TEMPO®

COMMUNICATIONS

FAST. ACCURATE. RELIABLE.

COMMUNICATIONS | CABLE TV | FIBER TESTING

TABLE OF CONTENTS

TABLE OF CONTENTS

IRRIGATION & LOCATION CONT.

COPPER TELECOMMUNICATIONS

HAND TOOLS

With over 20 years of supply to the Fiber Optic industry, Tempo Communications' fiber test products and tools have been tried and trusted by the following industrial segments: Telecoms (BT, Comcast), Avionics (Airbus, Boeing, Lockheed Martin), Petrochemical, Military (US Navy, NATO), Research and Development, Academia.

With a rich fiber heritage dating back to Rifocs and Opto-Electronics, Tempo Communications has grown into a worldwide supplier of fiber products offering a wide portfolio of tools and test equipment for the installation, maintenance and testing of fiber optic cabling systems.

Our Fiber test products and tools are selected and manufactured to Tempo Communications' rigorous design and performance criteria. Products are produced in house at our manufacturing facility in California or sub-contract manufactured by Tempo approved and vetted quality manufacturers. Our fiber test products pass through a Tempo final check before despatch to ensure that the highest quality standard is maintained and delivered to you.

After sales support is provided out of Vista, California and by Tempo Europe Limited at Tempo's Calibration & Repair Service Centre in Cwmbran, South Wales.

PRODUCT RANGE

Our portfolio covers a range of instruments and solutions for:

    Installation

    Loss Measurement

    Fault Finding

The range of fiber Test Instruments provided by Tempo Communications covers easy to operate and economically priced:

Fusion Splicers & Cleavers	Light Sources
Optical Time Domain Reflectometers	Live Fiber Identifiers
Optical Power Meters	Visual Fault Locators

As can be seen from above our focus is on the Physical Layer, Outside Plant products as opposed to service testing. Our philosophy being "A fully tested physical layer is the foundation for a functional service"!

This is why it is important to us to manufacture products that are easy to use and cost effective.

Included alongside these test sets are fiber stripping and preparation tools and a range of accessory items to enable you to outfit technicians performing fiber optic installation and maintenance on multi-mode and single-mode networks.

These products complete the Tempo promise of delivering quality, professional tools and test products.

OPTICAL FUSION SPLICERS

Tempo Communications fusion splicers utilize two different splicing technologies in our product offering. The FSP200 is a Core Alignment based splicer and the 915FS is an Active Clad splicer.

The FSP200 Core Alignment splicer incorporates six motor technology and is the most capable splicer when splicing legacy or dissimilar fibers. This is because two motors are used to adjust the objective lenses so that the cameras are able to precisely locate the center of the core of the fiber optic cable. This is especially important with older fibers that have geometry variability such as ovality and concentricity of the core with respect to the fiber cladding. The core alignment technology is also more tolerant of contamination and will yield the lowest splice losses in adverse conditions.

The 915FS fusion splicer is an Active Clad fusion splicer and has four motors to align the fibers. No objective lens focusing is provided which is sufficient when splicing two fibers of the similar geometry. Since singlemode fibers produced in the last two decades are of remarkably consistent geometries, even between cable manufacturers, the splice loss is virtually the same as the Core Alignment splicer.

Both the Active Clad and Core Alignment fusion splicers far surpass the performance of the V-Groove technology splicers that employ only two adjustment motors.

FSP200 CORE ALIGNMENT OPTICAL FUSION SPLICER

The Tempo Communications FSP200 Optical Fiber Fusion Splicer is intended to fuse two fiber optic cables, resulting in low splice loss and long-term stable splices. The FSP200 is a Core Alignment splicer that utilizes six precision motor transports.

The FSP200 fusion splicer uses a CDS (Core Detection System), which is also widely known as PAS (Profile Alignment System). The two focus cameras determine the center of the core of the two fibers, then adjusts each in the X, Y, and Z dimensions to automatically and precisely align the two fiber cores. A fusing arc is applied, which then provides the lowest loss fusion splice.

The FSP200 with PAS technology is designed for splicing singlemode and multimode fibers including DSF, NZDS and BIF.

Splices are completed in as little time as seven seconds while providing low splice losses typically of 0.01dB. The high capacity battery is capable of splicing over 200 fusion splices on one battery charge.

The intuitive user interface and IP52 rating insures that the technician able to quickly become proficient splicing in the most demanding conditions.

FEATURES

- True Core Alignment for Low Loss Splices
- IP52 provides resistance to dust and water ingress
- Small and lightweight for the most demanding jobs
- Loose tube fiber compatible
- Auto-Calculation of Estimated Splice Loss
- Adapters for 200/250, 900µm and 3mm fiber

SPECIFICATIONS:

Applicable Fibers	SM (G.652); MM (G.651); DS (G.653); NZDS (G.655); BIF (G.657); EDF
Fiber Cleaved Length	10mm
Cladding Diameter	80 to 150µm
Coating Diameter	100 to 1000µm
Fiber Count:	Single
Fiber Aligning Method	Core Alignment
Splice Loss (Typical)	0.02 dB (SM); 0.01 dB (MM); 0.04 dB (DS); 0.04 dB (NZDS & BIF)
Splicing Mode	60 Preset / User Definable Modes
Splice Time (Typical)	7 seconds (1)
Boot Time	5 seconds
Number of Splices Per Battery Charge	200 (including 60mm heat shrink cycle) (2)
Splice -On-Connector	SC, LC, FC, ST
Arc Calibration Mode	Automatic and Manual
Protection Sleeve Length	60mm, 40mm, Micro Sleeves
Ingress Protection(3)	IP5X (Dust); IPX2 (Water)
Storage of Splice Results	5,000 Results, 100 screenshots
Drop Test	76cm on five axis

Tension Test	2N
Fiber Display Magnification	200X
Tube Heating Mode	20 Preset / User Definable Modes Adjustable 0-240 seconds
Tube Heating Time (Typical)	18 seconds (4)
Attenuator Mode	0.1 to 15 dB
Electrode Life	5,000 Splices
Display:	3.5" Color, Turn-Over LCD
Connectivity	USB
Operating Conditions	Pressure: 0 to 16,404 feet (0 to 5,000 meters) above Sea Level Wind Velocity up to 15m/s Humidity: 0 to 95% Temperature: -4 to +131F (-20 to +55C)
Storage Conditions	Temperature: -40 to +158F (-40 to +70C)
Power Supply	100 to 240V AC Adapter; Li-ion Battery (4400 mAh)
Weight	3.74lbs (1.7kg) with battery
Dimensions (HxWxD)	4.9" x 4.9" x 5.3" (125 x 125 x 135mm)
Vibration Resistance	10Hz – 500Hz with a spectral density of 0.03g2/Hz
Password Protection	Yes

(1) Fast mode. (2) 90s/cycle splice time and power save functions activated. Number of cycles may vary depending on battery status and ambient operating conditions. (3) Dust resistance and rain resistance test do not guarantee that the product will not be damaged under these conditions.
(4) Dependent on splice protector used and ambient conditions. Time quoted is with power mode enabled and assuming that the oven is not cold.

*Specifications subject to change without notice.

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
55500052	FSP200	Optical Fusion Splicer
55500053	FSP200-KIT1	FSP200 Fusion Splicer & Cleaver Kit
55500054	FSP200-KIT2	Contractor Fusion Splicer Kit
52063415	06811	915FS FSP200 Batt
52080896	07096	Power Supply, 915FS FSP200
52064141	01325	Splice-On-Connector Adapter (SC & LC)
52066481	02401	Splice-On-Connector Adapter (ST & FC)

PART NO.	CAT. NO.	DESCRIPTION
52063414	01329	Replacement Electrodes
52064143	01332	200/250µm Adapter (Pair)
52064142	01333	900µm Adapter (Pair)
52076996	05801	Loose Tube Adapter (Pair)
52081862	07388	Universal Adapter (Pair)
52067851	03245	3mm Adapter (Pair)
55500059	NA LC	North American Line cord
52066954	02571	European Line Cord
52066952	02570	UK Line Cord
52066930	02568	12 V DC Car Adapter

915FS ACTIVE CLADDING OPTICAL FUSION SPLICER

The Tempo Communications 915FS Optical Fiber Fusion Splicer is intended to fuse two fiber optic cables, resulting in low splice loss and long-term stable splices. The 915FS is an Active Clad fusion splicer the utilizes four precision motor transports.

The 915FS fusion splicer capably aligns the two fibers in the X, Y, and Z dimensions to automatically and precisely align the two fibers. A fusing arc is applied, which then provides the lowest loss fusion splice.

The 915FS is designed for splicing singlemode and multimode fibers including DSF, NZDS and BIF.

Splices are completed in as little time as seven seconds while providing low splice losses typically of 0.01dB. The high capacity battery is capable of splicing over 200 fusion splices on one battery charge.

The intuitive user interface and IP52 rating insures that the technician able to quickly

FEATURES

- Active clad technology for todays fibers
- IP52 provides resistance to dust and water ingress
- Small and lightweight for the most demanding jobs
- Loose tube fiber compatible
- Auto-Calculation of Estimated Splice Loss
- Adapters for 200/250, 900µm and 3mm fiber

SPECIFICATIONS:

Applicable Fibers	SM (G.652); MM (G.651); DS (G.653); NZDS (G.655); BIF (G.657); EDF
Fiber Cleaved Length	10mm
Cladding Diameter	80 to 150µm
Coating Diameter	100 to 1000µm
Fiber Count	Single
Fiber Aligning Method	Active Clad Alignment
Splice Loss (Typical)	0.02 dB (SM); 0.01 dB (MM); 0.04 dB (DS); 0.04 dB (NZDS & BIF)
Splicing Mode	60 Preset / User Definable Modes
Splice Time (Typical)	7 seconds (1)
Boot Time	5 seconds
Number of Splices Per Battery Charge	200 (including 60mm heat shrink cycle) (2)
Splice-On-Connector	SC, LC, FC, ST
Arc Calibration Mode	Automatic and Manual
Protection Sleeve Length	60mm, 40mm, Micro Sleeves
Ingress Protection	IP5X (Dust); IPX2 (Water) (3)
Storage Of Splice Results	5,000 Results, 100 screenshots
Drop Test	76cm on five axis

Vibration Resistance	10Hz to 500Hz with a spectral density of 0.03g2/Hz
Tension Test	2N
Fiber Display Magnification	200X
Tube Heating Mode	20 Preset / User Definable Modes Adjustable 0-240 seconds
Tube Heating Time (Typical)	18 seconds (4)
Attenuator Mode	0.1 to 15 dB
Electrode Life	5,000 Splices
Display	3.5" Color, Turn-Over LCD
Connectivity	USB
Operating Conditions	Pressure: 0 to 16,404 feet (0 to 5,000 meters) above Sea Level Wind Velocity up to 15m/s Humidity: 0 to 95%Temperature: -13 to 122°F (-25 to 50°C)
Storage Conditions	Temperature: -40 to 140°F (-40 to 60°C)
Power Supply	100 to 240V AC Adapter; Li-ion Battery (4400 mAh)
Weight	3.3lbs (1.5kg) with battery 2.6lbs (1.2kg) no battery
Dimensions (HxWxD)	4.9" x 4.9" x 5.3" (125 x 125 x 135mm)

(1) Fast mode. (2) 90s/cycle splice time and power save functions activated. Number of cycles may vary depending on battery status and ambient operating conditions.(3) Dust resistance and rain resistance test do not guarantee that the product will not be damaged under these conditions.
(4) Dependent on splice protector used and ambient conditions. Time quoted is with power mode enabled and assuming that the oven is not cold.

* Specifications subject to change without notice.

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52079876	915FS	915FS Optical Fusion Splicer
52079879	915FS-KIT1	915FS Fusion Splicer & Cleaver Kit
52079878	915FS-KIT2	915FS Contractor Fusion Splicer Kit
52063415	06811	915FS FSP200 Batt
52080896	07096	Power Supply, 915FS FSP200
52064141	01325	Splice-On-Connector Adapter (SC & LC)
52066481	02401	Splice-On-Connector Adapter (ST & FC)

PART NO.	CAT. NO.	DESCRIPTION
52063414	01329	Replacement Electrodes
52064143	01332	200/250µm Adapter (Pair)
52064142	01333	900µm Adapter (Pair)
52076996	05801	Loose Tube Adapter (Pair)
52081862	07388	Universal Adapter (Pair)
52067851	03245	3mm Adapter (Pair)
55500059	NA LC	North American Line cord
52066954	02571	European Line Cord
52066952	02570	UK Line Cord
52066930	02568	12 V DC Car Adapter

Tempo Communications has a full suite of fiber optic cleavers including the FCL200, FCL100, 915CL and the 920CL. The FCL200 is the most capable cleaver in that it employs auto fiber end cut and auto blade return features. The 915CL has auto blade return with the 920CL providing the most economical alternative in the traditional cleaving footprint. The FCL100 is a low cost cleaver that is typically used in emergency situations or when cleaving field fibers when used in conjunction with mechanical connectors.

FCL200 OPTICAL FIBER CLEAVER

FEATURES

- Accurate Cleaves. Cleave multi-mode and single-mode fiber optic cables.
- Long Life. Blades rotate for longer life - over 48,000 cleaves.
- Adaptable. Supports 200um, 250um, 900um fibers, ribbon and loose tube fibers.
- Fast. For use with the 910FS, 915FS or FSP200 Optical Fusion Splicers for maximum speed and efficiency with auto return mechanism.
- Dust bin. Safely and automatically collects end cuts during the cleaving process.
- Fixed Clamp. Allows the technician to use the FCL200 as a standalone cleaver.

WATCH OUR PRODUCT VIDEO
CLICK HERE

SPECIFICATION:

Applicable Fibers	SM (G.652); MM (G.651); DS (G.653); NZDS (G.655); BIF (G.657)		Cleaving Angle	< 1.5˚
Fiber Cleaved Length	5mm to 25mm		Blade Rotation Positions	16
Cladding Diameter	125μm		Blade Life	48,000 Cleaves
Coating Diameter	0.20mm, 0.25mm and 0.9mm		Weight	0.77lbs (350g)
Fiber Count	Single and Ribbon (12)		Dimensions	2.55 x 3.85 x 2.55” (65 x 98 x 65mm)

915CL OPTICAL FIBER CLEAVER

FEATURES

- 48,000 cleaves
- Auto return of blade mechanism for fast and easy cleaves
- Cleaves singlemode and multimode fibers
- Integrated dust bin
- Prepares fibers for use in the 910FS, FSP200 and 915FS fusion splicers
- Supports 200um, 250um, 900um fibers, and loose tube fibers.
- Fixed Clamp. Allows the technician to use the 915CL as a standalone cleaver.

SPECIFICATION:

Applicable Fibers	SM (G.652); MM (G.651); DS (G.653); NZDS (G.655); BIF (G.657)	Cleaving Angle	< 1.5˚
Fiber Cleaved Length	10mm	Blade Life	48,000 Cleaves
Cladding Diameter	125μm	Weight	0.56lbs (255g)
Coating Diameter	0.25mm and 0.9mm	Dimensions (HXWXD)	2.29 x 2.17 x 1.89" (58 x 55 x 48mm)
Fiber Count	Single		

920CL OPTICAL FIBER CLEAVER

FEATURES

- 48,000 cleaves
- Cleaves single-mode and multi-mode fibers
- Integrated dust bin
- Prepares fibers for use in the 910FS, FSP200 and 915FS fusion splicers
- Supports 200um, 250um, 900um fibers, and loose tube fibers.
- Fixed Clamp. Allows the technician to use the 920CL as a standalone cleaver.
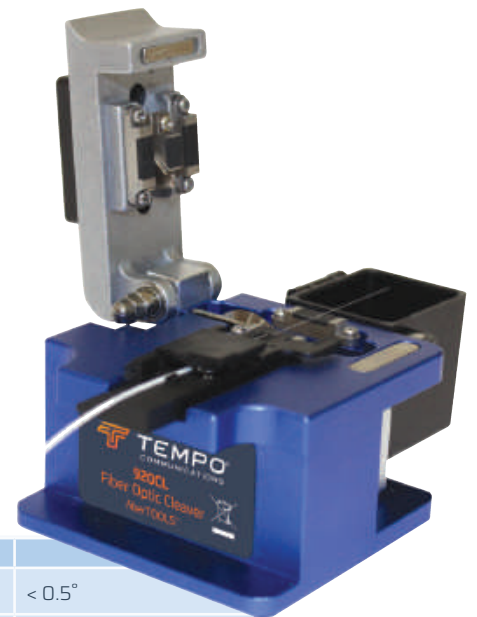
SPECIFICATION:

Fiber Type	SM (G.652); MM (G.651); DS (G.653); NZDS (G.655); BIF (G.657)	Cleaving Angle	< 0.5˚
Fiber Cleave Length	5mm to 25mm	Blade Life	48,000 Cleaves
Cladding Diameter	125μm	Weight	0.68lbs (310g)
Coating Diameter	0.20mm, 0.25mm and 0.9mm	Dimensions	2.13 x 2.28 x 2.28" (54 x 58 x 58 mm)
Fiber Count	Single		

FCL100 OPTICAL FIBER CLEAVER

FEATURES

- 200, 250 & 900 micron fibers
- Cleaves single-mode and multi-mode fibers
- Prepares fibers for use with mechanical connector, fusion splicers and bare fiber adapters

SPECIFICATION:

Applicable Fibers:	125 Micron Fiber (200/250/900)
Fiber Cleaved Length:	2.0mm to 20.0mm
Dimensions:	4.88" x 0.79" x 1.57" (124mm x 20mm x 40mm)
Weight:	0.13lbs (60g)
Operating:	Spring Activated

WATCH OUR PRODUCT VIDEO
CLICK HERE
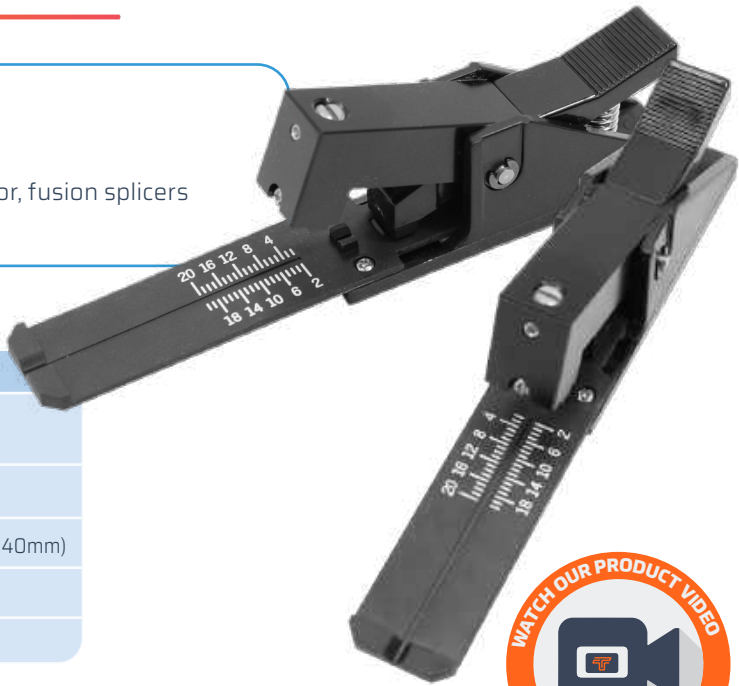
ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
55500055	FCL200	FCL200 Optical Fiber Cleaver
52078354	915CL	915CL Optical Fiber Cleaver
52082727	920CL	Fiber Optic Cleaver
52087221	FCL100	Field Cleaver
52064143	01332	200/250μm Adapter (PAIR)
52064142	01333	Adapter, 900μm (PAIR)
52076996	05801	Adapter, Loose Tube (PAIR)

PART NO.	CAT. NO.	DESCRIPTION
52078357	07111	Fixed Clamp with Screw
52086838	04268	Replacement Screw for Fixed Clamp
52064145	01640	Cleaving Wheel
55500194	BLD-01	FCL100 Blade
55500196	SPR-01	FCL100 Spring

FIBER FAULT LOCATORS - OTDR's

The 930XC OTDR's utilize an easy to learn intuitive user that allows the technician to quickly locate fiber faults in FTT(x) and Point to Point networks. Both singlemode and multimode versions are available which span all of the common wavelengths used in telco and LAN installations. The 930XC-20C OTDR is the basic version that effectively measure and characterize singlemode fiber links at 1310nm and 1550nm. The 930XC-30F measures at 1310nm, 1550nm and 1625nm where the 1625nm wavelength can be used to measure live fibers without interrupting network traffic. The 930XC-30P measures at 1310nm, 1490nm and 1550nm and is used to characterize fiber networks used in GPON applications. The 930XC-20M is a multimode OTDR that measures at 850nm and 1300nm which are commonly used in LAN.

The free Trace Viewer program imports SOR files which provides the tools required to complete a comprehensive report on the the fiber measurements.

All 930XC OTDR's are GR196 compliant which validates all specifications at an independent lab at temperature extremes, along with drop testing and dust chamber validation.

930XC HANDHELD MULTIMODE OTDR

FEATURES

- 850/1300nm wavelength
- Up to 24dB dynamic range
- Optical Power Meter
- Stabilised Light Source
- Visual Fault Locator
- Fiber analysis software for report generation
- Large backlight LCD colour display
- RS-232/USB interface
- NiMH batteries for 8 hours continuous use
- Software compatible to Win. XP, 7, 8, 8.1,10
- Multiple languages
- Pass/Fail thresholds
- Event table
- Insertion loss
- Return loss

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52067080	02607	930XC-20M-FC Multimode OTDR W/FC Bulkhead
52067079	02606	930XC-20M-SC Multimode OTDR W/SC Bulkhead
52067081	02608	930XC-20M-ST Multimode OTDR W/ST Bulkhead

930XC HANDHELD SINGLEMODE OTDR

FEATURES

- 2 & 3 wavelength options available: 1310/1550nm; 1310/1490/1550nm; 1310/1550/1625nm
- Up to 35dB SWDR on the two wavelength model Up to 38dB SWDR on the three wavelength model
- Optical Power Meter
- Stabilised Light Source
- Visual Fault Locator
- Fiber analysis software for report generation
- Large backlight LCD colour display
- Measure length and defects of coiled fiber
- 1625nm operation for live fiber testing (30F)
- RS-232/USB interface
- NiMH batteries for 8 hours continuous use
- LinkViewer Software analysis
- Macrobend analysis

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
DUAL WAVELENGTH SINGLEMODE OTDR		
52067083	02610	930XC-20C Singlemode OTDR, 1310/1550nm FC/UPC
52067082	02609	930XC-20C Singlemode OTDR, 1310/1550nm SC/UPC
52067084	02611	930XC-20C Singlemode OTDR, 1310/1550nm ST/UPC
52067086	02613	930XC-20C Singlemode OTDR, 1310/1550nm FC/APC
52067085	02612	930XC-20C Singlemode OTDR, 1310/1550nm SC/APC

PART NO.	CAT. NO.	DESCRIPTION
TRIPLE WAVELENGTH SINGLEMODE PON OTDR		
52067088	02615	930XC-30P Singlemode OTDR, 1310/1490/1550nm FC/UPC
52067087	02614	930XC-30P Singlemode OTDR, 1310/1490/1550nm ST/UPC
52067089	02616	930XC-30P Singlemode OTDR, 1310/1490/1550nm SC/UPC
52067091	02618	930XC-30P Singlemode OTDR, 1310/1490/1550nm FC/APC
52067090	02617	930XC-30P Singlemode OTDR, 1310/1490/1550nm SC/APC

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
TRIPLE WAVELENGTH SINGLEMODE FILTERED OTDR		
52067093	02620	930XC-30F Singlemode OTDR, 1310/1550/1625nm FC/UPC
52067092	02619	930XC-30F Singlemode OTDR, 1310/1550/1625nm SC/UPC
52067094	02621	930XC-30F Singlemode OTDR, 1310/1550/1625nm ST/UPC
52067095	02623	930XC-30F Singlemode OTDR, 1310/1550/1625nm SC/APC
52067096	02626	930XC-30F Singlemode OTDR, 1310/1550/1625nm FC/APC

930XC OTDR ACCESSORIES		
PART NO.	CAT. NO.	DESCRIPTION
52047065	AC-ADPT-20-UNI	Universal Power Supply
52034549	AC-CONN-FC-L2	FC Connector (For UPC & APC)
52034550	AC-CONN-ST-L2	ST Connector (For UPC)
52078401	AC-CONN-SC-UPC-L2	SC Connector (For UPC & APC)
52067854	ADAPTER, OPM SC (930XC)	OPM SC Adapter
52067855	ADAPTER, OPM FC (930XC)	OPM FC Adapter
52067856	ADAPTER, OPM ST (930XC)	OPM ST Adapter
52039299	AC-ADPT-V30	Vehicle Adapter (6FT, 5.5 OD, 2.1M)
52034541	20988	Soft Carry Case
52034542	20989	USB Cable
52034543	20990	RS-232 Cable
52034552	20999	NiMH Battery (9.6V)

SINGLEMODE & MULTIMODE OTDR KIT

FEATURES

- Combines 930XC SM and MM OTDRs in 1 kit
- 850/1300nm & 1310/1550nm
- FC, ST and SC Adapters available
- Compact handheld design
- Easy to use
- Fast automated testing
- LinkViewer Software analysis
- Microbend detection
- Up to 24dB dynamic range on MM and up to 35dB range on SM
- Large backlight LCD display
- Measure length and defects on SM & MM fiber
- Fiber analysis software for data management & report generation
- RS-232/USB interface
- NiMH batteries for 8 hours continuous use
- Supplied with SC adapters

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52067457	26307	930XC-SM (APC) + MM (UPC) Kit - (SM & MM OTDR Kit)

- DC Charger Port
- Optical Power Meter
- USB Port
- Visual Fault Locator
- OTDR Port
- OTDR 1625nm live out of band testing port

SPECIFICATIONS:

	930XC-20C	930XC-30F	930XC-30P	930XC-20M	
Wavelength (± 20nm)	1310/1550	1310/1550/1625	1310/1490/1550	850/1300	
Dynamic Range (dB)	35	38/37/37	38/37/37	21/24	
Event Deadzone (m)	1.0	1.0	1.0	≤2.5	
Attenuation Deadzone (m)	4.5	4.5	4.5	≤12	
Pulsewidth (ns)	5, 10, 30, 100, 300, 1µs, 2.5µs, 10µs, 20µs			12, 30, 100, 275, 1µs, 2µs	
Selectable Ranges (km)	0.3, 1.3, 2.5, 5, 10, 20, 40, 80, 120, 160, 240			0.1, 0.3, 0.5, 1.3, 2.5, 5, 10	0.1, 0.3, 0.5, 1.3, 2.5, 5, 10, 20, 40, 80
Sampling Points	16,000 (Maximum)			16,000 (Maximum)	
Average Time	15s/30s/1 min/2 min/3 min				
Distance Measurement Accuracy	±(1m + 5 x 10-5 x distance + sampling space)				
Connector Type	PC or APC (interchangeable FC, SC, ST)				
Reflection Detect Accuracy	±4 dB				
Attenuation Detect Accuracy	±0.05 dB/dB				
Measurement Data Storage	1,000 test curves				
Data Transmission	RS-232/USB port				
Visual Fault Locator (VFL)	3mW; 650nm				
Optical Power Meter (OPM)	InGaAs				
OPM Wavelengths	850, 1300, 1310, 1490, 1550, 1625nm				
OPM Range	+6 to -70dBm (+6 to -60dBm @ 850nm)				
OPM Display resolution	0.01dB				
OPM MOD Identification	1kHz, 2kHz				
Stabilized laser Source (SLS)	Wavelength same as selected in OTDR mode ≤ -7dBm				
Power Supply	NiMH chargeable battery/AC adapter				
Battery Life	Support over 8 hours operating on one charge or over 20 hours standby				
Operating Temperature	-10°C to 50°C				
Storage Temperature	-20°C to 60°C				
Relative Humidity	0 to 95% (non-condensing)				
Weight	1.9lbs. (0.87kg)				
Dimensions	7.7" H x 3.9" W x 2.4" L (196mm x 100mm x 64mm)				
Compliance	BelCore GR196, CE, FCC, UL, RoHS, WEEE				

TRACE VIEWER SOFTWARE
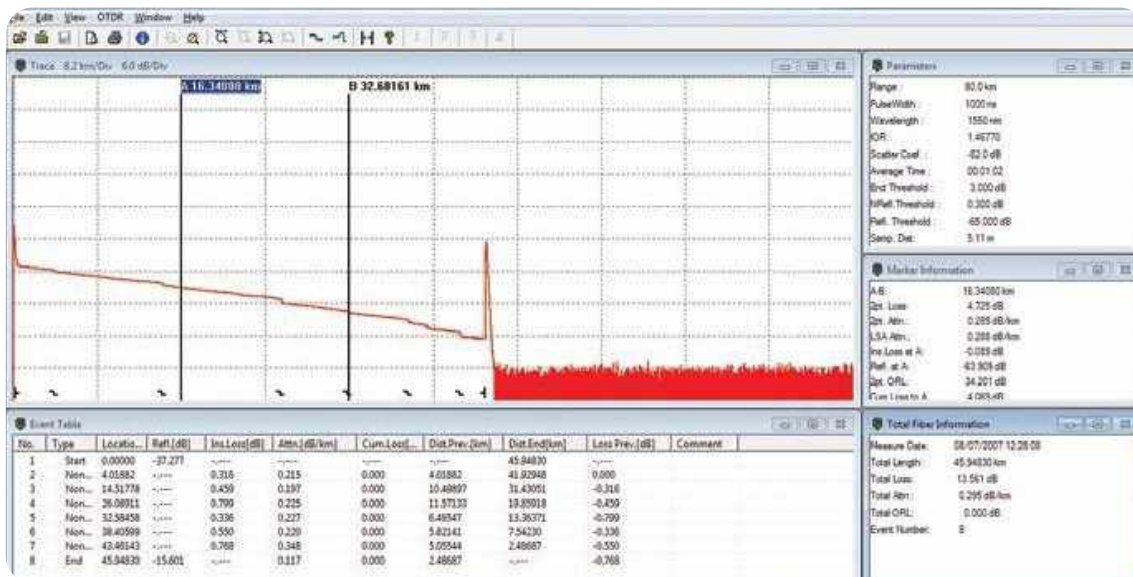
TraceViewer Software showing trace, event table, Parameters, Marker Information & Total Fiber Information.

TraceViewer with expanded trace view highlighting the benefit of Launch Cables to examine Near & Far end connectors.

LINK VIEWER SOFTWARE

LinkViewer Software showing optical events that exceed the threshold of the Fiber Under Test.
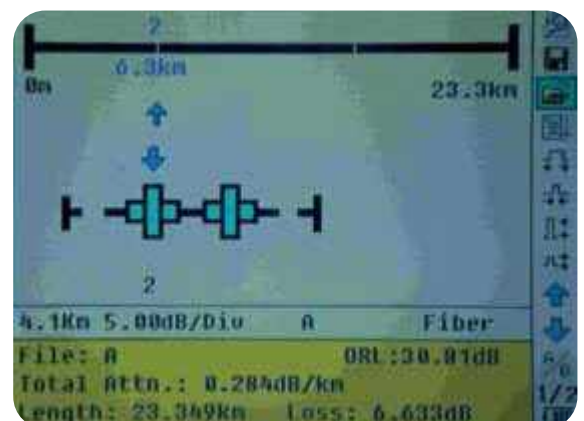
LAUNCH CABLES

Launch cables are used to reduce the effect deadzones caused by mechanical connection of the OTDR to the Fiber under Test. Constructing a backscatter trace before the Near end connector enables the technician to evaluate the connector for Insertion Loss & return Loss. Also known as a Pulse Suppressor.

FEATURES

- Universal compact design
- Rugged construction

BENEFITS

- Troubleshoot the input connector and the initial fiber span that may be masked by the deadzone of an OTDR
- Characterise input and output connectors and the entire fiber link
- Minimise Dead zones
- Eliminate multiple patch cables

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52076057	LC-500	500M Launch Cable with Patch Panel Matrix
52081881	LC500SCAPCSM	500M Launch Cable SC APC Singlemode
52081882	LC500SCUPCSM	500M Launch Cable SC UPC Singlemode
52081883	LC1000SCAPCSM	1000M Launch Cable SC APC Singlemode
52081884	LC1000SCUPCSM	1000M Launch Cable SC UPC Singlemode
52081885	LC2000SCAPCSM	2000M Launch Cable SC APC Singlemode
52081886	LC2000SCUPCSM	2000M Launch Cable SC UPC Singlemode
52081887	LC150SCPCMM	150M Launch Cable SC PC 50/125 Multimode
52081888	SCLC Adapter	SC TO LC Adapter (Use the SC to LC Adapter to convert the Launch Cable to LC connectors

LC2000SCUPCSM 2km
Singlemode Launch Cable
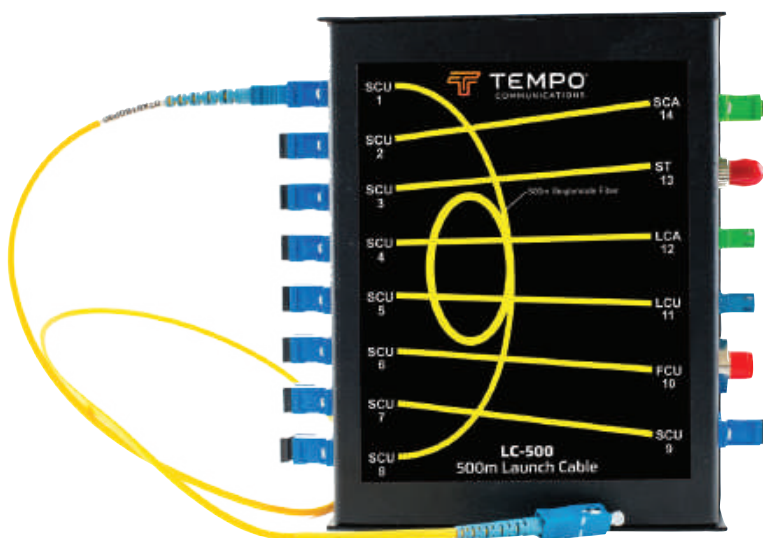
LC-500 Patch Panel Matrix with 1m
SC/PC-SC/PC patch cable

180XL VISUAL FAULT LOCATOR

LOCATING BREAKS AND BENDING LOSSES:

The 180XL visual fault finder is an indispensable tool for quickly identifying bending losses and breaks in optical fibers. If a fiber is bent too tightly, red laser light will be seen escaping through the jacket. Likewise, if a fiber is broken, escaping light will be visible where the break is located.

IDENTIFYING BAD CERAMIC CONNECTORS:

Ceramic connectors are easily tested using the 180XL visual fault finder. A fiber broken inside, or past, the ferrule will cause it to glow, as shown below at left. If the whole connector glows, it is definitely defective. If the end face polish of the connector is bad, light will be reflected internally, as shown below right. This will also make the ferrule glow when the 180XL is used.

Fiber broken in ferrule

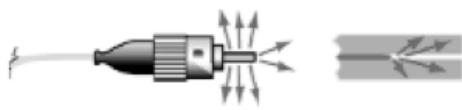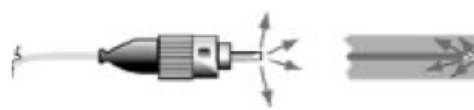Poor end face polish

FEATURES

- Continuous wave output mode for steady fault illumination
- Blinking output mode increases viewing contrast
- Easy to use "Quick Connect" interface fits all 2.5mm fiber optic connectors
- Ergonomic switch permits easy one-handed operation
- Simple, versatile, and user-friendly design
- Rugged, compact, and splash proof aluminium housing
- High output 1.0mW (0dBm) 650nm red laser
- Up to 7km range
- Two AA-size alkaline batteries provide 80 hours of continuous operation
- Nylon belt holster included

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52068671	180XL	Visual Fault Locator Kit (2.5mm UCI)
52068673	125mm ADAPTER	1.25mm adapter

SPECIFICATIONS:

Wavelength	650nm +/-10nm	Connector Interface	2.5mm Universal, Optional 1.25mm adapter
Emitter Type	Fabry Perot	Battery	AA (2)
Output Power	0dBm	Battery Life	80 Hours with 3.9Wh batteries
Spectral Width (CPR)	<2nm	Weight	0.15lbs, (70g) (not including batteries)
Laser Classification	2		
Range	7km	Dimensions	7.08" x 0.91" Dia (180mm x 23mm Dia)
Modes of Operation	CW and 2Hz Modulation	Operating Temperature	-10 to +45C
Method of Display Operation	Red/Green LED	Storage Temperature	-40 to +70C
Fiber Type	Singlemode, Multimode	Certifications	CE, WEEE, CDRH Reach RoHs

Macrobend easily visible in splice tray using 180XL

1.25mm Adapter

FI-100 LIVE FIBER IDENTIFIER

The Tempo Communications FI-100 fiber identifier is used to measure the approximate core power in FTT(x) and P2P networks without the need to disconnect the fiber under test. The low induced insertion loss when used with the precision adapters insures that the network equipment to go into an alarm condition due to excessive bending of the fiber. The high sensitivity detectors measure the direction of signal transport and are capable of detecting injected tones from laser sources at 270Hz, 330Hz, 1kHz and 2kHz. The FI-100 is also capable of sensing the core power in bend insensitive fiber that is being more commonly used in drop fibers in FTTH installations.

- Low insertion loss
- Easy operation
- Versatile
- Quickly identify fibers
- Tone Detect
- Signal direction indicator

FI-100 KIT contains instruction manual, sun shade, all available mandrels and carrying case.

SPECIFICATIONS:

Identified Wavelength Range	800-1700nm
Identified Signal Type	270Hz ±5%, 330Hz ±5%, 1kHz ±5%, 2kHz ±5%
Detector Type	1mm InGaAs
Adapter Types	Ø0.25 (Applicable for Bare Fiber and ribbon cable) Ø0.9 (Applicable for Ø0.9 Cable) Ø2.0 (Applicable for Ø2.0 Cable) Ø3.0 (Applicable for Ø3.0 Cable)
Signal Indication	Left & Right LED
Signal Direction Test Range (CW/0.9mm fiber)	-46 to 10dBm (1310nm) -50 to 10dBm (1550nm)
Signal Power Test Range (CW/0.9mm fiber)	-50 to +10dBm
Tone Detect Test Range (Average)	Ø0.9, Ø2.0, Ø3.0 — -30 to 0dBm (270Hz, 1kHz); -25 to 0dBm (2kHz) Ø0.25 — -25 to 0dBm (1kHz, 2kHz); -20 to 0dBm (2kHz)
Insertion Loss (Typical/ Maximum)	0.3 / 0.8dB at 1310nm 1.5 / 2.5dB at 1550nm
Battery	AAA Alkaline (2)
Operating Temperature	-10 to +60ºC
Storage Temperature	-25 to +70ºC
Dimension	196 X 30.5 X 27mm
Weight	195g
Certifications	CE, FCC, RoHS, EAC
Number of Activations	3600

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52068188	FI-100 KIT	Fiber Identifier Kit
52068108	FI-250µm/RIB	250µm Adapter
52068109	FI-100-900µm	900µm Adapter
52068110	FI-100-2mm	2mm Adapter
52068111	FI-100-3mm	3mm Adapter
52068113	FI-100-Case	Soft Carry Case
52068114	FI-100-Sunshade	Sun Shade

OPTICAL POWER METERS
& LIGHT SOURCES

The OPM2XX, OPM5XX and SLS5XX provide the technician with a ruggedized tool set to accurately and quickly measure the insertion loss of singlemode and multimode fiber links.

