



APD / DIN 72585 CONNECTORS



Cannon



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Introduction

Connectors with Bayonet Coupling Heavy Duty Environmental

- ◆ Cable connector
- ◆ Receptacle with flange for front and rear mounting
- ◆ Jam nut receptacle
- ◆ High Power connector
- ◆ Customer tailored versions (please consult factory)

Think of the harshest environment on a vehicle. One that is subject to contaminates, vibration and shock. That is where APD longs to be. This direct, in-line and bulkhead sensor connector is resistant to engine, transmission and brake fluid - plus just about everything else Mother Nature can toss its way. It also boasts very low contact resistance, so you can benefit from maximum signal integrity. APD is available in 1-, 2-, 3-, 4-, 6- and 7 position versions and has been designed to meet all DIN 72585 requirements.

Applications for the 4- and 7-way connector

- ◆ Sensors
- ◆ Traction / Anti Skid Control
- ◆ Brake Control (ABS)
- ◆ Magnetic Switch Control Systems
- ◆ Valve Control (Water, Oil, Air, Pressure)
- ◆ Lightening systems on Trucks and Trailers

Applications for the 1- and 2-way connector

- ◆ Power supply
- ◆ Power distribution
- ◆ Battery links

Features

- ◆ Available with 2, 3 and 4 contacts, current rating 30 A max. (4 mm² wire)
- ◆ 6 and 7 contacts, current rating 16 A max. (1,5 mm² wire)
- ◆ 2-way High Power, up to 74 A max. (16 mm² wire)
- ◆ 1-way High Power up to 245 A max. (50 mm² wire)
- ◆ Low contact resistance
- ◆ High performance engineered materials for continuous operation at - 40°C / 125°C.
- ◆ Class K2: -40°C/140°C contact temperature for APD 4-Way and 7-Way
- ◆ Environmental sealed to IP 69K
- ◆ Individual wire seals
- ◆ Hexagonal crimp profile at machined contacts
- ◆ Hand insertable contacts
- ◆ Bayonet coupling
- ◆ Keying
4 different keying colors (2-, 3-, 4-way)
1 coding only (7-way and 2-way High Power)
2 coding possibility 2 different colors
1 way High Power
- ◆ Conduit flex tube termination with straight or 90° right angle endbells
- ◆ In acc. to GGVS Resp. ADR

Connector 4 - Way

Connector 7 - Way

High Power Connector 1 - Way

High Power Connector 2 - Way

Benefits

- ◆ Meets sensors and actuators requirements
- ◆ Signal integrity for low current applications
- ◆ Survives harshest vehicle environment
- ◆ Superior environmental sealing
- ◆ Easy contact assembly and installation into connector housing
- ◆ Easy contact assembly and installation into connector housing
- ◆ Enhanced durability during assembly
- ◆ Low installed cost
- ◆ Easy connector mating
- ◆ Coding possibilities avoid mismating during harness assembly
- ◆ Excellent engine steam cleaning protection

Specials on request



Electrical Data

Voltage	48 VDC max.
Current	10 A max. for wire size 0,5 - 1,5mm ² / 25°C 25 A max. for wire size 1,5 - 2,5mm ² / 25°C 30 A max. for wire size 4,0mm ²
Voltage drop after 20 mating cycles /100mA	0,3 mV max.
Contact resistance	≤ 5mΩ
Test Voltage	1000 VAC (Ueff)
Insulation resistance	≥10MΩ

Mechanical Data

Sealing acc. to IEC529 and DIN 40050, Part 9	IP69K
Operating Temperature Range	-40°C / 125°C Class K2: -40°C/140°C contact temperature for APD 4-Way
Shock / Vibration Durability	acc. to DIN 72585 50 Mating cycles

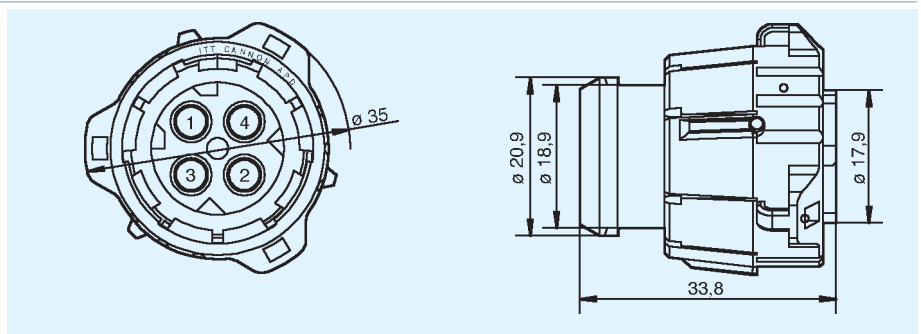
Materials

Connector housing	PBT
O - Ring	HNBR
Contacts	Copper alloy, tinned
Coupling nut	PA

Standards and Specifications (in Accordance with DIN 72585)

DIN 40050 Part 9	Temperature, humidity, environmental sealing, resistance against lubricants
DIN IEC 68 Part 1	Insulation resistance, dielectric withstanding voltage, mechanical shock, vibration
DIN 41640 Part 7, 8, 14, 15 and 21	Severity acceleration, durability
DIN 50021	Salt spray test
DIN 51511	Lubricants such as engine oil, grease, etc.
DIN 51601	Diesel fuel, gasoline
DIN IEC 4925	Brake fluids, anti freeze, coolants

Plug, 4 - way

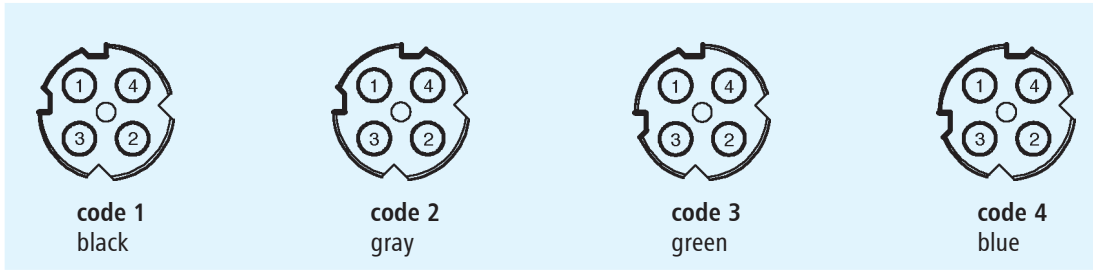


Order No.	Designation	Code	Color
121583-0000	APD-1BS-K2	1	black (RAL 9005)
121583-0001	APD-2BS-K2	2	gray (RAL 7036)
121583-0002	APD-3BS-K2	3	green (RAL 6029)
121583-0003	APD-4BS-K2	4	blue (RAL 5012)

Packaging unit 100 pcs.