The OPM2XX and OPM5XX measure the absolute fiber power to validate the optical loss budget in FTTX and P2P networks. All common wavelengths are supported and work in harmony with the dual and triple wavelength sources to facilitate insertion loss measurements. Tone injection is supported so that individual fibers can be identified when used with the OPM2XX, OPM5XX or FI-100.

The OPM2XX also incorporates an integrated visual fault locator for safe and quick visual identification of cut or damaged fiber, Macrobends and contaminated or damaged connectors.

The IP54 rating along with industry leading vibration and shock specifications assure the technician will complete their assigned task in even the most demanding environment.

OPM210 / OPM220 MICRO OPTICAL POWER METER

FEATURES

- Wide measurement range (+10 to -70dBm)
- High power CATV range (+26 to -50dBm)
- VFL for safe and effective fault locating
- Singlemode and multimode compatible
- Calibrated wavelengths of 850/1300/1310/1490/1550/1625nm
- 270Hz, 1kHz and 2kHz tone detect
- Auto power off

CONTENTS:

- Micro OPM with VFL
- Lanyard
- Instruction sheet
- Certificate of Conformance

WATCH OUR PRODUCT VIDEO
CLICK HERE

SPECIFICATIONS:

PARAMETER	SPECIFICATIONS	
Model:	**OPM210**	**OPM220**
Measurement Range:	-70 to +10dBm (1310/1490/1550/1625)	-50 to +26dBm (1310/1490/1550/1625)
	-60 to +10dBm (850/1300)	-40 to +26dBm (850/1300)
Calibrated Wavelengths:	850, 1300, 1310, 1490, 1550, 1625nm	
Display Resolution:	0.01dB	
Accuracy*:	+/-0.25dB	
Linearity*:	+/-0.5dB (+10 to -3dBm) +/-0.1dB (-3 to -50dBm) +/-0.5dB (-50 to -70dBm)	+/-0.5dB +26 to -3dBm +/-0.1dB -3 to -50dBm
Connector:	Universal 2.5mm	
Wavelength Response:	700 - 1700nm	
Detector:	InGaAs	
Power Supply:	AAA x 2 Alkaline	
Battery Lifetime:	>60 Hours (OPM mode)	
Operating Temperature:	-10 to +50°C (<90% Relative Humidity)	
Storage Temperature:	-20 to +60°C (<90% Relative Humidity)	
VFL Wavelength:	650nm +/-20nm	
VFL Output:	≤ 1mW/ 2Hz	
VFL Range:	4km	
Size:	106 x 58 x 28mm (4.17 x 2.28 x 1.10")	
Weight:	106g (0.23lbs)	
Auto Power Off:	10 minutes of no activity	
Certifications:	CE, RoHS, CDRH, WEEE	

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
55500025	OPM210	Standard Power OPM with VFL
55500026	OPM220	High Power OPM with VFL
52068673	125mm ADAPTER	1.25mm Adapter
52084662	08325	Micro OPM Carry Case

OPM510 / OPM520 OPTICAL POWER METER

FEATURES

- Wide measurement range (+6 to -70dBm)
- High power CATV range (+26 to -50dBm)
- Singlemode and multimode compatible
- Calibrated wavelengths of 850/1300/1310/1490/1550/1625nm
- 270Hz, 1kHz and 2kHz tone detect
- Auto power off

CONTENTS:

- Optical Power Meter
- SC Adapter
- Soft Carry Case
- Certificate of Conformance

WATCH OUR PRODUCT VIDEO
CLICK HERE

SPECIFICATIONS:

PARAMETERS	SPECIFICATIONS	
MODEL	OPM510	OPM520
Cal. Wavelength (nm)	850, 1300, 1310, 1490, 1550, 1625	
Measure range (dBm)	-65 ~ +10[1]	-50 ~ +27
Detector type	InGaAs	
Accuracy (dB)	±5% ±0.01nW (±0.5dB@850nm)	±5% ±1nW (±0.5dB@850nm)
Linearity	+/-0.5dB (+10 to -3dBm) +/-0.1dB (-3 to -50dBm) +/-0.5dB (-50 to -65dBm)	+/-0.5dB +27 to -3dBm +/-0.1dB -3 to -50dBm
Resolution (dB)	0.01dB	
Functions	W/mW/µW/dBm/dB(REF)/ MOD TONE DETECT 270Hz, 1kHz, 2kHz	
Connector Type	SC (Interchangeable LC, ST, SC)	
Fiber Type	Singlemode & Multimode	
Battery Life	> 100 Hours	
Power Supply	9V Alkaline or 1000mAh Lithium Battery/ 9V AC adapter	
Operating Temperature	-10°C ~ 50°C	
Storage Temperature	-20°C ~70°C	
Relative Humidity	0 TO 95% (NON-CONDENSING)	
Weight	0.68lbs (300g)	
Dimensions (H × W × T)	6.1 × 3.5 × 1.3" (155 × 88 × 33mm)	
IP Rating	IP54	
Vibration	5Hz to 150Hz, Amplitude+0.15mm	
Shock	Peak acceleration 25g at a pulse duration of 6ms	
Compliance	CE, FCC	

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
55500023	OPM510	InGaAs OPM +10 to -65dBm
55500024	OPM520	InGaAs OPM +27 to -50dBm

SLS520 STABILIZED LIGHT SOURCE

FEATURES

- Dual and Triple Wavelength Laser Sources at 1310, 1490, 1550, 1625 & 1650nm
- Dual Wavelength LED Source at 850nm & 1300nm
- Accurate Insertion Loss Measurements
- Tone and Probe Fiber Networks at 270Hz, 1kHz and 2kHz
- SC, LC, FC and ST Interchangeable Bulkheads
- Ruggedized Package, IP54 compliant
- Compatible with Singlemode and Multimode Networks
- Auto Off or Continuous On Operation
- Battery or 120/240VAC Operation

CONTENTS:

- Laser or LED
- SC Adapter
- Soft Carry Case
- Certificate of Conformance

WATCH OUR PRODUCT VIDEO
CLICK HERE

SPECIFICATIONS:

MODEL	SLS520	SLS525	SLS530	SLS535	SLS536
Wavelength (±20nm)	1310/1550	850/1300	1310/1490/1550	1310/1550/1625	1310/1550/1650
Range of Use	Singlemode	Multimode (62.5/125)	Singlemode		
Emitter Type	FP	LED	FP		
Spectrum Width	≤ 5nm	+/-40nm	≤ 5nm		
Output Power	≤ 0dBm/-1dBm	-20dBm/-21dBm	≤ 0dBm/-1dBm		
Output Power Stability	±0.05 dB/15min; ±0.10dB/8hr	±0.05 dB/15min ±0.15dB/8hr	±0.05 dB/15min; ±0.10dB/8hr		
MOD Frequency	270, 1kHz, 2kHz				
Display	LCD				
Battery Life	60 Hours				
Connector Type	SC/PC (Interchangeable LC, ST, FC)				
Power Supply	9V Alkaline or 1000mAh Lithium Battery/ 9V AC adapter				
Operating Temp.	-10°C to 50°C				
Storage Temp.	-20°C to 70°C				
Relative Humidity	0 to 95% (non-condensing)				
Weight	0.71 lbs (300g)				
Dimension (H×W×T)	6.1 × 3.5 × 1.3" (155 × 89 × 33mm)				
IP Rating	IP54				
Vibration	5Hz to 150Hz, Amplitude = 0.15mm				
Shock	Peak acceleration 25g at a pulse duration of 6ms				
Compliance	CE, FCC, 21 CFR 1040.10 (Laser)				

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
55500018	SLS520	1310/1550nm Dual Laser
55500019	SLS525	850/1300nm Dual LED
55500020	SLS530	1310/1490/1550nm Triple Laser
55500021	SLS535	1310/1550/1625nm Triple Laser
55500022	SLS536	1310/1550/1650nm Triple Laser

OPTICAL POWER METER & STABILIZED LIGHT SOURCE KITS

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
55500027	SM DUAL KIT	OPM510 & SLS520
55500028	SM DUAL KIT HP	OPM520 & SLS520
55500029	MM DUAL KIT	OPM510 & SLS525
55500030	SM T PON KIT	OPM510 & SLS530
55500031	SMT 1625 KIT	SLS535 & OPM510
55500032	SMT 1650 KIT	SLS536 & OPM510
55500033	SMT PON KIT HP	SLS530 & OPM520
55500034	SMT 1625 KIT HP	SLS535 & OPM520
55500035	SMT 1650 KIT HP	SLS536 & OPM520
55500050	SMMMKIT-T	SLS520, SLS525 & OPM510
55500051	SMMMKIT-M	SLS520, SLS525 & OPM520

SMMM KIT-M

OPM AND SLS ACCESSORIES:

PART NO.	CAT. NO.	DESCRIPTION
55500048	PS-100	EXTERNAL POWER SUPPLY
55500036	CC-1	CARRY CASE, SOURCE/OPM
55500049	CC-2-3	CARRY CASE, DUAL, TRIPLE, SOURCE/OPM

SPECIAL LAUNCH CONDITION
OPTICAL POWER METERS & SOURCES

INSTRUMENTS DESIGNED FOR POF & FIBER OPTIC CABLE TESTING:

The Special Launch Condition Sources and Optical Power Meter XL fiberTOOLS™ are designed for the professional to perform installation and maintenance measurements on both Plastic & Glass fiber optic networks.

The instrument family consists of standard instruments for routine cable testing, through to Stabilised Light Sources with stringent Launch Conditions for the Avionics and Defence Industries and Research Laboratories.

Tempo's LED Light Sources have been manufactured with specific launch conditions to overcome the inconsistent measurements caused by standard Light Sources.

The Multimode products that have specific launch conditions are designed for greater accuracy and repeatable results.

Tempo also manufacture instruments to test POF links. POF links are being used in a number of industries particularly on short links where optical budgets aren't too tight. The automotive industry is a good example of this.

The XL fiberTOOLS™ are fully featured, general purpose fiber optic instruments and easy to operate to outfit all technicians performing fiber optic installation and maintenance.

Tempo also manufacture a range of Optical Light Sources and Power Meters with enhanced EMI performance, manufactured to Military standards, these offer the ultimate in accuracy.

Tempo's range of Optical Light Sources and Power Meters were designed specifically for: avionics, automotive, defence and research.

567XL SILICON FIBER OPTIC POWER METER (FORMERLY 557B)

FEATURES

- Absolute (dBm) & Referenced (dB) measurements
- Long battery life
- User selectable auto shut-off
- SOC interface adapts to all commonly used connectors
- Rugged and splash-proof

OPTICAL SPECIFICATIONS	
Detector Type	3 x 3.5mm Silicon
Calibration Wavelengths	650nm, 780nm, and 850nm
Power Range	+3dBm to -60dBm
Accuracy	±0.25dB
Linearity at	+3dBm to -3dBm ±0.5db -3dBm to -50dBm ±0.1db -50dBm to -60dBm ±0.5db
Resolution	0.01dB
Power Requirements	Two AA 1.5V batteries (approx. 100 hours continuous operation)
Connector Interface	SOC
Operating Temperature	-15º C to +55º C
Storage Temperature	-35º C to +70º C
Humidity	0 to 95% non-condensing
Dimensions	7.2 x 14.2 x 3.5 cm (2.8 x 5.6 x 1.4 in.)
Weight	241g (8.5 oz.)
CE	EN61010; EN50081-1:1992; EN55011,Group1, Class A EN50082-1: 1992 IEC 801-2, -3, -4
Typical Power Output (µm)	
200/230 SI Fiber	-15dBm ±0.5dB
Modulation Frequencies	270Hz, 1kHz and 2kHz
Power Requirements	Two AA 1.5V batteries (approx. 24 hours continuous operation)

573XL & 573XL-UNIV 650NM LED SOURCE FOR LARGE CORE PLASTIC AND GLASS FIBER (FORMERLY 253B-POF)

FEATURES

- Stable Calibrated output Storage
- Continuous wave and modulated output
- Easy to use
- Long battery life
- User selectable auto shut-off
- 650nm wavelength
- Rugged and splash-proof
- Fixed ST and SOC Adapter options are available

577XL M90 850nm LED SOURCE WITH M90 LAUNCH CONDITIONS (62.5/125µm FIBER)

FEATURES

- Stable calibrated output
- Easy to use
- Continuous wave and modulated output
- Long battery life - approx. 24 hours
- User selectable auto shut-off
- Rugged and splash-proof
- Economically priced
- UCI Adapter options are available
- 850nm wavelength

577XL AS100 850NM LED SOURCE WITH AS-100 LAUNCH CONDITION (100/140µM FIBER)

FEATURES

- Stable calibrated output
- Easy to use
- Continuous wave and modulated output
- Long battery life - approx. 24 hours
- User selectable auto shut-off
- Rugged and splash-proof
- Economically priced
- UCI Adapter options are available
- 850nm wavelength

578XL M90 1300NM LED SOURCE WITH M90 LAUNCH CONDITION (62.5/125µM FIBER)

FEATURES

- Stable Calibrated output Storage
- Continuous wave and modulated output
- Easy to use
- Long battery life
- User selectable auto shut-off
- 1300nm wavelength
- Rugged and splash-proof
- UCI Adapter options available (options are available)

XL SERIES LED SOURCES

	573XL	577XL	578XL
Nominal	650nm	850nm	1300nm
Range (nm)	630 - 670	840 - 880	1270 - 1345
Max. spectral width (FWHM)	40nm	55nm	150nm
Stability, 1 hour	±0.05dB	±0.05dB	±0.05dB
POWER OUTPUT			
200/230µm SI MM fiber	-15dBm ***		–
100/140µm GI MM fiber	–	-20dBm**(AS-100)	-20dBm
62.5/125µm GI MM fiber**	–	-20dBm** (M90)	-20dBm** (M90)
50/125µm GI MM fiber	–		-21dBm
9/125µm SM fiber	–	–	-38dBm
Power output uncertainty	±0.5dB	±0.5dB	±0.5dB
Connector interface	SOC or ST	Universal connector interface	
Functions	MOD: Modulated output mode (270Hz, 1kHz, 2kHz) CW: Continuous Wave output mode Freq: selectable modulation frequency		
Modulation frequencies	270Hz, 1kHz, and 2kHz (±0.5%) using switch inside battery compartment		
Power requirements	Two AA-size alkaline batteries		
Battery life	> 24 hours		
ENVIRONMENT			
Operating Temperature	-15°C to 55°C		
Storage Temperature	-35°C to 70°C		
Humidity, Non-Condensing	0% to 95%		
Dimensions	7.2 x 14.2 x 3.5cm (2.8 x 5.6 x 1.4in)		
Weight			
Single	215g (7.6oz)		

* Within specified operating environment of 20°C to 25°C

** Calibrated launch level, equilibrium modal distribution

*** Calibrated launch level

560XL-EMI FIBER OPTIC POWER METER WITH ENHANCED EMI PERFORMANCE

FEATURES

- 0.01dB measurement resolution
- Multi-Wavelength Storage
- SOC interface adapts to all commonly used connectors*
- Long battery life
- Absolute (dBm) & Referenced (dB) Power measurements
- User selectable auto shut-off
- Rugged and splash-proof
- Economically priced
- Enhanced EMI performance: MIL-STD-461E, Method RS103, tested to 190 V/m
- Engineered for use in areas with high electrical interference

OPTICAL SPECIFICATIONS

Detector Type	1mm InGaAs
Calibration Wavelengths (nm)	850, 1300, 1310, 1550
Power Range	+3dBm to -60dBm
Accuracy	±0.25dB
Resolution	0.01dB
Power Requirements	Two AA 1.5V batteries (approx. 100 hours continuous operation)
Connector Interface	SOC

570XL-AS100-EMI 850/1300NM LED SOURCE WITH ENHANCED EMI PERFORMANCE

FEATURES

- Stable calibrated output
- 850nm / 1300nm wavelength LED Source
- Long battery life - approx. 80 hours
- Continuous wave and modulated output
- User selectable auto shut-off
- Supports a wide range of UCI connectors, including FC, SC, and ST
- Economically priced
- Enhanced EMI performance: MIL-STD-461E, Method RS103 tested to 200 V/m
- Easy to use
- Configured to meet AS100 launch conditions
- Rugged and splash-proof

OPTICAL SPECIFICATIONS

Detector Type	1mm InGaAs
Calibration Wavelengths (nm)	850nm, 1300nm
Power Range	820nm to 880nm; 1270nm to 1345nm
Accuracy	±0.25dB
Resolution	0.01dB
Power Requirements	Two AA size 1.5V batteries (approx. 40 hours continuous operation)
Connector Interface	UCI

580XL-EMI 1310/1550NM LASER SOURCE WITH ENHANCED EMI PERFORMANCE

FEATURES

- Stable calibrated output
- 1310nm / 1550nm wavelength Laser Source
- Long battery life - approx. 80 hours
- Continuous wave and modulated output
- User selectable auto shut-off
- Easy to Use
- Enhanced EMI performance: MIL-STD-461E, Method RS103 tested to 200 V/m
- Supports a wide range of UCI connectors, including FC, SC, and ST
- Rugged and splash-proof
- Economically priced

OPTICAL SPECIFICATIONS

Centre Wavelength	1310nm	1550nm
Range (Typical)	1280nm to 1340nm	1520nm to 1580nm
Max. Spectral Width (FWHM)	<5nm	<5nm
Stability (1 hour)	±0.05dB	±0.05dB
Typical Power Output (9/125µm)		
Minimum	-8dBm	-8dBm
Typical	-7dBm	-7dBm
Modulation Frequencies	270Hz, 1kHz and 2kHz	270Hz, 1kHz and 2kHz
Power Requirements	Two AA 1.5V batteries (approx. 80 hours continuous operation)	
Connector Interface	UCI	

ORDERING INFORMATION- XL *fiber*TOOLS™ SERIES:

PART NO.	CAT. NO.	DESCRIPTION
52058723	00025	567XL Silicon Fiber Optical Power Meter
52058784	00023	573XL 650nm LED Source with Fixed ST Connector
52061770	00598	573XL 650nm LED Source with SOC Adapter Interface
52058727	00029	577XL-AS100, 850nm LED Source with 100/400μm Launch Condition
52058726	00027	577XL-M90, 850nm LED Source with 62.5/125μm Launch Condition
52061054	00753	578XL-M90, 1300nm LED Source with 62.5/125μm Launch Condition
52060994	00244	560XL-EMI HH OPM, INGAAS, EMI SHIELDING
52060995	00245	570XL-AS100-EMI HH DUAL LED SOURCE, EMI SHIELDING
52060996	00246	580XL-EMI HH LASER SOURCE, EMI SHIELDING

SNAP ON CONNECTOR (SOC) FOR XL SERIES INSTRUMENTS

Snap On Connectors (SOC) are used on the XL Fiber Optic Power Meters and 573XL LED light source. The Snap On Connectors configure the instruments for various optical connectors. Contact Tempo Communications for other available adapters.

FC	ST	SC
T1020	T1030	T1062

UNIVERSAL CONNECTOR INTERFACE (UCI)
FOR XL SERIES INSTRUMENTS

Users will need to purchase a Universal Connector Interface (UCI) adapter for use with specific light sources. Please specify the desired connector adapter type when ordering.

FC	SC	ST
APC-108	ASC-108/C	ATS-108

FEATURES

- Our SOC and UCI adapters provide direct connectivity for Tempo Communications fiberTOOLS® to a wide range of industry-standard fiber optic connectors
- Adapter design ensures maximum accuracy and repeatability when performing critical measurements on fiber optic systems
- Easy to clean and use
- Single-mode and multimode compatible
- SOC adapters are compatible with both PC and APC interfaces
- UCI adapters feature durable phosphor bronze alignment sleeve

CONNECTOR		SOC Adapter			
DESCRIPTION		PART NO.	CAT. NO.	PART NO.	CAT. NO.
1.25 mm Quick-Connect Universal Adapter (LC, MU, etc.)		50605881	T1026	USE HYBRID CABLE	
FC		50605768	T1020	50605720	APC-108
LC		50606000	T10LC	USE HYBRID CABLE	
MIL-T-29504/4 & /5 Termini		50605898	T1038	USE HYBRID CABLE	
SC		50605751	T1062	52039964	ASC-108/C
ST		50605775	T1030	50605737	ATS-108
Versatile Link – V/Z PIN		50606048	T10ZP	USE HYBRID CABLE	
SMA 905/906		50605966	T1087-POF	N/A	
ST		52040191	T1030-POF	N/A	

TIA-568B & FOTP-171A CERTIFIED REFERENCE CABLES

SPECIFICATIONS:

Ferrule OD	2.4990 ±0.0005mm
Fiber to Ferrule Eccentricity	<0.25µm (SM) and <3µm (MM)
Insertion Loss	<0.15dB (SM, 1310/1550nm) and <0.25dB (MM, 850/1300nm)
Return Loss	>55dB (SM, 1310/1550nm) and >40dB (MM, 850/1300nm)
Beam Exit Angle	<0.25° (SM) and <0.5° (MM)
Standard Length	3m

HOW TO ORDER CABLE ASSEMBLY:

USE FOR SPECIFYING A PATCH CORD, PIGTAIL OR A CUSTOMER-SUPPLIED DEVICE.

Order Length ≤5 meters, Final Length -0% / +5% Order Length ≥5 meters, Final Length -0%/ +10% Minimum Order Length: 1 foot. For shorter lengths, please call the factory!

ENTER ORDER CODES FROM PRICE LIST: ☐☐☐☐–☐☐☐**R**☐☐ ☐☐–☐☐

CONNECTOR #1

CONNECTOR #2
ADDITIONAL OPTIONS:
00 = NO CONNECTOR
02 = CUSTOMER COMPONENT PIGTAIL

CABLE CODE LENGTH
IF FRACTIONAL LENGTHS:
"R" IS SUBSTITUTED FOR
DECIMAL POINT

= METERS
F = FEET, N = INCHES

CUSTOM OPTIC CODE
OPTIONAL

ACCESSORIES

*fiber*TOOLS™ HARD CARRY CASE

FEATURES

- Designed to hold Tempo handheld instruments and a full range of test accessories.
- Top tray holds up to 3 handheld instruments and a 180XL Visual Fault Finder
- Bottom compartment of both models stores additional instruments and test accessories
- Compact, waterproof and lockable
- Moulded from black structural foam resin

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50606840	900B	Carry Case Ruggedised 3 Unit

SPECIFICATIONS:

Weight: 500g
Dimensions: 380 x 185 x 180mm

*fiber*TOOLS™ SOFT CARRY CASE

FEATURES

- Designed to hold a variety of Tempo OTDRs, Fiber Testers, Tools and accessories.
- 930C Soft Carry Case
- Suitable for multiple instrument storage
- Can hold up to 2 OTDRs and accessories
- Pockets for accessory and cleaning material storage
- Compact and lightweight
- Shoulder strap

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52034541	20988	Soft Carry Case

SPECIFICATIONS:

Weight: 500g
Dimensions: 380 x 185 x 180mm

FIBER HAND TOOLS

PROGRIP 5-IN-1 FIBER OPTIC STRIPPER

FEATURES

- Precision ground stripping cavities for:
  - 2.0 - 2.4mm outer jacket
  - 2.0 - 3.0mm loose tube
  - 2.8 - 3.0mm outer jacket
  - 900µm buffer insulation
  - 900/125µm and 250/125µm buffer/acrylate
- Factory calibrated
- Dual-durometer ProGrips for improved comfort and control

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52055935	PA1171	Pro-Grip Stripper, 5-in-1 Fiber Optic

SPECIFICATIONS:

Weight: 140g
Dimensions: 173mm

PROGRIP 3-IN-1 FIBER OPTIC STRIPPER

FEATURES

- Precision ground stripping cavities for:
  - 2.0mm outer jacket
  - 900µm buffer insulation
  - 250/125µm buffer/acrylate
- Factory calibrated
- Dual-durometer ProGrips for improved comfort and control

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52055938	PA1177	Pro-Grip Stripper, 3-in-1 Fiber Optic

SPECIFICATIONS:

Weight: 130g
Dimensions: 160mm

MIDSPAN SLITTER

FEATURES

- The Mid Span Slitter is an efficient and indispensable tool for fiber optic cable termination.
- The sharp blade is made of super-alloy, suitable for longitudinal stripping of outdoor optical loose tube cable.
- The stripping opens the tube on upper and lower sides for easy access of the fiber.
- The Mid Span Slitter comes with 4 groove diameters. Select the proper groove, put in the loose tube, press the blade into the tube coating, close and clamp the two half grooves, and move the blade along the tube to strip.

BENEFITS

- Small, light weight design for maximum portability
- Simple operation without any adjustments
- Provides easy access to fiber
- Super-alloy blade ensures precision and continued sharpness after multiple uses
- Four groove diameter options:
  (Ø 1.5~Ø 1.9mm) / (Ø 2.0~Ø 2.4mm) / (Ø 2.5~Ø 2.9mm) / (Ø 3.0~Ø 3.3mm)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52076413	05712	Sheath Slitter

SPECIFICATIONS:

Weight: 30g	
Dimensions: 50 x 40 x 25mm	

ECONOMY KEVLAR® CUTTER

FEATURES

- Cut protective Kevlar® strands in fiber optic cable
- Hard-chromed serrated edges to easily cut through Kevlar®
- Comfortable handles with large finger openings

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051283	PA1511	Kevlar® Cutter

SPECIFICATIONS:

Weight: 60g	
Dimensions: 197mm	

ALSO SEEN IN THE HAND TOOLS CATALOG

LIFETIME WARRANTY

ECONOMY FIBER OPTIC STRIPPER

FEATURES

- Pre-calibrated and factory set to ensure precision
- Rubber dipped handles
- Lock closure for safety and transport
- Strips 2.0 to 3.0mm fiber jacket, 900μm buffer and 125μm acrylate
- Spring loaded closure with distance stops

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050605	PA1162	Stripper Fiber Optic 3-Level

SPECIFICATIONS:

Weight: 86g	
Length: 127mm	

UNIVERSAL SLITTER

FEATURES

- Strips and slits 4.5-25mm diameter Round Cables
- Precision stripping and slitting of rubber, PVC, nylon and most insulation materials
- Adjustable depth of cut
- Circumferential, longitudinal and spiral cuts
- Cable is supported during use
- Cable support arm edge is used to pry off thick insulation
- Laser-trimmed, stainless-steel blade for long use
- A perfect tool for mid-point taps
- Spare blade included

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050604	PA1822	Cable Slitter 4.5-25mm Inch Clamshell
52050563	PA2109	Replacement Blade (Qty 2)

SPECIFICATIONS:

Weight 7 oz. (200g)	
Length 5.7" (145mm)	

ROUND CABLE CUTTERS

FEATURES

- To cut fiber outer cable jacket
- Cuts solid or stranded cable up to AWG 6
- Precise and effortless cuts
- Round cutting form minimises cable deformation
- Both are ideal for UTP and Coax, RG58, RG59 and RG6/6Q; Use PA1175 for RG7 and RG11

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52055936	PA1175	Pro-Grip Cutter, Contour Cable Cutter
52055940	PA1179	Pro-Grip Cutter, Dual Contour Cable Cutter

POCKET PROBE PICK

FEATURES

Probe pick for pulling wire, slicing, stripping cable and cleaning debris off terminal panels. Small and lightweight. Pen-sized with clip for carrying in pocket.

- Spudger tip
- Wire hook
- Wire stripper and slitting tooth
- Non-conductive scraping tip

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52049188	PA1915	Pocket Probe Pick/Blister

SPECIFICATIONS:

Weight: 3oz. (86g)	
Dimensions: 6.5" (166mm)	

RING AND SLIT STRIPPER

FEATURES

- Ring and Slit stripping for 1.2mm – 6.4mm fiber optic cables
- Easy fast adjustment for various cables diameters
- Ring Blade Kit TCCPS-RING-2 contains one blade, knob and pin
- Slit Blade Kit TCCPS-SLIT-2 contains one blade, lever and screw

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52085475	TCCPS	Cable Slit and Ring Stripper

SPECIFICATIONS:

Weight: 0.05lbs (22g)	
Dimensions: 2.87" (72.9mm)	

ALSO SEEN IN THE HAND TOOLS CATALOG

LIFETIME WARRANTY

DROP CABLE STRIPPER

FEATURES

- Strips 8.1mm drop cables
- Provides midspan slit operation for 8.1mm drop cables
- Easy secure operation for quick stripping
- Replacement Blade Kit TCDCS-2 contains six individual blades

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52086521	TCDCS	Drop Cable Stripper

SPECIFICATIONS:

Weight: 0.15lb (68g)

Dimensions: 3.26" (82.8mm)

MULTI BIT DRIVER

FEATURES

- Versatile multi-bit screwdriver, 6 tools in one
- Precision machined, hardened steel bits
- High-grade, rust resistant, chrome-plated finish
- Soft, cushioned grip for extra comfort and torque
- Lifetime limited warranty

**Note: This is not an insulated tool

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52024842	SD-6-1	Multi Bit 6-in1 Driver

SPECIFICATIONS:

Weight: 0.188 kg

Dimensions: Nutdriver 1/4" and 5/16"

PA1180 NEEDLE NOSE PLIERS

FEATURES

- Needle-nose with knurled surface for gripping, wrapping and looping
- Side cutter for AWG 19-26 copper
- Non-slip grips for precision control
- Stripping cavity for AWG 22 wire
- Crimp capacity:
  - UR: AWG 19-26
  - UY: AWG 22-26
  - UG: AWG 19-26

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52055941	PA1180	NEEDLE NOSE PLIERS

SPECIFICATIONS:

Weight: 0.15lb (68g)

Dimensions: 3.26" (82.8mm)

©2021 Tempo Communications Inc. | An ISO 9001 Company

BARE FIBER ADAPTER

FEATURES

- Popular SC type connector with PC ferrule
- Easy to clean
- Smooth fiber feed
- Temporarily connect to fiber under test
- 900 micron buffer compatible

SPECIFICATIONS:

Ferrule diameter	2.5mm
Capillary diameter	Nominal -0 / +10um
Buffer diameter	250-900um
Fiber strip length	40mm

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52080175	BFA-1	Bare fiber Adapter Kit

FIBER OPTIC SCRIBE

FEATURES

- Pen-type scribe with screw-in non-reversible carbide tip
- Wedge shaped tip
- Pocket-clip
- Stainless steel barrel

SPECIFICATIONS:

Weight	2oz (57g)
Length	5.25" (197mm)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050965	PA1922-1	Fiber Optic Carbide Scribe

FIBER TOOL KITS

The Tempo Communications Fiber Optic Tool Kits provides four kit options to satisfy varying tasks that the fiber optic technician may encounter. The tool kits contain all the common tools required to effectively and safely complete the job in an efficient manner.

Each tool kit is supplied in a rugged carry case to safely keep all tools organized for easy storage and retrieval for use. Extra pockets are incorporated to hold accessories and other tools. The FTK-B, Basic tool kit provides a variety of cutters, strippers and common handtools that the typical technician would use in their day to day activities. The FTK-P, Pro tool kit adds the 180XL visual fault locator for safe and quick visual identification of cut or damaged fiber, Macrobends and contaminated or damaged connectors.

The FTK-PP, Pro Plus tool kit adds the OPM210 optical power meter/visual fault locator to the FTK-B. This enables the technician to visually locate fiber and connector faults and to measure the absolute power in fiber networks.

The FTK-T, Termination kit provides all of the tools needed to quickly and effectively terminate fiber optic cables. The 915CL and 180XL are the key components along with a fiber stripper, side cutter and Kevlar shear.

FTK-B BASIC TOOLS KITS

A basic tool kit allows the technician cut, strip and prepare fiber optic cables for termination.

INCLUDES

- Kevlar Cutter
- 3-in-1 Fiber Optic Stripper
- Universal Slitter
- 6-in-1 Multi Tool
- Long Nose Pliers
- Fiber Optic Tool Case
- Side cutters
- Drop Cable Stripper
- Mid Span Slitter
- Ring and Slit Stripper

FTK-P PRO TOOLS KIT

Same tools as the FTK-B but with a 180XL Visual Fault Locator (VFL) to visually locate faults and two fiber cleaning pens.

INCLUDES

- Kevlar Cutter
- 3-in-1 Fiber Optic Stripper
- Universal Slitter
- 6-in-1 Multi Tool
- Visual Fault Locator
- Long Nose Pliers
- Fiber Optic Tool Case
- Side cutters
- Drop Cable Stripper
- Mid Span Slitter
- Ring and Slit Stripper
- 2.5mm Fiber Cleaning Pen
- 1.25mm Fiber Cleaning Pen

FTK-PP PRO PLUS TOOLS KIT

Same tools as the FTK-P but with a Micro OPM which has an Optical Power Meter (OPM) and Visual Fault Locator (VFL). The OPM can be used to measure optical power, perform loss testing and to sense tones present on the fiber. The VFL can be used to visually locate faults and to test mechanical connectors.

INCLUDES

- Kevlar Cutter
- 3-in-1 Fiber Optic Stripper
- Universal Slitter
- 6-in-1 Multi Tool
- Micro OPM
- Long Nose Pliers
- Fiber Optic Tool Case
- Side cutters
- Drop Cable Stripper
- Mid Span Slitter
- Ring and Slit Stripper
- 2.5mm Fiber Cleaning Pen
- 1.25mm Fiber Cleaning Pen

FTK-T TERMINATION TOOLS KIT

Contains all of the tools needed to terminate fiber optic cables with a mechanical connector

INCLUDES

- Kevlar Cutter
- 3-in-1 Fiber Optic Stripper
- 915CL Cleaver
- Fiber Optic Tool Case
- Visual Fault Locator
- Side Cutter

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52086508	FTK-B	Basic Fiber Tool Kit
52086509	FTK-P	Pro Fiber Tool Kit
52086510	FTK-PP	Pro Plus Fiber Tool Kit
52086866	FTK-T	Termination Fiber Tool Kit

INDIVIDUAL TOOL FROM KITS:

PART NO.	CAT. NO.	DESCRIPTION
52051283	PA1511	Kevlar Cutter
52055938	PA1177	3-in-1 Fiber Optic Stripper
52050604	PA1822	Universal Slitter
52024842	TCBMD	6-in1 Multi Tool
55500025	OPM210	Standard Power OPM with VFL
52055941	PA1180	Long Nose Pliers
52085476	FIBKIT CASE	Fiber Optic Tool Case
52055936	PA1175	Side cutters
52086521	TCDCS	Drop Cable Stripper
52076413	MSS100	Mid Span Slitter
52085475	TCCPS	Ring and Slit Stripper
52068671	180XL	Visual Fault Locator

OTHER TOOLS AVAILABLE:

PART NO.	CAT. NO.	DESCRIPTION
52087221	FCL100	Field Fiber Optic Cleaver
52082727	920CL	920CL Optical Fiber Cleaver
52080175	BFA-1	Bare Fiber Adapter
52050560	PA1820	AM25 Slitter (0.18" – 1.0")
52050561	PA1821	AM35 Slitter (1.0" – 1.4")
52050605	PA1162	Economy Stripper
52049188	PA1915	Pocket Probe / Pick
52050965	PA1922-1	Fiber Optic Carbide Scribe

REPLACEMENTBLADES FOR STRIPPING TOOLS:

PART NO.	CAT. NO.	DESCRIPTION
52086502	TCDCS-2	DROP CABLE STRIPPER BLADE KIT (six blades)
52086503	TCCPS-RING-2	CPS RING BLADE KIT (one replacement blade with hardware)
52086504	TCCPS-SLIT-2	CPS SLIT BLADE KIT (one replacement blade with hardware)

OPTICAL WAVELENGTH SPLITTER

Wavelength division multiplexing (WDM) is a technology or technique modulating numerous data streams, i.e. optical carrier signals of varying wavelengths (colours) of laser light, onto a single optical fiber.

Our Optical Wavelength Splitter (OWS200) allows any technician, who has a standard OPM (Optical Power Meter) to be able to measure signal levels in WDM networks.

The OWS200 "splits" multiplexed wavelengths, found in NGPON2 networks allowing specific wavelengths to be measured with a conventional optical power meter such as the OPM510.

FEATURES

- High accuracy to measure specific channel wavelengths
- Eliminates the need for expensive DWDM power meters
- Wavelength configurable for specific customer equipment
- Configurable for 2, 4 and 8 wavelengths
- Low loss
- SC/APC connections
- Low return loss will not disrupt network
- Compact design
- Convenient lanyard to securely hold

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
55500164	OWS201	OWS 1490 & 1570nm
55500166	OWS202	OWS 1490 & 1577nm

WATCH OUR PRODUCT VIDEO
CLICK HERE

DROP FIBER ENCLOSURE

The Drop Fiber Enclosure is used to facilitate repairs of fiber optic cables. Common fiber sizes of 8.1mm, 5.4mm and 5.1mm rectangular cables and 5.1mm round cables are accommodated with the supplies sealing gaskets. Both fusion splices (total of 12) and mechanical splices are securely positioned within the IP67 rated enclosure. The enclosure can be permanently buried, mounted on to the side of a building or can be mounted onto a pole utilizing the integrated pole mounting brackets.

FEATURES

- Allows technician to repair drop cables in FTTx applications
- Direct bury, wall mount or pole mount
- Fusion splice or mechanical splice
- Up to fourteen fiber capacity
- Two are required due to no slack and damage to cable
- IP67 rated

- Integrated tabs to position and hold fibers in place
- Common fiber sizes of 8.1mm, 5.4mm and 5.1mm rectangular cables and 5.1mm round cables
- Kit contents:
  - Enclosure
  - Two mechanical splices
  - Two gaskets for each of the fiber sizes

WATCH OUR PRODUCT VIDEO
CLICK HERE

INDIVIDUAL GASKET FOR EACH CABLE SIZE:

8.1mm Rectangular   5.1mm & 5.4mm Rectangular   5.1mm Round

COMPONENT PARTS:

PART	QTY
Case Top	1
Case Bottom	1
8.1mm Rectangular Cable Gasket	2
5.1mm & 5.4mm Rectangular Cable Gasket	2
5.1mm Round Cable Gasket	2
Mechanical Splice	2

STRUCTURE:
EXAMPLE OF FIBER OPTIC SPLICE
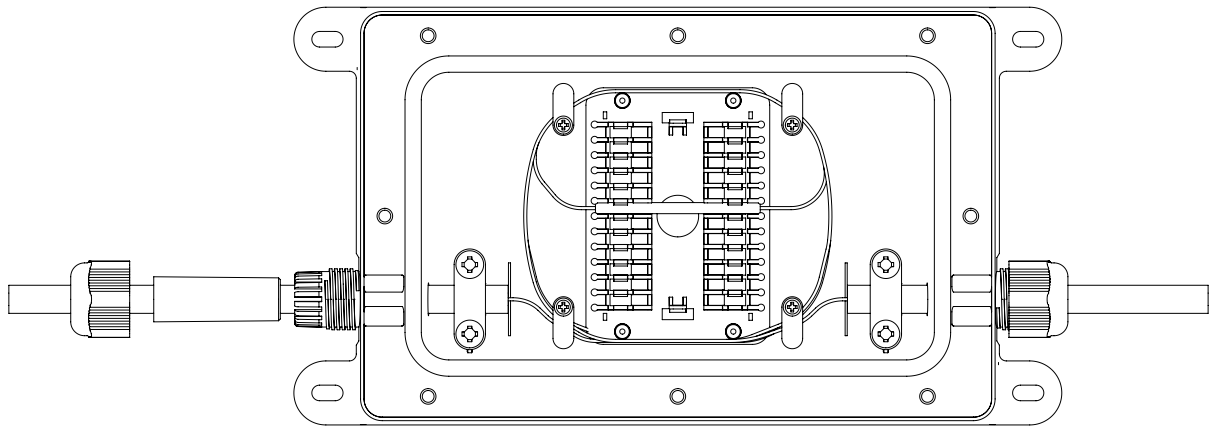
SPECIFICATIONS:

Size	160.0 x 95.0 x 32.5mm
Material	ABS with Polycarbonate (UV resistant)
Cable Size	5.1mm, 5.4mm & 8.1mm rectangular & 5.1mm round
Mechanical Splice Locations	Two
Fusion Splice Locations	Twelve (3 x 60mm)
IP Rating	IP67
Weight	0.115kg
Color	Black
Operating Temperature	-40 to +80C
Storage Temperature	-40 to +80C

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
55500211	DFE100	Drop Fiber Enclosure

EML100 ELECTRONIC MARKER LOCATOR

Tempo have introduced the 92 kHz markers, targeted at marking fiber optic cable installations, in response to requests from telecom companies who wish to differentiate their ducts carrying copper communication cables from those carrying fiber optic communication cables. It has also been found in practice that installing metallic tracer wires or tapes alongside or in fiber optic ducts is unreliable; they rarely have proper continuity for the whole duct length, often found corroded or not connected at joints.