Coding, 4-way layouts

view on Mating Face

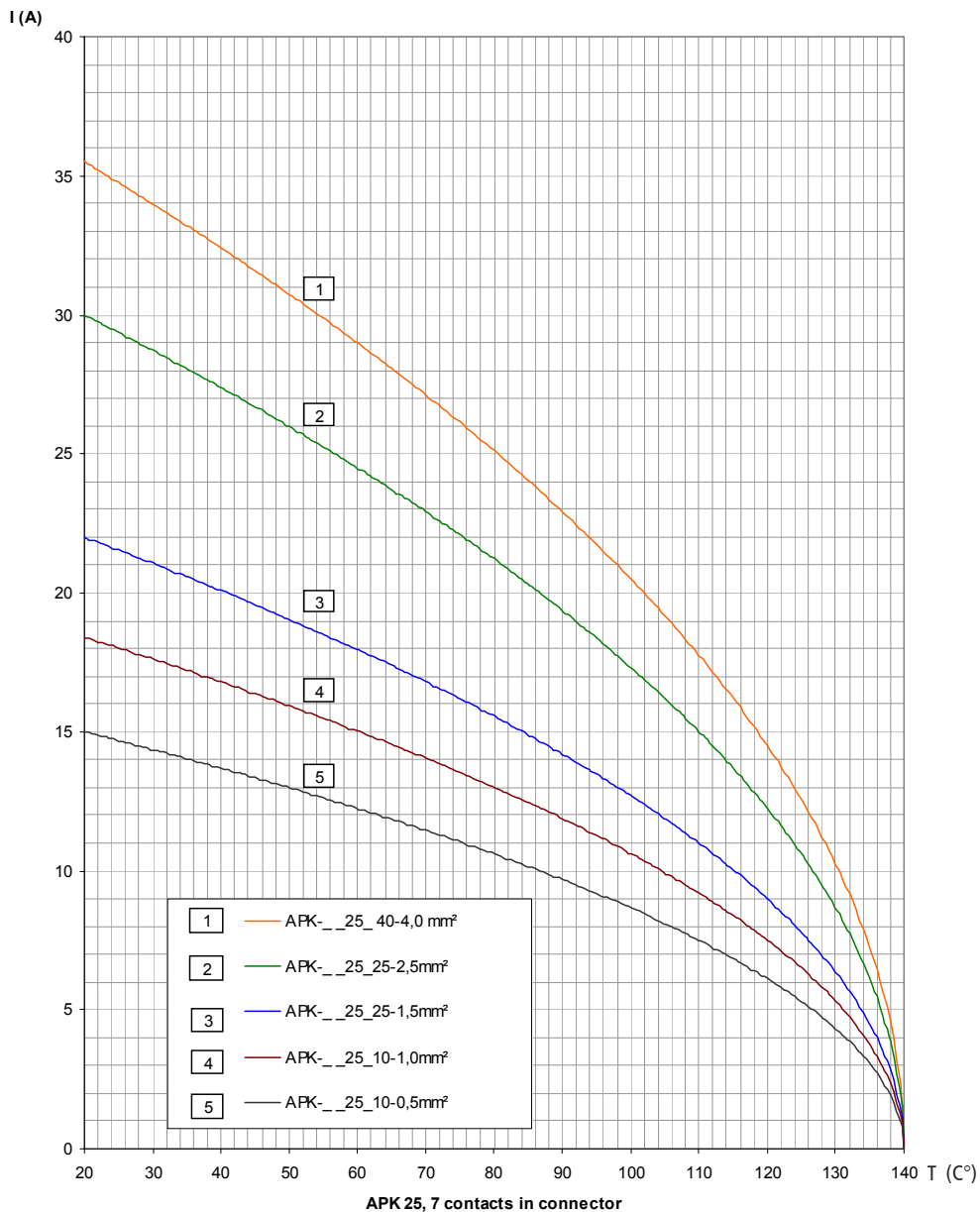


Note:

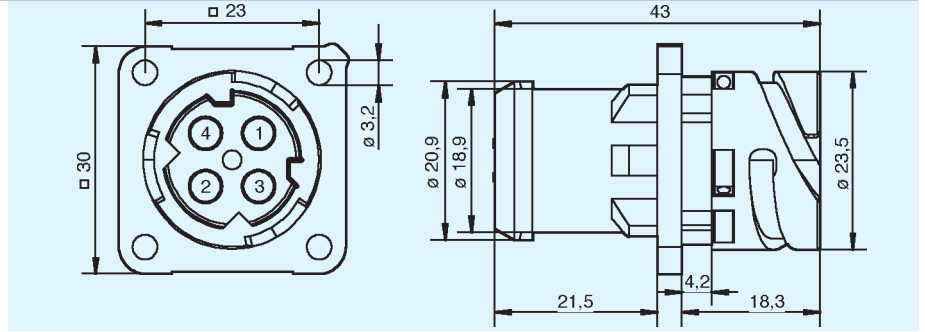
The connectors offer both - mechanical keying and visual coding by different colors

Socket Crimp-Contacts, Individual wire seal, Wire filler see page 8

Derating curve



Flange Receptacle 4 - way

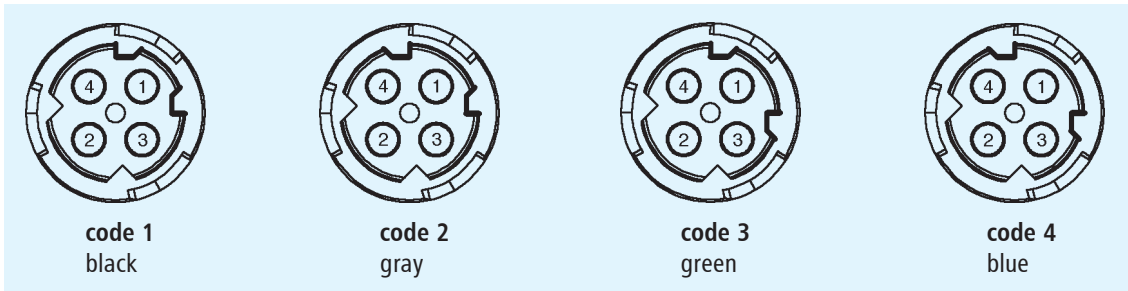


Order No.	Designation	Code	Color
121583-0004	APD-1AP-K2	1	black (RAL 9005)
121583-0005	APD-2AP-K2	2	gray (RAL 7036)
121583-0006	APD-3AP-K2	3	green (RAL 6029)
121583-0007	APD-4AP-K2	4	blue (RAL 5012)

Packaging unit 100 pcs.

Coding, 4-way layouts

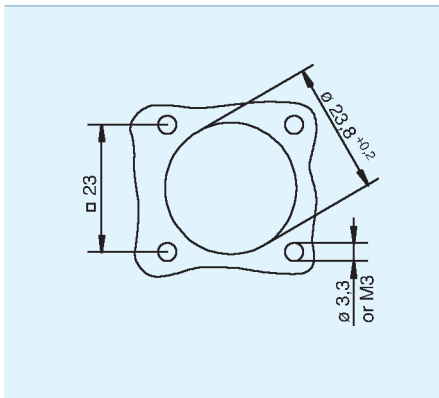
view on Mating Face



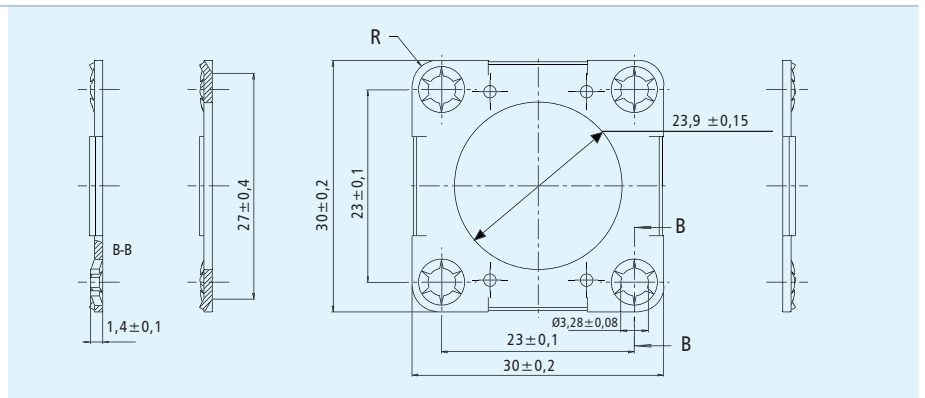
Note:

The connectors offer both - mechanical keying and visual coding by different colors

Panel cut out



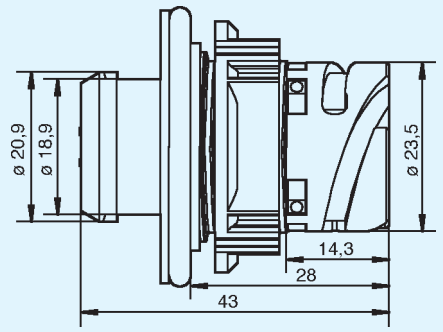
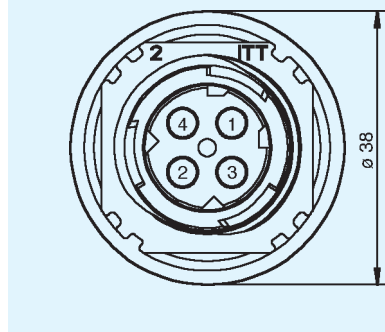
Flange for all Flange Receptacles:



Order Number: 066-8516-005

Pin Crimp-Contacts, Individual wire seal, Wire filler, Flange gasket see page 8

Jam Nut Receptacle, 4 - way



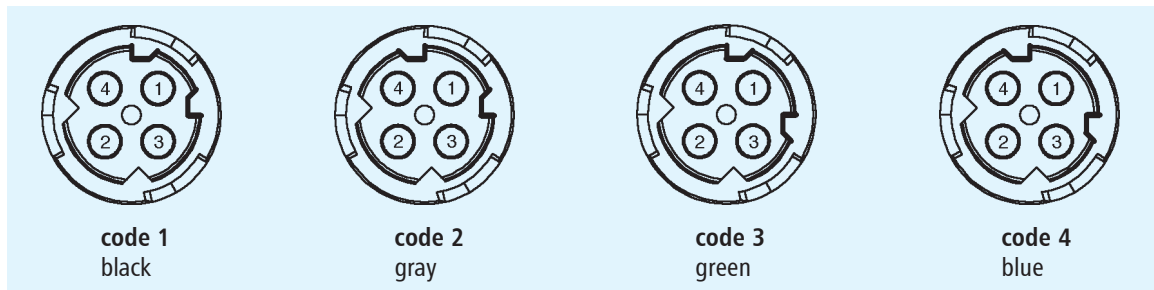
Connector
4 - Way

Order No.	Designation	Code	Color
121583-0008	APD-1CP-K2	1	black (RAL 9005)
121583-0009	APD-2CP-K2	2	gray (RAL 7036)
121583-0010	APD-3CP-K2	3	green (RAL 6029)
121583-0011	APD-4CP-K2	4	blue (RAL 5012)

Packaging unit 100 pcs.

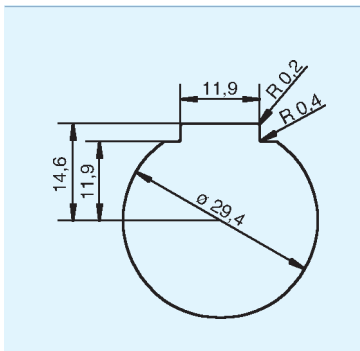
Coding, 4-way layouts

view on Mating Face

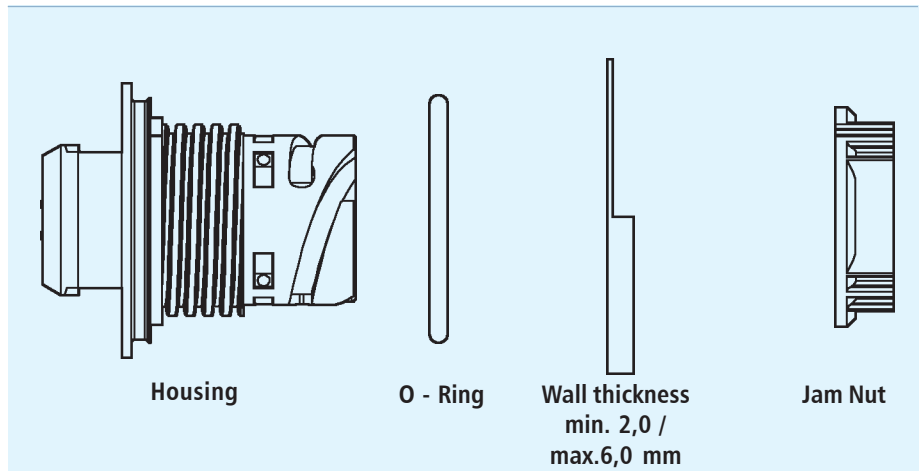


Note:
The connectors offer both - mechanical keying and visual coding by different colors