Tempo Communications' Marker-Mate electronic marker locator along with, OmniMarker and Spike Marker buried electronic markers form a complete solution for marking and locating buried utilities and other devices to depths of at least 1.5m. Ideally suited to marking fiber optic ducts that, without metallic elements, are otherwise difficult to pinpoint.

FEATURES

- Detects up to nine different marker types
- Rapid switching between scan and single modes
- Digital signal processor accuracy
- Bar graph, numeric & audible signal strength indicators
- Headphone jack
- Low battery warning
- Weather resistant
- Scan mode provides simultaneous detection of all marker types
- User-adjustable Detection Threshold
- Large-character display
- Adjustable speaker volume
- Battery level indicator
- Adjustable time out feature
- Rugged construction

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50607984	EML100	Electronic Marker Locator
52085007	OM-02	OmniMarker II, CATV
52085016	OM-04	OmniMarker II, Fiber Optic
52085015	OM-07	OmniMarker II, Europower
55500096	SM-02	SPIKE MARKER ORANGE-BLACK 77 KHZ CATV (50 PACK)
55500097	SM-03	SPIKE MARKER YELLOW 83 KHZ GAS (50 PACK)
55500101	SM-08	SPIKE MARKER BLUE 145 KHZ WATER (50 PACK)

GENERAL	
Housing Material	High density welded polyethylene
Identification	Solid moulded colour and moulded text
Detection Range	1.5m typical for all models (using Tempo EML-100 or RD8000MRX)
Detection Offset	15cm maximum at 1.5m
ELECTRICAL	
Detection Field	Vertical Dipole (OmniMarker II model)
Frequency Tolerance	± 0.35 %
MECHANICAL	
Overall Diameter	100mm max
Anchoring	Two "tie down" loops along flange.
Length	128mm

SACRIFICIAL CONNECTORS

The sacrificial connector is used to protect the optical port of fiber optic test equipment and instruments. The sacrificial connector ensures that repeated mating's have no detrimental effect on the optical port (bulkhead) which can lead to reflectivity and insertion loss issues.

A damaged bulkhead is expensive to repair and will take the instrument out of commission. A sacrificial connector, on the other hand, can be replaced when worn or damaged and a new sacrificial connector installed. With near 0dB loss through this connector, there is no impact on the test results.

FEATURES

- Prevents damage to instrument and equipment bulkheads
- Low insertion loss
- Low reflectance
- GR326 / IEC61300-2 compliant
- GR910/ UV94-V0 compliant
- RoHS compliant

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
55500159	ZDBSCA	Zero dB SC/APC
55500160	ZDBSCU	Zero dB SC/UPC
55500161	ZDBSCAU	Zero dB SC/APC (M) -SC/UPC (F)
55500163	ZDBSCUA	Zero dB SC/APC (F) -SC/UPC (M)

SPECIFICATIONS:

Fiber Type:	Single Mode	
Operating Wavelength:	1310nm & 1550nm	
Ferrule Type:	PC	APC
Maximum Insertion Loss:	0.5dB	
Return Loss:	≥40dB	≥55dB
Maximum Optical Power:	≤500mW	
Operating Temperature:	-40 - +70℃	
Storage Temperature:	-40 - +70℃	
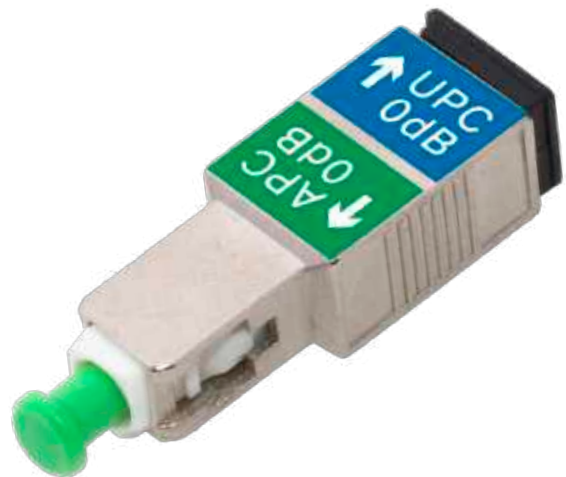
MAINTENANCE
OF FSP200, 915FS, FCL200, 915CL AND 920CL

- Turn off splicer.
- Use lint free swabs.
- Do not touch the electrodes.
- Never use compressed air.
- Use the cleaning brush only to clean debris from general working area, never on the lenses, V-grooves or mirrors.

V-GROOVES (RECOMMENDED DAILY). SEE FIGURE 1.
Clean the bottom of the V-groove using 99% pure isopropyl alcohol and a lint free swab.

Fiber Clamps (Recommended Daily)

If contaminants are present on the clamps, proper clamping may not occur resulting in poor quality splices. The fiber clamps should be frequently inspected and periodically cleaned during normal operation. To clean the fiber clamps do the following:

- Clean the surface of the clamps with 99% pure isopropyl alcohol and a lint free swab.

WIND PROTECTOR MIRRORS (RECOMMENDED DAILY ON 910FS). SEE FIGURE 2.
If the wind protector mirrors become dirty, the fiber core position may be incorrect due to decreased optical path clarity, resulting in higher splice loss. To clean the mirror's, do the following:

i. Clean the mirror surface using 99% pure isopropyl alcohol and a lint free swab.
ii. Mirror should look clean with no streaks or smudges.

OBJECTIVE LENSES (RECOMMENDED WEEKLY). SEE FIGURE 3.
If the objective lens' surface becomes dirty, normal observation of the core position may be incorrect, resulting in higher splice loss or poor splicer operation. Therefore, clean both of them at regular intervals. Otherwise, dirt may accumulate and become impossible to remove.

To clean the objective lenses do the following:

i. Before cleaning the objective lenses, always turn off the splicer.
ii. Gently clean the lenses' (X-axis and Y-axis) surface with a dry lint free swab. Using the swab, start at the centre of the lens and move the swab in a circular motion until you spiral out to the edge of the lens surface.
iii. The lens surface should be clean and free of streaks or smudges.
iv. Turn on the power and make sure no smudges or streaks are visible on the monitor screen. Press X/Y key to change the screen and check the state of the lens surface on both the X- and Y-screens.

NOTE:
Do not touch the electrodes when cleaning.
It is recommended to clean the objective lenses when replacing the electrodes.
General Fusion Splicer Cleaning (Recommended Daily)
Use the cleaning brush only to clean debris from general working area, never on the lenses, V-grooves or mirrors.
Periodically clean the fiber adapters with 99% isopropyl alcohol and a lint free swab. Never touch the fiber clamping area of the fiber adapters.

GENERAL FUSION SPLICER CLEANING (RECOMMENDED DAILY)
Use the cleaning brush only to clean debris from general working area, never on the lenses, V-grooves or mirrors. Periodically clean the fiber adapters with 99% isopropyl alcohol and a lint free swab.
Never touch the fiber clamping area of the fiber adapters.

CLEANING FIBER CLEAVER (RECOMMENDED DAILY)
If the circular blade or clamp pads of the fiber cleaver become contaminated, the cleaving quality could degrade. This may lead to fiber surface or end-face contamination, resulting in higher splice loss.Clean the edge of the circular cleaving blade and clamp pads with a lint free swab using 99% pure isopropyl alcohol.

FIGURE 1	FIGURE 2	FIGURE 3

Clean V-Groove daily

Mirror cleaning in lid

Objective Lens

*The above procedures are also recommended for the 910FS and 910CL

OPTICAL POWER
METER CALIBRATION GLOSSARY

ABSOLUTE POWER STANDARDS:

The reference photodetectors maintained by the National Institute of Standards and Technology (N.I.S.T.) in Boulder, Colorado. These reference photodetectors are used to transfer optical power calibration to two sets of Secondary Standards maintained by Tempo Communications Ltd.

ACTIVE SET OF SECONDARY STANDARDS/ACTIVE SECONDARY STANDARD:

The most recently calibrated set of Secondary Standards, which are used to calibrate Working Standards used on the production floor. An Active Secondary Standard is one of the photodetectors in the Active Set of Secondary Standards.

ADAPTER:

A mechanical device enabling the coupling and uncoupling of a connector. A bulkhead adapter is used to couple two terminated cable ends. An interface adapter is used to connect a cable to a light source, photodetector, or other device.

AGING OF STANDARDS:

A gradual deviation from specifications due to wear and the deterioration of associated electronic components.

ANSI CERTIFICATE OF CALIBRATION:

A Certificate of Calibration (see below) that includes additional information specified by American National Standards Institute document ANSI/NCSL Z540. In addition to manufacturer, performance, and traceability information, an ANSI Certificate of Calibration must include the name and address of the customer and a detailed description of the methods and Working Standards used to perform the calibration. The calibration status of the Working Standards used must also be documented. Furthermore, an ANSI Certificate of Calibration must include a statement that the certificate or report may not be reproduced, except in full, without written permission from the calibration laboratory.

BACKUP SET OF SECONDARY STANDARDS/BACKUP SECONDARY STANDARD:

The set of Secondary Standards with calibration older than one year, but not exceeding two years. The calibration points of the Backup Set of Secondary Standards are compared to the Active Set at monthly intervals to verify the accuracy of the latter. A Backup Secondary Standard is one of the photodetectors in the Backup Set of Secondary Standards.

CALIBRATION CONDITIONS:

The specific conditions under which a calibration factor is associated with a calibration wavelength. The calibration conditions typically include the centre wavelength and acceptable spectral deviation of the laser source in use; the output power of the laser source; the reference cable type and length; the type of connectors used to terminate the reference cable, including the manufacturer; the interface adapter used; and the ambient temperature and humidity conditions.

CALIBRATION FACTOR:

A number used to correlate the response of a photodetector in a manufactured instrument with the photodetector response of a Secondary Standard or Working Standard. In instruments manufactured by Tempo calibration factors are stored in non-volatile memory, and defined for each calibration wavelength.

CALIBRATION WAVELENGTH:

A specifically defined wavelength used during the point calibration of a manufactured instrument. The absolute accuracy of measurements performed at other than the calibration wavelength may vary, depending on the response linearity of the photodetector incorporated in the instrument at that wavelength. Calibration wavelengths are listed below:

CERTIFICATE OF CALIBRATION:

A document certifying that a manufactured instrument has been calibrated or re-calibrated to conform to published specifications, and that the calibration is traceable to an established standards bureau, i.e., the N.I.S.T. A Certificate of Calibration includes the following: the name and address of the manufacturer; the model number and description of the instrument; the instrument serial number; the condition in which the instrument was received and returned, i.e., within tolerance, out of tolerance, or non-operational; the calibration date, interval, and due date for re-calibration; the conditions under which the instrument was calibrated; the procedures used to perform the calibration; the identity of the calibration technician; and a signature of an authorized representative of the manufacturer.

CONNECTOR:

A mechanical device that allows an optical fiber or cable to be repeatedly coupled or uncoupled from an interface or another cable. An optical fiber fitted with connectors is said to be connectorised or terminated.

CONNECTOR REPEATABILITY:

The ability of a connector to be mated and unmated repeatedly without affecting its attenuation, return loss and other performance specifications. A lack of repeatability is usually attributable to the inability of a connector to maintain accurate and consistent alignment of the cores of the optical fibers.

FIBER OPTIC CABLE:

An optical fiber, multiple fibers, or fiber bundles, which may include a jacket and strength members (kevlar, steel, or other materials), fabricated to meet optical, mechanical, and environmental specifications.

LINEARITY:

The ability of a photodetector to generate electrical current in amounts proportional to the incident wavelength and intensity of light.

PHOTODETECTOR:

A semiconductor device that converts light energy into an electrical current. The conversion of light energy into electrical current is, in principle, proportional and linear with the incident power, which is expressed in Watts. The conversion ratio of a photodetector is dependent on the wavelength of the light received, therefore, this wavelength must be precisely defined for a point calibration (see below) to be valid.

POINT CALIBRATION:

The correlation of electrical current produced by a photodetector, quantified in Amps, with an incident power of light energy, expressed in Watts, at a single defined wavelength. This photodetector response is expressed in Amps-per-Watt (A/W

SECONDARY STANDARDS:

The reference photodetectors maintained by Tempo Secondary Standards are calibrated at regular intervals by the N.I.S.T. using the Absolute Power Standards maintained by the Institute. Tempo maintains two sets of Secondary Standards, each set containing one reference photodetector of Si and InGaAs composition. Each set of Secondary Standards alternates as Active and Backup at one-year intervals.

SPECTRAL DEVIATION:

The difference between the actual output wavelength of a light source and its specified wavelength. Spectral deviation is usually attributable to manufacturing tolerances.

UNCERTAINTY:

The margin of error for a calibration or measurement attributable to external causes, such as connector repeatability, ambient temperature, back-reflections, or spectral deviation from a defined calibration wavelength. Uncertainty will cause slight variations in optical power measurements unless the conditions and equipment used are identical to those employed during the calibration of the instrument. Uncertainty is typically expressed in percent (%).

WORKING STANDARDS:

A set of reference optical power meters incorporating photodetectors of Si or InGaAs composition that are calibrated using an Active Secondary Standard. These reference optical power meters are used to perform a point calibration of manufactured instruments at specified wavelengths.

INSERTION LOSS MEASUREMENT

WHAT IS INSERTION LOSS?

An insertion loss (IL) measurement characterizes the light loss through a component or connection.

There are two accepted methods for measuring insertion loss, both of which may be found in reference document FOTP-171, published by the Electronic Industry Association (EIA).

Insertion loss measurements require a light source, an optical power meter, and a patch cable manufactured to precise tolerances, known as a reference cable.

In general, an insertion loss measurement is a two step process:

1) Establish a baseline power level measurement for the light source and reference cable in use. This is referred to as "referencing" or "calibration."

2) Connect the device under test and measure the difference between the measured power and the Reference power.

INSERTION LOSS MEASUREMENTS

To measure the insertion loss of a connector/cable, do the following:

STEP 1: Connect an appropriate Tempo LED or laser source to the optical power meter using a suitable reference cable. The reference cable should be 2 to 3 meters in length. See the illustration.

STEP 2: Make sure the source is in continuous wave (CW) output mode. Set the optical power meter to the output wavelength of the source using the [λ] key and to dBm units using the [dBm] key. Note that the dBm output from the reference cable should be within acceptable limits.

STEP 3: Store the reference power level by pressing the [Rel] key for a few seconds. The main numerical display should read 00.00 dB.

STEP 4: Disconnect the reference cable from the optical power meter and insert the cable to be tested using an appropriate bulkhead adapter.

Cable/connector under test

Source   Power meter
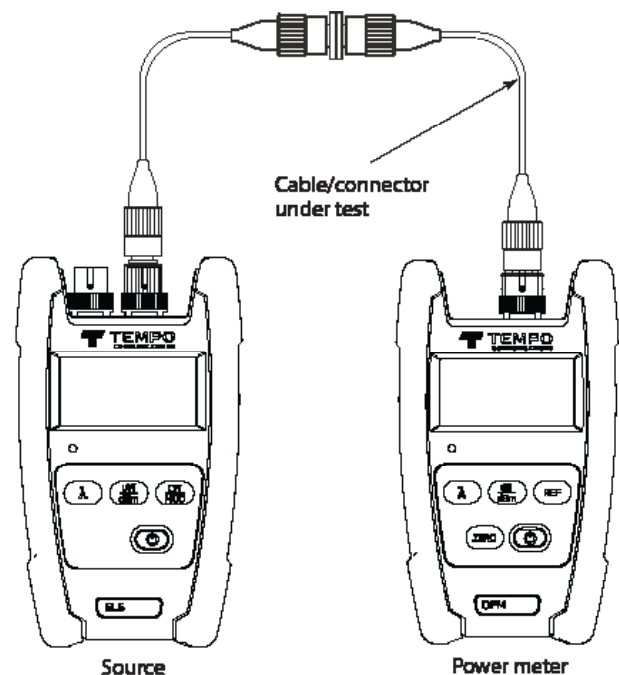
ABOUT dB, dBm, and WATTS

Fiber optic measurements are performed using decibel (dB) units.

The decibel is a logarithmic, relative, dimensionless unit it gives no indication of the absolute power level. Loss is always indicated using a minus (-) sign, and a gain is indicated by a plus (+) sign. Because dB units are relative and dimensionless, a correlation with an absolute unit of measure must be established to be useful. To indicate absolute power, logarithmic decibel units are referenced to linear Watt units: 0dBm = 1 milliwatt (mW).

To convert Watt units to dBm, the following formula is used: $P = 10 \log \left(\frac{Px}{1mW} \right) dBm$

The table on the right illustrates the relationship between absolute logarithmic dBm units and absolute linear Watt units: Absolute logarithmic dBm [P] Absolute linear Watts [Px]

dBm (P)	WATTS (Px)
+10dBm	10mW
+3dBm	2mW
0dBm	1mW
-3dBm	0.5mW
-10dBm	100µW
-20dBm	10µW
-30dBm	1µW
-40dBm	100nW
-50dBm	10nW
-60dBm	1nW
-70dBm	100pW
-80dBm	10pW
-90dBm	1pW

RETURN LOSS
MEASUREMENT METHODS

WHAT IS RETURN LOSS?

A return loss measurement characterises the strength of a reflection produced by variations in the refractive index along a fiber optic link, known as a back-reflection or Fresnel reflection. Quantified in decibel (dB) units, return loss is the logarithmic expression of the ratio of the reflected power over the incident power, that is, the intensity of light reflected back to the return loss meter over the intensity of the light injected into the fiber, expressed as a positive number.

If not controlled, back-reflections can degrade the performance of a fiber optic system by interfering with the operation of the laser transmitter, or by generating noise at the receiver.

A common source of back-reflections is the junction where two fiber optic connectors are mated. Because of this, a connector with high return loss, which sends very weak reflections back to the transmitter, is superior to a connector with low return loss that sends back strong reflections. When measuring connectors, extremely low return loss values usually indicate a defect, such as core misalignment, poor fiber end-face contact, scratches, breaks, or end-face contamination.

RETURN LOSS MEASUREMENT METHODS

OPTICAL TIME DOMAIN REFLECTOMETER (OTDR) METHOD

An Optical Time Domain Reflectometer (OTDR) launches a train of light pulses into the device under test and collects backscatter information as well as superimposed Fresnel reflections. The OTDR is optimised to accurately measure loss-per-distance based on the received backscatter level. An OTDR also gives an estimation of the strength of a reflection at a given distance based on its peak height.

RETURN LOSS DEFINED

Reflections—or more specifically Fresnel reflections—occur at the boundary between two media with different refractive indices. The percentage of the light reflected can be calculated if the refractive indices of both media are known.

The most commonly known percentage of reflected power, the 4% reflection, is caused by a glass-to-air boundary. Reflectance in general is the ratio of reflected power to incident power. When knowledge of a reflection at a discrete point is important, the term reflectance is preferred. Reflectance is expressed in negative decibels (dB). Optical return loss (ORL), often referred to as return loss, describes the ratio of reflected power over the incident power of a system as a whole. Similar in concept to reflectance, return loss is also expressed in decibels.

YOU PROMISE GIGABIT SPEEDS
NOW
YOU CAN PROVE IT.

AirScout®

DATASCOUT

The DataScout 10G™ – The smart tablet that goes beyond testing! This device features a powerful Android-based, rugged-tablet platform available with the industries only 10G Ethernet and more. This enables technicians to carry a single device powerful enough to test legacy DS0-TIMS, 10G ethernet and everything in between while simultaneously removing the need to carry a separate laptop or tablet. Training videos, as well as the user manual, are available directly from the simple to use, fast to learn, touch screen interface.

ADVANCED FEATURES

- Power-up 3X's faster than the competition*
- Test DS0-TIMS up to 10G Ethernet
- Test multiple services simultaneously
- Remote control via Bluetooth® or standard web browser

SIMPLE TO USE, FAST TO LEARN

- Touch screen tablet design
- No confusing menus
- Intuitive test configuration
- Training videos embedded in application

RUGGED & RELIABLE:

- Plug & Stay - No modules to lose!
- Replaces up to 8 handhelds*
- Aluminum case with protective rubber boot
- Designed, manufactured and supported in USA

DESIGNED FOR:

- Service Providers
- Utilities & Municipalities
- E911 Communication Networks
- Datacenters

① GOES BEYOND TESTING

- Tablet comes loaded with standard applications including web browser, email, document viewer and more.

- Onboard user manual & training videos
- Wired, Wi-Fi® and Bluetooth® remote options
- Print and Export reports to PDF or CSV

② ETHERNET & C37.94

- Dual 10/100/1000BaseT ports
- Dual 100/1000BaseX SFP ports
- Single 10Gbps SFP+ Port (a)
- Single C37.94 SFP Port (b)
- Read/Diagnose SFP data and optical power
- Quick Test (BERT)
- RFC-2544, Y.1564 and C37.94
- Mulitstream (16) test streams

- EMIX, VLAN, MPLS & Jumbo frames
- IPv4 and IPv6 included standard
- Loopback & End-to-End test modes
- Discover and loopup/down six remote units
- Automatically respond to loopup/down commands
- Save test profiles
- Easy to read graphical reports

③ 4 WIRE DDS

- CSU/DSU emulation
- 56K primary/secondary modes
- 64K clear channel mode
- Real-time received byte display
- Monitor received signal level

④ DS1 & DS3

- DS3 and Dual T1/E1 interface options
- PRI-ISDN NT/TE interface option
- G.821 PRI-ISDN data logging option
- DS0 Voice & Data Testing
- DS3-THRU mode

- Bit Display
- CSU/NIU Emulation Mode
- DDS Latching loopbacks
- Loopup/down repeaters & spans
- Replacement for TBERD 107a, 224, 227, etc.

⑤ DATACOMM

- Sync/Async & DTE/DCE modes
- 50bps-250kbps in 1 bps steps
- V.35
- EIA-530(A)

- RS449 (V.36)
- RS530
- X21 (V.11)
- High Impedance mode

- RS232 (V.28)
- Bi-directional loopback mode
- Displays DTE/DCE signal status

⑥ SIGNALING – TIMS/DS0

- Comprehensive VF test suite
- TIMS 2/4 wire signal generator up to 2MHz
- Signaling modes: LS, GS,
- DID, E&M
- CO/PBX emulation modes

- Transmit +13dB, Receive -50dB
- Impulse noise measurement
- Dropouts, gain and phase hit measurement
- Replacement for Am5, CXR 704a
- HP4935, etc.

COMPARISON CHART:

PART NO.	DS-TIMS (TIMS ONLY)	DS-SS- DDS-TIMS (ALL LEGACY)	DS-C-E2- 3-K2 (EVERYTHING)	DS10G-COMBO- ETHERNET
1G REFLECTOR FED				
10G REFLECTOR FED				
ETHERNET 1G SINGLE PORT			✓	
ETHERNET 1G DUAL PORT			✓	✓
ETHERNET 10G			✓	✓
QUICK TEST (BERT) & RFC-2544			✓	✓
ITU-T Y.1564 & MULTISTREAM (16)			✓	✓
IEEE C37.94			✓	✓
DS0 (TIMS)	✓		✓	
DS0 EXTENDED TEST RANGE	✓	✓	✓	
DS3, T1/E1		✓	✓	
T1 CSU/NIU EMULATION		✓	✓	
DUAL PORT T1/E1		✓	✓	
DDS		✓	✓	
DATACOMM			✓	
SMF & MMF JUMPERS LC & SC			✓	
MMF JUMPER LC/ST			✓	✓
SMF & MMF 1G TRANSCEIVERS (2)			✓	✓
SMF & MMF 10G TRANSCEIVER			✓	✓
MMF C37.94 TRANSCEIVER			✓	✓
MMF, SMF, COPPER LOOP PLUGS			✓	✓
ETHERNET CAT5 PATCH CABLE			✓	✓
BANTAM LEADS RED/BLUE	✓	✓	✓	✓
BANTAM TO DUAL ALLIGATOR (2)	✓	✓	✓	✓
RJ48 TO DUAL BANTAM	✓	✓	✓	✓
BNC LEADS RED/BLUE		✓	✓	✓
DDS RJ-48 TEST LEADS		✓	✓	
AC CHARGER	✓	✓	✓	✓
DC VEHICLE CHARGER	✓	✓	✓	✓
PADDED CASE	✓	✓	✓	✓
USB OTG CABLE	✓	✓	✓	✓

ETHERNET & Wi-Fi® TESTING CATALOG

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52068246	DS-LD-RJ48-BTM	TEST LEAD-RJ48(M)/DUAL BANTAM
52068250	DS-LD-SMF-SC-LC	TEST LEAD - OPTICAL, SMF SC TO LC, 6FT
52068252	DS-LD-MMF-SC-LC	TEST LEAD - OPTICAL, MMF SC TO LC, 6FT
52068260	DS-SFP-MMF-C37	SFP - 100BASE-X C37.94 850NM MMF XCVR, L
52068590	DS-LD-MMF-LC-LC	DS-LEAD-MMF-LC-LC-2M
52068621	DS-LEAD-SMF-LC-LC	DS-LEAD-SMF-LC-LC-2M
52068622	DS-ADAP-BTM-310B	S-ADAP-BTM-310-BL
52068623	DS-ADAP-BTM-310R	DS-ADAP-BTM-310-RD
52071039	DS10G-ACC-SOFT	CASE-PADDED SOFT STORAGE CASE
52071572	DS-LD-DDS-STR	TEST LEAD - DDS RJ48 STRAIGHT-THRU, 6FT
52071573	DS-LD-DDS-REV	TEST LEAD - DDS RJ48 REVERSED, 6FT
52071577	DS10G-ACC-VEH	ACCESSORY - 12VDC VEHICLE CHARGER
52071578	DS-ACC-OTG	ACCESSORY - USB 2.0 MICRO CABLE ADAPTER
52072140	DS-LD-BNC-R	TEST LEAD - BNC RED
52072141	DS-LD-BNC-B	TEST LEAD - BNC BLUE
52073056	DS-LD-BTM-R	TEST LEAD - BANTAM RED
52073057	DS-LD-BTM-B	TEST LEAD - BANTAM BLUE
52075915	DS-ACC-M-LP	ACCESSORY - MMF LOOPBACK
52075916	DS-ACC-S-LP	ACCESSORY - SMF LOOPBACK
52075917	DS-ACC-E-LP	ACCESSORY - SUPER LOOPER
52077521	DS-LD-MMF-ST-LC	TEST LEAD - OPTICAL, MMF ST TO LC
52084727	DS10G-SW-STRESS	SW OPTION - C37.94 STRESS TEST

Real-Time Testing. A simple and intuitive tool that delivers immediate results to meet the needs of your customers, all in the palm of your hand.

FEATURES

- Test Ethernet speeds up to 1 Gbps and wireless up to 1.3 Gbps
- Real-time Report Generation and Cloud Access
- Intuitive interface with visual pass/fail indicators
- Controlled via smartphone app
- Powered by industry standard Speedtest® by Ookla®
- Ensure customers get the performance they expect, where they expect it

SPECIFICATIONS:

Power	11 to 15 VDC, 1 A
Operating Temperature	0 to +60 °C (+32 to +140 °F)
Charging Temperature	–10 to +55 °C (+14 to +131 °F)
Operating Humidity	90% max, non-condensing
Storage Temperature	–20 to +70 °C (–4 to +158 °F)

HOW HEATMAP WORKS:

The AirScout GigaCheck unit, controlled via smartphone app, connects directly to a customer's residential gateway. It then tests WiFi coverage and verifies the upload and download speeds of the wired Ethernet connection in real-time, all the way up to 1 gigabit.

Technicians can also easily test WiFi speeds up to 1.3 Gbps from different areas of the home to ensure the customer is getting the performance they expect, where they expect it. The intuitive user interface of the mobile app and cloud based reporting tool makes it easy to generate, view, and send reports – giving you and your customers and access to the most up to date information.

- "Headless" Unit is Fully Integrated with
- Smartphone App (Android)
- Report Generation and Cloud Access
- Easy to Read Pass/Fail Indicators
- Powered by Industry Standard Speedtest® by Ookla®
- Rechargeable Li-Ion Battery
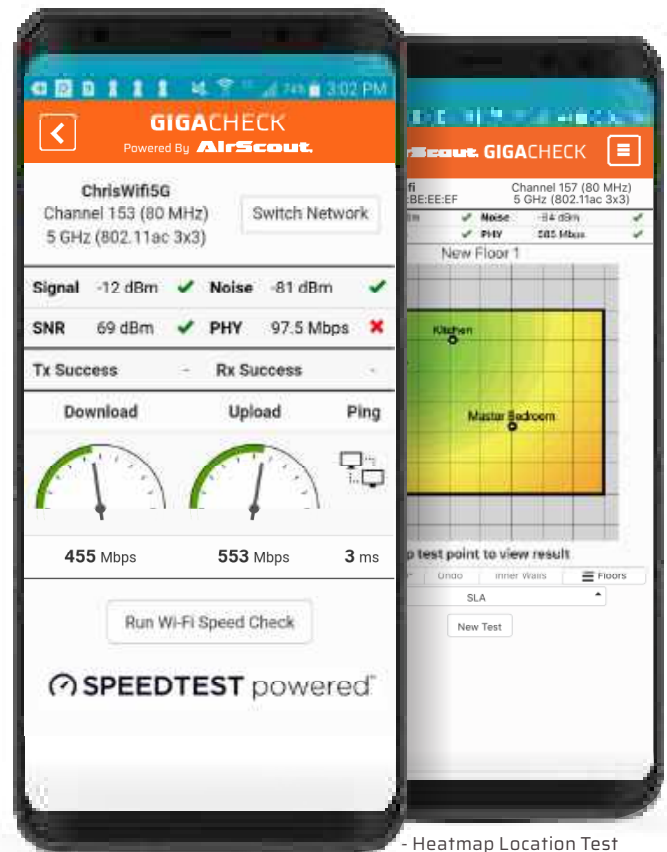
- Wi-Fi® Test Results

- Heatmap Location Test

Simplify Your Workflow

Connect the AirScout unit directly to a residential gateway and instantly verify Ethernet upload and download speeds, and WiFi signal strength throughout the home.

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52084671	AGC350	AirScout GigaCheck Master unit with charger
52084591	AGC-PWR	Charger, 12V
52076901	ASB302	Soft Case
52087669	AGC-HMP	Heatmap

AIRSCOUT LIVE**PRO**

Wi-Fi Networks Are Complicated. Now Finding The Problem Is Easy.

The only thing more frustrating than experiencing slow or no Wi-Fi is not knowing how to identify and resolve the issue.

The AirScout Live PRO is an easy to use, engineering grade troubleshooting tool that helps you identify Wi-Fi and non-WiFi interference on your network. It also provides a real-time view of how your network is being utilized and by what, down to the client. The simple, easy to use interface means there is no need for expensive training – users can quickly and easily get to the root of the problem without being a Wi-Fi genius.

FEATURES

- AirTime Analysis
- Spectrum Analysis
- Real-Time Congestion, Interference and Utilization Depiction
- 802.15.4 Optimization
- Reporting and Cloud Access
- Compatible with AirScout Residential

SPECIFICATIONS:

Standard	802.11
Type	Wi-Fi Quality Assurance Tool
Battery	LiIon Polymer 15.5 Wh (one in each device)
Antenna	2 x 2 MIMO (both master controller and all clients)
Area Network Type	WLAN
Enclosure	Molded Plastic
Power Supply	5 ±0.25 V dc, 1A max
Operating Temperature	0 to +60 °C (+32 to +140 °F)
Length	4.88 in (12.4 cm)
Width	4.88 in (12.4 cm)
Height	1.46 in (3.7 cm)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52084672	ALP330	AirScout Live Pro (Including Master Client, Charger, dongle and carry case)
	CLDSA	12 Month Cloud Service
52087670	ALP-DGL	USB WiFi dongle for AirScout Live Pro

Real-Time Analysis

Quickly view all in-range AP characteristics, identify common problems such as incorrect channel selection and congestion, optimize 802.15.4 configurations, and more.

802.11
- View all in-range Access point configurations
- Quickly identify common Wi-Fi® problems
- Instantly view channel utilization on 2.4Ghz abd 5Ghz

AIRTIME ANALYSIS
- Live view of chanel utilization
- AP and client level analysis
- MAC address and device identification

802.15.4
- View all in-range Access point configurations
- In-depth view of channel utilization
- Optimize your 802.15.4 configuration to ensure ideal settings

SPECTRUM ANALYSIS
- Detect Wi-fi and Non-Wi-fi interference
- Analyze source of interference
- Identify impact on WLAN channels

RESIDENTIAL

The AirScout® Residential Wi-Fi® Tester helps technicians identify the optimum location and settings for the access point of a Wi-Fi® broadband router or access point within a home or small business.

AirScout® provides an automated solution that surveys the residence from Layer 1 all the way through to the application layer. Providing technicians with a tool that makes complex measurements into easy to understand metrics; enabling technicians to convey to consumers whether their applications are supported where they need it.

FEATURES

- The AirScout Client devices are placed around the building that you want to "survey" for Wi-Fi coverage
- Up to 30 can be used with any AirScout Master controller device so you can cover a very large building or have high density of measurements by adding more to your kit
- Purchase this to add to your existing AirScout Kit (ASK306, 304 or 302); needs an AirScout Master controller to operate
- Includes universal AC to USB PSU and USB charging lead

SPECIFICATIONS:

Standard	802.11
Type	Wi-Fi Quality Assurance Tool
Battery	LiIon Polymer 15.5 Wh (one in each device)
Antenna	2 x 2 MIMO (both master controller and all clients)
Area Network Type	WLAN
Enclosure	Molded Plastic
Power Supply	5 ±0.25 V dc, 1A max
Operating Temperature	0 to +60 °C (+32 to +140 °F)
Length	4.88 in (12.4 cm)
Width	4.88 in (12.4 cm)
Height	1.46 in (3.7 cm)

AIRSCOUT® 306 WI-FI® TESTING KIT
- 1 - Six Client and 1 Master Carry Case
- 1 - AC/DC Universal Power Supply
- 1 - 12V Vehicle Charging Lead
- 1 - Quick Start Guide
- 1 - AirScout Master Controller (ASM300)
- 6 - AirScout Client Devices (ASC300)

AIRSCOUT® 302 WI-FI® TESTING KIT
- 1 - Soft Carry Case
- 1 - AC/DC Universal Power Supply
- 1 - 12V Vehicle Charging Lead
- 1 - Quick Start Guide
- 1 - AirScout Master Controller (ASM300)
- 2 - AirScout Client Devices (ASC300)

AIRSCOUT® 300 CLIENT - TWO PACK
- 1 - AC/DC Universal Power Supply
- 2 - AirScout Clients (ASC300)

AIRSCOUT® 304 WI-FI® TESTING KIT
- 1 - Four Client and 1 Master Carry Case
- 1 - AC/DC Universal Power Supply
- 1 - 12V Vehicle Charging Lead
- 1 - Quick Start Guide
- 1 - AirScout Master Controller (ASM300)
- 4 - AirScout Client Devices (ASC300)

AIRSCOUT® 300 MASTER
- 1 - AC/DC Universal Power Supply
- 1 - AirScout Master Controller (ASM300)

AIRSCOUT® 300 CLIENT
- 1 - AC/DC Universal Power Supply
- 1 - AirScout Client (ASC300)

AIRSCOUT® 306 WI-FI® TESTING CASE
- 1 - Six Client and 1 Master Carry Case

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52084672	ALP330	AIRSCOUT LIVE PRO
52085896	ASK302-LP	PRO MASTER W/ LIVE ASK302
52085897	ASK304-LP	PRO MASTER W/ LIVE ASK304
52085898	ASK306-LP	PRO MASTER W/ LIVE ASK306
52087670	ALP-DGL	USB WiFi dongle for AirScout Live Pro

NEW PRODUCTS
AT TEMPO

INTRODUCTION

Many utility companies rely on burying their distribution network plant beneath the street and elsewhere for security, safety and aesthetic reasons. However, that plant does not have an infinite life and can be subject to stresses that can cause failure in the future; knowing exactly where that plant is buried can become a challenge later. Some types of buried plant are extremely difficult to locate precisely from above ground; most notably those which are electrically non-conductive, such as gas and water pipes and communication ducts carrying only optical fibres.

We present our system that can be used to aid the marking, surveying, geo-tagging and future precision location of plant, particularly useful with the non-conductive types. Also, various locators and other tools useful for tracing buried cables and ducts and give details of some which are targeted at the "irrigation" market; tracing shallow buried cables and identifying solenoid valves etc.

Many buried utilities that are in use, are well over 40 years old and often as old as 100 years, therefore any records, should they exist are completely out of date; where a pipeline or duct was installed a certain distance from the kerb of a road, that was when the road was just two lanes and no longer relates to the modern four lane highway that may have also changed direction and position relative to the centre line.