Panel cut out



Piece parts / Assembly instruction



Pin Crimp-Contacts, Individual wire seal, Wire filler see page 8

APD / DIN 72585 Connector

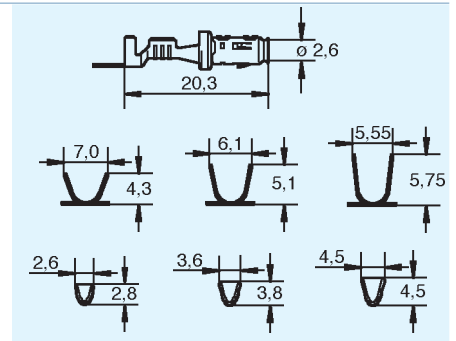
Contacts, Seals, 4 - way

4 - Way Connector

Socket Crimp-Contacts Standard tinned, 3000 contacts per reel

for Plug, 4 way

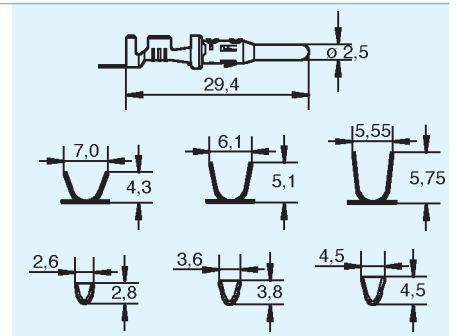
Designation	Order No.:
APK-SB25A10-002 (0,5 - 1,5 mm ²)	121668-0125
APK-SB25A25-002 (1,5 - 2,5 mm ²)	121668-0126
APK-SB25A40-002 (2,5 - 4,0 mm ²)	121668-0127
(upon request)	
Optional with Au-flash	
APK-SB25H10-002 (0,5 - 1,5 mm ²)	121668-0022
APK-SB25H25-002 (1,5 - 2,5 mm ²)	121668-0128
APK-SB25H40-002 (2,5 - 4,0 mm ²)	121668-0124
(upon request)	



Pin Crimp- Contacts Standard tinned, 3000 contacts per reel

for Flange- and Jam Nut Receptacle, 4 way

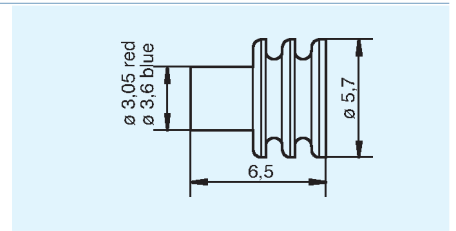
Designation	Order No.:
APK-PB25A10-002 (0,5 - 1,5 mm ²)	121668-0026
APK-PB25A25-002 (1,5 - 2,5 mm ²)	121668-0027
APK-PB25A40-002 (2,5 - 4,0 mm ²)	121668-0028
(upon request)	
Optional wit Au-flash	
APK-PB25H10-002 (0,5 - 1,5 mm ²)	121668-0024
APK-PB25H25-002 (1,5 - 2,5 mm ²)	121668-0029
APK-PB25H40-002 (2,5 - 4,0 mm ²)	121668-0020
(upon request)	



Individual Wire Seals

for all versions, 4 way

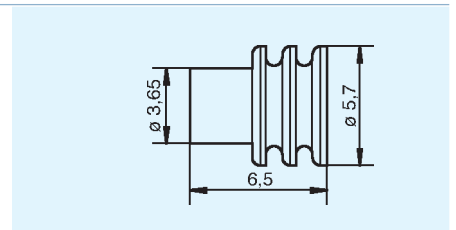
Designation	Order No.
10RD5821	273-8506-005
Wire insulation Ø 1,4 - 2,0 mm / red	
15BL5822	273-8506-006
Wire insulation Ø 2,0 - 2,9 mm / blue	



Wire Filler

for all versions, 4 way

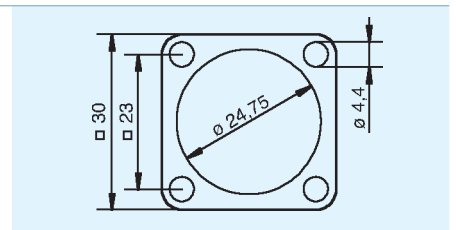
Designation	Order No.
15WH5823	273-8506-007
white	



Flange Gasket

for Flange Receptacle, 4 way

Order No.
075-8503-000 (-55/125°C)
075-8503-004 (-30/200°C)
Packaging unit 100 pcs.



Crimp and Assembly Tools for APK 25 Contacts

Contact / Socket	Hand Crimp Tool / Order No.	Crimp-Dies
APK-SB25A10-002 (0,5 - 1,0 mm ²)	M22520-5-01 / 995-0001-761	CT121586-289
APK-SB25A25-002 (1,5 - 2,5 mm ²)	M22520-5-01 / 995-0001-761	CT121586-290
APK-SB25A40-002 (2,5 - 4,0 mm ²)	M22520-5-01 / 995-0001-761	CT121586-292

Contact / Pin	Hand Crimp Tool / Order No.	Crimp-Dies
APK-PB25A10-002 (0,5 - 1,0 mm ²)	M22520-5-01 / 995-0001-761	CT121586-289
APK-PB25A25-002 (1,5 - 2,5 mm ²)	M22520-5-01 / 995-0001-761	CT121586-290
APK-PB25A40-002 (2,5 - 4,0 mm ²)	M22520-5-01 / 995-0001-761	CT121586-292

Crimp Machine for volume production

Designation:	Order No.
EPS 2000	121586-5043

Quick Change Tool for above Crimp Machine: (Mini Applicator)

Contact / Socket	Designation	Order No. (to be mentioned on order)
APK-SB25A10-002 (0,5 - 1,0 mm ²)	WWZ.20-100-APK25-10-002	121586-5134
APK-SB25A25-002 (1,5 - 2,5 mm ²)	WWZ.20-100-APK25-25-002	121586-5135
APK-SB25A40-002 (2,5 - 4,0 mm ²)	WWZ.20-100-APK25-40-002	121586-5136

Contact / Pin	Designation	Order No. (to be mentioned on order)
APK-PB25A10-002 (0,5 - 1,0 mm ²)	WWZ.20-100-APK25-10-002	121586-5134
APK-PB25A25-002 (1,5 - 2,5 mm ²)	WWZ.20-100-APK25-25-002	121586-5135
APK-PB25A40-002 (2,5 - 4,0 mm ²)	WWZ.20-100-APK25-40-002	121586-5136

Contact Extraction Tool

Description	Order No.
CET-APK25	192900-0176
Wire Insulation Stripping length: 6,5 mm	

Connector
7 - Way

Electrical Data

Voltage	48 VDC max.
Current	10 A max. for wire size 0,5 - 1,0mm ² / 25°C 16 A max. for wire size 1,5mm ² / 25°C
Voltage drop after 20 mating cycles /100mA	0,3 mV max.
Contact resistance	≤ 5mΩ
Test Voltage	1000 VAC (Ueff)
Insulation resistance	10MΩ

Mechanical Data

Sealing acc. to IEC529 and DIN 40050, Part 9	IP69K
Operating Temperature Range	-40°C / 125°C Class K2: -40°C/140°C contact temperature for APD, 7-Way
Shock / Vibration	acc. to DIN 72585
Durability	50 Mating cycles

Materials

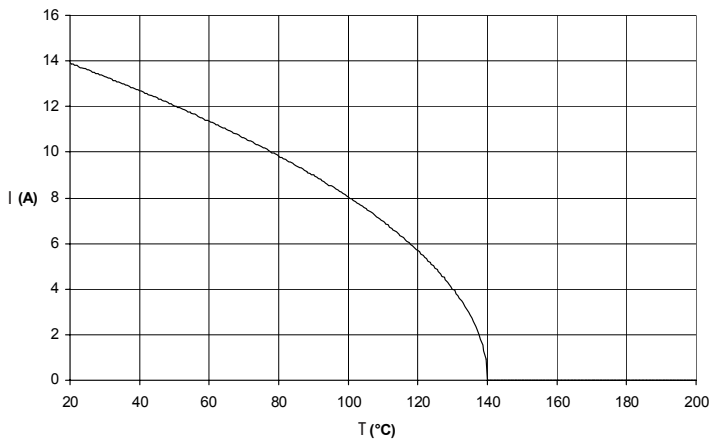
Connector housing	PBT
O - Ring	HNBR
Contacts	Copper alloy, tinned
Coupling nut	PA

Standards and Specifications (in Accordance with DIN 72585)

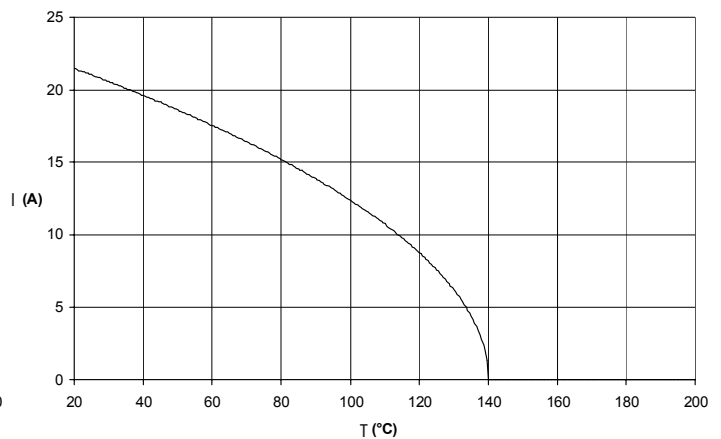
DIN 40050 Part 9	Temperature, humidity, environmental sealing, resistance against lubricants
DIN IEC 68 Part 1	Insulation resistance, dielectric withstanding
DIN 41640 Part 7, 8, 14, 15 and 21	voltage, mechanical shock, vibration
DIN 50021	Severity acceleration, durability
DIN 51511	Salt spray test
DIN 51601	Lubricants such as engine oil, grease, etc.
DIN IEC 4925	Diesel fuel, gasoline Brake fluids, anti freeze, coolants

Derating curve

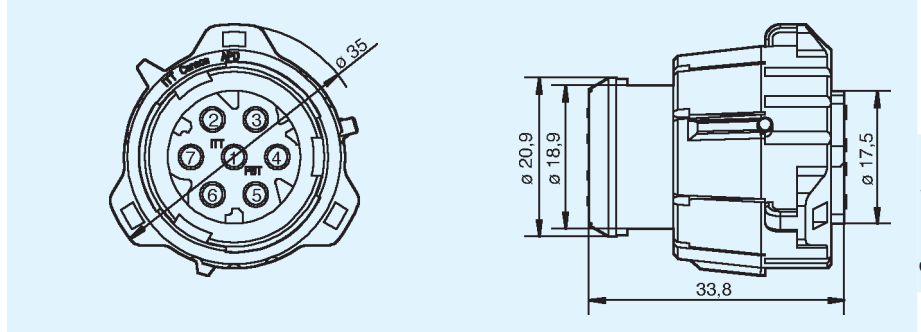
APD 6 WAY
Cable 1.5mm²



APD 7 WAY
Cable 0.5mm²



Plug, 7 - way

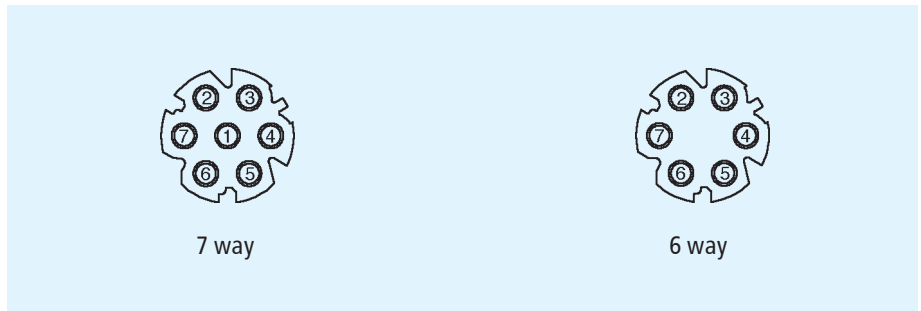


Connector
7 - Way

Order No.	Designation	Code	Color
121583-0018	APD-1BS7	1	black (RAL 9005)
120110-0024	APD-1BS6	1	black (RAL 9005) (contact cavity 1 closed)

Packaging unit 100 pcs.