The important questions that must be answered before digging in the ground are:

1.   Where is it?

2.   What is it?

3.   Does it tally with the known records?

4.   Can you see everything?

5.   Am I safe to dig?

FEATURE	BLL-200	501	PE2003	508S	521A
Trace concealed wiring in walls and floors	✓	✓		✓	✓
Locate junction box relays and transformers	✓	✓		✓	✓
Locate switch gear	✓			✓	
Find shorts to ground			✓[2]		✓[1]
Trace wires in PVC (nonmetallic conduit)	✓	✓		✓	✓
Find opens in a circuit					✓
Localize power and lighting panels	✓	✓		✓	
Operate on energized circuits	✓	✓		✓	
Operate on telecom circuits	✓	✓	✓	✓	
Operate on power circuits (600VAC)	✓				
Operate on unenergized circuits	✓	✓	✓	✓	✓
Trace shielded cable	✓	✓[3]		✓[3]	✓[3]
Trace buried metal conduit	✓	✓			
Trace coax cable	✓	✓[5]		✓[5]	✓[4]
Auto gain control for improved accuracy	✓				
AC voltage range	0-600V	0-240V	0-240V	0-240V	0-120V
DC voltage range	0-300V	0-500V	0-400V	0-500V	0-250V
Distance–receiver from transmitter	5,000 ft.	✓[7]	5,000 ft.	1,000 ft.	✓[6]
Transmitter battery	(4) A A	(8) A A	12V rechargeable	(1) 9V	(8) D
Receiver battery	(4) A A	(1) 9V	(1) 9V	(1) 9V	(1) 9V

1. 10,000 ohms and less–both ends isolated from grounds
2. Does not locate the cable path which has to be predetermined and only in direct burial applications. 5M ohm and less
3. Transmitter connected to metallic shield
4. Will trace coax providing the bond is in place at the remote end–will disrupt service
5. No sorting (high RF bleeds) can trace coax if transmitter connected to braid
6. Low frequency locators need a "path to earth" (dirt), 5000 ft. on an open conductor and 2500 ft. on a metallic pipe at 3 ft. deep
7. Direct Connection 4,000 ft at 7 ft deep. Inductive Coupler 1,000 ft at 3 ft deep. Inductive Antenna 700 ft at 3 ft deep

501 TRACKER II

FEATURES

- Traces the path and determines the depth of wires and metallic pipes on active or dead systems without having to deactivate the system
- Lightweight receiver provides audible and visual indications of signal strength
- Transmitter output and receiver sensitivity are fully adjustable for maximum accuracy
- Transmitter offers three methods of connection: direct, inductive coupler and inductive antenna
- Includes transmitter assembly, receiver assembly, inductive coupler (clamp), built-in inductive antenna, two 8' (2.4 m) test leads with heavy-duty alligator clips and durable polyethylene case
- High frequency transmitter provides range up to 4,000' (1,219 m) and depths up to 7' (2 m)
- Receiver is 32" long (813 mm)
- Battery operated (eight AA and one 9V battery is not included)
- Molded carrying case included

SPECIFICATIONS:

Power Requirements	Transmitter - (8) AA batteries; Receiver - (1) 9V battery
Battery Life	Transmitter - 30 hours nominal; Receiver - 10 hours nominal
Transmitter Frequency	447.5kHz
Transmitter Power	40Vp-p (140mW) maximum
Voltage Protection	240VAC/500VDC
Automatic Shut Off	90 Min. Transmitter and Receiver
Construction	Transmitter/Receiver – powder coated aluminum Case – vacuum formed polyethylene
Dimensions	Transmitter - 4.25" x 3" x 3.25" (108 x 76.2 x 82.6 mm) Receiver - 32" x 2.75" x 4" (812.8 x 69.9 x 101.6 mm) Case - 33.5" x 8.25" x 3.75" (850.9 x 209.6 x 95.3 mm)
Weight	6.7 lbs. complete kit (3.04 kg)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50086626	501	Tracker II Kit
50603531	501T	Transmitter
50603523	501R	Receiver
50603540	IC1	Inductive Clamp
50603558	CS16	Transmitter Cord Set
50603515	500CA	Case with Antenna

BURIED LINE LOCATOR

FEATURES

- LED and LCD signal strength indicators make it quick and easy to find exact line location
- Lightweight and ergonomically balanced
- Automatic signal boost makes it easy to trace lines, even those with very weak signals
- Receiver may be used in active or passive mode
- Receiver locates multiple passive frequencies with a single settingReceiver automatically locks out passive range when it detects a transmitter signal, reducing the chance of tracing other lines carrying weaker signals
- Microprocessor-based circuitry delivers increased accuracy and features auto-gain control in all environments
- Traces 20' (6 m) underground and provides depth readings up to 15' (4.57 m)
- Transmitter can be connected to live lines up to 600V
- Molded carrying case included

SPECIFICATIONS:

TRANSMITTER	
Operating Voltage	0-600VAC, 0-300 VDC
Current	13mA (open line) 150mA (live or shorted line)
Frequency	33.3kHz
Operating Temperature	0°F to 120°F (-17°C to 50°C)
Size	7.5" x 4" x 2.1" (190.5 mm x 101.6 mm x 53 mm)
Power	6 VDC (4 AA batteries)
Weight	15 oz. (425 g) (with batteries and clamp)

RECEIVER	
Depth Range	**Measures:** 0-15 ft **Traces:** 0-20 ft.
Depth Resolution	0.1 ft. increments
Passive Trace Frequency	12Hz-24kHz
Operating Temperature	0°F to 120°F (-17°C to 50°C)
Size	4.1" x 8.5" x 38" (104.1 mm x 215.9 mm x 965.2 mm)
Power	6 VDC (4 AA batteries)
Weight	1 lb. 12 oz. (794 g)

ORDERING INFORMATION:

| PART NO.	CAT. NO.	DESCRIPTION
50077961	BLL-200	Buried Line Locator

PULSER GROUND FAULT LOCATOR

FEATURES

- Identifies the exact location of even the smallest breaks in insulation by "pulsing" a high-voltage signal that radiates into the earth at the location of the faults.
- With the A-frame mounted receiver, a visual analog meter points the way to the source of the voltage
- Multiple faults on a single wire can be identified indicating the need to replace instead of repair
- Extra-long test leads feature heavy-duty alligator clips for use on multiple cable types
- Includes a rechargeable transmitter, receiver, A-frame, ground stake, 120V charger and a 12V DC (cigarette lighter) adapter
- Battery operated (one 12V and one 9V battery are included)
- Molded carrying case included

SPECIFICATIONS:

Power Requirements	Transmitter: (1) 12V rechargeable battery Receiver: (1) 9V battery
Battery Life	Transmitter: 23 hours per charge; Receiver: 200 hours
Transmitter Power	2400VDC peak
Voltage Protection	240VAC/400VDC
Construction	Transmitter - aluminum housing in polyethylene case Receiver - powder coated aluminum
Dimensions	Transmitter – 17" x 8.5" x 6.5" (421 mm x 215 mm x 160 mm) in case Receiver – 33.5" x 21.75" x 3.25" (840 mm x 550 mm x 8 mm) on A-Frame
Weight	12.5 lbs. (5.7 kg) complete

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52083233	PE2003	Pulser
50603574	2000H	Transmitter (Includes CH1 & CH2)
50603582	2000R	Receiver
50604821	AF2	A-Frame
50603604	CH1	AC Charger
50603612	CH2	DC Charger
52025430	59F0002	Battery, Replacement (12V 2.5 Ah)
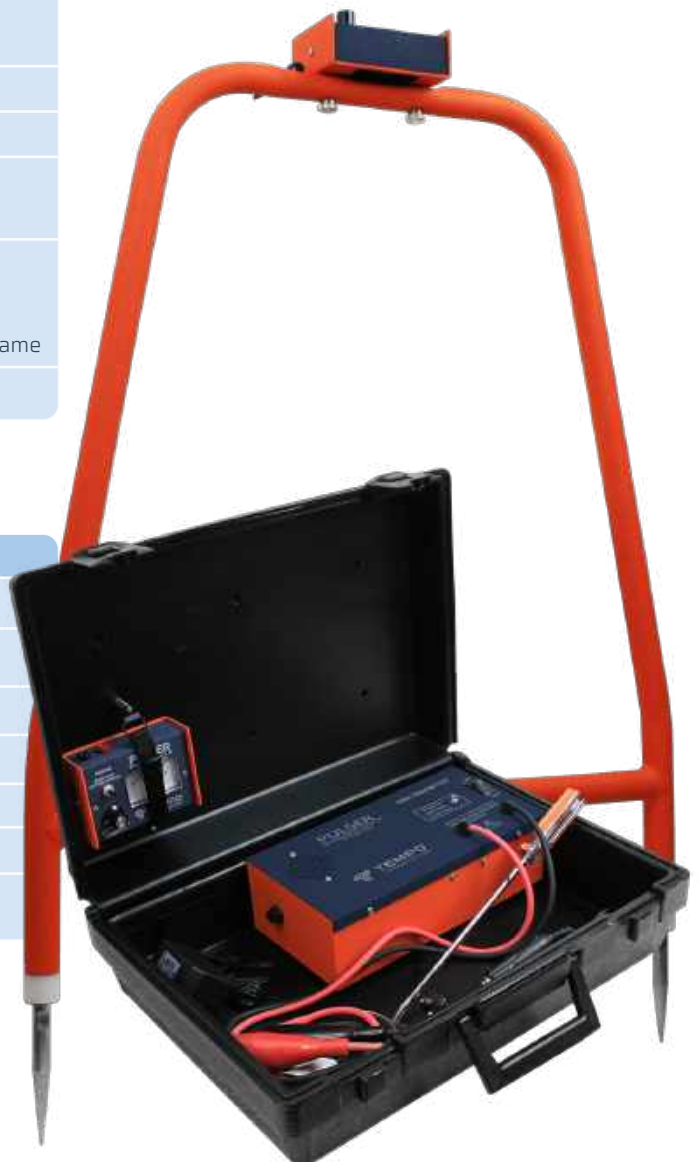
WIRE FINDER/ MINI LOCATOR

FEATURES

- Traces energized or non-energized wires in walls, floors and drop ceilings
- Provides reliable results on buried cables to depths of 3' (1 m) and lengths up to 1000' (308 m)
- Determines the approximate depth of the wire before digging
- Compact design and easy-to-understand operations
- Fully adjustable transmitter and receiver for accurate locating
- Quick change test leads for use in any industry, even international power outlets
- Voltage protection to allow use on live AC circuits
- Automatic shut-off to prevent accidental battery discharge
- Housed in a durable, molded carrying case with a quick reference operation guide on the inside of the lid
- Battery-operated: (2) 9V batteries included

SPECIFICATIONS:

Power Requirements	(1) 9V each (transmitter and receiver, included)
Battery Life	Transmitter 35 hours nominal; Receiver 20 hours nominal
Transmitter Frequency	447.5kHz
Transmitter Power	9Vp-p (11mW)

Voltage Protection	240VAC/500VDC
Construction	Transmitter/Receiver – high-impact ABS plastic, Case – vacuum-formed polyethylene
Dimensions	Transmitter - 4" x 2.3" x 1" (101.6 x 58.4 x 25.4 mm), Receiver - 6" x 2.35" x 1" (152.4 x 59.7 x 25.4 mm), Case â€" 9.5" x 8" x 3"(241.3 x 203.2 x 76.2 mm)
Weight	2.6 lbs. (1.2 kg)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52082815	508S-G	Wire Finder/Mini Locator Kit
52082816	508ST-G	Transmitter
52082817	508SR-G	Receiver

PART NO.	CAT. NO.	DESCRIPTION
50603663	CS14	Alligator Clip Cord set
50603671	CS15	AC Outlet Cord set

WIRE & VALVE LOCATOR

FEATURES

- Locate irrigation control cables, solenoid valves and similar shallow and direct buried conductors.
- Adjustable transmit power allows you to select the best signal for maximum performance
- Transmitter's high power output offers extended range and use on higher resistance wire paths that other locators can't touch
- Receiver provides both audible and visual indications of signal strength
- Lightweight receiver wand makes it easy for you to move along quickly to locate even the longest wire path
- Rugged headphones block ambient noise and improve "feel" for the signal
- Includes transmitter, receiver, headset, ground stake, and complete instructions
- Battery-operated: (8) "D" Cells and (1) 9V

SPECIFICATIONS:

Power Requirements	Transmitter: (8) "D" Cell; Receiver: (1) 9V battery
Battery Life	Transmitter: 50 hours nominal Receiver: 100 hours nominal
Transmitter Frequency	1748Hz

Transmitter Power	750Vp-p 285Vrms
Voltage Protection	120VAC/250VDC
Construction	Powder-coated aluminum housing in polyethylene case
Case Dimensions	33.5" x 8.25" x 3.75"
Weight	12 lbs. complete

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52025222	521A	Wire and Valve Locator Kit
52033346	521A-R	Receiver
50086952	HS-1	Headset

MARKER-MATE®

FEATURES

- Designed to locate buried electronic markers, including Omni Marker™ and SPIKE Marker™ electronic markers.
- Five+ foot depth range with standard markers
- Detects up to nine different marker types
- Scan mode provides simultaneous detection of all marker types
- User-adjustable Detection Threshold
- Digital signal processor accuracy
- Large-character display is easy to read
- Bar graph, numeric & audible signal strength indicators
- Speaker volume adjust
- Headphone jack
- Battery level indicator
- Low battery warning
- Adjustable time out feature prolongs battery life (and can be turned off)
- Weather resistant
- Rugged construction

SPECIFICATIONS:

Electrical	Twelve AA batteries Battery Life: 20 hours typical
Environment	
Operating Temperature	-4°F to 122°F (-20°C to 50°C)
Storage Temperature Weather Resistant	-40°F to 158°F (-40°C to 70°C)
Physical	
Length	30.7 in. (780 mm)
Width	7.8 in. (198 mm)
Height	12.8 in. (325 mm)
Weight	4.5 lbs. with batteries (2 kg)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50607984	EML-100	Marker-Mate™ Electronic Marker Locator

OMNI MARKER-II

Electronic markers are a low-cost, extremely reliable way to mark buried utilities and other plant, making it easy for contractors to find the exact location of critical components like fittings and splices, while helping to avoid expensive damage and unfortunate accidents. Omni Marker II from Tempo Communications builds upon our three decades of experience with the original Omni Marker, providing the same reliability and range in a more compact package. With no active components or potentially hazardous fluids, Omni Marker II can be located by all compatible marker locators. Dig Safe. Dig Right. Save Time.

USE THE OMNI MARKER II TO MARK AND FIND:

- Buried splices
- Buried service drops
- Pipe ends
- Conduit stubs
- Road crossings
- Cable paths
- Fiber optic facilities
- Snow-covered
- Manholes under pavement or grade changes installations
- Military caches
- Survey points
- Septic installations
- Repair points
- Non-metallic lines

SPECIFICATIONS:

Size	4.0 inch diameter (100 mm) Min
Weight	0.3 lb (0.15 kg)
Shipping Weight	11.3 lbs per carton of 30 (5.2 kg per carton of 30)
Range	5 feet typical (1.5 meters)
Field Type	Vertical dipole
Package Material	High-density polyethylene

ORDERING INFORMATION:

PART NO.	CAT. NO.	COLOR	DESCRIPTION
52085010	OM-01	Purple	OmniMarker II, Non-Potable
52085007	OM-02	Orange/ Black	OmniMarker II, CATV
52085008	OM-03	Yellow	OmniMarker II, Gas
52085016	OM-04	Yellow/ Black	OmniMarker II, Fiber Optic
52085012	OM-05	Orange	OmniMarker II, Telephone
52085009	OM-06	Green	OmniMarker II, Sanitary
52085015	OM-07	Red/Blue	OmniMarker II, Europower
52085013	OM-08	Blue	OmniMarker II, Water
52085011	OM-09	Red	OmniMarker II, Power

SPIKE MARKER

Spike Markers are a compact and easy-to-install addition to the Tempo Communications Electronic Marker System family. These sleek markers are primarily designed for marking objects buried in the soil to depths down to one meter (3ft) or slightly more. This encompasses most utilities' "distribution" ducts and similar applications such as Cable TV or fiber "drops," traffic light control cables, power, gas or district heating lines to properties. Spikes are ideal for use in shallower and narrower ducts where Tempo's Omni Marker II is impractical.

SPECIFICATIONS:

Size	4.0 inch diameter (100 mm) Min
Weight	0.3 lb (0.15 kg)
Shipping Weight	11.3 lbs per carton of 30 (5.2 kg per carton of 30)
Range	5 feet typical (1.5 meters)
Field Type	Vertical dipole
Package Material	High-density polyethylene

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
55500095	SM-01	SPIKE MARKER PURPLE 66 KHZ NONPOTABLE
55500096	SM-02	SPIKE MARKER ORANGE-BLACK 77 KHZ CATV
55500097	SM-03	SPIKE MARKER YELLOW 83 KHZ GAS
55500098	SM-05	SPIKE MARKER ORANGE 101 KHZ TELEPHONE
55500099	SM-06	SPIKE MARKER GREEN 121 KHZ SANITARY
55500100	SM-07	SPIKE MARKER BLUE-RED 134 KHZ EUROPOWER
55500101	SM-08	SPIKE MARKER BLUE 145 KHZ WATER
55500102	SM-09	SPIKE MARKER RED 169 KHZ POWER
55500186	SM-FIX	SPIKE MARKER FIXING KIT

STATION MASTER PRO KIT 24BK

ALSO SEEN IN THE COPPER TELECOMMUNICATIONS CATALOG

FEATURES

- Troubleshoot irrigation systems
- Chatter mode for audible locating of valves
- Activate any 24V AC valve solenoid
- Test solenoids for continuity
- Send tone to identify wires
- Check clock AC voltage
- Low battery indication
- Easy-to-understand LEDs
- Test leads with 'bed-of-nails' and piercing pin clips
- Tracing valve wiring
- Locates underground solenoids

SPECIFICATIONS:

Minimum voltage for clock LED	15 VAC
Minimum Battery while Testing	10.5 VDC
Maximum Input Voltage between Test Leads	28 VAC
Solenoid activate output voltage	27 to 18 VAC
Battery	2- 9V Alkaline Batteries
Operating/storage temp.	32°F to 122°F (0°C to 50°C)
Relative humidity (max.)	80%

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52025221	24BK	Station Master Pro Kit

MULTIMETERS

Meeting today's stringent safety standards is essential.

Tempo's certification of selected instruments to both the most recent IEC and UL requirements brings you assurance of the highest level of protection currently available.

What you should know about Measurement Category ratings.

IEC Category standards specify protection levels that are far above a system's rated capacity. Without this additional protection, transient overvoltages, which are becoming increasingly common, can lead to serious injury or death.

Measurement Category I is the signal level for telecommunications and electronic equipment or other circuits that are not directly connected to the utility mains.

Measurement Category II is the local level for fixed or nonfixed powered devices – everything from lighting to appliances to office equipment such as copiers; may also be used in Category I areas.
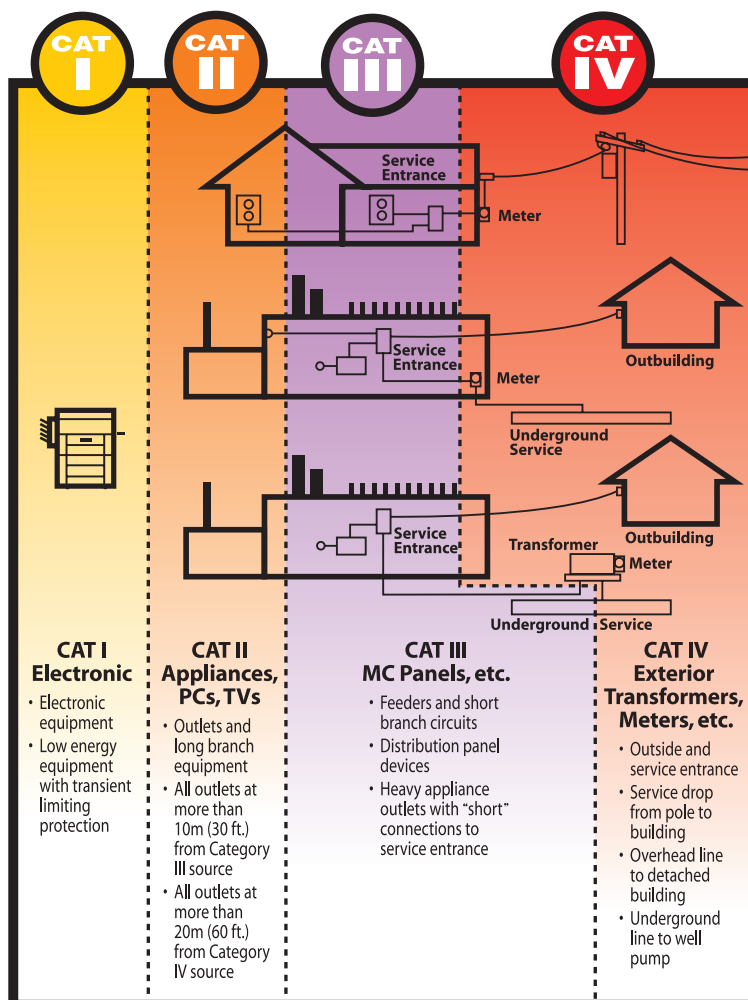
Measurement Category III is the distribution level – fixed primary feeders or branch circuits. These circuits are usually separated from Category IV (whether utility service or other high-voltage source) by a minimum of one level of overvoltage protection; may also be used in Category II and Category I areas.

Measurement Category IV is the primary supply level. Tempo is leading the way in offering protection certified to conform with the highest level of protection as specified by UL & IEC standards; may be used in all Category environments.

Tempo's Instruments – Independently tested and certified to meet the standards. Throughout this catalog, you'll see Category designations for many Tempo's instruments indicating that they comply with UL & IEC Category II, III, IV. All of these designations reflect third-party testing by independent testing organizations such as UL and ETL – added assurance for you. While there is no requirement for independent verification, we believe you deserve it.

Get the right protection for the job.

Wherever you need overvoltage protection, choose at least the rating appropriate to the type of work you expect to be doing. If you have any questions on using Tempo's test instruments to help ensure user safety, please contact Tempo Communications.

CAT I
Electronic
- Electronic equipment
- Low energy equipment with transient limiting protection

CAT II
Appliances, PCs, TVs
- Outlets and long branch equipment
- All outlets at more than 10m (30 ft.) from Category III source
- All outlets at more than 20m (60 ft.) from Category IV source

CAT III
MC Panels, etc.
- Feeders and short branch circuits
- Distribution panel devices
- Heavy appliance outlets with "short" connections to service entrance

CAT IV
Exterior Transformers, Meters, etc.
- Outside and service entrance
- Service drop from pole to building
- Overhead line to detached building
- Underground line to well pump

FEATURES	PM100	MM200	MM810
Size	Pocket	Compact	Full
Main Display	6000	6000	6000
Disp. Update Rate	5 per sec	5 per sec	5 per sec
Aux. Display			9999
Bar-Graph (upd. rate)		24 segment (40 Hz)	41 segment (60 Hz)
Autoranging	✓	✓	✓
DCV & ACV	0 to 450 V	0 to 1000 V	0 to 1000 V
DCA & ACA		0 to 10 A	0 to 10 A
True RMS			✓
Frequency Response	50 to 60 Hz	50 to 400 Hz 10 to 50 kHz	50 Hz to 20 kHz 15 Hz to 50 kHz
Frequency Meter	10 Hz to 30 kHz	5 Hz to 1 MHz logic level	5 Hz to 1 MHz logic level
Duty Cycle %			0 to 100% (5 Hz to 10 kHz)
Resistance	0 Ω to 6 MΩ	0 Ω to 60 MΩ	0 Ω to 60 MΩ
Continuity Beeper	✓	✓	✓
Capacitance	100 µF		25000 µF
Diode Check		✓	✓
Non Contact EF detect	✓	✓	
Beep-Jack		✓	✓
Auto power off	✓	✓	✓
CAT II	450V	1 kV	1 kV
CAT III	300V	600V	1 kV
CAT IV		300V	1 kV

PM100 POCKET MULTIMETER

FEATURES

- Auto-select mode for hassle-free use
- Low impedance eliminates stray or "ghost" voltage readings
- AC/DC voltage measurement
- Hassle-free, automatic measurement of voltage and resistance
- Autoranging for quick, convenient measurements
- Non-contact voltage detection for identifying live lines without contacting conductors
- Intelligent Auto-Off for longer battery life
- Low battery indicator
- Resistance measurement
- Audible continuity test
- Frequency measurement in voltage mode
- Capacitance measurement
- 6000-count LCD for high resolution
- Accessories included: (1) 3 V battery (CR2032) and carrying case

SPECIFICATIONS:

Display	6000-count LCD
Polarity	Automatic
Display Update Rate	5 per second
Temperature Coefficient	Nominal 0.15 x (specified accuracy) per °C below 18 °C or above 28 °C
Intelligent Automatic Power Off	After 3 minutes of inactivity (approximately)
Noise Rejection	Common Mode Rejection Ratio: > 60 dB from 0 Hz to 60 Hz when measuring ACV; Common Mode Rejection Ratio: > 100 dB at 0 Hz, 50 Hz, and 60 Hz when measuring DCV; Normal Mode Rejection Ratio: > 30 dB at 50 Hz and 60 Hz when measuring DCV
Operating Conditions	Temperature: 0 °C to 40 °C (32 °F to 104 °F)
Relative Humidity	80% maximum for temperatures up to 31 °C (88 °F), decreasing linearly to 50% maximum at 40 °C (104 °F)
Altitude	2000 m (6500') maximum
Pollution Degree	2
Storage Temperature	–20 °C to 60 °C (–4 °F to 140 °F), 0% to 80% relative humidity (non-condensing)
Battery	3 V standard button battery (IEC-CR2032; ANSI-NEDA-54004LC)
Low Battery	Below 2.4 VDC
Overvoltage Protection	450 VDC/VAC RMS, 50/60 Hz
Measurement Category	Cat II, 450 V Cat III, 300 V

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
55500083	PM100	PM100 POCKET MULTIMETER

MM200 MULTIMETER

FEATURES

- Testing| Troubleshooting| Accuracy
- Supplied with a zipper case
- high-quality safety test leads
- Fast response 24 segment "bar-graph"
- 6000 Count large digit LCD
- Core accuracy better than 0.5%
- Average responding AC measurements

SPECIFICATIONS:

Display	LCD (6000) and 24-segment bar graph
Polarity	Automatic
Sampling Rate	Numeric Display: 5 per second Bar Graph Display: 40 per second
Temperature Coefficient	Nominal 0.15 x (specified accuracy) per °C below 18 °C or above 28 °C
Automatic Shut-Off	After 34 minutes of inactivity
Noise Rejection	Normal Mode Rejection Ratio > 60 dB at 50 Hz and 60 Hz when measuring DCV Common Mode Rejection Ratio > 60 dB from 0 Hz to 60 Hz when measuring ACV Common Mode Rejection Ratio > 100 dB at 0 Hz, 50 Hz and 60 Hz when measuring DCV
Operating Conditions	0 °C to 40 °C (32 °F to 104 °F)
Relative Humidity	80% maximum for temperatures up to 31 °C (88 °F), decreasing linearly to 50% maximum at 40 °C (104 °F)
Altitude	2000 m (6500') maximum
Pollution Degree	2
Storage Temperature	–20 °C to 60 °C (–4 °F to 140 °F)
Battery	Two 1.5 V batteries (AAA, NEDA 24A or IEC LR03)
Volts & AutoCheck	1100 V DC/AC rms
mV, O, and Others:	1000 V DC/AC rms
µA and mA:	0.4A/1000V DC/AC rms, IR 30kA @ 1000V DC/AC rms; Dimension: 6 x 32 mm
A:	11A/1000V DC/AC rms, IR 20kA @ 1000V DC/AC rms; Dimension: 10 x 38 mm
V/ohms/mA/A to COM:	Category II 1000V, CAT III 600V and CAT IV 300V AC & DC
E.M.C.	Meets EN61326-1:2013

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
55500084	MM-200	MM200 MULTIMETER

MM810 MULTIMETER

FEATURES

- True RMS response for AC measurements
- Dual display allows, for example AC V and frequency
- Fast response 41 segment "bar-graph" with 60 updates per second
- 9999 or 6000 Count large digit LCD with 5 updates per second
- Core accuracy better than 0.1%
- Millivolt and microampere ranges for precision measurements

SPECIFICATIONS:

Display	9999 counts: ACV, DCV, Hz, and nS; 6000 counts: mV, µA, mA, A, ohm, and capacitance
Polarity	Automatic
Sampling Rate	Numeric Display: 5 per second; 41-Segment Bar Graph Display: 60 per second
Temperature Coefficient	Nominal 0.15 x (specified accuracy) per °C below 18 °C or above 28 °C
Automatic Shut-Off	After 30 minutes of inactivity
Noise Rejection	Normal Mode Rejection Ratio > 60 dB at 50 Hz and 60 Hz when measuring DCV Common Mode Rejection Ratio > 60 dB from 0 Hz to 60 Hz when measuring ACV Common Mode Rejection Ratio > 120 dB at 0 Hz, 50 Hz and 60 Hz when measuring DCV
Operating Conditions	0 °C to 45 °C (32 °F to 113 °F), 0% to 80% relative humidity (non-condensing)
Storage Temperature	–20 °C to 60 °C (–4 °F to 140 °F)
Battery	9-Volt (NEDA 1604, JIS 006P or IEC 6F22)
µA and mA:	0.44 A/1000 V DC/AC rms, interrupting rating 10 kA, F fuse,13/32" x 1-1/2"
A:	11 A/1000 V DC/AC rms, interrupting rating 20 kA, F fuse, 13/32" x 1-1/2"
V	1100 V DC/AC rms
mV, O, and Others:	1000V DC/AC rms
Safety	Double insulation per IEC/UL/EN61010-1 Ed. 3.0, IEC/EN61010-2-030 Ed. 1.0, IEC/ EN61010-2-033 Ed. 1.0, IEC/UL/EN61010-031 Ed. 1.1 and CAN/ CSA-C22.2 No. 61010-1-12 Ed. 3.0 to Category IV 1000 VAC and VDC
All Terminals	Category IV 1000 VAC and VDC

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
55500085	MM-810	MM810 MULTIMETER

NEW AT TEMPO

CableScout (TM) CS-90 is a great hand-held TDR with features and a price point which means you should and can equip all your technicians with an advanced, high-bandwidth, 1 ns precision cable diagnostics tool. Designed primarily for use in 75 ohm CATV systems but equally useful for 50 ohm coax and twisted pair cable testing.

COPPER TELECOMMUNICATIONS
TEST & TOOLS

Telecommunications is moving increasingly to fiber optic transmission, particularly for trunk connections, but copper conductors will be used for the foreseeable future for in-building and shorter links. Tempo Communications continues to invest in "copper" test instruments and tools to support the industry.

See also our range of hand-tools for manipulating and terminating copper cables...

SIDEKICK® PLUS
COPPER AND DSL TEST SET

SAVES TIME – Easy-to-use mode selection dial and operation - minimizes training needs and saves time on the job
VERSATILE – Combines your copper qualification needs with DSL sync and service testing in one test set
FULLY LOADED – The Sidekick® Plus xDSL comes complete with all you need to perform tests on the copper networks that support DSL services
NO MODULES NEEDED – Advanced cable diagnosis and troubleshooting in a single test set

APPLICATIONS:

Helps technicians diagnose and troubleshoot problems with twisted pair cable Install, qualify, and maintain DSL services

FEATURES

BONDED MODEM WITH XDSL
- Pair bonding
- ADSL2+/VDSL2+
- Vectoring
- Broadcom BCM63168
- Automated test scripts
- USB export/import of test results/profiles
- 35MHz Wideband Noise Spectrum Analysis
- 4.4MHz Loss Measurement Test
- 35MHz Impulse Noise Step
- TDR with auto bridgetap detection (zero dead zone)

ADSL/VDSL MODEM SYNC AND SERVICE TESTS:
- DSL Showtime
- Bits per Tone Graph
- Signal-to-Noise Ratio Graph
- HLOG Graph
- Error Counter
- Upper Layer Testing: Ping, Trace-route, HTTP, FTP

STANDARD FEATURES:

- Advanced Dual Trace Pulse TDR (Zero Dead Zone)
- Resistive Fault Locator (Detects up to 20MΩ)
- 1GΩ Leakage Test (Insulation Resistance)
- Longitudinal Balance Test
- Ground Resistance Test
- Stress Test
- AC/DC Voltage
- Resistance
- Circuit Loss
- Open Meter (capacitance) with option for Step TDR
- Loop Current
- Tracing Tone Generator
- Reference Tone

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52064728	1155-5001	Sidekick Plus Kit LCC
52064080	1155-5003	Sidekick Plus Kit SCC
52064131	1155-5005	Kit, Sk Plus, Impulse Noise, Step TDR
52064729	1155-5009	Sidekick Plus With Wideband
52064730	1155-5010	Sidekick Plus With Wideband & Adsl/Vdsl Sync LCC
52066485	1155-5011	Sidekick Plus With Wideband & Adsl/Vdsl Sync SCC
52070010	1155-5012	Sidekick Plus Pair Bonded Modem - Fully Featured
52070321	1155-5013	Sidekick Plus Pair Bonded Modem - Fully Featured SCC

SIDEKICK® PLUS DSL FAR-END DEVICE

For use with the Sidekick® Plus as a complete DSL testing solution

APPLICATIONS:
- Helps technicians diagnose and troubleshoot problems with twisted pairs at the far end of the cable
- Install, qualify, and maintain DSL services

BENEFITS
- Helps qualify pairs for DSL service with ease
- Reduces testing time and increases technician productivity

KIT INCLUDES:
- Sidekick® DSL Far-End Device Unit
- RJ45 to Telco clip leads
- Canvas carry case

FEATURES
- K-Test-" Far-End-Device straps the pair under test
- TDR " Far-End-Device can alternately short and open the pair to verify the end-of-line
- Noise " Far-End-Device provides a line termination
- Loss " Far-End-Device provides single or multiple reference tones
- Longitudinal Balance " Far-End-Device provides an IEEE 455-1985 Longitudinal Balanced Termination
- Autotest" The Sidekick® Plus manages the operation of the Far-End-Device during the test sequence
- Short Pair " Verifies loop length
- Short Pair to Ground " Determines pair resistive balance
- Remote activation via Sidekick® Plus
- Ability to connect and disconnect Central Office and Customer Premise equipment
- Supports Second Pair Testing
- Generates tones for pair ID and pair tracing
- Capability to generate tones over a range of frequencies from

*FOR USE WITH THE SIDEKICK® PLUS MODELS
1155-5009 Sidekick® Plus with Wideband
1155-5010 Sidekick® Plus with Wideband & ADSL/VDSL Sync LCC
1155-5011 Sidekick® Plus with Wideband & ADSL/VDSL Sync SCC
1155-5012 Sidekick® Plus Bonded Modem - Fully Featured
1155-5013 Sidekick® Plus Bonded Modem - Fully Featured

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52070454	1157-5001	Sidekick® FED Kit

1155 FAULT LOOP SIMULATOR

FEATURES

- Simulates 8 faults that can be used individually or in a combination:
  - Cross battery
  - Resistive 5 kohm load to ground
  - Resistive 500 ohm short
  - Two balanced bridge taps
  - 60 ohm series resistance fault
  - 60 Hz Power Influence
  - High frequency noise
- 1910 foot cable length
- Battery operated
- Rugedized case
- Convenient Test Lead connections.
- Three access locations in the span for custom faults
- Train users on real twisted-pair faults
- Test multiple test set functions such as RFL, TDR, power influence, stress, leakage, resistance, impulse noise and others
- Verify results from the field in a controlled environment
- Demonstrates how noise increases with pair imbalances
- Show differences between shorts, bridge taps, series faults and opens with a TDR

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52054909	1155-7001	Test Set

4-6-8 MODULAR ADAPTERS

FEATURES

- Nylon-reinforced ABS plastic body
- Easy-to-read wire layout
- Removable/replaceable patch cord enables using your own special cable types
- Inline adapters allow testing active circuits
- Snagless plugs (where possible)
- Belt clip
- Barbed copper contacts keep alligator clips attached during testing

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051670	PA1902	RJ45 Modular Adapter (8-way)
52051671	PA1903	RJ11 Modular Adapter (6-way)
52086505	PA1921	UK Modular Adapter (6-way)

SIDEKICK® T & ND

FEATURES

- Easy-to-read digital LCD display
- Internal Dialer for making Transmission Test connections
- Autotest - performs 22 individual tests at the touch of a button
- Determines the stressed noise susceptibility of dry and working pairs
- Measures AC/DC Volts, Leakage, resistance, and loop current
- Performs circuit loss, circuit noise (metallic noise), and power influence tests
- Built-in open meter
- Locates up to 4 load coils
- Single set up for Tip-Ring, Tip-Ground, and Ring-Ground tests
- Field replaceable test leads
- On-screen display of "LOW BATTERY" when batteries are near failure.

SPECIFICATIONS:

Weight	2 lbs.
Dimensions	10.75" X 4.25" X 2.5"
AC Volts	300 Vrms max.
DC Volts	± 300 Volts max.
Resistance	1 Megohm max.
Leakage	100 Megohm max.
Stress	0 to 82 dBrnC

Opens	0 to 60 kft.
Loop Current	0 to 100 mA
Load Coil	up to 4
Circuit Loss	+1 to -15 dB
Power Influence	40 to 100 dBrnC
Circuit Noise	0 to 75 dBrnC
Power	Four AA Batteries

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50608530	1144-5000	Sidekick T&ND Test Set
52038822	1134-1002S	Case

SIDEKICK® T & N

FEATURES

- Five transmission and noise tests
- Determines the stressed noise susceptibility of dry and working pairs
- Measures resistance, AC/DC volts, and capacitive kick
- Provides tone for twisted pair or crossed conductor identification
- Single setup for testing Tip-Ring, Tip-Ground, and Ring-Ground
- Minimal drying effect in all ranges
- Field replaceable leads
- Softcase with adjustable strand hook
- Low battery indicator light

SPECIFICATIONS:

Dimensions	10.75" x 4.25" x 2.5"
Weight	2 lbs.
Resistance	Rx1: Reads 0 to 2000 Ω Rx1K: Reads 0 to 2 MΩ
Leakage	Rx10K: Reads 0 to 20 MΩ
DC Voltage	0 to 300 volts DC
AC Voltage	0 to 300 Vrms

Stress Test	0 to 82 dBrnC
Loop Current	0 to 100 mA
Circuit Noise	0 to 75 dBrnC
Circuit Loss	-15 to +1 dB
Power Influence	50 to 100 dBrnC
Operating Temp.	-4°F to +140°F
Power	Four AA batteries

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
R50605263	1137-5002	Sidekick T&N
50607519	1131-0202	Test Leads
52038822	1134-1002S	Case

SIDEKICK® 7B

FEATURES

- Determines the stressed noise susceptibility of dry and working pairs
- Measures resistance, AC/DC volts, and capacitive kick
- Provides tone for twisted pair or crossed conductor identification
- Single setup for testing Tip-Ring, Tip-Ground, and Ring-Ground
- Minimal drying effect in all ranges
- Field replaceable leads
- Softcase with adjustable strand hook
- Low battery indicator light

SPECIFICATIONS:

Dimensions	10.75" x 4.25" x 2.5"
Weight	2 lbs.
Resistance	Rx1: Reads 0 to 2000 Ω; Rx1K: Reads 0 to 2 MΩ
Leakage	Rx10K: Reads 0 to 20 MΩ
DC Voltage	0 to 100 Volts DC
AC Voltage	0 to 200 Vrms
Stress Test	0 to 82 dBrnC

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50605256	1134-5029	Sidekick 7B
52038822	1134-1002S	Case
50607519	1131-0202	Test Leads

SIDEKICK® V.O.C.

FEATURES

- Identifies defective inside wire and jacks
- Measures resistance, AC/DC volts, quasi square wave, and pair balance
- Identifies shorts, opens, crosses and grounds
- Replaces the need for other meters
- Provides tone for twisted pair or crossed conductor identification
- Single set-up for testing Tip-Ring, Tip-Ground, and Ring-Ground with ground connection
- Field replaceable leads
- Softcase with adjustable hook
- Low battery indicator light

SPECIFICATIONS:

Dimensions	10.75 x 4.25 x 2.5 inches
Weight	2 lbs.
Resistance	Rx1: Reads 0 to 2000Ω Rx1K: Reads 0 to 2 MΩ
Leakage	Rx10K: Reads 0 to 20 MΩ
DC Voltage	0 to 100 Volts DC
AC Voltage	0 to 200 Vrms
Stress Test	0 to 82 dBrnC
Operating Temp.	-4°F to +140°F
Power	Four AA batteries

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50605270	1143-5000	Sidekick V.O.C
52038822	1134-1002S	Case

TELEPHONE TEST EQUIPMENT
YOUR JOB
FASTER, SAFER, AND EASIER.

TM-700 TELE-MATE™ TELEPHONE TEST SET

FEATURES

- Complete telephone set with ringer
- Phone-to-phone intercom, compatible with other SmartIntercom™ devices
- Modular or alligator clip connection
- Amplified loudspeaker line monitor
- Headset or handset operation
- Tone and pulse dialing
- Large 10-location speed dialing memory
- Multi-memory redial
- DTMF digit detection and measurement

- Pair tracing tone output mode
- Caller ID with name display
- Call waiting Caller ID
- Missed call indication
- DSL compatible, high impedance monitor and filters
- Glow-in-the-dark keypad
- Line voltage and current display
- High voltage detect and lockout
- High current detect and lockout
- Uses 2 AA/LR6 batteries (not included)
- Quick release belt-clip

SPECIFICATIONS:

TECHNICAL SPECIFICATIONS	
LENGTH	9.25" (235mm)
WIDTH	2.5" (64mm)
HEIGHT	3.25"(83mm)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52061409	TM-700	TM-700 Tele-Mate™ TELEPHONE TEST SET
52063087	TM-700I	BUTT SET (SML CLIPS & BOX) (TM-700I)
52063088	TM-700UK	BUTT SET (UK PLUG & BOX) (TM-700UK)

TM-500 TELE-MATE™ TELEPHONE TEST SET

FEATURES

- Luminescent (glow-in-the-dark) keypad
- Can be used safely on a DSL enabled line
- High Impedance Monitor for monitoring line without disrupting existing traffic
- Over voltage and over current protection
- Tone and Pulse dialing
- Line powered, no battery needed
- Polarity test with LED indicator
- 32 digit last number redial and pause
- 10 number speed dial
- Adjustable volume control plus mute
- Flash to generate a timed break recall
- Headset (included) for hands free operation
- RJ11 socket
- Quick release belt-clip

SPECIFICATIONS:

TECHNICAL SPECIFICATIONS	
LENGTH	9.25" (235mm)
WIDTH	2.5" (64mm)
HEIGHT	3.25"(83mm)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52061369	TM-500	Telephone Test Set W/ ABN "Bed-Of-Nails" Croc Clips (POP)
52062073	TM-500i	Telephone Test Set W/ Small Croc Clips (Boxed)
52063086	TM-500UK	BUTT SET (TM500 UK PLUG & BOX)

NAUTILUS TEST SETS

Nautilus range products are "real-world hardened" to deliver reductions in Whole Life costs. Each product includes a "shell" designed to breathe and safeguard the functional elements from water, dust, impact and humidity and temperature change.

Water resistant to IP67, they can be used in heavy rain or even dropped in a puddle.

Tough and drop resistant, they are designed for years of hard use literally "in the field".

With simple controls, placed in optimal positions for good ergonomics, they are comfortable and easy to use.

Now built for over two decades these are proven "real-world" tough products that have their hardened shells like their namesake the "Nautilus" but their internal functions have been updated over the years to match the changes in the telecommunications networks.

FEATURES/SPECIFICATIONS:

	PE930	PE945	PE961
Digital Services Detection and Lockout			✓
High voltage warning		✓	✓
Speaker-phone with volume control		✓	✓
Luminescent keymat			✓

ALL THREE INCLUDE:

- Waterproof (IP67, buoyant)
- Ten-number speed dial memory (32 digits)
- Microphone mute
- Unique quick-release belt clip
- Audible and visual mode indicators
- Polarity test in any mode
- Chemical resistant
- Digital safe line monitor

- 3-year warranty
- Last number redial
- Precise hook flash
- Premium cordset with bed-of-nails and piercing pin clips
- Tone or pulse dialing
- Two-tone ringer with adjustable pitch
- Built-in DSL filter
- Luminescent keymat

PE930   **PE945**   **PE961**

A340, D350 & D361 SPECIFICATIONS:

	A340 ETSI	A340 ETSI LCC	D350 90ms	D361	D361 LCC
DigAlert 3			✓	✓	✓
Loudspeaking	✓	✓	✓	✓	✓
Hands Free				✓	✓

ALL FIVE INCLUDE:

- High voltage alarm and lockout
- Waterproof IP67, buoyant
- "ETSI" European telephony setup, with 90 ms TBR (other options available)
- Ten dialing memories (up to 32 digits each)
- Microphone mute
- Polarity test in any mode
- Glass reinforced nylon belt clip

- Audible and visual mode indicators
- Ambidextrous operation of the ergonomically placed controls
- DTMF and pulse dialing (change of mode can be stored in memories)
- Three year warranty
- Options with Angled-nose, bed-of-nails (ABN) large crocodile clips (LCC) or small crocodile clips (SCC)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52040076	M0401/10	DIGALERT 361 ETSI ADSL SCC
52059247	M0401/20	DIGALERT 361 ETSI ADSL LCC
52059241	M0402/10	DIGALERT 350 ETSI ADSL SCC
52059242	M0404/10	ALERT 340 ETSI ADSL SCC
52059246	M0404/20	ALERT 340 ETSI ADSL LCC

CABLESCOUT™ TV220 TDR Cable Tester For CATV

FEATURES

- Easier-to-use GUI interface requires little or no training
- PC application is compatible with Windows 10*
- Excellent clarity and trace functionality makes it easier to identify faults on-screen and determine noise versus the fault
- High SNR and resolution makes it easier to identify events that were previously difficult or impossible to find
- Zero dead zone at the launch allows the user to see faults immediately
- Fast trace update rate allows you to see more dynamic faults (5 times/sec.)
- Light weight and long charge life with the lithium-ion battery
- Higher capacity to hold 200 traces
- USB interface for trace download
- TestWizard™ one-button cable analysis
- Automatic Return Loss Measurements
- Automatic Multiple Event Marking
- High-Resolution, Short Pulse Width (1 ns)
- Rugged enough to withstand everyday use in the field

*Must be installed in "admin" mode and may require re-installation following updates due to Microsoft enforced changes

** Overvoltage category I, 60V max without use of supplementary isolation device. Contact Tempo if you require such.

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52061155	TV220	TDR for CATV Broadband
	TV220-0350	Soft Carrying Case
	1155-1010	Power Supply, AC-DC
	174173401	Vehicle DC Adapter/Charger

SPECIFICATIONS:

Output	Test Signal Output – 1/2 Sine Amplitude – 4V into 75 Ω Pulse Width – 1 ns, 5 ns, 25 ns Output Impedance – 75 Ω Acquisition System Bandwidth – 400 MHz	Power	AC Operation: Voltage Ranges: 110 V, 220 V, or 240 V with appropriate AC to DC adapter Line Frequency: 50 Hz to 60 Hz DC Operation: Voltage Range: 9 to 16 VDC @ 1A (charging and operating)
Return Loss	Automatic at cursor location Resolution: ±1 dB **Input Protection: ±400 VDC + peak AC up to 440 Hz, 30-second duration Maximum Distance Range: 12,000 ft. (3,658 m), depending on cable type and condition Gain: 0 to 72 dB Waveform Storage: Minimum of 20 waveforms with notes		Battery Operation: Type: Internal Li-Ion rechargeable battery Operating Time: Typically 12 hours continuous operation (backlight off) Battery Savers (user selectable) Shutoff: 5 to 30 minutes or disabled Backlight: Shutoff 5 to 30 minutes, disabled, or always on
Distance Accuracy (Feet)	0 to 2,000 ft.: ±2 ft. ± uncertainty in Vp 2,001 to 6,000 ft.: ±3 ft. ± uncertainty in Vp 6,001 to 12,000 ft.: ±4 ft. ± uncertainty in Vp Meters: 0 to 610 m: ±0.6 m ± uncertainty in Vp 611 to 1830 m: ±0.9 m ± uncertainty in Vp 1831 to 3658 m: ±1.2 m ± uncertainty in Vp	General Characteristics	Temperature: Operating: –10° C to +40° C (+11° F to +104° F) Non-operating: –20° C to +60° C (–4° F to +140° F) Humidity: 10% to 95% (non-condensing) Field Usage: Shock, water, and dust resistant Durability: Survives drop of 2 meters (6 ft.) to concrete in standard soft case. Drip proof, dust resistant EMI Emissions: EN55011, Class A; EN60555-2 Safety: CE (Low Voltage Directive)
Display	Resolution: 640 x 440 (281,600 pixels) Size: 7.2 inch Type: High contrast LCD Backlight: Operator switchable Waveform Display Resolution – 0.33% of selected range, 4.5 cm (0.15 ft.) minimum Display Ranges – Twelve display ranges from 6 ft. (1.8 m) to 12,000 ft. (3,658 m), plus single-button zoom window Output Port – USB-B socket Distance Measurements – Meters, feet, nanoseconds	Physical	Height	9.5 inches; 24cm
			Width	11.5 inches; 30 cm
			Depth	3.5 inches; 9 cm
			Weight (Net)	6.4 lbs.; 3kg

CABLESCOUT CS90

THE everyday, every technician, copper network TDR. Aimed squarely at the CATV technician who deals with 75 ohm COAX all day but also suitable for use in 50 ohm COAX or twisted pair fault finding applications. The CS90 provides a perfect mix of simplicity of use, ergonomics, accuracy and high dynamic range with

FEATURES

- Large, Color, HiRes Backlit Display (Readable Outdoors in Bright Conditions)
- Splash, Dust, and Shock-Resistant Packaging
- Zero Dead Zone
- 1, 5 and 25 ns pulse widths standard
- FastFind™ whole cable overview
- Protected 75 Ω F Connector
- Intermittent Fault Location
- Context-Sensitive Help Available for All Functions
- Save a virtually unlimited number of traces to the SD Card (included) or USB drive
- Small, Portable, Lightweight Package
- Internal Cable Types for Fast, Accurate Testing
- Rechargeable Lithium Ion Battery for 8+ hrs. of use
- Span View Window Shows Entire Cable & Navigation
- Narrow Pulse Width Enables Near-End Fault ID

BENEFITS

- Locate Damage in Drops & Bad Passive Devices
- Find Impedance Mismatches
  (e.g. corrosion, water or cable type changes)

WATCH OUR PRODUCT VIDEO
CLICK HERE

BASE MODEL KIT INCLUDES:

- CS90 "CableScout®"
- DC charger (12 V socket)
- AC PSU (universal)
- 2 metre COAX patch lead
- F type barrel connectors
- Shoulder Strap
- Basic Carry Bag
- SD Card (included)
- 1 ns pulse width for precision
- Determine Length of Cable

PRO KIT EXTRAS:

- SV-03 Adaptor
- BNC Adaptor
- Alligator clip cord

CS90 SPECIFICATIONS:

Output Pulse	
Test Signal	Pulse
Type	½ Sine Wave
Width	1 ns, 5 ns, 25 ns
Impedance	75 Ohm
Voltage	>4V Peak
Input	
Protection*	+/- 400VDC
Filtering	1, 2, 4, 8, 16, 32
Physical	
Size	262mm x 162mm x 55mm
Weight	900g
Operating Temp.	-20 to + 50 (0 to 30 charging) Celcius
Storage Temp.	-20 to +60 C

Performance	
Horizontal Resolution	204 ps (approx. 3"/75 mm)
Maximum Distance	9.5 kft (2.9 km) @ Vp=0.93
Display Resolution	800 X 480
Display Size	180mm 7" diagonal
Backlight Brightness	1000nits
Test Result Storage	SD card or USB drive
Battery Type	Li-Ion polymer
Battery Capacity	30 Wh; sufficient for >8 hr use with typical backlight
Battery Life	Battery Management System optimizes charging and lifetime

* Overvoltage category I, 60V max without use of supplementary isolation device. Contact Tempo if you require such.

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
55500017	CS90	CableScout 90 TDR (Pro kit)
55500220	CS90B	CableScout 90 (base kit)

FEATURES/SPECIFICATIONS:

	77HP-G	77HP-G/6A	77M-G
Selectable Warble Tone	✓	✓	✓
Continuity Testing	LED & Beeper	LED & Beeper	LED
Polarity Testing*	✓	✓	✓
Talk Battery Supply	✓	✓	✓
Two-line Modular Test Lead (RJ-11)	✓	✓	
Three-color LED (identifies AC ring voltage)	✓	✓	✓
Weather-Resistant Design	✓	✓	✓
Angled Nose Clips with Bed-of-Nails Penetrator		✓	
RJ11 plug & RJ45 adapter	✓	✓	
Lanyard	✓	✓	
Battery Operated (9V not included)	✓	✓	✓

*Dual line on 77HP models, single line on 77M models

CLASSIC 77 SERIES TONE GENERATORS

Permits technicians to identify the conductor within a bundle, at a cross-connect point or at the remote end. Can be used on twisted pair wiring (telecom, datacom, etc.), single conductors, coaxial cables, de-energized AC wiring and most other wiring.

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52047488	77HP-G	77H-GP Tone Generator (standard alligator clips)
52047489	77HP-G/6A	77HP-G/6A Tone Generator (ABN Clips)
52047490	77M-G	77M-G Tone Generator (Basic)
50086863	77CS	Leather Belt Holster for Classic 77 Series Tone Generators
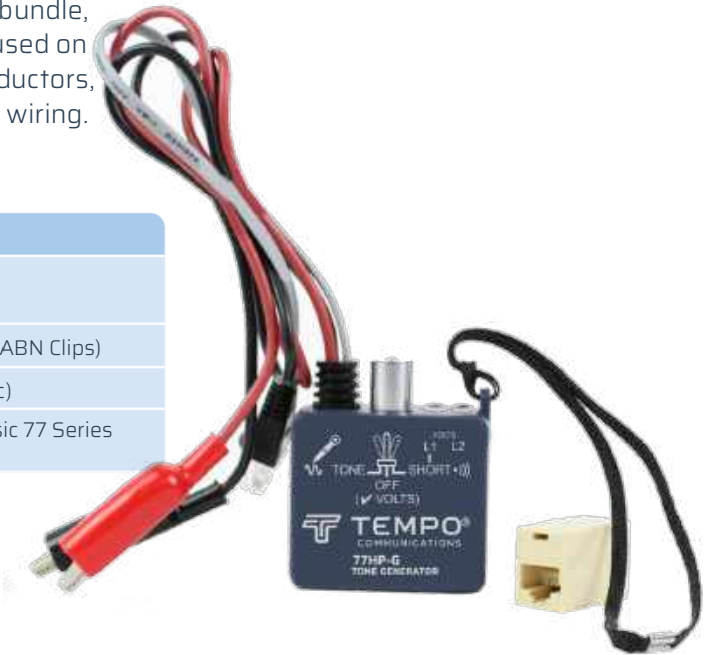
REPLACEMENT PIERCING CLIPS

FEATURES

- These traditional telco-style clips can be used with almost any style cordsets
- Clips feature angled nose design for use on 66 style punchdown blocks and bed-of-nails penetrator for use on insulated wires
- Package of two clips with red and black boots

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50087100	RPC	Piercing Clips

STATION MASTER PRO 24B

FEATURES

- Troubleshoot irrigation systems
- Activate and cycle solenoids
- Test solenoids for continuity
- Send tone to identify wires
- Measure clock voltage
- Low battery indication
- Easy-to-understand LEDs
- Test leads with Bed-of-Nails and piercing Pin Clips
- 1-year limited warranty

SPECIFICATIONS:

Minimum Voltage for Clock LED (LED intensity increases as voltage increases)	15 VAC
Minimum Battery while Testing	10.5 VDC
Maximum Input Voltage between Test Leads	28VAC
Solenoid Circuit Recharge Time	2.5 seconds
Maximum Distance Range to Activate one Solenoid	12 AWG Loop 3000-13000 feet 14 AWG Loop 2000-8500 feet 18 AWG Loop 500-3000 feet
Power Source	2x 9V alkaline batteries
Battery Life	3 hours continuous
Operating/Storage Temp.	32°F - 122°F (0° - 50°C)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52025220	24B	Station Master Pro

ALSO SEEN IN THE IRRIGATION CATALOG

TEMPO
COMMUNICATIONS

STATION MASTER PRO KIT 24BK

FEATURES

- Troubleshoot irrigation systems
- Chatter mode for audible locating of valves
- Activate any 24V AC valve solenoid
- Test solenoids for continuity
- Send tone to identify wires
- Check clock AC voltage
- Low battery indication
- Easy-to-understand LEDs
- Test leads with 'bed-of-nails' and piercing pin plips
- Locates underground solenoids

SPECIFICATIONS:

Minimum voltage for clock LED	15 VAC
Minimum Battery while Testing	10.5 VDC
Maximum Input Voltage between Test Leads	28 VAC
Solenoid activate output voltage	27 to 18 VAC
Battery	3x 9V Alkaline Batteries
Operating/storage temp.	32°F to 122°F (0°C to 50°C)
Relative humidity (max.)	80%

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52025221	24BK	Station Master Pro Kit

PROFESSIONAL GX SERIES TONE GENERATORS

FEATURES

- Microprocessor controlled precision tone generator
- Two-line polarity indication for fast outlet status check
- Automatic shutoff to prevent battery drain
- Snag-proof boot prevents broken plug tabs
- Convenient wrist/hanging lanyard
- Three distinct, selectable tone signal outputs for multiple line identification
- Two selectable tone power outputs for use on open and shorted pairs
- Independent continuity test function
- Independent talk battery supply with higher output voltage
- Fixed alligator clips and removable modular plug for multiple connection options
- 77GX2 includes premium telco-style angled nose clips with piercing pin and bed-of-nails connectors

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50605560	77GX	77GX Tone Generator with standard alligator clips
52082818	77GX2	77GX2 Tone Generator with ABN clips

COPPER TELECOMMUNICATIONS CATALOG

ADAPTONER MODULAR BREAKOUT TONE GNERATOR

FEATURES

- The AT8 Tone Generator makes it simple to test continuity, polarity, send tone and even supply talk battery to any configuration of pairs in 8-position modular jacks and plugs
- Ideal for splitting tone across pairs for easier tracing of CAT5 and higher cables
- Combines the features of our tone generators and a modular breakout adapter
- In-line testing is made simple with both a modular plug and jack on each unit
- 8-position "snag-proof" modular plug
- 8-position jack with protective cover
- Quick reference guide with common wiring configurations
- Selectable solid/warble tone signal
- Tone, continuity and talk battery supply using alligator clips
- Weather-resistant design
- Battery operated (9V not included)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50086936	AT8	AdapToner Modular Breakout Tone Generator

Note: Not for use on energized AC wiring
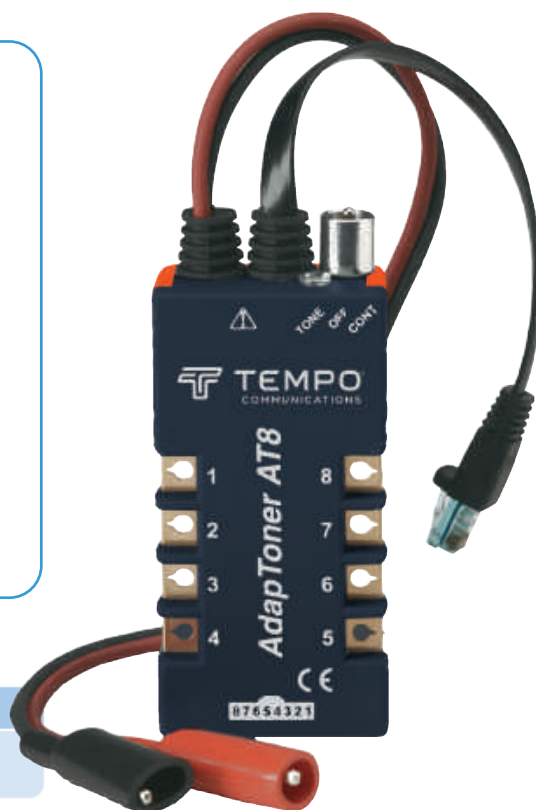
## LAN TONER WITH HUB BLINK & DETECT

FEATURES

- The LAN Toner is designed for the network installation and maintenance professional and can be used on any wiring system including datacom, telecom, security/alarm, audio and CATV
- Blinks HUB, Switch Port, and PC activity lights for fast identification
- Detect LAN hubs & switches
- Provides tone signaling, continuity testing and telephone line polarity indication combined with a modular breakout adapter
- Selectable tone outputs for identifying multiple cable runs
- Includes multiple connection options

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50605836	AT8L	LAN Toner

Note: Not for use on energized AC wiring
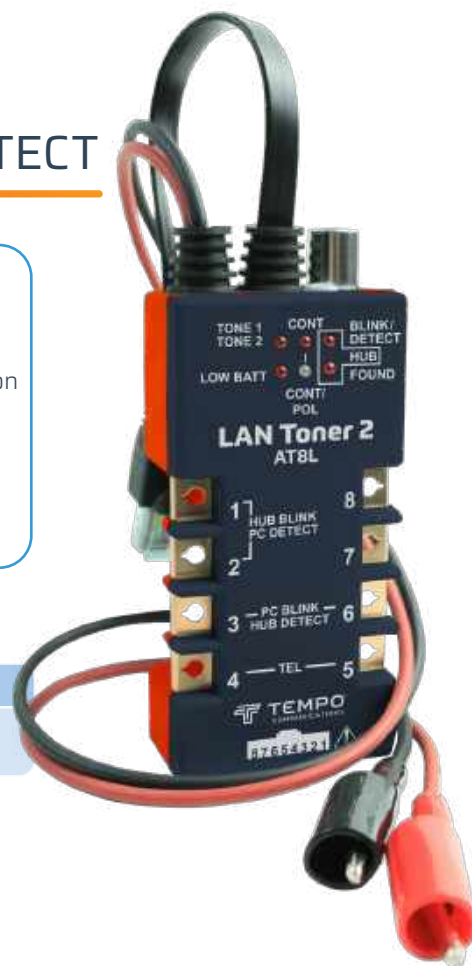
DATA MATE™ PRECISION TRACING TONE GENERATOR

FEATURES

- Trace wire or cable without interfering with digital two-way cable or ADSL services
- The model 7780 Data Mateâ„¢ Precision Tone Generator is intended to provide tone for tracing and troubleshooting communication circuits without disrupting digital traffic on the line or adjacent lines
- The high purity of the tracing tones combined with internal isolating filters allows safe tracing on circuits that carry digital services above the baseband (two-way cable and ADSL)
- The high-power differential output of the 7780 makes tones easy to find, even over long distances.
- Useful for continuity testing and polarity testing, the 7780 provides the standard warble tone and talk battery supply
- Line voltage and polarity indication
- High power tone output
- High purity tone signal
- Low crosstalk
- Low battery indicator
- Filter-isolated circuit ry
- Two-way broadband compatible
- Modular and Telco pro alligator leads
- ADSL service compatible
- Long range
- Popular, standard warble tone frequencies continuity testing
- Compatible with existing tone

SPECIFICATIONS:

Electrical	
Output Power	+9dBm
Output Signal Frequency	577/982 Hz alternating
Output Impedence	3,500 ohms minimum, 25kHz to 1.1 MHz
Mechanical	
Length	5.5" (140 mm)
Width	2.25" (57 mm)
Depth	1.0" (25 mm)
Weight	0.38 lbs. (0.17 kg)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52082819	PE7780	Data Mate™ Tone Generator

Note: Not for use on energized AC wiring

TONE PROBES SELECTION GUIDE

MODEL NO.	200B-G	200EP-G	200FP	200XP	500XP
Powerful 2" Rear-fire Speaker	✓	✓	✓	✓	✓
One-button Operation	✓	✓	✓	✓	Two Button
Adjustable Gain Control	✓	✓	✓	✓	✓
LED for Visual Signal Strength Indication		✓	✓	✓	✓
Recessed Tabs for Telephone Test or Headset Connection			✓	✓	
Headset Jack (audio shock protected)		✓			✓
LED Flashlight		✓			
Noise Filtration			✓	✓	✓
Replaceable Tip	✓	✓	✓	✓	✓
Five-Minute Auto Shutoff			✓	✓	✓
Low-battery Indicator			✓	✓	✓
Battery Operated (9V not included)	✓	✓	✓	✓	✓
Water Resistant					✓
"Mains Power" Warning (acAlert® option)					✓
Patented					✓

200B-G   200EP-G   200FP   200XP   500XP

TEMPO COMMUNICATIONS

TOUGH & WATER RESISTANT MULTI-FILTER TONE PROBE

FEATURES

- The tough and water resistant 500XP will help identify signals buried in the worst of noise
- Simple two-button operation with dual signal strength indicating LEDs can work with any tone generator
- Headset allows discrete use in quiet environments and can help in acoustically noisy areas
- Option to enable acAlert®, which helps warn users if brought near hazardous AC power voltages and may be inaudible if using the advanced filtering (note, international models have this enabled by default - can be switched off).

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52061827	500XP	500XP Pair Tracing Probe (POS)
52061826	500XPB	500XP Pair Tracing Probe (Boxed)
52062626	HS001	Replacement Headset
52066899	500XPH	500XP Pair Tracing Holster
52082917	500XP-BT	500XP With International Presets (acAlert active)

COPPER TELECOMMUNICATIONS CATALOG

TONE PROBE AMPLIFIERS

FEATURES

- Tone Probe Amplifiers permit wire and cable identification without having to make direct metallic contact with the conductor in conjunction with any tone generator
- All models feature high sensitivity and a powerful speaker for noisy environments, recessed on/off button control and high gain for accurate wire identification in congested cable bundles and equipment rooms
- The 200B-G also includes adjustable volume control for precise identification
- The 200EP-G also includes a headset jack (audio shock protected) and an LED Flashlight for working safely behind furniture, inside racks or in dim lighting conditions

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52047483	200B-G	Tone Probe Classic, Basic
52047484	200EP-G	Tone Probe, Standard, with Headset Jack & Flashlight
50086707	200C	Leather Belt Holster for 200 Series Tone Probe Amplifiers

FILTER TONE PROBE

FEATURES

- By selectively filtering out 60Hz (or 50Hz) and its harmonics, the 200FP can be used with any tone generator for faster and more accurate cable and wire identification
- Slim and comfortable design for use in limited-space areas
- Recessed on/off push-button control to conserve battery life
- Adjustable sensitivity/volume control to increase accuracy
- Blended carbon/plastic tip to reduce the risk of shorting terminals

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50086723	200FP	Filter Tone Probe (60Hz mains)
50604678	200FP/50	Filter Tone Probe (50Hz mains)

MULTI-FILTER TONE PROBE

FEATURES

- Single button selects between default mode and two kinds of powerful noise filters
- Filtering means faster and more accurate pair tracing
- Digital signal processor for accuracy and sensitivity
- Durable and light weight
- Audible and visible signal detection
- Continuous wide-range volume control
- Butt set terminals
- Field replaceable tip and spare tip included
- Uses a single 9V battery
- One probe for many applications
- Works with any tone generator
- The narrowband filter mode is especially well suited for 577Hz Telco tone (983 Hz for the international version)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52024457	200XP	Multi-Filter Tone Probe (60Hz mains, 577Hz narrowband)
52025467	200XP/50	Multi-Filter Tone Probe (50Hz mains, 983Hz narrowband)

REPLACEMENT PLASTIC TIPS FOR 200 SERIES PROBES

FEATURES

- Plastic tips perform much the same as traditional metal tips while reducing the risk of shorting terminals
- Specially formulated with a carbon powder and carbon fiber blended plastic
- Tips fit 200B, 200EP, 200GX, 200FP and 200XP probes
- RPT-1 comes with two pencil-style tips and two spade-style tips

RPT-1

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50087118	RPT-1	Plastic Tips for 200B, 200EP, 200FP and 200XP
52066900	RPT-3	Replacement tips for 500XP.

RPT-3

REPLACEMENT METAL TIPS FOR 200B & 200EP PROBES

FEATURES

- Metal tips provide maximum performance when probing insulated wires or making direct metallic contact
- Made of nickel-plated brass
- Tips fit 200B and 200EP probes
- Package contains two pencil-style tips

RMT-1

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50087096	RMT-1	Metal tips for 200B and 200EP Probes
52066901	RMT-3	Replacement metal tips for 500XP

RMT-3

PRECISION TONE GENERATOR

FEATURES

- Used in the telecommunications industry for pair identification and fault locating
- Supplies a precise 577.5Hz crystal controlled signal frequency
- Variable output allows technicians to adjust signal strength to suit field conditions and improve accuracy
- Designed to work with any common amplifier and exploring coil for aerial fault locating
- The unit supplies talk battery to power two telephone test sets (buttsets) for communications over inactive pairs
- Each of the three test leads is equipped with traditional bent nose piercing clips with "bed-of-nails" insulation piercing pins
- The tone generator and test leads fit neatly in a durable and protective woven polyester carrying case with shoulder strap
- Battery-operated (1 - 6V lantern included)

SPECIFICATIONS:

Power Requirements	One 6V lantern battery
Battery Life	40 hours nominal
Transmitter Frequency	577.5Hz pulsed at 1Hz, crystal controlled
Output Voltage	0.1 to 80Vp-p
Output Signal Level	0 to +30dBm
Construction	High impact ABS plastic in woven polyester case
Dimensions	7.25" x 5.5" x 4.5" in case
Weight	3 lbs. with battery

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52083234	177	Precision Tone Generator

TONE PROBES KITS SELECTION GUIDE

	PRODUCT	CABLE PAIR ID (CPI)	CADENCE CHANGE FOR MULTI USE	TALK BATTERY	CONTINUITY	POLARITY	IP RATING
TELECOMMUNICATION	**601K-G**	✓	✓	✓	✓	✓	
	200B-G						
	77M-G						
	701K-G	✓	✓	✓	✓	✓	
	200EP-G						
	77HP-G						
	711K	✓	✓	✓	✓	✓	
	200EP						
	77GX						
	801K	✓	✓	✓	✓	✓	
	200FP						
	77HP						
	802K	✓	✓	✓	✓	✓	
	200FP						
	AT8L						
	811K	✓	✓	✓	✓	✓	
	200XP						
	77GX						
	500/600	✓	✓		✓		IP67
	TP500						
	TG600						

	PRODUCT	CABLE PAIR ID (CPI)	CADENCE CHANGE FOR MULTI USE	TALK BATTERY	CONTINUITY	POLARITY	IP RATING
DATA, COAX & ALARM	**AT8LK**	✓	✓	✓	✓	✓	
	200EP						
	AT8L						
	402K		✓		✓		
	402T						
	402R						
	620K	✓			✓	✓	
	200EP						
	620						

TONE PROBES KITS SELECTION GUIDE

	PRODUCT	BATTERY LIFE	OUTPUT V PK-PK	DISTANCE RANGE		ADDITIONAL FEATURES
TELECOMMUNICATION	**601K-G**		10.2V	~13km	1 year	
	200B-G	> 50 hours				Modular test lead and croc clips
	77M-G	> 50 hours				52VDC voltage protection
	701K-G		6.7V	~ 15km	1 year	150VDC voltage protection
	200EP-G	> 50 hours				Headset socket 2.5mm
	77HP-G	> 50 hours				LED torch for work in dark closets
	711K		High 21.5V Low 8.8V	~ 15km	1 year	
	200EP	> 50 hours				Visible and audible signal strength
	77GX	> 50 hours				Removable modular jack lead
	801K		10.2V	~ 17km	1 year	50Hz AC mains filter
	200FP	> 50 hours				
	77HP	> 50 hours				
	802K		6.0V	~ 17km	1 year	50Hz AC mains filter
	200FP	> 50 hours				Built in Modular adaptor (access all 8 wires in Data cable)
	AT8L	> 25 hours				Hub/PC link
	811K		High 21.5V Low 8.8V	~ 15km	1 year	
	200XP	> 50 hours				1kHz band pass filter (Discriminator mode)
	77GX	> 50 hours				50Hz AC mains filter
	500/600		25.7V	~ 40km	3 years	
	TP500	> 60 hours				Headset option
	TG600	> 200 hours				Pure sine wave reducing cross talk
DATA, COAX & ALARM	**AT8LK**		6.0V	~ 15km	1 year	Hub / PC detect
	200EP	> 50 hours				Built in Modular adaptor (access all 8 wires in Data cable)
	AT8L	> 25 hours				Hub / PC blink
	402K		20.0V	8km inductive	1 year	
	402T	> 25 hours	20.0V	15km direct		ID terminated & non terminated cables
	402R	> 25 hours	20.0V	5km magnetic		50Hz AC mains filter
	620K		9.3V	~ 11.5km	1 year	
	200EP	> 50 hours				Latching facility for intermittent faults
	620	> 100 hours				Test normally open and normally closed switches

COPPER TELECOMMUNICATIONS CATALOG

CLASSIC TONE & PROBE KIT

FEATURES

- 701K-G Kits include the 77HP-G High Power Tone Generator and the 200EP Tone Probe Amplifier in a rugged and woven nylon carrying case (700C)
- 601K-G Kit is a more basic version of the 701K-G kit and includes the 77M-G Tone Generator and the 200B-G Tone Probe amplifier in a zippered nylon pouch

601K-G

701K-G

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52047486	601K-G	Classic Tone and Probe Kit, Basic
52047487	701K-G	Classic Tone and Probe Kit, Standard
52047489	701K-G/6A	Classic Tone and Probe Kit, Standard with ABN clips

PREMIUM TONE & PROBE KIT

FEATURES

- Designed for more accurate wire identification
- The 801K virtually eliminates power-related noise from the tone and probe operation
- Kit includes the 77HP/6A High Power Tone Generator and 200 FP Filter Probe in a convenient Cordura® case (700C)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50086901	801K	Premium Tone and Probe Kit
50604660	801K/50	Premium Tone and Probe Kit (50Hz)
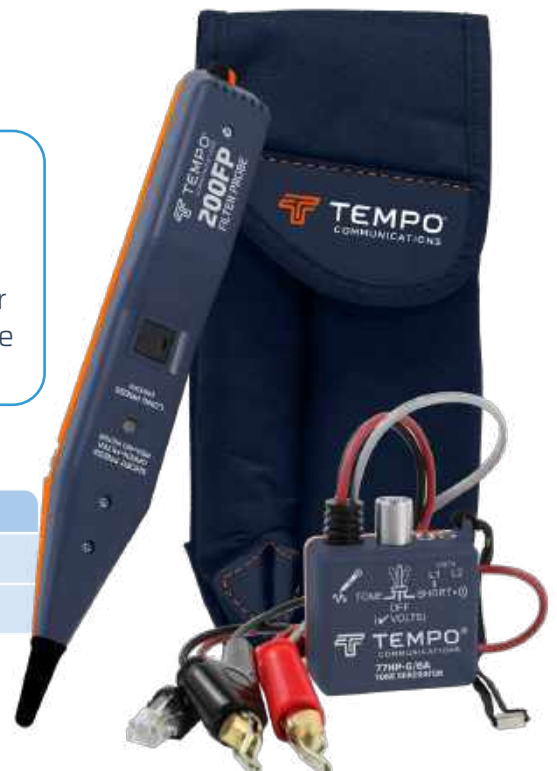
XPERT TONE & PROBE KIT

FEATURES

- Designed for fast and accurate wire identification by combining the features of our tone generators and modular breakout adapter
- Kit includes the AT8 Modular Breakout Tone Generator and 200EP Inductive Amplifier in a convenient carrying case (700C)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52025323	811K	Tone and Probe Kit, Xpert
52055997	811K/6A	Tone and Probe Kit, Xpert with ABN clips

AdapToner KIT

FEATURES

- Designed for fast and accurate wire identification by combining the features of our tone generators and modular breakout adapter
- Kit includes the AT8 Modular Breakout Tone Generator and 200EP-G Inductive Amplifier in a convenient carrying case (700C)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50086944	AT8K	AdapToner Kit

LAN TONER

- Designed for the network installation and maintenance professional, the LAN Toner sends tone and blinks HUB, Switch Port, and PC activity lights for fast identification. This kit can be used on any wiring system including Datacom, Telecom, security/alarm, audio and CATV
- Kit includes the AT8L LAN Toner and the 200GX Inductive Amplifier in a rugged and woven nylon carrying case (700C)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50605843	AT8LK	LAN Toner Kit

CATV CABLE TONE TEST KIT

FEATURES

- Designed specifically for the CATV industry, this kit allows you to tone through splitters, directional couplers and traps
- Simple to use, the 402K provides accurate results and will eliminate long delays trying to figure out non-tagged or mis-tagged cable drops
- Kit includes one transmitter, one receiver, one male F-to-F connector adapter cable, one male F-to-alligator clip adapter cable and a carrying case (700C)
- Transmitter and receiver are equipped with female F-connectors
- Three methods of signal reception: electrostatic pickup for non-terminated cables, electromagnetic pickup for terminated or shorted cables and direct connection when identifying through passive devices such as splitters
- In continuity mode, provides both audible tone and LED display
- Identifies the presence of AC or DC voltage on the cable under test
- Four selectable tone outputs for multiple line identification

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50086774	402K	CATV Cable Tone Test Set
50603760	402T	Transmitter
50603760	402R	Receiver
50603744	CS9	Male to male F-connector adapter cable
50603787	CS19	F-connector to alligator clip

TONE & PROBE CARRYING CASE

FEATURES

- Allows you to build your own kit using any tone generator and 200 Series probe
- Durable woven nylon
- Fits belts up to 3" wide

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50086839	700C	Tone & Probe Carrying Case

STRUCTURED WIRING TESTERS
NETcat® PRO 2 NC-500

FEATURES

- Test and troubleshoot data, telephone and coax wiring
- NETcat Pro 2 Additional Features:
    - Gigabit device capability detection (also detects 10baseT and 100baseT)
    - Cable type, velocity of propagation library, user editable
    - Power over Ethernet (PoE) detection
    - Memo pad
- Detect split pairs, short circuits, broken and crossed wires
- Step TDR technology shows length to open or short of all pairs
- Test shielded twisted-pair (STP), unshielded twisted-pair (UTP) & coaxial cables.
- Test patch cords and remote jacks
- Touch-screen control, included stylus slots into main unit
- Large icons ensure easy use with your finger too
- Large 3" (76mm) backlit high-contrast (user adjustable) monochrome display is highly visible in dark or brightly lit areas
- Remote test and ID unit stores in base of main unit
- Can identify up to 8 remote test ID units (the 7 extra ID units are available in the NC-510 accessory kit along with carrying case)
- Tone generator with four selectable precision frequency tones, compatible with Tempo advanced digital signal processing probes
- Operates on single 9V battery with low battery indication

SPECIFICATIONS:

Dimensions	3.3" x 1.4" x 6.7" (8.5 cm x 3.5 cm x 17 cm)
Weight	0.45 lb. (200 g)
Power	9V Alkaline battery (PP3)
User Interface	
Display LCD	Dot Pixels: 128 x 128 dots
Viewing Area	60.0 x 58.4
Backlight	White LED
Buttons	LCD touch-screen, Single momentary contact push button
Environmental	
Operating Temp	0°C to 50°C
Storage Temp	-20°C to 70°C
Interface	RJ45 shielded jacks
Connections	F-type threaded female coaxial connectors
TDR	User selectable based on a known cable length.
Calibration	40% to 100% in steps of 1%
TDR Range	0 to 2000 ft.
Resolution	1 ft. (0.3 m)
Accuracy to Open/Short	±4% or 2 ft. (0.6 m) whichever is greater
Remote Identifier	2000 ft. (609.6 meters) maximum distance
Wiremap	358 ft (100 meters) maximum distance

NC-500 CONTENTS:

- NETcat Pro 2 main unit with stylus
- Removable remote jack and patch lead test and ID unit
- Twisted-pair (modular RJ45), coax (F) and alligator clip test cords
- 9V alkaline battery

NC-510 NETCAT PRO 2 ACCESSORY KIT CONTENTS:

- Seven additional remote jack test and ID units, RJ45 and F (male)
- Carrying case to hold additional remote test ID units and content of NC-500 main kit

NC-520:

- Netcat Pro 2 Main Unit With Stylus
- Removable Remote Jack And Patch Lead Test and Id Unit
- Twisted-Pair (Modular Rj45), Coax (F) And Alligator ClipTest Cords
- Seven additional remote jack test and ID units, RJ45 and F (male)
- Carrying case to hold additional remote test ID units and content of NC-500 main kit
- 9V Alkaline Battery

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52024556	NC-500	NETcat Pro 2 Digital VDV Wiring Troubleshooter
52024661	NC-510	NETcat Pro 2 Accessory Kit w/carry case
52057701	NC-520	Netcat Pro 2 NC-500 Main Unit plus NC-510 accessory set

NETcat® MICRO NC-100

FEATURES

- Tests shielded twisted pair (STP), unshielded twisted pair (UTP) and coaxial cables
- TIA/EIA standard wiring pair verification
- Detects shorts, opens, reversed polarity, crossed and split pairs
- Generates three distinct, selectable digital tone patterns for cable tracing and troubleshooting
- Tracing modes can be adjusted for high performance LAN cables
- Complete set of connector types standard (telephone, LAN and coax)
- Nested remote allows end-to-end testing of all wiring types
- Simple testing of LAN wiring and phone lines
- Detection of common wiring and connector errors
- Warning if connected to voltage source
- Checks for reversed telephone wires

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52024541	NC-100	NETcat® Micro Digital Voice Data & Video Wiring Tester

SPECIFICATIONS:

Dimensions	150 x 70 x 33mm
Weight	220g including remote unit and battery
Power Source	9V Alkaline battery (PP3)
User Interface	
Display LCD	Icon and seven segment type
Viewing Area	Green LED
Backlight	White LED
Buttons	Four momentary contact push button
Environmental	
Operating Temp	0°C to 50°C
Storage Temp	-10°C to 60°C

Connections	RJ45 8 way shielded socket, RJ12 6-way socket F-type threaded female coaxial connectors
Network Split Pair Detection	Minimum detectable length of split cable 2 to 3 meters (5 to 10 ft.) depending on cable type and length
Pair Tracing Tones	Alternating frequencies of 577Hz and 983Hz are produced at three user selectable rates. Designed for standard tone probes, but compatible with precision digital Tempo tone probes. Can be output on all pairs, individual pairs or individual wires.