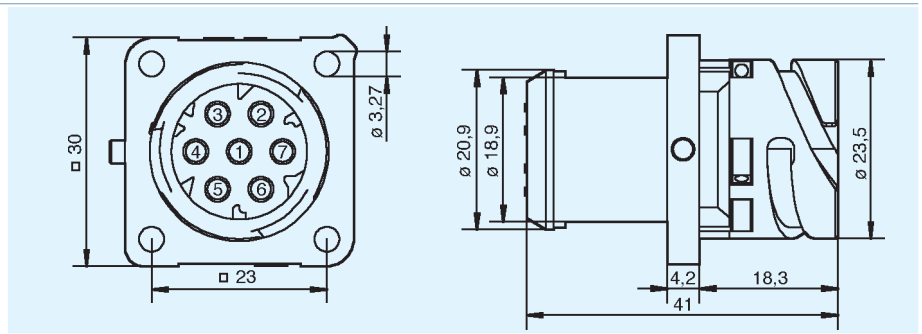
6 - / 7 - way



Socket Crimp-Contacts, Individual wire seal, Wire filler, see page 14

Flange Receptacle, 7 - way (for standard contacts)

Connector
7 - Way



Order No.	Designation	Code	Color
121583-0020	APD-1AP7	1	black (RAL 9005)
121583-0060	APD-1AP6	1	black (RAL 9005) (contact cavity 1 closed)
Optional 120110-0083	APD-1AP6-SPL	1	black (contact cavity 1 closed)

6 - / 7 - way with crimp press-in contacts

6-way Flange Receptacle

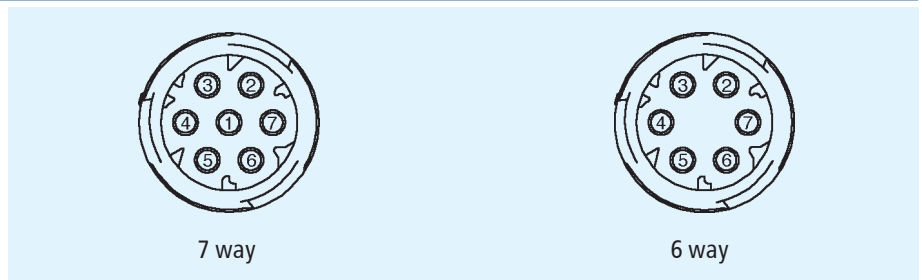
Order No.

APD 120110-0020

7-way Flange Receptacle

Order No.

upon request



Press-in-Crimp contact

for Flange- and Jam Nut Receptacle, 7 way

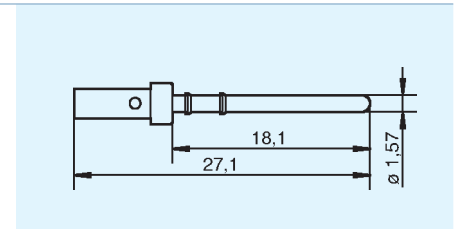
Order No.:

330-8672-021 (tinned) (0,75 - 1,5mm²)

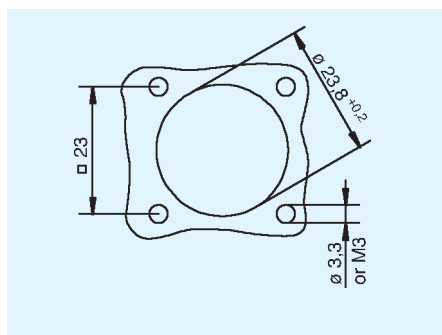
330-8672-019 (tinned) (0,35 - 0,75mm²)

with gold flash plate upon request

Packaging unit: 100 PCS



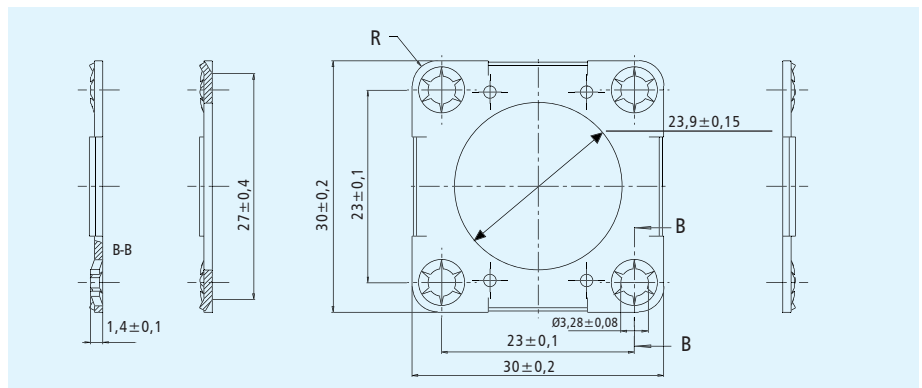
Panel cut out



Tools: See bottom of page

***Packaging unit 100 PCS

Flange for all Flange Receptacles:

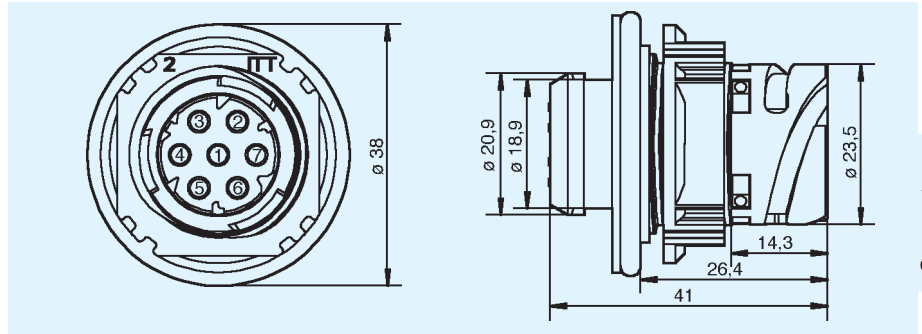


Order Number: 066-8516-005

Pin Crimp-Contacts, Individual wire seal, Wire filler, Flange gasket see page 14

Remark: Contacts are not removable after insertion

Jam Nut Receptacle, 7 - way (for standard contacts)



Connector
7 - Way

Order No.	Designation	Code	Color
121583-0019	APD-1CP7	1	black (RAL 9005)
121583-0061	APD-1CP6	1	black (RAL 9005) (contact cavity 1 closed)

Packaging unit 100 pcs.

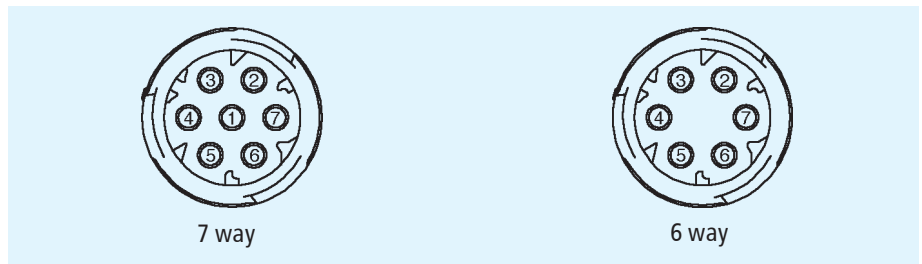
6 - / 7 - way with crimp press-in contacts