WIREMAP TESTER

FEATURES

- Quickly identifies opens, shorts, reversals and transposed pairs
- Economical tester includes all the basic functions
- Connecting the receiver unit automatically activates the test process
- Sequencing red and green LEDs provide fast, accurate and simple-to- understand results
- Alerts the technician if connected to an active circuit without harming the unit
- Connect any eight-position modular plug to the appropriate jack on the transmitter and a sweeping tone signal is applied to all pairs
- At the far end of the cable, use any Tempo Communications inductive amplifier (probe) to locate the corresponding plug or jack
- Battery operated (9V not included)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52082812	468	Wiremap Tester
50603825	468C	Carrying Case for the Wiremap Tester
52082813	468T	Transmitter
52082814	468R	Receiver
50603817	CS10	Modular Adapter Cable

COPPER TELECOMMUNICATIONS CATALOG

LAN CABLE-CHECK™

FEATURES

- Identifies cross-over telephone connections
- Automatically scans when cables connected and unit turned on
- Two scan speeds: fast or slow
- Maps connector and cable pin-out
- Tests cables up to 1,650' or 500m
- Can also test RJ11 connections with an RJ11 adapter (not included)
- 2, RJ45 patch cords and 9V battery included
- Contained in a durable nylon carrying case with belt loop

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52046967	PA1574	LAN Cable-Check™ Tester

LAN & A/V CABLE-CHECK™

FEATURES

- Tests RJ45 patch cords and network installations to identify good connections, opens, shorts or cross-connections
- Identifies data and telephone connection schemes
- Maps cable pin-out and detects split pairs
- Tests continuity of cords and installed cable runs
- Identifies good connections, opens and shorts
- Automatic scanning
- User selectable slow or fast speeds
- Quickly check cable installations and patch cords
- Easy-to-use with clear LED read-outs

INCLUDES:

- 2 RJ45 patch cords
- 75-ohm male terminator
- Cable TV "F" female adapter
- 9V battery
- Durable, nylon carrying case
- RCA to CATV „F" adapter

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52046970	PA1594	LAN and A/V Cable-Check™

PALADIN TOOLS COMBINE RUGGEDNESS, RELIABILITY AND VERSATILITY.

The Paladin brand is synonymous with quality, reliability, ruggedness and performance. Designed to be the go-to hand tool for communications technicians and complement the tried-and-true Tempo Communications repertoire of test and measurement solutions—Paladin Tools, manufactured by Tempo Communications remian an industry favorite when only the best will do. As always, Paladin Tools are proudly backed by a limited Lifetime Warranty.

RUGGED. Paladin hand tools are built to last, even when tackling the toughest jobs. Tempo Communications is so confident in this that they offer a Lifetime Warranty on all Paladin products.

RELIABLE. Time is money. Today's technician wants to have confidence that their tools are going to perform as promised, time and time again. Paladin proudly delivers this level of optimum reliability!

VERSATILE. By offering a selection of hand tools that tackles virtually any job a communications technician may encounter, Paladin is a one-stop-shop for success.

THE "DO-IT-YOURSELF" LINE OF PRODUCTS FROM TEMPO COMMUNICATIONS.

WHAT IS DATASHARK®?

Datashark® Tools can be found in stores serving the general household, including Home Depot and Menards. DataShark-labeled products are also available on Amazon.

DataShark test equipment and hand tools priced and designed to empower homeowners to ensure their communications devices are installed and working as intended.

Contact us for more information on DataShark hand tools.

PALADIN HAND TOOLS ARE BUILT

WITH THE TECHNICIAN IN MIND.

LIFETIME WARRANTY

ALL THE TOOLS YOU NEED

TO DO IT YOURSELF!

Data Shark

FIBER HAND TOOLS

ECONOMY FIBER OPTIC STRIPPER

FEATURES

- Pre-calibrated and factory set to ensure precision
- Bright orange rubber dipped handles
- Lock closure for safety and transport
- Tool is for stripping 2.0-3.0 mm Fiber Optic cable, micron-cladded core
- 5" (127 mm) long

SPECIFICATIONS:

WEIGHT	LENGTH
3 oz. (86 g)	5" (127 mm)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050605	PA1162	Economy Fiber Optic Stripper

ECONOMY KEVLAR® CUTTER

FEATURES

- Cut protective Kevlar strands in fiber optic cable
- Hard-chromed serrated edges to easily cut through Kevlar
- Comfortable handles with large finger openings
- 7.75" (197 mm) long

SPECIFICATIONS:

WEIGHT	LENGTH
2 oz. (57 g)	7.75" (197 mm)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051283	PA1511	Economy Kevlar Cutter

Kevlar is a registered trademark of E.I. du Pont de Nemours and Company

FIBER OPTIC SCRIBE

FEATURES

- Pen-type scribe with screw-in non-reversible carbide tip
- Wedge shaped tip
- Pocket-clip
- Stainless steel barrel
- 5.25" (197 mm)

SPECIFICATIONS:

WEIGHT	LENGTH
2 oz. (57 g)	5.25" (197 mm)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050965	PA1922-1	Fiber Optic Scribe

ALSO SEEN IN THE FIBER CATALOG

LIFETIME WARRANTY

PROGRIP 5-IN-1 FIBER OPTIC STRIPPER

FEATURES

- Precision ground stripping cavities for:
    - 2.0 - 2.4mm outer jacket
    - 2.0 - 3.0mm loose tube
    - 2.8 - 3.0mm outer jacket
    - 900µm buffer insulation
    - 900/125µm and 250/125µm buffer/acrylate
- Factory calibrated
- Dual-durometer ProGrips for improved comfort and control

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52055935	PA1171	Pro-Grip Stripper, 5-in-1 Fiber Optic

SPECIFICATIONS:

Weight: 140g	
Dimensions: 173mm	

ALSO SEEN IN THE FIBER CATALOG

LIFETIME WARRANTY

PROGRIP 3-IN-1 FIBER OPTIC STRIPPER

FEATURES

- Precision ground stripping cavities for:
    - 2.0mm outer jacket
    - 900µm buffer insulation
    - 250/125µm buffer/acrylate
- Factory calibrated
- Dual-durometer ProGrips for improved comfort and control

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52055938	PA1177	Pro-Grip Stripper, 3-in-1 Fiber Optic

SPECIFICATIONS:

Weight: 130g	
Dimensions: 160mm	

ALSO SEEN IN THE FIBER CATALOG

LIFETIME WARRANTY

DROP CABLE STRIPPER

FEATURES

- Strips 8.1mm drop cables
- Provides midspan slit operation for 8.1mm drop cables
- Easy secure operation for quick stripping
- Replacement Blade Kit TCDCS-2 contains six individual blades

SPECIFICATIONS:

Weight: 0.15lb (68g)	
Dimensions: 3.26" (82.8mm)	

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52086521	TCDCS	Drop Cable Stripper

RING AND SLIT STRIPPER

FEATURES

- Ring and Slit stripping for 1.2mm – 6.4mm fiber optic cables
- Easy fast adjustment for various cables diameters
- Ring Blade Kit TCCPS-RING-2 contains one blade, knob and pin
- Slit Blade Kit TCCPS-SLIT-2 contains one blade, lever and screw

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52085475	TCCPS	Cable Slit and Ring Stripper

SPECIFICATIONS:

Weight: 0.05lbs (22g)	
Dimensions: 2.87" (72.9mm)	

MIDSPAN SLITTER

FEATURES

- The Mid Span Slitter is an efficient and indispensable tool for fiber optic cable termination.
- The sharp blade is made of super-alloy, suitable for longitudinal stripping of outdoor optical loose tube cable.
- The stripping opens the tube on upper and lower sides for easy access of the fiber.
- The Mid Span Slitter comes with 4 groove diameters. Select the proper groove, put in the loose tube, press the blade into the tube coating, close and clamp the two half grooves, and move the blade along the tube to strip.

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52076413	MSS100	Midspan Slitter, Fiber

SPECIFICATIONS:

Weight: 30g	
Dimensions: 50 x 40 x 25mm	

FIBER OPTIC TOOL CASE

FEATURES

- Rugged carry case to safely keep all tools organized
- Extra pockets are incorporated to hold accessories and other tools

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52085476	FIBKITCASE	Fiber Optic Tool Case

ULTIMATE FIBER TOOL KIT

This Ultimate Kit contains all the slitters, strippers, and Kevlar® cutters you will need to start your fiber optic terminations. Also included is the premium 1600 Series Crimper with three interchangeable dies. The Ultimate Tool Bag also has plenty of room for you to add your consumables.

INCLUDES:

- **PA1511** Kevlar® Cutter
- ProGrip 5-in-1 Fiber Optic Stripper
- **PA1162** Economy Fiber Optic Stripper
- **PA1161** Adjustable Jacket Stripper
- **PA1820** AM 25 Slitter
- **PA1821** AM 35 Slitter
- **PA1258** LC CST- Mini Stripper

- **PA1511** Kevlar® Cutter
- ProGrip 5-in-1 Fiber Optic Stripper
- **PA1162** Economy Fiber Optic Stripper
- **PA1161** Adjustable Jacket Stripper
- **PA1820** AM 25 Slitter
- **PA1821** AM 35 Slitter
- **PA1258** LC CST- Mini Stripper

SPECIFICATIONS:

WEIGHT	LENGTH
5.65 lbs	

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050427	PA4924	Ultimate Fiber Tool Kit

Kevlar is a registered trademark of E.I. du Pont de Nemours and Company

LIFETIME WARRANTY

TEMPO® COMMUNICATIONS

GripPACK QUICK-RELEASE TOOL HOLSTER

FEATURES

- Easy-on, easy off with new quick-release belt clip
- Belt clip swivels so the holster moves with you and the tools stay out of your way
- Form fitted PVC material ensures that tools don't fall out - even if you drop your kit or they are upside down
- Molded specifically to hold the following Tempo Communications Tools: Data SureStrip® UTP/STP & flat satin phone cutter/stripper, Datacomm scissors with serrated blades & ergonomic handles, Punchdown tool- either the ergonomic SurePunch Pro or the original SurePunch PDT®, Mini-MagLite® or SurePunch Pro detachable LED, and a Sharpie® marker

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52046993	PA4941	GripPack SurePunch Pro Technician's Kit
52046994	PA4942	GripPack SurePunch Pro Installer's Kit
52050958	PA4943	GripPack SurePunch Technician's Kit
52055952	PA4946	GripPack UTP Essentials
52049537	PA4940-31	Replacement Belt Clip

GRIP PACK KITS:

DESCRIPTION	MODEL NO.	PA4941	PA4942	PA4943	PA4946
GripPack Tool Holster	PA4940	✓	✓	✓	
Data SureStrip® UTP/STP & flat satin cutter/stripper	PA1116	✓	✓	✓	✓
Reversible 110/66 blade	PA4571	✓	✓	✓	✓
SurePunch Pro PDT punchdown tool handle	PA3589	✓	✓		
SurePunch PDT® punchdown tool handle	PA3570			✓	✓
SurePunch Pro detachable LED light & batteries	PA4599	✓	✓		
MagLite® with 2 AA batteries	N/A	✓		✓	
Black Sharpie® pen	N/A	✓		✓	

GripPACK PVC POUCH

FEATURES

- Easy-on, easy off with new quick-release belt clip
- Belt clip swivels so the holster moves with you and the tools stay out of your way
- Form fitted PVC material ensures that tools don't fall out – even if you drop your kit or they are upside down
- Molded specifically to hold the following Paladin Tools:Data SureStrip® UTP/STP & flat satin phone cutter/stripper, Datacomm scissors with serrated blades & ergonomic handles, Punchdown tool – either the ergonomic SurePunch® Pro or the original SurePunch® PDT, Mini- MagLite® or SurePunch® Pro detachable LED, and a Sharpie® marker

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52049537	PA4940	GRIPPACK PVC POUCH

PRO COAX TOOL KIT

Designed for the professional CATV cable installer. Offers the convenience in having six essential tools needed for coaxial repair and installation with a unique Grip Pack Pouch.

INCLUDES:

- **0251-08D**
  8" Diagonal Cutting Pliers, Dipped Grip
- **45591**
  RG59/6/6Q, RG7/11 Coaxial Cable Stripper
- **PA70020**
  RG59/6/6Q, RG7/11 Coaxial Cable Crimper
- **0153-42C**
  6-in-1 Multi-Tool (Screwdriver/Nut Driver Tool)
- **0354-14**
  Combo Ratcheting Closed and Open Ended 7/16" Wrench
- **PA5000**
  Custom Grip Pack Pouch with Belt Clip

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050427	PA4924	Ultimate Fiber Tool Kit

LIFETIME WARRANTY

ULTIMATE TECHNICIAN KIT

INCLUDES:

- **PA1179** KT8 round cable cutter
- **PA1116** Data SureStrip® UTP/STP & flat satin cutter/stripper
- **PA1257** LC-CST CATV "F" coax stripper
- **PA1923** Untwist tool
- **PA1927** CATV "F" flaring & attachment tool - RG6/RG6 QS
- **PA1559** SealTite® Pro compression crimper
- **PA3589** SurePunch Pro punchdown tool
- **PA4599** SurePunch Pro detachable LED light
- **PA4572** 110 blade
- **PA4591** Double 110 blade
- **PA4573** 66 blade
- **PA4574** BIX blade
- **PA4575** Krone LSA blade
- **PA1543** LAN ProNavigator® tester & remote
- **PA1573** Telephone Test Set & LAN Cable-Check™
- **PA1902** RJ45 adapter
- **PA1900** Can wrench
- **N/A** (10) RJ22 handset plugs
- **PA9520** (10) RJ11/12 plugs, stranded, flat cable
- **PA9546** (10) RJ45 plugs, Cat5e, solid, round cabl
- **PA9644** (10) CATV "F"RG6/RG6 QS connectors
- **PA901074** (2) BNC-to-CATV "F" adapters
- **PA4923** Ultimate Tool Bag
- **N/A** Plano® plastic tackle box

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52046987	PA4932	Ultimate Technician Kit

LIFETIME WARRANTY

ULTIMATE PREMISE SERVICE KIT

INCLUDES:

- **PA1179** KT8 round cable cutter
- **PA1116** Data SureStrip® UTP/STP & flat satin cutter/stripper
- **PA1257** LC-CST CATV "F" coax stripper
- **PA8000** CrimpALL® crimp frame with EZI-CHANGE™ thumb screws
- **PA3589** SurePunch Pro punchdown tool
- **PA4572** 110 blade
- **PA4573** 66 blade

- **PA1543** LAN ProNavigator® tester & remote
- **PA1573** Telephone Test Set & LAN Cable-Check™
- **PA1902** RJ45 adapter
- **PA901074** (2) BNC-to-CATV "F" adapters PA4923
- **N/A** Ultimate Tool Bag
- **PA2062** Die Sets: RJ11/12 WE/SS-style
- **PA2687** Die Sets: RJ45 WE/SS-style & RG6/RG6 QS CATV "F"

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52046988	PA4933	Ultimate Premise Service Kit

ULTIMATE DATA/VOICE PRO KIT

This complete kit is for data and voice installation and maintenance stored in the new versatile Ultimate Tool Bag.

INCLUDES:

- **PA1116** Data SureStrip® UTP/STP & flat satin cutter/stripper
- **PA1923** Untwist tool
- **PA1561** All-in-One Phone/Data tool
- **PA3589** SurePunch Pro punchdown tool
- **PA4572** 110 blade
- **PA4573** 66 blade
- **PA4591** Double 110 blade
- **PA1573** Telephone Test Set & LAN Cable-Check™
- **PA1900** Can wrench
- **PA4923** Ultimate Tool Bag
- **N/A** Plano® plastic tackle box

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52046990	PA4935	Ultimate Data/Voice Pro Kit

ULTIMATE TOOL BAG

FEATURES

- Main compartment features removable inner tote and three additional pockets
- Removable inner tote with eight adjustable storage slots keeps smaller tools handy
- Detachable shoulder strap with three anchor points to carry bag horizontally or vertically
- Deep Velcro pockets holds large tools or test equipment
- Plano® divided tackle box neatly stores dies, blades & connectors and fits into all outer pockets
- Sturdy bottom prevents bag from flopping over when sitting upright

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52049337	PA4923	Ultimate Tool Bag with Plano® tackle box

SEALTITE® PRO CABLE TV "F" KIT

Tackle all of your compression crimping jobs with the complete SealTite® Pro Kit. Includes all the tools you need to prepare the cable and terminate any compression connector using RG59, RG6 or RG6 Quad shield cables.

INCLUDES:

- **PA1179** KT8 round cable cutter
- **PA1257** LC CST CATV "F" coax stripper
- **PA1917** RG6/RG6 Quad shield flaring tool
- **PA1559** SealTite® Pro compression crimper
- **N/A** RG6/RG6 Quad SealTite® connectors (10)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52046985	PA4910	SealTite® Pro Kit
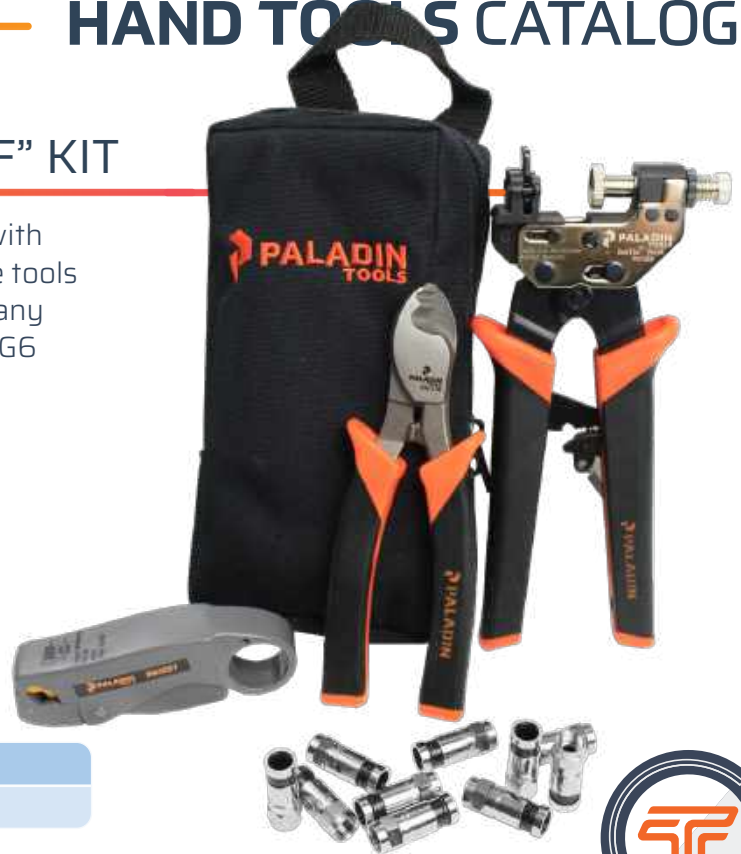
COAXREADY™ COMPRESSION TOOL KIT

Adding to our CoaxReady™ solutions, this kit has everything you will need to terminate any manufacturers' cable TV "F", RCA or BNC compression connectors using RG6, RG6 Quad or RG59 cable sizes.

- 12 piece kit
- Includes zippered Cordura® portfolio case

INCLUDES:

- **PA1821** AM 35 Slitter
- **PA1179** KT8 Cutter
- **PA1119** Data & A/V UTP & Coax Cutter/Stripper
- **PA1280** CST Pro Coax tool
- **PA2280** CST Pro GRN 3-Level Strip Blade Cartridge
- **PA2283** CST Pro OG 3-Level Strip Blade Cartridge
- **PA2282** CST Pro BK 3-Level Strip Blade Cartridge
- **PA2284** CST Pro Rollers
- **PA1927** CATV "F" Flaring & Insertion Tool
- **N/A** Zippered Cordura® Portfolio Case

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52049337	PA4923	Ultimate Tool Bag with Plano® tackle box

Cordura is a registered trademark of E.I. du Pont de Nemours and Company

COAXREADY™ DELUXE KIT

Perfect for LAN/Ethernet or video & CATV installation. For a wide variety of coaxial connectors including mini-coax and HDTV applications, CoaxReady™ Deluxe combines our most popular tools for a complete coax solution in a handy zipper case.

INCLUDES:

- **PA1179** KT8 round cable cutter
- **PA1255** LC CST-58/59 coax stripper
- **PA1302** 1300 crimp tool frame with EZI-CHANGE™ thumb screws

DIE SETS:

- **PA2034** BNC/TNC - RG58/59/62AU
- **PA2649** BNC/TNC - CATV "F" RG59/6/Belden 8281/1694A and 1505A
- **PA2653** SMA/SMB/Mini 59 BNC & TNC/Mini-UHF

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050391	PA901081	CoaxReady™ Deluxe Kit

COAXREADY™ KIT

With this kit a technician is set to tackle most coaxial cabling challenges Perfect for the LAN/Ethernet or video installation installer. For a wide variety of coaxial connectors including mini-coax applications, CoaxReady™ combines our most popular tools with the new LC CST coax stripper in a handy zippered case.

INCLUDES:

- **PA1179** KT8 round cable cutter
- **PA1255** LC CST-58/59 coax stripper
- **PA1302** 1300 crimp tool frame with EZI-CHANGE™ thumb screws

DIE SETS:

- **PA2034** BNC/TNC - RG58/59/62AU
- **PA2075** BNC/TNC - RG58/59/62AU RG6 Teflon/Plenum
- **PA2653** SMA/SMB/Mini 59 BNC & TNC/Mini-UHF

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050387	PA901054	CoaxReady™ Kit

DATACOMM PRO STARTER KIT MAX

This kit is also a starter kit for datacomm professionals.

- 66 piece kit
- Includes the complete solution for cutting, crimping, and terminating
- All the tools included come in a compact zipper case

INCLUDES:

- **PA1116** Data SureStrip® UTP/STP Cutter/Stripper
- **PA3570** SurePunch Pro Punchdown Tool
- **PA4528** 110 Reversible blade
- **PA1561** All-in-One Phone/Data Crimp Tool
- **PA9520** (10) RJ45 Cat5e Modular Plugs
- **N/A** Compact Zipper Case

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52046983	PA4908	DataComm Pro Starter Kit

DATACOMM PRO STARTER KIT MAX

A complete data cable installation kit providing everything to support the installer using commonly-available connectors, and punchdown termination blocks. All tools contained in a professional-quality, soft-sided zipper case with heavy-duty wrist strap.

INCLUDES:

- **PA1116** Data SureStrip® UTP/STP & flat satin cutter/stripper
- **PA1923** Untwist Tool
- **PA3589** SurePunch Pro punchdown tool
- **PA4599** SurePunch Pro detachable LED light
- **PA4591** Double 110 blade
- **PA4571** 110/ 66 blade**
- **PA1543** LAN ProNavigator® UTP/STP continuity tester & remote
- **PA8000** CrimpALL® crimp frame with EZI-CHANGE™ thumb screws

DIE SETS:

- **PA2061** RJ45 WE/SS-style
- **PA2062** RJ11/12 WE/SS-style
- **PA2063** RJ22 handset
- **PA2064** DRJ45 AMP-style
- **PA2067** RJ11 DEC-MMJ

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050393	PA901378	DataReady™ PRO Kit
	PA9013781	DataReady™ PRO Kit - Krone*
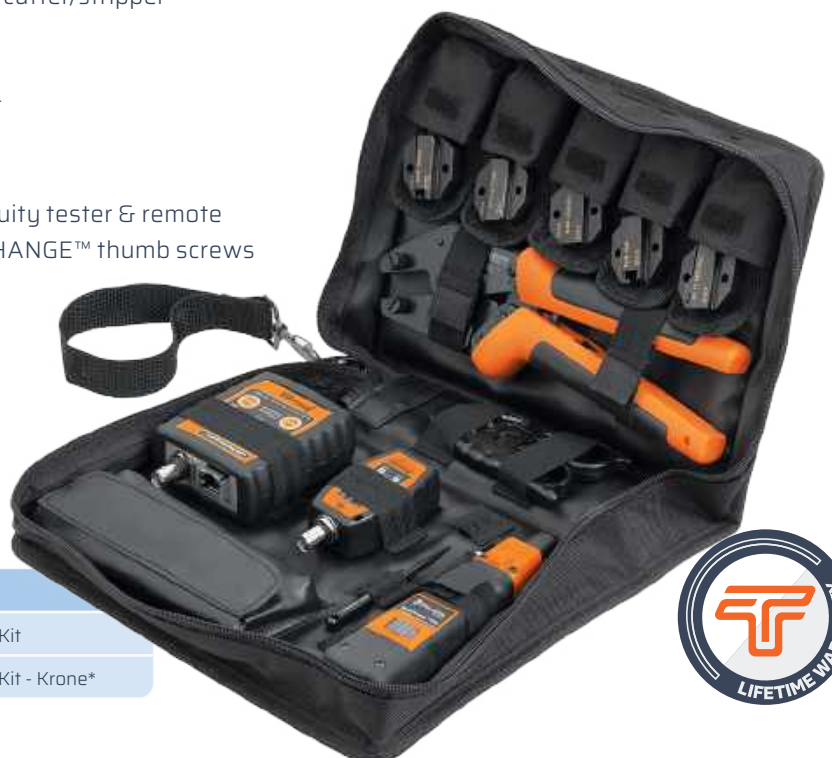
DATAREADY™ KIT

The complete Category 5 datacomm tool set in a handy zipper case. Everything needed for a CAT-5 installation except the cable.

INCLUDES:

- **PA1116** Data SureStrip® UTP/STP & flat satin cutter/stripper
- **PA1561** All-in-One Phone/Data tool*
- **PA3570** SurePunch Impact Punchdown Tool
- **PA4571** 110/ 66 blade**
- **PA1576** Data Link/ID and Cable-Check™ Tester
- **N/A** (20) RJ45 plugs, Cat5e, solid/stranded; flat/round cable
- **N/A** Zipper Case with Carrying Strap

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050388	PA901053	DataReady™ Kit
52050414	PA9010531	DataReady™ Kit - AMP/Krone*†

WE/SS - style replaced with AMP - style #1557
***Contains 110 & Krone blades PA4575 (only with PA9010531 Kit)*
† 68 spring- compression blades precisely adjust to the insulation.

PREMISE SERVICE KIT

Our biggest data, voice, and coaxial LAN installation kit provides everything for twisted pair and coaxial cable installation. All tools contained in a professional blow-mold case complete with form-fitting foam.

INCLUDES:

- **PA1179** KT8 round cable cutter
- **PA1257** LC-CST CATV "F" coax stripper*
- **PA1116** Data SureStrip® UTP/STP & flat satin cutter stripper
- **PA8000** CrimpALL® crimp frame with EZI-CHANGE™ thumb screws
- **PA3589** SurePunch Pro punchdown tool
- **PA4599** SurePunch Pro detachable LED light
- **PA4573** 66 blade***
- **PA1543** LAN ProNavigator® UTP/STP continuity tester & remote
- **PA1573** Telephone Test Set & LAN Cable-Check™
- **PA1902** RJ45 8-way adapter

DIE SETS:

- **PA2062** RJ11/12 WE/SS-style**
- **PA2687** RJ45 WE/SS-style & RG6/RG6 QS CATV "F"**
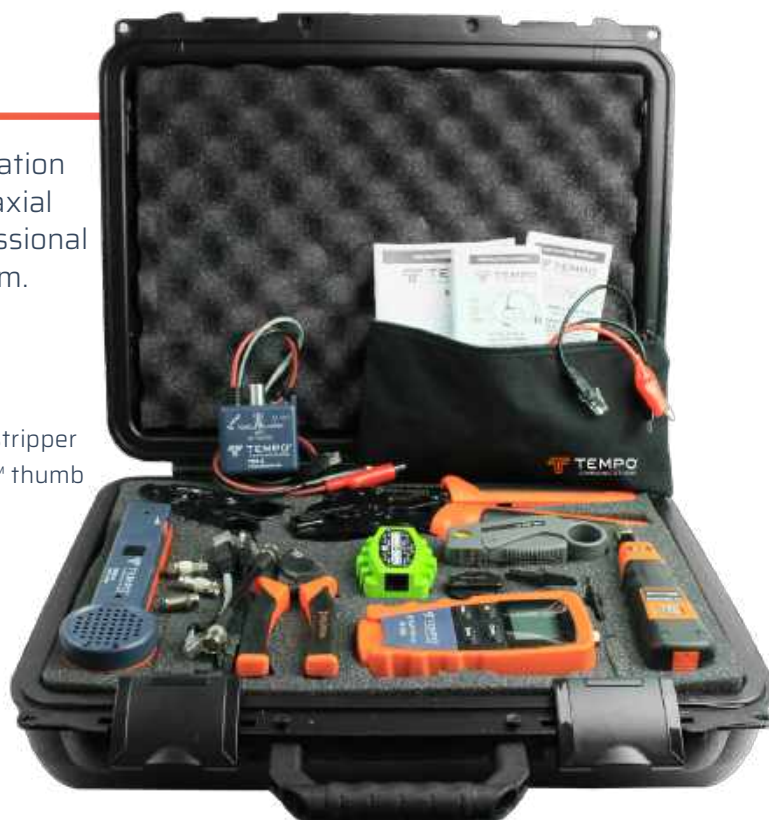
ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050389	PA901039	Premise Service Kit

KIT LAN PRO NAVIGATOR

FEATURES

- Simple PASS/FAIL test results in one second allows technicians to quickly move on to the next test site
- Generates oscillating audio tone for use with tone probes to locate cables
- Tests data and telephone cables up to 320 feet (100 meters) for proper pairing for EIA/TIA-568A, EIA/TIA-568B, Token Ring, 10 Base T, and common Category 5 configurations
- Tests unshielded UTP and shielded STP data cable
- Detects good connections, open connections, crossed wires and split pairs
- Tests common BNC connected 50 and 75 ohm coaxial cables up to 320 feet (100 meters) for continuity
- Tests coaxial cable types RG58, RG59, RG6, RG6 Quad, Belden 8281, RG8, RG11 and more
- Belt clips provided and lanyard holes embedded in case to attach to belt or wrist
- Features low battery test and auto-off function to preserve battery life
- Includes standard 9V battery

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051666	PA901066	KIT LAN PRO - NAVIGATOR

LIFETIME WARRANTY

NETWORK TOOL BUNDLE

This new bundle provides the perfect solution for the do-it-yourselfers that want to use professional tools or for small contractors just starting out installing networks. It includes everything you need but the cable to get the job done

INCLUDES:

- **PA1116** Data SureStrip® UTP/STP & flat satin cutter/stripper
- **PA1561** All-in-One Phone & Data Tool
- **PA3580** Non-impact 110 punchdown
- **PA9546** 10, RJ45 Cat5e plugs
- **PA9520** 10, RJ11 plugs

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52046984	PA4909	Network Tool Bundle

CATEGORY 5 DATA TERMINATION & TEST KIT

FEATURES

- Includes the tools, connectors and testers necessary for installing a Cat 5 data network
- Durable Cordura® Plus zipper case protects and organizes tools and includes a see-through pouch for storing connectors
- Outside pockets provide convenient storage of instruction manuals or worksite documents

INCLUDES:

- **45482** Cable Cutter
- **45579** Kwik Stripper® Twisted Pair Stripper
- **46023** Punchdown Tool with 110 Blade
- **45575** Telephone Ratchet Crimper for 4-, 6- and 8- Position Modular Plugs
- **468T** Modular Cable Tester Transmitter with Tone Generator
- **468R** Modular Cable Tester Receiver
- **45485** Zipper Case

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50454706	45470	Category 5 Data Termination and Test Kit

HAND TOOLS

TELECOM SPLICE CRIMPERS

FEATURES

- Side cutter for AWG 19-26 copper
- Non-slip grips for precision control
- Limited lifetime warranty
- Crimp capacity
  - UR: AWG 19-26
  - UY: AWG 22-26
  - UG: AWG 19-26

PA1180 ONLY
- Stripping cavity for AWG 22 wire
- Needle-nose with knurled surface for gripping, wrapping and looping

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52055941	PA1180	4-in-1 Telecom Splice Crimper
52055939	PA1178	Telecom Splice Crimper
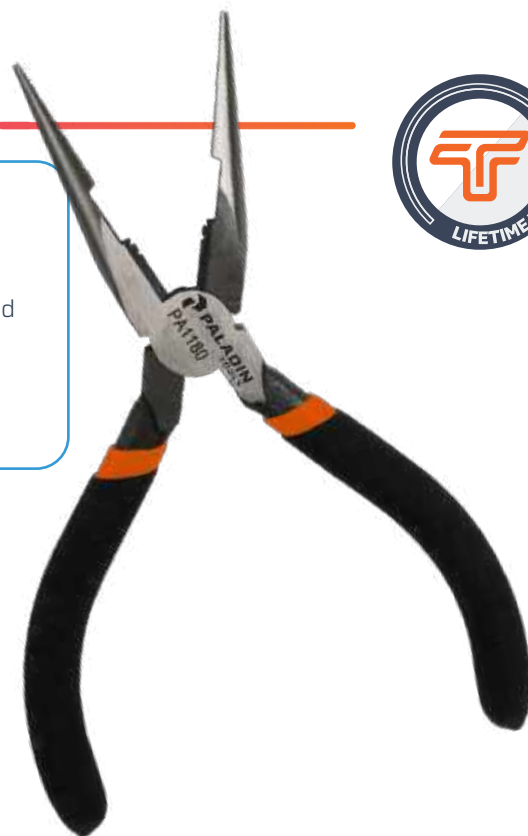
UY 2-PORT YELLOW CONNECTORS

FEATURES

- Quickly and easily splice wires.
- Butt connector.
- Use with solid copper 22-26 AWG conductors.
- No stripping required

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051375	PA9692	CONN UY 2-PORT YEL TELE SPLICE 25-PACK

UR3-PORT RED CONNECTORS

FEATURES

- Quickly and easily splice wires
- Butt connector
- Use with solid copper 22-26 AWG conductors
- No stripping required

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051374	PA9691	CONN UR3-PORT RED TELE SPLICE 25-PACK

ROUND CABLE CUTTERS

FEATURES

- Cuts solid or stranded cable up to AWG 6
- Precise and effortless cuts
- Round cutting form won't deform cables
- Ideal for UTP and Coax, RG58, RG59 and RG6/6Q; RG7 and RG11 with PA1175
- Limited lifetime warranty

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52055936	PA1175	Contour Round Cable Cutter
52055940	PA1179	Dual-Contour Round Cable Cutter

CABLE SPLICER'S KNIFE & SPLICER'S SNIPS

FEATURES

- Cuts cable, telephone wire and strips insulation
- Tough, tempered steel knife blade holds its edge longer
- Full-sized knife handle provides greater comfort
- Knife has a short, coping-type blade made of the finest cutlery steel
- Scissors have an upper blade with two stripping notches to strip most insulations from 19-24 AWG.