6 - way Jam Nut Receptacle

Order No.
upon request

7-way Jam Nut Receptacle

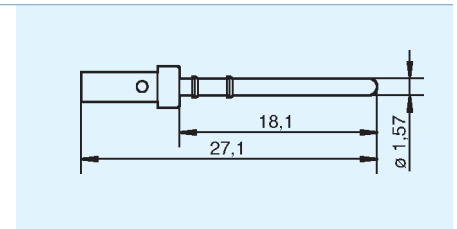
Order No.
121583-0028



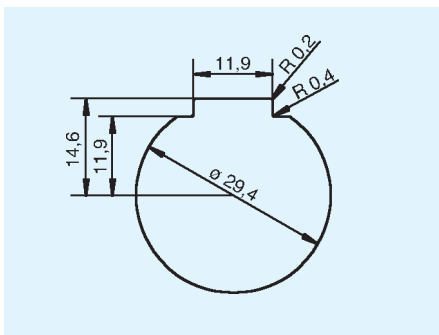
Press-in-Crimp contact

for Flange- and Jam Nut Receptacle, 7 way

Order No
330-8672-021 (tinned) (0,75 - 1,5mm²)
330-8672-019 (tinned) (0,35 - 0,75mm²)
with gold flash plate upon request
Packaging unit: 100 PCS



Panel cut out

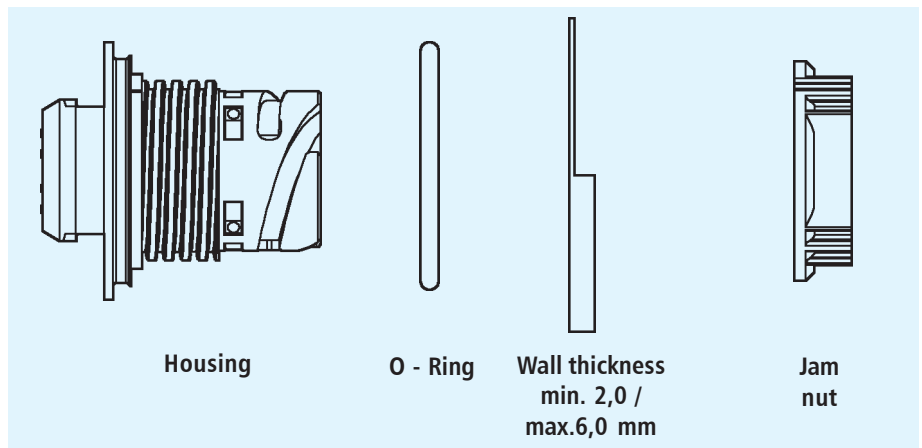


Tools: see bottom of page

Pin Crimp-Contacts, Individual wire seal,
Wire filler, see page 15

Remark: Contacts are not removable after insertion

Piece parts / assembly instruction



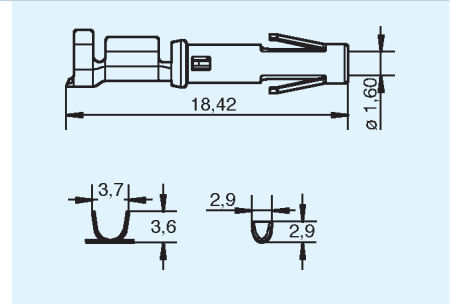
Connector
7 - Way

Socket Crimp-Contacts 1,6 mm Standard tinned, 3000 contacts per reel

for Plug, 7 way

Order No.

192900-0001 (0,5 - 1,5 mm²)

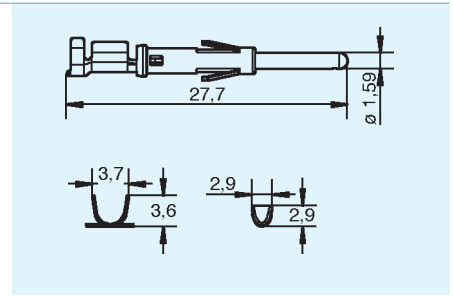


Pin Crimp- Contacts 1,6 mm Standard tinned, 3000 contacts per reel

for Flange- and Jam Nut Receptacle, 7 way

Order No.

192900-0000 (0,5 - 1,5 mm²)



Individual Wire Seals

for all Style, 7 way

Designation

Order No.

10GR3940 273-8506-008

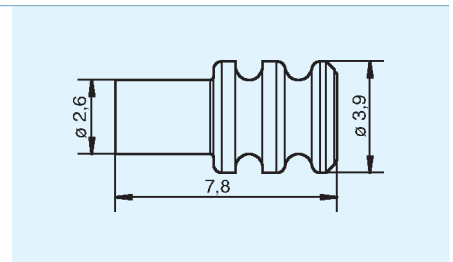
Wire Insulation \varnothing 1,4-2,0 mm / gray

10YE3940 273-8506-009

Wire Insulation \varnothing 1,9 - 2,1 mm / yellow

10RD3940 273-8506-010

Wire Insulation \varnothing 1,2 - 1,6 mm / red



Wire Filler

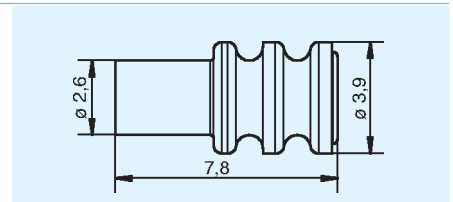
for all Style, 7 way

Designation

Order No.

10WH3940 273-8506-011

white



Flange Gasket for all Flansch Receptacle

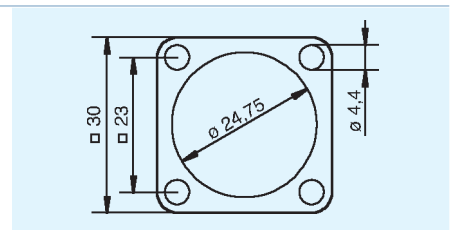
for Flange Receptacle, 7 way

Order No.

075-8503-000 (-55/125°C)

075-8503-004 (-30/200°C)

Packaging unit 100 pcs.

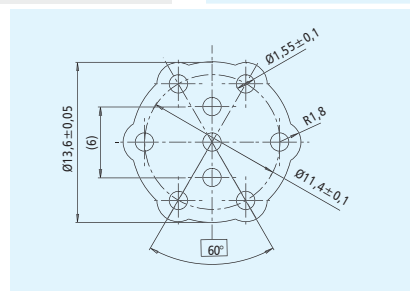


Alignment Disc

Order No.