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52056118	PT-K01A	Scissors and Knife Kit in Pouch

DATACOMM SNIPS, ELECTRICIAN'S SNIPS

FEATURES

- Cuts, strips and trims data and phone cables
- Ergonomic design nests in hand for comfort and added cutting power
- One fully serrated blade for clean cuts
- "V" stripping notches for 19 and 23 AWG wire
- Manufactured from high-carbon steel, chrome over nickel plate

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52046765	PT-T03	Snips

DATACOMM SNIPS, ELECTRICIAN'S SNIPS

FEATURES

- Head of tool and handles designed at optimum 22° angle to prevent awkward wrist bends
- Precision grould blades ensure consistent stripping and cutting
- Features screw cutter and wire loops embedded in frames
- Built-in safety lock
- Gripping jaws on front of tool for pulling wire
- PA1117 will work on Romex household cable
- Note: This is not an insulated tool

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050609	PA1117	GripP 10 cutter/stripper; Solid: 10-22; Stranded: 12-24
52050610	PA1118	GripP 20 cutter/stripper Solid: 20-30; Stranded: 22-24
52050616	PA1123	Wire Stipper Bundle, includes both PA1117 and PA1118
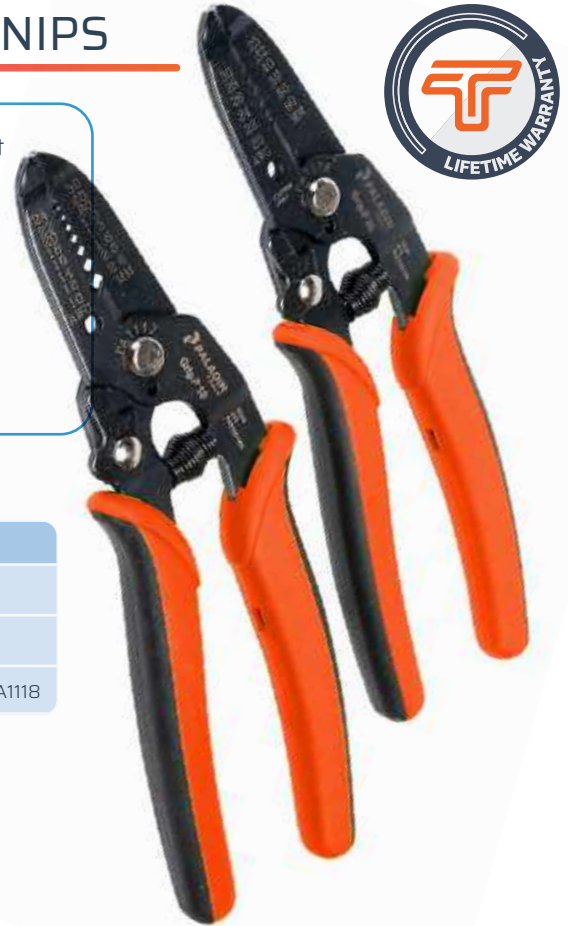
MINI-STRIPAX® PLUS

FEATURES

- Strips flexible and solid conductors with PVC, Teflon, silicone and other special insulations
- Strips multiple conductors and thin ribbon-cable conductors simultaneously
- Adjustable wire stop and built-in wire cutter
- 28-18 AWG (0.80-1.0 mm2) PVC blade included
- See replacement blades in next section
- Limited lifetime warranty

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050558	PA1115P	mini-stripax® plus (28-18 AWG)

ADJUSTABLE WIRE STRIPPER & CUTTER

FEATURES

- Economical wire stripping tool for multiple cables
- Made of high carbon steel and heat treated for long life
- Adjustable settings for wire sizes from 30-10 AWG

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050603	PA1161	Adjustable wire stripper & cutter (30-10 AWG)

COMBO UTP/COAX SURESTRIP®

FEATURES

- Professional all-in-one cutter/stripper for coaxial and twisted pair cables
- Cuts and strips multiple cable types:
  - Coax: RG6, RG6 Quad and RG59
  - Twisted Pair (UTP/STP): Cat6, Cat5e and Cat5
- Easy-to-use combination cutter/stripper
- Adjustable stripping blade for UTP/STP; accommodates different insulation thicknesses without damaging conductors
- Self-regulating cassette blade prevents nicks
- Coax blade cassette is removable to adjust stripping depth of both blades with hex key included
  (Note: Hex key stores securely in bottom of tool)
- Contoured finger grips for cutting power

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52046962	PA1119	Combo UTP/Coax SureStrip®
52050614	PA2119	Coax Blade Cassette
52050615	PA2120	UTP Cut/Strip Blade

DATA SURESTRIP®

FEATURES

- Small, compact tool that cuts and strips multiple cable types:
  - 4-, 6- and 8- conductor flat satin cables
  - 4-, 6- and 8- conductor UTP/STP data cables
  - 25- vpair UTP/STP data and telephone cables
- Multi-conductor round bundled cables with a maximum diameter of .5" (12.7 mm)
- 14-8 AWG (2.5-75mm2) wire
- Nylon reinforced ABS plastic with stainless steel blade
- Fully adjustable with simple thumb screw
- Self-regulating to prevent nicking
- Contoured finger grips for power cutting

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050597	PA1116	Data SureStrip®

STRIPPER AM 12 W/LENGTH GAUGE

FEATURES

- Strips round cables with diameters of 0.08 – 0.5" (2 – 12.5 mm)
- Strips outer jacket off UTP and STP data cable and CAT-5 round telephone cable
- Adjustable stripping blade for different insulation thicknesses prevents damage of shielding and conductors
- Length gauge for repeated cutting/stripping accuracy
- Cuts round, flexible copper cables up to 12 AWG (4 mm²)
- Use left or right handed

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050589	PA1112	STRIPPER AM 12 W/LENGTH GAUGE

CST VARIO STRIPPER

FEATURES

- Most flexible coax stripping tool on the market
- Easy to set up and adjust
- Two- and three-level stripping
- Minimum center-to-center strip length is 0.13" (3.2 mm)
- Maximum total strip length is 0.67" (17 mm)
- Adjustable blade positioning in 0.04" (1 mm) increments
- Lifetime warranty on frame only

  Not recommended for use on LMR or Teflon cables

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050510	PA3240	CST vario stripper

![TEMPO COMMUNICATIONS logo]

PUNCHDOWN STRIPPER

FEATURES

- Self-regulating strip depth
- Fast and easy to use
- Great for CAT-5, CAT-5e, and CAT-6 data cable
- Built-in 110 punchdown (punch only)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051290	PA1913	Punchdown stripper

CST STRIPPER

FEATURES

- Fixed blade system that accommodates 0.1"-0.315" (2.5-8.0mm) cable diameters including RG58/59/62AU, RG6, RG6 Quad, RG174,
- Belden 1505A, 1855A and 8281
- Cam adjustment ensures precise and repeatable hold on cable
- Memory blocks reduce set-up time and are easy to interchange and mark for various applications
- Blades are two-sided for longer use
- No cable jacket distortion during stripping process
- Blade cassettes easy to change
- Lifetime warranty on frame only

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050503	PA1240	CST Green - 3 Level (A=.279, B=.201)
52050570	PA2240	Green Blade Cassette only
52050506	PA1243	CST Brown - 3 Level (A=.295, B=.137)
	PA2243	Brown Blade Cassette only
52050508	PA1247	CST Orange - 3 Level (A=.327, B=.146)
52050576	PA2247	Orange Blade Cassette only
52050515	PA1248	CST Black - 3 Level (A=.344, B=.094)

CST PRO COAX STRIPPER

FEATURES

- Coax stripping system for precision & accuracy
- Works with a wide range of cable diameters from .1" - .315" (2.5-8.0mm) including: RG58/59/62AU, RG6/6QS, RG174, Belden 1505A, 1855A & 8281 and mini-coax
- Pre-set for standard 2- and 3- level strip lengths
- Coax stripper designed for pros requiring precision, versatility & ease of use
- Reversible-rollers easily adjust for various cable sizes including mini-coax
- Dual roller mechanism perfectly centers cable & applies equal pressure to eliminate cable distortion
- Quick-change pre-set blade cassettes
- Cam adjustment ensures precise hold on cable
- Fixed blade cassettes pre-set for standard 2- and 3- level strip lengths
- Interchangeable blades reduce set-up time

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52052366	PA1280	CST Pro Green 3-level (A=.279, B=.201)
52050617	PA2280	Green Blade Cassette only
52050521	PA1281	CST Pro Orange 3-level (A=.327, B=.146)
52050618	PA2281	Orange Blade Cassette only
52052367	PA1282	CST Pro Black 3-level (A=.344, B=.094)
52050619	PA2282	Black Blade Cassette only
52050522	PA1283	CST Pro Blue 2-level (A=.250)
52050620	PA2283	Blue Blade Cassette only

LC CST STRIPPERS

FEATURES

- Self-regulating tension
- Adjust cutting depth on each blade for varying cable thicknesses with the included hex key
- Pre-set for common strip lengths
- Blades adjust for strip dimensions other than our standard pre-set units*

*To adjust strip lengths simply change blade locations in the lower jaw to attain the following:

.157" (4 mm), .236" (6 mm), .315" (8 mm), .394" (10 mm) and .472" (12 mm)

Not recommended for use on LMR or Teflon cables.

Teflon is a registered trademark of E.I. du Pont de Nemours and Company

SPECIFICATIONS:

	PRESET STRIP LENGTH	CABLE USAGE
LC CST-58/59	0.315" outer jacket 0.157" inner dielectric	RG58, RG59, RG62 AU & RG6
LC CST-11	0.315" outer jacket 0.157" inner dielectric	RG8, RG11 & RG213
LC CST CATV "F"	0.236" outer jacket	RG59, RG6 & RG6 QUAD CATV"F" (preset for RG6 CATV "F")
LC CST-Mini	0.344" outer jacket 0.094" inner dielectric	RG178, RG179, RG188, AT&T 735(A), NT735, Belden 1855A, Belden 8218, RG180, RG187, RG188A, RG405 and more

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050513	PA1255	LC CST-58/59 – 2- & 3-Level, Adjustable
52050514	PA1256	LC CST-11 – 2- & 3--Level, Adjustable
52050516	PA1257	LC CST CATV "F" – 2-Level
52050517	PA1258	LC CST-Mini
52050599	PA2263	Replacement Blade

KWIK STRIPPER® TWISTED PAIR STRIPPER

FEATURES

- No tool is better for trimming the jacket from twisted pair cable without damaging the individual conductors
- Blade depth adjustment ensures precise cutting depth
- Blade penetration controlled by tension loop
- Strip length gauge

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50455796	45579	Kwik Stripper® Twisted Pair Stripper

AM 25 STRIPPER

FEATURES

- Strips and slits 0.18" to 1.0" (4.5-25mm) diameter Round Cables
- Adjustable cutting depth
- Swivel blade for circular, longitudinal and spiral cuts
- Spare blade in handle
- Cable holding clip with integrated edge for removing slit insulation
- Laser-trimmed, stainless-steel blade for long use
- Slits PVC, Teflon and THHN
- Perfect for armored cable

NOTE: Do not use on live circuits. Not for polyethylene, polypropylene or XLP insulations Teflon is a registered trademark of E.I. du Pont de Nemours and Company

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050560	PA1820	AM 25
52050563	PA2109	Replacement Blade

UNIVERSAL SLITTER

FEATURES

- Strips and slits 0.18" to 1.0" (4.5-25mm) diameter Round Cables
- Precision stripping and slitting of rubber, PVC, nylon and most insulation materials
- Adjustable depth of cut
- Swivel blade for circular, longitudinal and spiral cuts
- Cable is supported during use
- Cable support arm edge is used to pry off thick insulation
- Laser-trimmed, stainless-steel blade for long use
- A perfect tool for mid-point taps
- Spare blade included

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050604	PA1822	Universal Splitter
52050563	PA2109	Replacement Blade

COAX 3-WAY TOOL

FEATURES

- Flares RG6 and RG6 Quad Cable types
- Flares shield braid back from the dielectric without nicking your fingers
- Attachment tool enables you to hold the connector comfortably to insert connector onto cable
- Extraction tool to assist in coupling connector to port or to assist in uncoupling from port
- Works with CATV "F" connectors

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52046973	PA1928	Coax 3-Way Tool

BNC 12" EXTRACTION TOOL

FEATURES

- Chrome finish
- Comfortable driver-style plastic handle

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050484	PA1916	BNC 12" (305 mm)
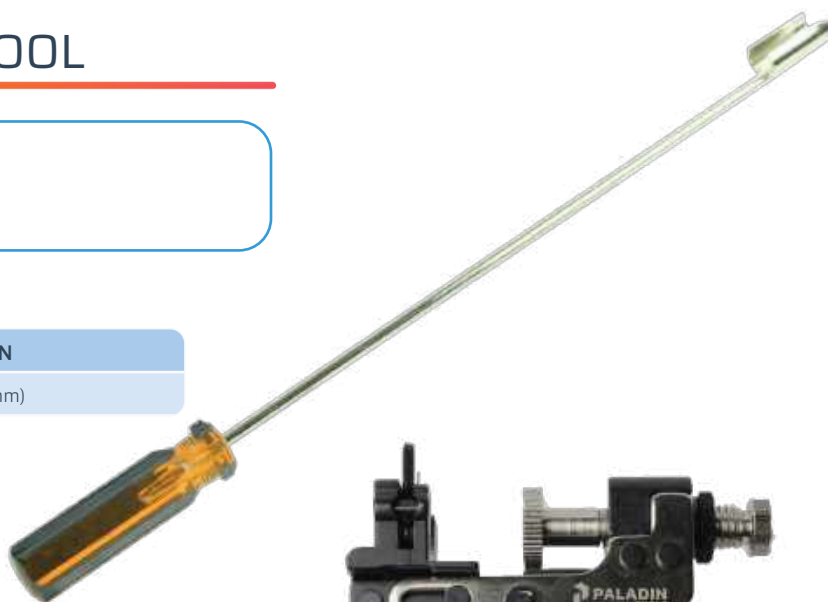
SEALTITE® ProM COAX CRIMPER

FEATURES

- Crimps weatherproof linear CATV "F", BNC, RCA & right-angle compression-type connectors from all manufacturers
- Works with RG6, RG6 Quad, RG59 & RG62AU coax cables
- Versatile tool - accommodates multiple connectors
- The only tool with a single, reversible head eliminating need for adapters
- No additional parts, attachments or other tools required to change from one crimp style to another
- Quickly & easily adjust crimp height
- Once properly set, lock with adjustment lock
- Rated life cycle 30,000 (unloaded)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52055946	PA1559	SealTite® ProM Coax Crimper

PA70020 PRO COAX COMPRESSION TOOL

FEATURES

- Versatile tool crimps RG59, RG6, RG6 Quad , RG 7/11, BNC and RCA Compression Connectors
- Cable holder rotates to accommodate different connector sizes
- Adjustable Crimp length accommodates most manufacturers' connectors
- Once adjusted, no additional parts or adapters are needed to change from one crimp style to another

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52057138	PA70020	RG59/6Q-7/11 Pro Coax Compression Tool

CONNECTORS & ADAPTERS

SEALTITE® CABLE TV "F" COMPRESSION CONNECTORS

FEATURES

- Large hex nut for easy installations
- Patented design with 360º cable gripping sleeve
- Solid brass construction with nickel plating to prevent UV degradation

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051371	PA9643	RG6 & RG6 QUAD; 10 pack
52051354	PA9611	RG6 & RG6 QUAD; 20 pack
52051336	PA9646	RG6 & RG6 QUAD; 50 pack
52051372	PA9644	RG6 Quad; 10 pack
52051337	PA9647	RG6 Quad; 50 pack

SEALTITE® RCA COMPRESSION CONNECTORS

FEATURES

- Patented design with 360º cable gripping sleeve
- Full gold contacts for low signal loss
- Includes slip-on color bands for easy cable identification
- A set of bands includes 4 red, 2 green, 2 blue, 2 yellow and 2 white per ten connectors
- Constructed from solid brass with nickel plating

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051390	PA9714	RG6 & RG6 Quad; 10 pack

SEALTITE® BNC COMPRESSION CONNECTORS

FEATURES

- Patented design with 360º cable gripping sleeve
- Full gold contacts for low signal lossIncludes slip-on color bands for easy cable identification
- A set of bands includes 4 red, 2 green, 2 blue, 2 yellow and 2 white per ten connectors
- Constructed from solid brass with nickel plating

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051395	PA9730	RG59; 10 pack
52051391	PA9715	RG6 & RG6 Quad; 10 pack
52051397	PA9740	RG6 & RG6 Quad; 50 pack

HEXCRIMP CABLE TV "F" CONNECTORS

FEATURES
- Crimp-on style cable TV "F" connectors
- All-brass with nickel plating for durability
- Designed for indoor use

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051360	PA9677	RG6; 10 pack
52051361	PA9678	RG6 QUAD; 10 pack

TWIST-ON CABLE TV "F" CONNECTORS

FEATURES
- Connectors twist onto cable for quick installation
- Sharp threads firmly grip cable for good connections
- EZ-SPIN™ hex nut for easy installation

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051378	PA9695	RG6; 10 pack

PUSH-ON CABLE TV "F" CONNECTORS

FEATURES
- Simply strip cable and push connector onto it requiring no crimping
- Special knurled nut offers superior grip for strong connection
- All brass, nickel-plated for durability and low signal loss
- For indoor usage only

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051366	PA9683	RG6; 10 pack

OTHER COAXIAL CONNECTORS

FEATURES

Connect CATV "F" cables to RCA plugs.
- Eliminate the need for new cabling
- Solid brass with nickel plate
- 75 ohm rating

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051400	PA9719	Adapter, CATV "F" (female) to RCA (male) (Qty. 10)

FEMALE SPLICE ADAPTER

FEATURES

- Cable TV "F" female-to-female barrel adapter
- Designed for performance up to 3.0 GHz
- Gold-plated contacts
- 2 pack

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051345	PA9675	CATV "F" Terminators (10)

TEMPO
COMMUNICATIONS

BNC COAXIAL ADAPTER

FEATURES
- Precision manufactured from machined brass and nickel plated for corrosion resistance

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50457284	45728	BNC Straight Jack to Jack (1)

LIFETIME WARRANTY

BNC(F) RCA(M) DATASHARK ADAPTER

FEATURES
- Adapt BNC cable to plug into RCA jack without need for new cabling
- Connect CCTV cables to DVRs, entertainment centers, VCRs, DVDs, camcorders and other items
- Solid brass with nickel plate
- 2-pack clamshell

PART OF DataShark PRODUCT LINE

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051389	PA70054	Datashark Adapter BNC(F) RCA (M)

ADAPTER BNC M TO-CATVF

FEATURES
- Professional grade gold tipped adapters for premium transmission of digital and analog data

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52056791	PA9751	ADAPTER BNC M TO-CATVF F 2-PK

LIFETIME WARRANTY

BNC(M) TO RCA(F) ADAPTER

FEATURES

- Convert a BNC jack to accept an RCA plug
- Eliminate need for new cabling
- Nickel-Plated Brass

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52083934	PA9725	BNC Male to RCA Female Adapter (2-PK)

BNC(M) TO RCA(M) ADAPTER

FEATURES

- Connect BNC cables to RCA plugs
- Eliminate need for new cabling
- Solid brass with nickel plate

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52077232	PA9752	Adapter, BNC Male to RCA Male

RG6Q RCA CATVF HEX CONNECTORS

FEATURES

- EZ-SPIN™ hex nut for easy installations.
- Designed for indoor use.
- Requires a standard 0.324" crimp.

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52056784	PA9679	CONN RG6Q RCA CATVF HEX

PUNCHDOWN TOOLS

SUREPUNCH PRO PUNCHDOWN TOOL

FEATURES

- Terminate cable in single punch - including 23 AWG Cat6
- Detachable light with long-life LED specially designed to focus the light on the panel work area
- Luminous intesity of the LED is 2200 mcd
- Finger grips and non-slip rubber-embedded cushioned handle for comfort
- Multi-use spudger that can be used as a screwdriver or an IDC contact insertion tool
- Hook to feed wires through holes
- Pick to separate bonded twisted-pair cables or to strip insulation and cut wire
- Adjustable HI/LO spring compression for all cable types LO = 27.5 lbs (122 N), HI = 37.5 lbs (167 N)
- Uses twist-and-lock style blades
- Blade storage area in end of handle with comfortable latch cover

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050824	PA3588	SurePunch Pro PDT with 1110/66 combination cut-only
52046976	PA3596	SurePunch Pro PDT with 110 reversible cut & punch/punch-only blade and light
52050826	PA3586	SurePunch Pro PDT with 110 & 66 reversible cut & punch/punch-only blades
	PA4599	SurePunch Pro PDT detachable light and batteries

SUREPUNCH PRO PUNCHDOWN TOOL

FEATURES

- Cushion grip, molded to the shape of your hand, for comfort and a sure, non-slip hold
- Increased HI/LO impact force to meet demands of new cable types and AWG sizes: LO= 30 lbs (133 N), HI= 40 lbs (178 N)
- For 28-22 AWG (0.08 - 0.34 mm2), solid or stranded wire
- Uses twist-and-lock style blades
- Cushioned heel for comfort in the palm of your hand
- New latch cover blade storage area in end of handle
- Lanyard holes in end

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050800	PA3570	SurePunch PDT® handle (no blade)
52050801	PA3571	SurePunch PDT® with 110/66 combination cut-only blade
52049236	PA3572	SurePunch PDT® with 110 reversible cut & punch/punch-only blade
52049269	PA3579	SurePunch PDT® with both 110 and 66 reversible cut & punch/punch-only blades
52046977	PA4571	SurePunch 110/66 combination cut-only blade
52046978	PA4572	SurePunch 110 reversible blade
52046979	PA4573	SurePunch 66 reversible blade
52046980	PA4574	SurePunch BIX™ cut-only blade
52046981	PA4575	SurePunch Krone® LSA cut-only blade
52046982	PA4591	SurePunch Double - 110 blade

PA4591   PA4573   PA6514   PA4571   PA4574   PA4572   PA4575

PROPUNCH™ 110 MULTI-PAIR PUNCHDOWN

FEATURES

Terminates and cuts up to five pairs of data/voice cable at the same time! We designed it to perform over 30,000 cycle punches and to terminate most 23 AWG cable pairs in one punch! This tool delivers more than one and a half times the force of other multi-punchdown tools on the market today. The rugged "no-slip" handle fits comfortably in your hand with the handle end contoured to the heel of your hand.

- Fewer punches saves time
- Smooth operation and rugged, comfortable handle absorbs punch recoil Terminates 28-22 AWG (.08 - .34 mm2) solid or stranded wires with single insulation
- Cut and punch blade cassette or switch blades for punch only
- Designed to work with 23 AWG CAT 6 cable

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52046974	PA3560	ProPunch 110 with 5-pair head
52050797	PA3561	ProPunch 110 with 4-pair head
52050799	PA4561	Replacement 4-pair head

NON-IMPACT PUNCHDOWN TOOLS WITH FIXED BLADES

FEATURES

- Non-impact, low-cost punchdown tools for 110, 66 & BIX
- Works with 28-22 AWG (.08 - .5 mm2)
- Solid or stranded, single insulation wire
- Comfortable rubber handle grip
- Performs both cut and punch functions
- Perfect for small jobs and the do-it-yourself installer
- Fits in the palm of your hand
- Typically lower in cost than replacement blades for punchdown tools

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050807	PA3580	110 Punchdown Tool

POCKET PROBE PICK

FEATURES

Probe pick for pulling wire, slicing, stripping cable and cleaning debris off terminal panels. Small and lightweight—pen-sized with clip for carrying in pocket.
- Spudger tip
- Wire hook
- Wire stripper and slitting tooth
- Non-conductive scraping tip

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52049188	PA1915	Pocket Probe Pick

CAN WRENCH

FEATURES

- Strips PVC insulation
- Strips outer jacket of AWG 22/4 and 24/4 telephone cable
- Strips insulation of AWG 22 (.34 mm2) and AWG 24 (.20 mm2) wire
- 3/8" (9.5 mm) and 7/16" (11 mm) hex sockets for accessing panels
- Durable shock-resistant design

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52049187	PA1900	Can Wrench
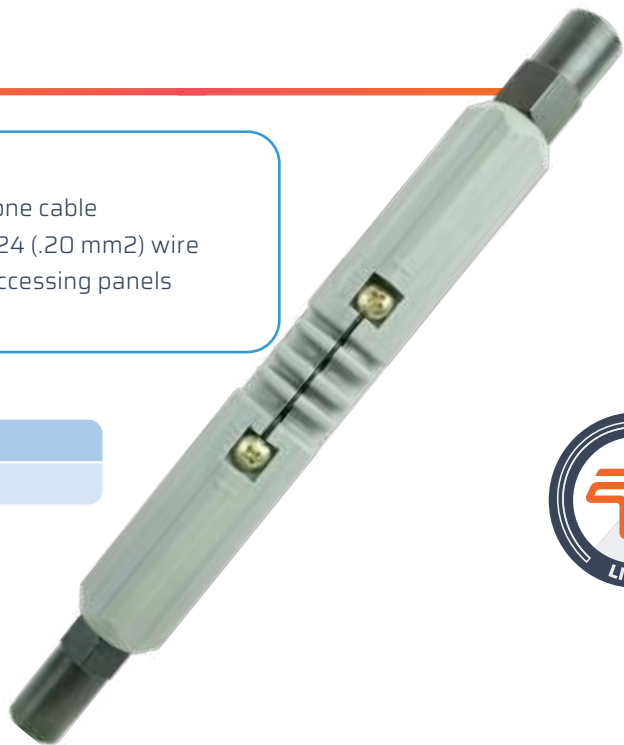
JACK TERMINATOR

FEATURES

- High-grade, hardened steel frame offers superior performance and durability
- Ratcheted action to ensure proper, consistent termination
- Adjustment feature for extra leverage applications
- Quick-change punch sets require no tools
- Removable jack cradle allows for alternate lacing option
- Punch heads can be purchased separately
- Rubber-embedded handles provide extra comfort
- For use with Modular Jacks listed below including CommScope® (Systimax®, Uniprise®), Leviton®, OCC®, HellermannTyton®, Hubbell®Premise Wiring and Legrand® (Ortronics®)
- Lifetime Warranty (crimper frame only)

SPECIFICATIONS:

	PA8100	GENERAL JACK TERMINATOR™ WITH PUNCH DOWN HEAD-SET	GENERAL PUNCHDOWN HEAD-SET	GENERAL PUNCH HEAD ONLY
Length	9.6" (245 mm)	9.75" (248 mm)	1.6" (40 mm)	1" (26 mm)
Height	3.25" (80 mm)	4" (102 mm)	4" (102 mm)	2.1" (55 mm)
Width	1.25" (32 mm)	1.25" (32 mm)	1.25" (32 mm)	1.25" (32 mm)
Weight	1.25 lbs (575 g)	1.4 lbs (652 g)	2 oz (54 g)	0.8 oz (23 g)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52057135	PA8100	Jack Terminator™ Crimper Frame Compability: Punchdown Head Set not Included
52057024	PA8105	Jack Terminator™ with Punchdown Head-Set Compability: Systimax® - MPS100E, Uniprise® UNJ600/500
52057026	PA8106	Jack Terminator™ with Punchdown Head-Set Systimax® - MGS400, MGS500, MGS600
52057027	PA3712	Replacement Punchdown Head-Set Compability: Systimax® - MGS400, MGS500, MGS600
52057300	PA8109	Jack Terminator™ with Punchdown Head-Set Compability: OCC® - KMJA5E, KMJA6, K6A
52057302	PA8111	Jack Terminator™ with Punchdown Head-Set Compability: Hubbell® - HXJ Series

ALL-IN-ONE UTP SNAGLESS CRIMPER

FEATURES

- Cuts and strips round or flat cable
- All metal construction
- Cushion grips for improved comfort and control
- For standard and "snagless" RJ45 connectors
- Also crimps RJ11/22 and RJ22 WE/SS style plugs

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52055947	PA1561	All-in-One UTP Snagless Crimper

ALL-IN-ONE ULTRA TELEPHONE TOOLS

FEATURES

- 4 crimp functions with a single tool without changing dies
- Crimps 4- position RJ22 handset
- Crimps 4- and 6- position RJ11/RJ12 connectors
- Crimps 8- position RJ45 (non-keyed)
- Embedded cable cutter and stripper
- Crimps 28-24 AWG (.08 - .20 mm2) telephone and data cables
- Advanced ratchet system
- Precision die-cast aluminum head
- Crimps 6- position RJ11-DEC offset type connectors (P/N 901014)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050012	PA901014	All-in-One Ultra Telephone Tool AMP (Tyco)
52050013	PA901016	All-in-One Ultra Telephone Tool (WE/SS)

ALL-IN-ONE PRO TELEPHONE TOOLS

FEATURES

- Crimps 4- position RJ22 connectors
- Crimps 4- and 6- position RJ11/RJ12 connectors
- Crimps 8- position RJ45 (non-keyed) connectors
- Embedded cable cutter and stripper
- Crimps 28-24 AWG (.08 - .20 mm2) telephone and data cables
- Comfortable rubber-embedded handles
- Built-in safety ratchet release

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52049987	PA1540	All-in-One Pro Telephone Tool AMP (Tyco)
52047010	PA1530R	All-in-One Pro Telephone Tool (WE/SS)

TELEPHONE RATCHET CRIMPER

FEATURES

- Combination tool terminates 8- position, 6- position and 4- position (45575 only) modular style plugs
- No need to change crimping dies
- Full-cycle ratchet mechanism provides consistent quality terminations every cycle
- Straight action ensures uniform crimp
- Small, compact design
- Built-in wire cutter and stripper for flat cable
- All-steel frame has rust-resistant, black oxide finish

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50455532	45553	Telephone Ratchet Crimper
50455753	45575	Telephone Ratchet Crimper

45553
Typically used for Modular Plug Connectors.

45575
Typically used for Modular Plug Connectors our Telephone Ratchet Crimper was designed with a compact head to fit into tight spaces and ergonomic handles for operator comfort.

LIFETIME WARRANTY

MODULAR PLUG CONNECTORS

FEATURES

- RJ45 8-conductor modular plugs
- 50 micron gold plating
- Meets or exceeds EIA/TIA specifications

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051450	PA9546	Cat5e, Solid or Stranded; 10pack
52051443	PA9655	Round, Flat or Oval; 50 pack
52051453	PA9549	Round, Flat or Oval; 100pack

LIFETIME WARRANTY

ADAPTER RJ11-UK 6-WAY BLISTER

FEATURES

- Nylon-reinforced ABS plastic body
- Easy-to-read wire layout
- Removable/replaceable patch cord
- Inline adapters
- Belt clip
- Notched copper contacts keep alligator clips attached during testing
- With "UK" BS6312 BT631A telephone plug cord as used in UK, Botswana, Cyprus, Eswatini, Gibraltar, Israel, Malta, New Zealand, Oman, Saudi Arabia, UAE, Zimbabwe etc.

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52086505	PA1921	Adapter RJ11-UK 6-way Blister

ADAPTER RJ45 MODULAR 8-WAY BLISTER

FEATURES

- Nylon-reinforced ABS plastic body
- Easy-to-read wire layout
- Removable/replaceable patch cord
- Inline adapters
- Snagless plugs
- Belt clip
- Notched copper contacts keep alligator clips attached during testing

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051670	PA1902	Adapter RJ45 Modular 8-way Blister

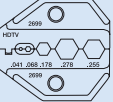# CRIMPERS & DIESETS

FEATURES
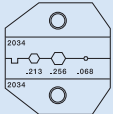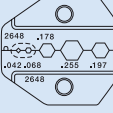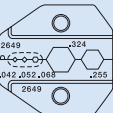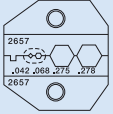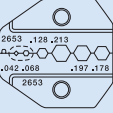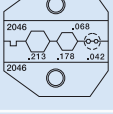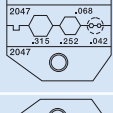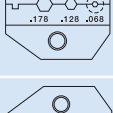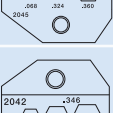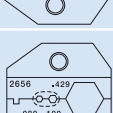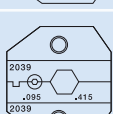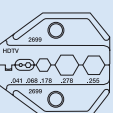
- Fully-ratcheting cycle with built-in safety release
- Interchangeable die sets of heat-treated steel for long life
- Easy to use and maintain
- Available as complete tool with die set inserted or separate tool frame and individual die sets
- Foam-lined case available to hold frame and 6 die sets together
- Lifetime warranty on tool; one-year on die sets
- EZI-Change™ die screws make changing dies quick and easy –no screwdriver required
- Most precise and tightest tolerances on die sets in the industry
- Six ratchet gear settings for optimum crimp performance

SPECIFICATIONS:

CrimpALL® INTERCHANGEABLE DIE SETS FOR MODULAR PLUGS

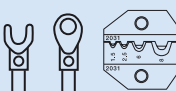|	CABLE TYPE	CONNECTION	CRIMP SIZE	TOOL/DIE
	RJ45 - 8P8C (8 Pin)	Flat/Round, Solid/Stranded	RJ45 Unkeyed WE and SS	PA8030 PA1307
	RJ11 & RJ12 - 6P6C, 6P4C, 6P2C	Flat/Round, Solid/Stranded	RJ11 & RJ12 Unkeyed WE and SS	PA8031 PA1340
	RJ22 Handset - 4P4C (4 Pin)	Flat/Round, Solid/Stranded	4 Pin Handset WE and SS	PA8032
	RJ45 - 8P8C (8 Pin)	Flat/Round, Solid/Stranded	RJ45 Unkeyed AMP	PA8033 PA1342
	RJ50 - 10P10C (10 Pin)	Flat/Round, Solid/Stranded	RJ50 Unkeyed WE and SS	PA8036 PA1345
	British Telecom 6 Pole Plug	Flat/Round, Solid/Stranded	BT 6 Pole	
	RJ45, AMP/Molex Connectors for dia. Cable	6.0mm Dia. Round, Shielded (STP)	RJ45 STP AMP & Molex, 6.0mm dia. cable	

CrimpALL® INTERCHANGEABLE DIE SETS FOR COAXIAL CONNECTORS

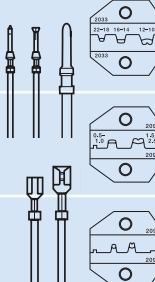|	CABLE TYPE	CONNECTION	CRIMP SIZE	TOOL/DIE
	RG58, RG59, RG62AU	BNC/TNC and 3 Piece	0.256" (6.5mm, 0.213" (5.4mm), 0.068" (1.7mm) HEX	PA8001 PA1317
	RG174, RG59/62, mini-coaxial 75-ohm	HDTV SMA, True 75-ohm BNC/TNC, Mini-UHF	0.255" (6.5mm), 0.197" (5.0mm), 0.178" (4.5mm), 0.068" (1.7mm) HEX & 0.042" (1.0mm) SQ	PA8002 PA1366
	RG59, RG6, Belden 8281, Belden 1694A	HDTV BNC/TNC/CATV "f" True 75-ohm	0.324" (8.2mm), 0.255" (6.5mm), 0.068" (1.7mm) HEX & 0.052" (1.3mm), 0.042" (1.0mm) SQ	PA8003 PA1367
	RG6, Belden 1694, Bleden 1694A	HDTV BNC/TNC True 75-ohm	0.278" (7.0mm), 0.275" (6.9mm), 0.068" (1.7mm) HEX & 0.042" (1.0mm) SQ	PA8004 PA1368
	RG58, Mini-59, RG174, small coaxial	SMA, SMB, Mini-59 BNC/TNC, Mini-UHF	0.128" (3.2mm), 0.213" (5.4mm), 0.197" (5.0mm), 0.178" (4.5mm), 0.068" (1.7mm) HEX & 0.042"(1.0mm) SQ	PA8005 PA1363
	RG58, RG174, AT&T 735, 50 and 75-ohm	Thinnet, BNC/TNC, Mini-UHF	0.213" (5.4mm), 0.178" (4.5mm) 0.068" (1.7mm) HEX & 0.042" (1.0mm) SQ	PA8006 PA1335
	RG59, RG62, Belden 8281, 50 and 75-ohm	BNC/TNC and Mini-UHF	0.315" (8.0mm), 0.252" (6.4mm), 0.068" (1.7mm), HEX 0.042" (1.0mm) SQ	PA8007 PA1336
	RG174, RG179 and Small Cable Connection	BNC/TNC	0.178" (4.5mm), 0.128" (3.2mm), 0.068" (1.7mm) HEX	PA8008 PA1338
	RG6 and RG6 Quad, Belden 1694A	BNC and CATV "F" Type & HDTV	0.360" (9.1mm), 0.324" (8.2mm), 0.068" (1.7mm) HEX	PA8012 PA1356
	RG59, RG6 Video Cable	CATV "F" Type	0.346" (8.8mm)m 0.319" (8.2mm), 0.256" (6.5mm) HEX	PA8013 PA1328
	RG8, RG11, RG213	N-Type	0.429" (10.9mm), 0.100" (2.54mm), 0.080" (2.03mm) HEX	PA8014 PA1365
	RG8, RG11, RG213, RG216	N-Type, MS39012 Type	0.415" (10.5mm), 0.095" (2.4mm) HEX	PA8015 PA1319
	Belden 1855A, 1865A, 1505A, 1505F, 1694A, 1694F, 179DT	HDYV BNC/TNC True 75-ohm	0.178" (4.5mm), 0.255" (6.5mm), 0.278" (7.0mm), 0.068" (1.7mm), 0.041" (1.0) HEX	PA8049 PA1389

CrimpALL® INTERCHANGEABLE DIE SETS FOR INSULATED TERMINAL CRIMPERS

	CABLE TYPE	CONNECTION	CRIMP SIZE	TOOL/DIE
	Insulated Terminals and Lugs	Solid or Stranded Wire, 22-10 AWG (.34 - 6 mm²)	12-10 (Yellow), 16-14 (Blue), 22-18 (Red), (6-4 / 2.5 - 1.5 / .34 - .75 mm²)	PA8021 PA1305
	Insulated Terminals and Lugs	Solid or Stranded Wire, 22-12 AWG (.34 - 4 mm²)	12-10 (Yellow), 16-14 (Blue), 22-18 (Red), (4/1.5 - 2.5 / .34 - .75 mm²)	PA8022 PA1308
	Insulated Terminals and Lugs	Solid or Stranded Wire, 26-14 AWG (.10 - 2.5 mm²)	16-14 (Blue), 22-18 (Red), 22-26 (Yellow) (1.5 - 2.5 / .34 - .75 / .34 - .10 mm²)	PA8023 PA1334

CrimpALL® INTERCHANGEABLE DIE SETS FOR NON-INSULATED TERMINAL CRIMPERS

	CABLE TYPE	CONNECTION	CRIMP SIZE	TOOL/DIE
	Non-Insulated Terminals and Lugs	Solid or Stranded Wire, 22-8 AWG (.34 - .10 mm²)	10-8 / 14-12 / 18-16 / 22-20 (6 - 10 / 2.5 - 4 / .75 - 1.5 / .34 - .50 mm²)	PA8024 PA1322

CrimpALL® INTERCHANGEABLE DIE SETS FOR OPEN BARREL, BOX & TERMINAL SYSTEMS

	CABLE TYPE	CONNECTION	CRIMP SIZE	TOOL/DIE
	Open Barrel Non-Insulated Terminals, Narrow Lugs and Power Contacts	Solid or Stranded Wire, 22-10 AWG (.34 - 6 mm²), F Type*	22-18 / 16-14 / 12-10 (.34 - .75 / 1.5 - 2.5 / 4-6 mm²)	PA8026 PA1306
	Open Barrel Non-Insulated Terminals, Wide Lugs and Power Contacts	Solid or Stranded Wire, 22-14 AWG (.34 - 2.5 mm²), F Type*	16-14 / 22-18 (1.5 - 2.5 / .34 - .75 mm²)	PA8027
	Open Barrel D-Sub Contact Pins RS-232	Solid or Stranded Wire, 28-20 AWG (.08 - .50 mm²), F Type*	28-24 / 22-20 (.08 - .2 / .34 - .5 mm²)	PA8029 PA1359

DIE AMP 2.0/2.5/3.0 SC BLISTER

FEATURES

- Most precise and tightest tolerance
- 4140 steel with black-oxide plating
- Use with both 8000 and 1300 series crimp tools

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051060	PA2695	DIE AMP 2.0/2.5/3.0 SC BLISTER

LIFETIME WARRANTY

DIE FIBER LC/SC/ST/FC BLISTER

FEATURES

- Most precise and tightest tolerance
- 4140 steel with black-oxide plating
- Use with both 8000 and 1300 series crimp tools

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051053	PA2685	DIE FIBER - LC/SC/ST/FC BLISTER

DIE FIBER SMA/SMB/SC FOC-A2

FEATURES

- Most precise and tightest tolerance
- 4140 steel with black-oxide plating
- Use with both 8000 and 1300 series crimp tools

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051031	PA2652	DIE FIBER SMA/SMB/SC FOC-A2

DIE KINGS/ADC-1694A BLISTER

FEATURES

- Most precise and tightest tolerance
- 4140 steel with black-oxide plating
- Use with both 8000 and 1300 series crimp tools

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051038	PA2657	DIE KINGS/ADC-1694A BLISTER

DIE1300/8000

FEATURES

- Most precise and tightest tolerance
- 4140 steel with black-oxide plating
- Use with both 8000 and 1300 series crimp tools

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051062	PA3703	DIE,1300/8000

POLISHING PUCK FIBER LC

FEATURES

- Manufactured from aluminum with tungsten coating
- Cleaner than conventional plastic pucks because less debris left behind
- Double the lifetime of conventional plastic pucks

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051276	PA1926-1	POLISHING PUCK FIBER LC

POLISHING PUCK FIBER SC ST FC

FEATURES

- Manufactured from aluminum with tungsten coating
- Cleaner than conventional plastic pucks because less debris left behind
- Double the lifetime of conventional plastic pucks

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051275	PA1920-1	POLISHING PUCK FIBER SC ST FC

D-SUB INDENT CRIMPERS

FEATURES

- Adjustable Pin Height Locator
- Cushion Grips for comfort

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52055943	PA1460	D-sub 4 Indent Crimper 26-20 AWG
52055944	PA1461	D-sub 4 Indent Crimper 20-12 AWG
52055945	PA1462	D-sub 8 Indent Crimper 26-20 AWG

ELECTRICAL TERMINAL CRIMPER

FEATURES

- D-sub Pins & Sockets 26-28 AWG
- Butt-Insulated Connectors 22-26 AWG
- Telephone Piercing Spade Lugs 22-26 AWG
- Open Barrel Connectors 14-18, 20-22 AWG

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52055937	PA1176	Multi-Purpose Electrical Terminal Crimper

EDAC/ELCO CRIMPER

FEATURES

Crimp tool for broadcast professionals terminating loose 28-18 AWG (.08-75 mm2) EDAC and ELCO rack and panel open barrel contacts

- Crimps EDAC pins 516-290-590 & 516-290-591 along with ELCO pins 000-60-8017-03-13
- Embedded pin locators properly align pins to ensure accurate reliable crimping
- Fully-ratcheted to prevent under crimping
- Requires low hand force and provides superior crimp force
- True ergonomic design for extreme comfort and performance
- Non-slip, soft rubber handles
- Double-plated for extended long-life and crimping accuracy
- Factory-calibrated and set for precision

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050102	PA1670	EDAC/ELCO Crimper

OPEN BARREL CONTACT PIN CRIMPER

FEATURES

Professional crimping tool for open-barrel box and round connector contacts
with a wire range of 30-18AWG (0.05-.75 mm2).

- Precision fixed dual-plate dies for crimp accuracy
- Crimps non-insulated terminal lugs, cable lugs and parallel and serial splices or "F-Type"
- Works with Molex, Waldom & Leoco-type connectors
- Durable steel construction for long life
- Rubber-embedded ergonomic handles for low-effort operation

SPECIFICATIONS:

WEIGHT	RANGE
14 oz. (400 g)	Small: 30-24 AWG (0.05-.20 mm2) Medium: 22-18 AWG (.34-.75 mm2)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52049995	PA1645	Open Barrel Contact Pin Crimper

OPEN BARREL CONTACT PIN CRIMPER

FEATURES

Professional crimping tool for open-barrel box and round connector
contacts with a wire range of 24-14 AWG (0.2-2.5 mm2)

- Precision fixed dual-plate dies for crimp accuracy
- Built-in locator
- Crimps non-insulated terminal lugs, cable lugs and parallel and serial splices or "F-Type"
- Works with Molex, Waldom & Leoco-type connectors
- Durable steel construction for long life
- Rubber-embedded ergonomic handles for low-effort operation

SPECIFICATIONS:

WEIGHT	RANGE
14 oz. (400 g)	Small: 24-22 AWG (0.05-.20 mm2) Medium: 18-14 AWG (.34-.75 mm2)

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52049994	PA1631	Open Barrel Contact Pin Crimper

PZ6 ROTO CRIMPER

FEATURES

- Professional-quality rotary crimping tool for insulated and non-insulated wire ferrules with a wire range of 24-10 AWG (0.25-6.0 mm2)
- Rotating die for front or side ferrule insertion
- Crimps conform to EN 60947-1 & DIN 46228 Pt. 1 and 4
- Hardened steel die system for long life
- Single tool for entire wire range (no additional dies are required)
- Durable steel construction for long life
- Ergonomic handles for low-effort operation

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050272	PA901435	Crimper PZ6 ROTO

1300 FIBER CRIMPER

FEATURES

- Fully-ratcheting cycle with built-in safety release
- Interchangeable die sets of heat-treated steel for long life
- Easy to use and maintain
- Available as complete tool with die set inserted or separate tool frame and individual die sets
- Foam-lined case available to hold frame and 6 die sets together
- Lifetime warranty on tool
- EZI-Change™ die screws make changing dies quick and easy – no screwdriver required
- Most precise and tightest tolerances on die sets in the industry
- Six ratchet gear setting for optimum crimp performance
- New packaging includes brown box instead of clamshell

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050014	PA1362	Crimper 1300 Fiber SMA/SMB/SC

ECON AMP/TYCO ALL-IN-ONE CRIMPER

FEATURES

- Crimps multiple AMP (Tyco) size modular plugs:
- RJ45 (8P8C), RJ11/RJ12 (6P4C, 6P6C) & RJ22 handset (4P4C).
- Cuts & strips flat and round cables.
- Comfortable to use with rubber-embedded handles & advanced ratchet.

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050101	PA1557	CRIMPER ALL-IN-ONE ECON AMP/TYCO

CRIMPER 1600 FRAME ONLY

FEATURES

- Low hand force & superior crimp force.
- Precision calibrated crimp profiles.
- Powerful & precise - the tool does the work, not your hand.

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52049988	PA1600	CRIMPER 1600 Frame Only

CRIMPER 1600 FERRULES AWG 20-12

FEATURES

- Professional crimping tool for insulated and non-insulated wire ferrules with a range of 20-12 AWG (0.5-4 mm2)
- Fixed steel die system
- Ferrules insert from side of the tool
- Ferrule crimp conforms to DIN standards
- Durable steel construction for long life
- Ergonomic handles for low-effort operation
- Single tool for entire wire range

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52049997	PA1648	CRIMPER 1600 FERRULES AWG20-12

CRIMPALL BROADCAST KIT

FEATURES

- Crimp tool and five coax die sets in a rugged nylon pack with outer holster and strap for belt or wrist.

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050403	PA4802	CrimpALL Broadcast Kit

CASE ZIPPER

FEATURES

- Versatile pocket and handle design keeps tools organized
- Keep your tools protected and easy to access

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52049555	PA4391	Case Zipper 10x7x3

CASE CORDURA

FEATURES

- Crimper case
- Keep your tools protected and easy to access
- Constructed of a double layer of rugged., lightweight Cordur fabric

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52049552	PA901380	Case Cordura
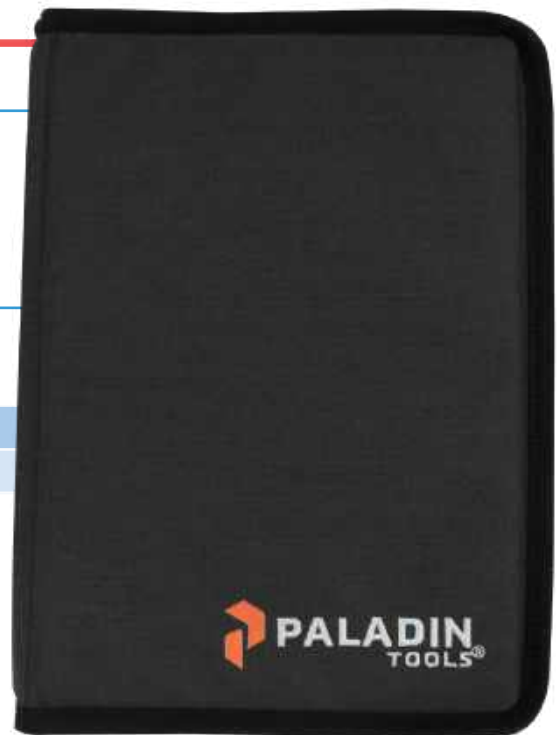
HEAT GUN

FEATURES

- Electronic variable heat control ranging from 250-1100° F (120-590° C)
- Two speeds: high & low
- Double insulation safeguards injury from possible electrical failure inside gun
- Comfortable, lightweight design reduces operator fatigue
- Three nozzles included: window nozzle, deflection nozzle and .47" (12 mm) focusing nozzle
- UL listed

SPECIFICATIONS:

POWER REQS.	CURRENT DRAW	POWER CONS.
120VAC 60 Hz	7.5 amps max	1200 watts max.

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52049268	PA1873	Heat gun

DESOLDERING TOOLS

FEATURES

- Removes solder with simple push-button operation
- Standard (regular & anti-static) replacement tips available
- Repair kits come complete with replacement spring and suction rods
- Durable metal frame

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051260	PA1700	Desoldering tool (standard)

KNIFE PT-T01A

FEATURES

- Full size, no slip textured handle
- Blade designed to stay sharp
- Handle fits comfortably in your hand

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52056119	PT-T01A	KNIFE, PT-T01A

DIAGONAL 8" DIPPED PLIERS

FEATURES

- Double layered vinyl handles for comfort and slip resistance
- Reduced handle size allows for easy storage of tools in pouches and tool bags

ORDERING INFORMATION:

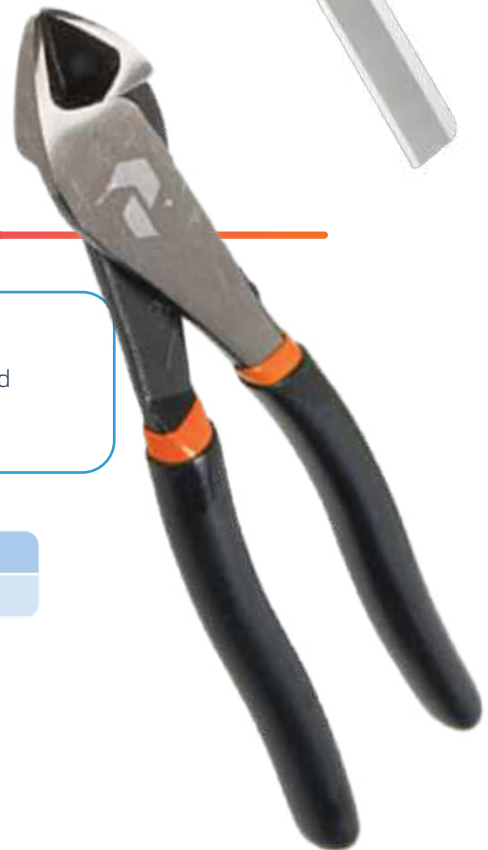| PART NO.	CAT. NO.	DESCRIPTION
52028114	0251-08D	Pliers, Diagonal 8" Dipped

BLADE DURO-STRIPAX

FEATURES

- Replacement blade for the stripax tool

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050568	PA2143	BLADE DURO-STRIPAX
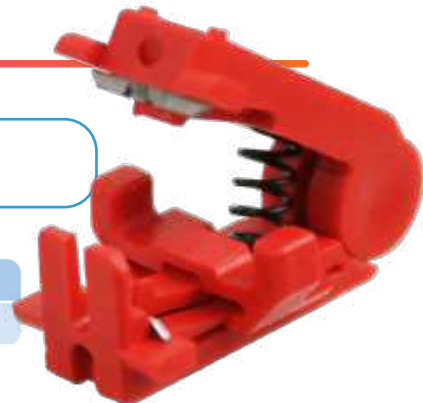
KWIK CYCLE CABLE TIE GUNS

FEATURES

- Tension adjustment allows the user to adapt the tool to the size of the tie
- Automatic cut-off eliminates sharp edges on ties

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
50453009	45300	Heavy-Duty Cable Tie Gun

6-IN-1 MULTI-TOOL

FEATURES

- Versatile multi-bit screwdriver, 6 tools in one
- Precision machined, hardened steel bits
- High-grade, rust resistant, chrome-plated finish
- Cushion grip handle for extra comfort and torque
- Lifetime limited warranty
  *Note: This is not an insulated tool

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52024842	SD-6-1	Multi Bit 6-in1 Driver

LAN CABLE-CHECK

FEATURES

- Identifies cross-over telephone connections
- Automatically scans when cables connected and unit turned on
- Two scan speeds: fast or slow
- Maps connector and cable pin out
- Tests cables up to 1,650' or 500 m
- Also tests RJ11 connections using an RJ11 adapter (not included)
- 2, RJ45 patch cords and 9V battery included
- Contained in a durable nylon carrying case with belt loop
- Patented – Patent # 6466885

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52046967	PA1574	CableCheck-LAN

PUSHRODS & GLORODS

FEATURES

PUSHROD
- Highly visible green color rods can be easily threaded together and seen when working above ceilings, down walls, or under raised floors
- 1/4" (6.4 mm) diameter fiberglass adds rigidity when connecting multiple sections
- 200 LBS (0.9 kN) maximum pulling strength
- Two different threaded tips accommodate various bundles of wire or cable

GLOROD
- Luminescent fiberglass rods glow in the dark for fishing in dark spaces
- More flexible for fishing in walls through outlet box holes
- Sturdy, steel-threaded connectors are interchangeable with Tempo's 1/4" (6.4 mm) PushRods
- Clear, non-metalic storage tube keeps GloRods charged and ready to use
- 200 LBS (0.9 kN) maximum pulling strength

WHAT SIZE DO YOU NEED?

Flexibility increases as rod diameter decreases:
- ¼" for long spans requiring greater rigidity
- ³⁄₁₆" for short spans or in limited space
- ⁵⁄₃₂" for making tight turns

Featuring the same size ferrule threads (#8-32), different diameter rods can be used together in any combination for ultimate on-the-job customization.

GLOW ROD

Non-Conductive Fiberglass Rods For Wiring with our proprietary luminescent resin, Jameson is the original manufacturer of fiberglass glow rods. These non-conductive rods are perfect for drop ceilings, attics, floors, walls, and crawl spaces. Their high strength and flexibility handle turns easily without breaking. Designed for maximum versatility, threaded ferrules make it possible to customize rod length to any job and a variety of accessories make it easier to handle any wiring situation.

SPECIFICATIONS:

	PUSHROD LONG	PUSHROD SHORT	GLOROD KIT	GLOWROD KIT 18'
Overall Length	24" (7.3m)	12" (3.6m)	15' (4.6m)	18' (5.5m)
Tensile Pull/ Strength	750 lbs	750 lbs	500 lbs	300 lbs
Length	Contains 5 easy to connect fiberglass rods: 3 ¼" x 6" (6mm x 1.2mm), 1 ¼" x 3' (6mm x .9mm) and 1 ³⁄₁₆" x 3' (5mm x .9mm)	Contains 3 easy to connect fiberglass rods: ¼" x 4' (6mm x 1.2mm)	Contains 3 easy to connect fiberglass rods: ³⁄₁₆'" x 5' (5mm x 1.5mm)	Contains 3 easy to connect fiberglass rods: ⁵⁄₃₂" x 6" (4mm X 1.8MM)
Diameter	¼" (6.4mm)	¼" (6.4mm)	³⁄₁₆" (4.7mm)	⁵⁄₃₂" (4.0mm)
Weight	1.04 lbs (0.5kg)	1.04 lbs (0.5kg)	1 lbs (0.5Kg)	.8 lbs (0.4 kg)
Minimum Bend Radius	6 ½" (165mm)	6 ½" (165mm)	4 ¼" (108mm)	3 ½" (89mm)

ORDERING INFORMATION:

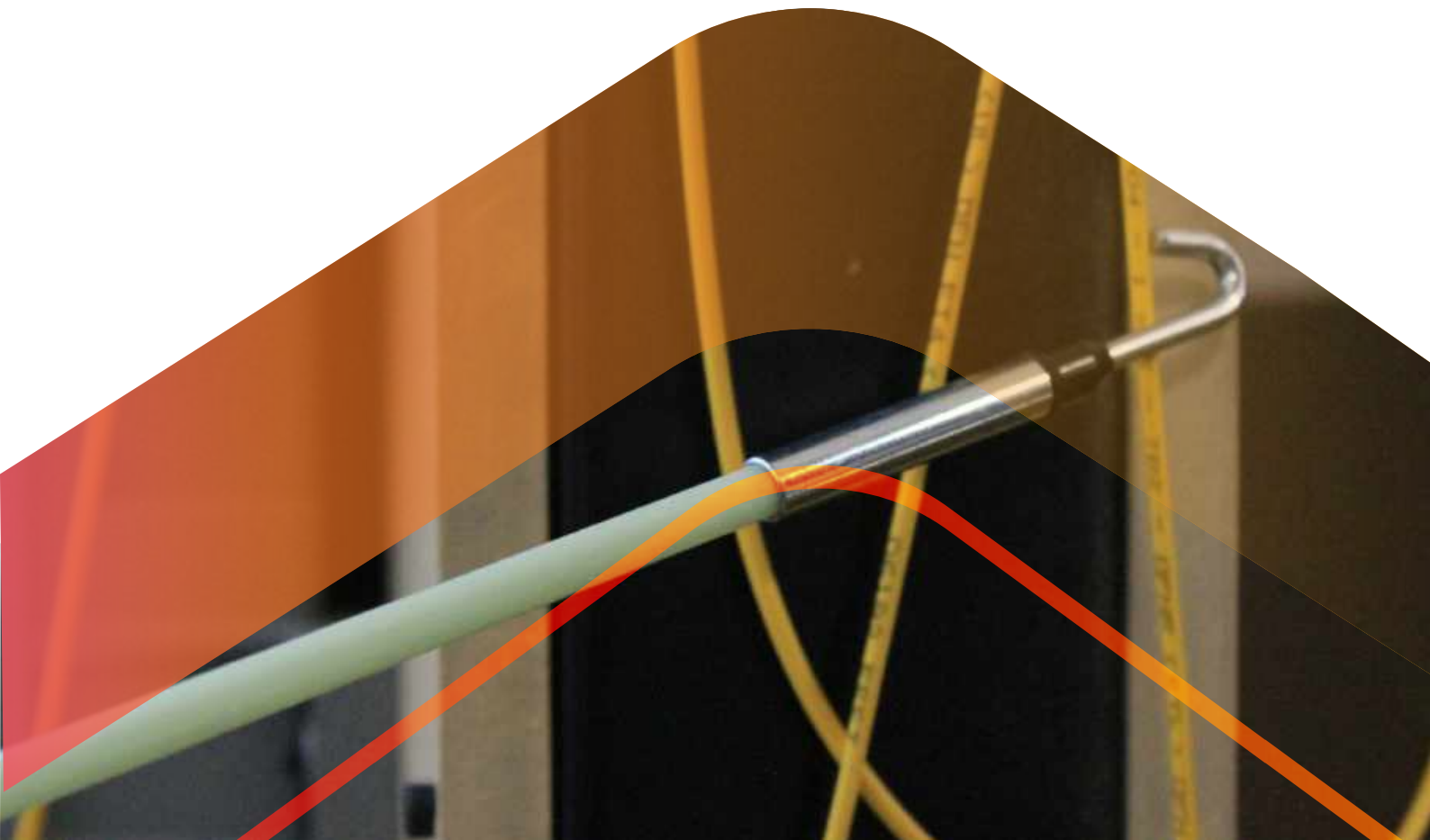| PART NO.	CAT. NO.	DESCRIPTION
55500221	PR-24	PUSHROD, LONG (24)
55500223	GR-15	GLO ROD KIT
55500222	PR-12	PUSHROD, SHORT(12)
55500224	GR-18	GLO ROD KIT, 18'

**PUSHROD PR-12**   **PUSHROD PR-24**   **GLOROD GR-15**   **GLOROD GR-18**

DataShark®

Wire your home and make connections like a Pro! The DataShark line of tools, testers and connectors provides everything you need to tackle wiring projects like moving TV outlets, upgrading computer wall jacks or building custom-length computer and video cables. The best part is that it is relatively simple, affordable and you can do the job at your own convenience rather than working with someone else's schedule.

There are 3 basic steps to preparing the cable: cut, strip, crimp or terminate. DataShark offers all the tools needed to complete the job virtually hassle-free. You can choose one of our complete kits where we have pre-selected all of your tools and connectors or the products are also sold individually. DataShark completes the line with an assortment of connectors and testers to offer a complete solution.
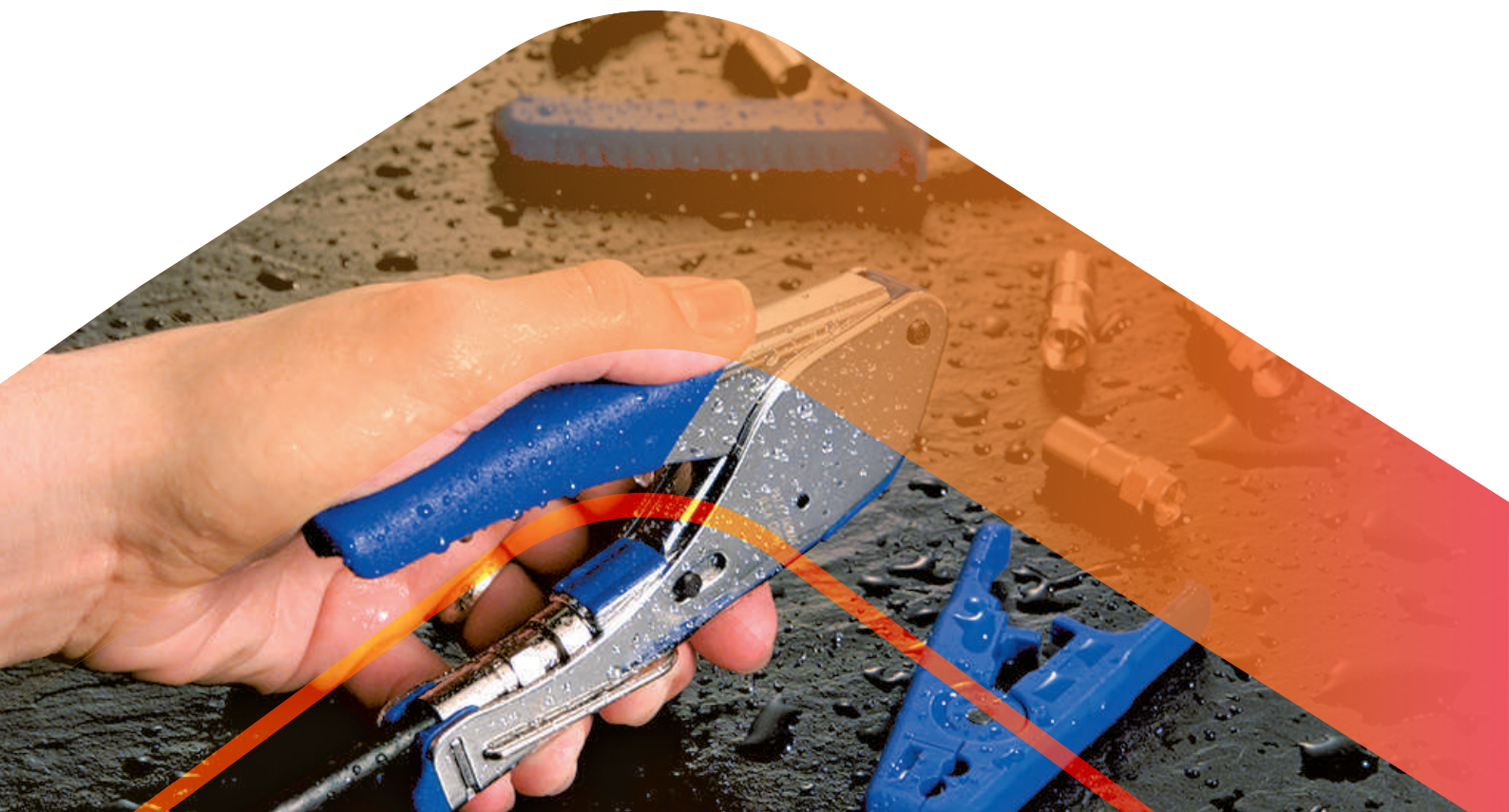
ROUND CABLE CUTTER SC-CLAM

FEATURES

- Cuts most round cable types – except steel conductor cable
- Works well with coaxial & twisted pair cables
- Locking mechanism for safe transport
- Carbon steel construction
- Non-slip handles

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52049901	PA70001	DATASHARK ROUND CABLE CUTTER SC-CLAM

CATV/UTP CUTTER/STRIPPER

FEATURES

- Cuts and strips Cat5, Cat5e and Cat6 twisted pair network cables
- Cuts and strips flat satin phone cables
- Cuts and strips RG6, RG6 Quad, RG59, RG7 and RG11 coaxial cables

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52047005	PA70029	Cutter/Stripper - CATV/UTP

UNIVERSAL STRIPPER SC

FEATURES

- Strips UTP/STP phone & data cable – Cat5, Cat5e & Cat6
- Strips flat cables such as telephone, intercom, alarm or speaker wire
- Adjustable blade stripping depth

ORDERING INFORMATION:

| PART NO.	CAT. NO.	DESCRIPTION
52049932	PA70003	Universal Stripper SC-CLAMSHELL

![Tempo Communications logo]

DATASHARK STRIPPER CUTTER

FEATURES

- Precision-ground stripping cavities for 22-10 AWG wire prevent scoring
- Also strips internal wires of ROMEX non-metallic building electrical wire. ROMEX is a federally registered trademark owned by Southwire Company
- Gripping jaws on front of tool
- Screw cutter and wire loops made into the frame
- Spring-loaded closure
- Built-in safety lock

ORDERING INFORMATION:

| PART NO.	CAT. NO.	DESCRIPTION
52049905	PA70056	Datashark Stripper Cutter
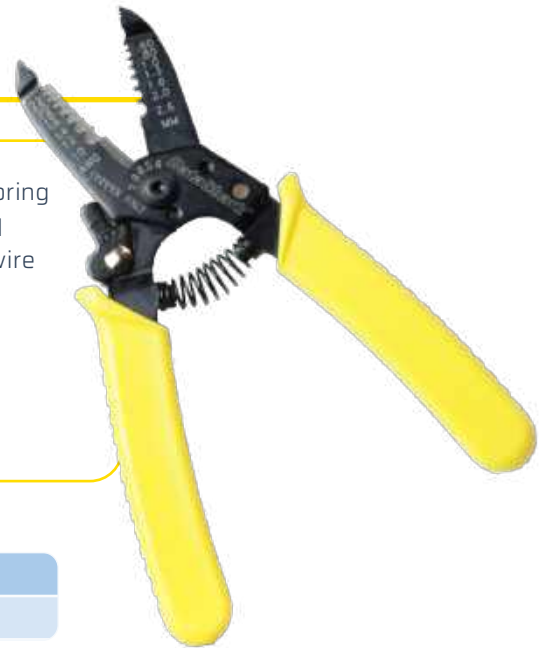
STRIP/CUT STRIP/CUT 30-20 AWG

FEATURES

- Precision-ground stripping cavities for 30-20 AWG wire prevent scoring
- Gripping jaws on front of tool
- Screw cutter and wire loops made into the frame
- Spring-loaded closure
- Built-in safety lock

ORDERING INFORMATION:

| PART NO.	CAT. NO.	DESCRIPTION
52049906	PA70057	Strip/Cut Strip/Cut 30-20 AWG
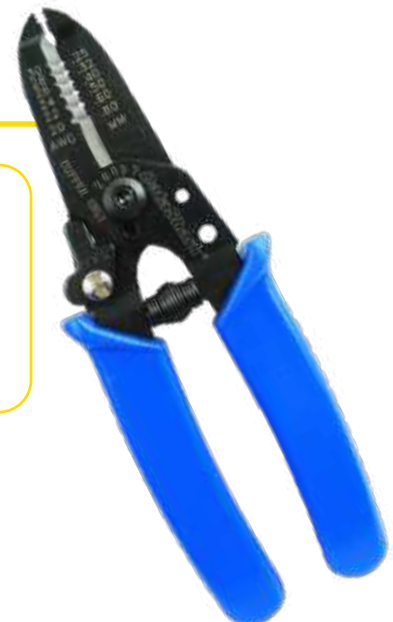
WIRE STRIPPER DATASHARK BUNDLE

FEATURES

- Precision-ground stripping cavities prevent scoring
- Screw cutter and wire loops embedded in frame
- Spring-loaded closure
- Built-in safety lock
- Gripping jaws on front of tool

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52047007	PA70058	Wire Stripper Bundle - Datashark
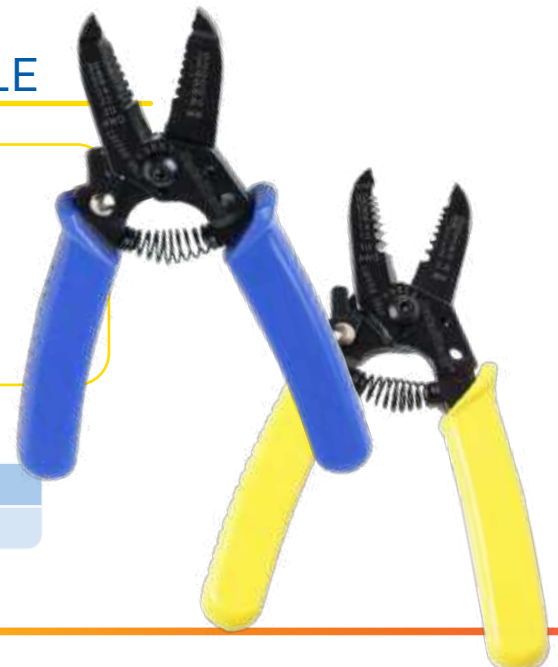
CRIMPING & PUNCHDOWN TOOLS

RG6 CATV F SC CRIMPER

FEATURES

- Crimps RG6 & RG6 Quad shield cable TV "F" hex-crimp connectors
- Crimp dimensions .068/.324/.360" (1.7/8.3/9.1 mm) HEX
- .324" used on RG6
- .360" used on RG6 Quad
- Fully-ratcheted for easier crimps; built-in safety release

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050081	PA70006	Crimper RG6 CATV F SC

BNC/TNC RATCHETED CRIMPER

FEATURES

- Crimps RG58, RG59 & RG62AU BNC/TNC connectors used for closed circuit TV cameras
- Crimp dimensions: .256/.213/.068" (6.5/5.4/1.7 mm) HEX
- Fully-ratcheted for easier crimps; built-in safety release

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050093	PA70015	Datashark Crimper RG58/59/62 RETAIL

ALL-IN-ONE CRIMPER

FEATURES

- Our most popular crimper to assemble computer and phone cords
- Crimps RJ45 computer and RJ11 or RJ12 phone connectors
- Cuts and strips round Cat5, Cat5e or flat satin phone cable

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52046998	PA70005	Crimper-Datashark All-In-One

COAXIAL TOOL CABLE TV

FEATURES

- Make cable TV cords with a single tool
- Cuts and strips RG6 coaxial cable
- Crimps RG6 hex-type cable TV "F" connectors
- Spring-loaded, manual crimper
- Designed for small projects

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050105	PA70031	Coaxial Tool Cable TV CUT/STRIP/CRIMP

COMPRESSION CATV "F" CRIMPER

FEATURES

- Build custom cables for home theater, security, cable TV and satellite including digital/analog audio, component video, closed circuit TV, digital cable, HDTV and more
- Tool crimps RCA and BNC compression connectors; adapter (included) snaps into tool to also terminate cable TV "F" connectors
- Crimps RG6, RG6 Quad and RG59 coax cable connectors
- Works with DataShark and Paladin Tools connectors

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52047000	PA70014	Crimper - Compression CATV "F"

F/RCA/BNC COMPRESSION CRIMPER

FEATURES

- Build custom cables for home theater, security, cable TV and satellite including digital/analog audio, component video, closed circuit TV, digital cable, HDTV and more
- Tool crimps RCA and BNC compression connectors; adapter |(included) snaps into tool to also terminate cable TV "F" connectors
- Crimps RG6, RG6 Quad and RG59 coax cable connectors
- Works with DataShark and Paladin Tools connectors

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050106	PA70052	Crimper F/RCA/BNC Compression Crimper

COMPRESSION UNIV ADJ CRIMPER

FEATURES

- Assemble custom-length cables for home entertainment and
- security systems using compression connectors
- Crimps most common compression RCA, BNC & cable TV "F" connectors
- Fully adjustable to accommodate different sized compression connectors from various manufacturers
- Includes adapter for cable TV "F" connectors that conveniently stores in tool head

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52047009	PA70063	Crimper - Compression Univ ADJ

PUNCHDOWN NON-IMPACT 110

FEATURES

- Comfortable handle
- Non-impact style punchdown tool
- Works with Cat5, Cat5e and Cat6 UTP/STP cables
- Terminates wire and cuts off excess in one step
- Good quality tool at an affordable price

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52047006	PA70034	PUNCHDOWN - NON-IMPACT 110

DIGITAL CABLE & SATELLITE TOOL KIT

FEATURES

- Install additional television outlets, move existing ones or add cable modem jacks
- Enhance your favorite movies or TV shows with high-quality audio and video outputs with compression cable TV "F" system
- Compression connectors are watertight and can be used in high moisture environments
- Tools and connectors fit in a blow-molded storage case

KIT INCLUDES:

- PA70001 Round Cable Cutter
- PA70002 Coax Stripper
- PA70014 Cable TV "F" Compression Crimper
- PA70024 (10) compression cable TV "F" connectors for RG6/RG6 Quad

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050420	PA70019	DATASHARK CATV F COMP TOOL KIT

DATASHARK SECURITY TOOL KIT

FEATURES

- Tool also crimps RCA and Cable TV F connectors for your home theater
- Make BNC cables for your surveillance cameras in 3 easy steps
- Includes 4 RG59 BNC compression connectors

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050423	PA70042	Datashark Security Tool Kit

DATASHARK DIY CRIMP BUNDLE

FEATURES

- Complete tool bundle along with modular plugs to make custom RJ45 computer or RJ11 phone cables
- Bundle includes: Part No.
  - Universal Cable Stripper PA70003
  - RJ45 & RJ11/12 Modular Plug Crimper PA70005
  - (10) RJ45 Cat5e Data Plugs for solid or stranded; flat, round or oval cable; available only in kits
  - (10) RJ11 Phone Plugs for solid or stranded; flat, round or oval cable; available only in kits

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52046999	PA70009	Crimp Bundle - Datashark DIY

NETWORK BUNDLE

FEATURES

- Install, maintain or make changes to your computer network
- Bundle includes: Part No.
  - Universal Cable Stripper PA70003
  - RJ45 & RJ11/12 Modular Plug Crimper PA70005
  - Non-Impact 110 Punchdown Tool PA70034
  - (10) RJ45 Cat5e Data Plugs for solid or stranded; flat, round or oval cable Available only in kits

ORDERING INFORMATION:

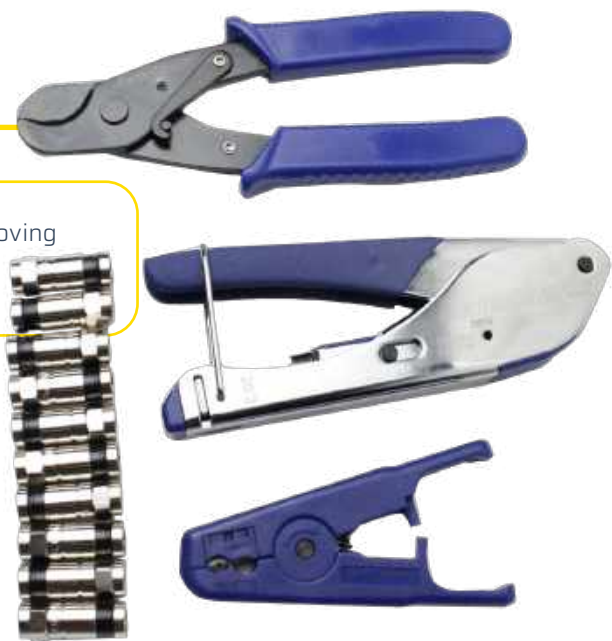| PART NO.	CAT. NO.	DESCRIPTION
52050418	PA70016	Datashark Network Bundle

CATV F COMP TOOL KIT

FEATURES

- Install additional cable TV, satellite outlets or cable modems or moving existing ones with this handy pack of tools and connectors
- RG6 or RG6 Quad Shield Coaxial

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050419	PA70018	Datashark CATV F COMP Tool Kit

DATASHARK CABLE TIE GUN

FEATURES

- Works with plastic cable ties up to .25" in width
- Adjustable tension for changing cable bundle pressure
- Automatically cuts off excess cable tie
- Neatly fastens and cuts in one action

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52056991	PA70076	Datashark, Cable Tie Gun

RJ45 NETWORK TESTER KIT

FEATURES

- Quickly and easily test your computer patch cables or installed cable runs to verify good connections or to troubleshoot problems
  Identifies good connections, opens, shorts, and cross-connections
- LED clearly lights for each pin and maps the cable as the unit goes through the automatic test cycle
- Cable test begins once the cable is plugged into the unit and the tester's power button is "on"
  Choice of fast or slow display speeds

KIT INCLUDES:

- Main unit to transmit signals and to test patch cords
- Remote unit for testing installed cable runs
- (2) RJ45 patch cords to connect tester to wall jack or patch panel
- Convenient carrying case

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52047002	PA70025	TESTER,CABLE - DATASHARK NETWORK

PDT NON-IMPACT 110

FEATURES

- Comfortable rubber grip handle
- Uses as twist-and-lock-style blades
- Blade storage in tool handle
- Non-impact tool

ORDERING INFORMATION:

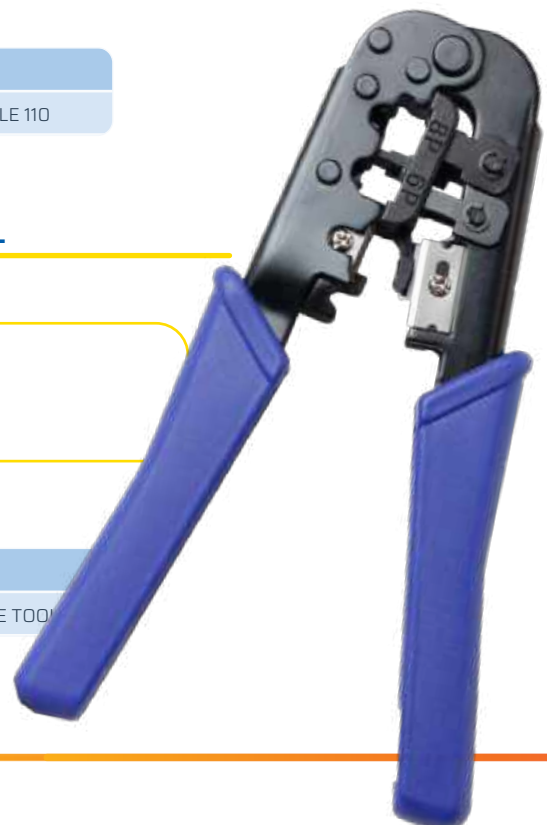| PART NO.	CAT. NO.	DESCRIPTION
52050830	PA70012	PDT NON-IMPACT 110 TWIST-LOCK STYLE 110

RJ45 RJ11 AMP ALL-IN-ONE TOOL

FEATURES

- Crimps AMP-style RJll, RJ12 & RJ45 modular plugs
- Cuts and strips round data & flat telephone cable

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52051438	PA70021	DATASHARK RJ45 RJ11 AMP ALL-IN-ONE TOOL

CATV/SATELLITE KIT

FEATURES

- Build custom length compression Cable TV "F" cables for satellite, digital cable, other video and cable modems

ORDERING INFORMATION:

PART NO.	CAT. NO.	DESCRIPTION
52050409	PA70008	CATV/SATELLITEKIT

NOTES:

NOTES:

NOTES:

North America

1.800.642.2155

Latin America

1.760.510.0558

EMEA

+44 (0) 1633.927.050

FOR PRODUCT VIDEOS,
DEMONSTRATIONS & MORE, VISIT:

TEMPOCOM.COM

1390 Aspen Way Vista, CA • 92081

©2020 Tempo Communications Inc. • An ISO 9001 Company

EMEA Address: Tempo Europe Limited

Brecon House • William Brown Close • Cwmbran • NP44 3AB • UK

02.04.21