052-8509-002

For pin contact only



Crimp and assembly Tools for 1,6 mm contacts (for standard contacts) connectors on page :11, 12, 13

Contacts Designation	Basic Hand Crimp Tool	Order No.
192900-0000 (0,5 - 1,5 mm ²) Pin	CCT-1,6-002	121586-5156
192900-0001 (0,5 - 1,5 mm ²) Socket	CCT-1,6-002	121586-5156
Crimp Dies		
192900-0000	Trident 16-15-002	121586-5201
192900-0001	Trident 16-15-002	121586-5201

Crimp Machine for Volume Production:

Designation:	Order No.
EPS 2000	121586-5043

Connector
7 - Way

Quick Change Tool for above Crimp Machine: (Mini Applicator)

Contact / Socket	Designation	Order No. (to be mentioned on order)
192900-0001 (0,5 - 1,5 mm ²)	WWZ.20-100-Trident 16-18-002	121586-5190

Contact / Pin	Designation	Order No. (to be mentioned on order)
192900-0000 (0,5 - 1,5 mm ²)	WWZ.20-100-Trident 16-18-002	121586-5190

Contact Extraction Tool

Description	Order No.
CET-1,6	192922-1450

Wire Insulation Stripping length: 6,5 mm

Crimp and assembly Tools for press in contacts connectors on page 12 & 13

Contact /Pin	Hand Crimp Tool	Order No.
330-8672-021	M22520-1-01	995-0001-585
330-8672-019	M22520-1-01	995-0001-585
Turret (for hand crimp tool)		
330-8672-021	CT120090-163	120090-0163
330-8672-019	CT120090-163	120090-0163
Insertion Tool		
	CIT-APD 16	317-8608-0080
Hand Lever		
	CHPZ-240	121586-0081

Electrical Data

Voltage	48 VDC max.
Current	245 A max. for wire size 50mm ² / 25°C
Voltage drop after 20 mating cycles /100mA	0,3 mV max.
Contact resistance	≤ 0,4mΩ
Test Voltage	1000 VAC (Ueff)
Insulation resistance	10MΩ

Mechanical Data

Sealing acc. to IEC529 and DIN 40050, Part 9	IP69K
Operating Temperature Range	-40°C / 125°C
Shock / Vibration	acc. to DIN 72585
Durability	50 Mating cycles

Materials

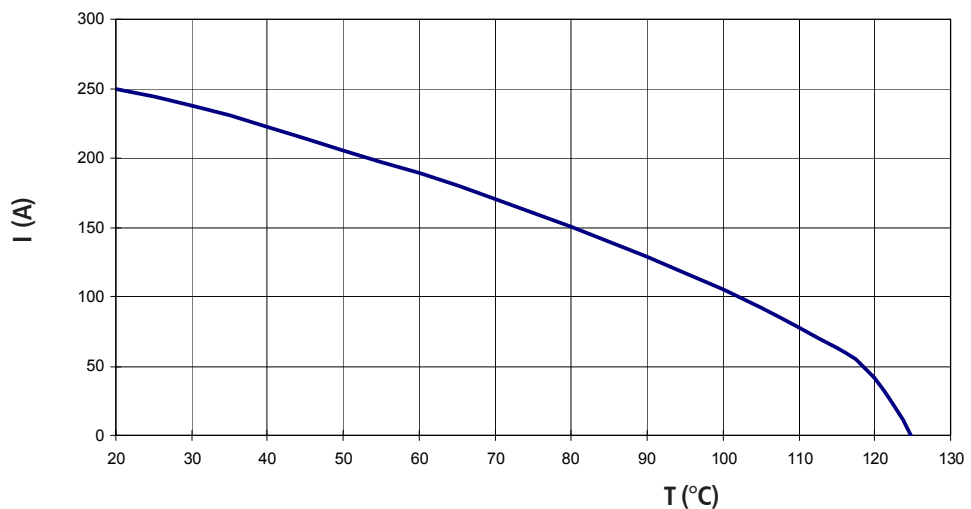
Connector housing	PBT
O - Ring	HNBR
Contacts	Copper alloy, silver plated
Coupling nut	PA

Standards and Specifications (in Accordance with DIN 72585)

DIN 40050 Part 9	Temperature, humidity, enviromental sealing, resistance against lubricants
DIN IEC 68 Part 1	Insulation resistance, dielectric withstand- ing
DIN 41640 Part 7, 8, 14, 15 and 21	voltage, mechanical shock, vibration
DIN 50021	Severity acceleration, durability
DIN 51511	Salt spray test
DIN 51601	Lubricants such as engine oil, grease, etc.
DIN IEC 4925	Diesel fuel, gasoline Brake fluids, anti freeze, coolants

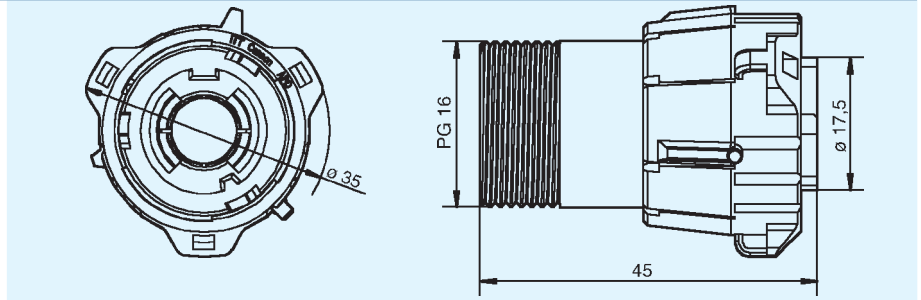
Derating curve

APD 1 Way
Cable 50mm²



APD - High Power Contacts # 500, wire size 50 mm² (AWG 0)

High Power Plug, 1- way



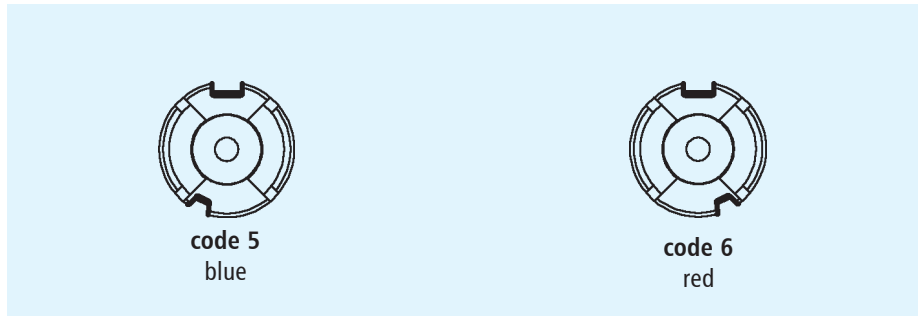
Order No.	Designation	Code	Color
121583-0012	APD-5BSH	5	blue (RAL 5012)
121583-0013	APD-6BSH	6	red (RAL 2002)

Packaging unit 100 pcs.

High Power Connector 1- Way

Coding, 1-way layouts

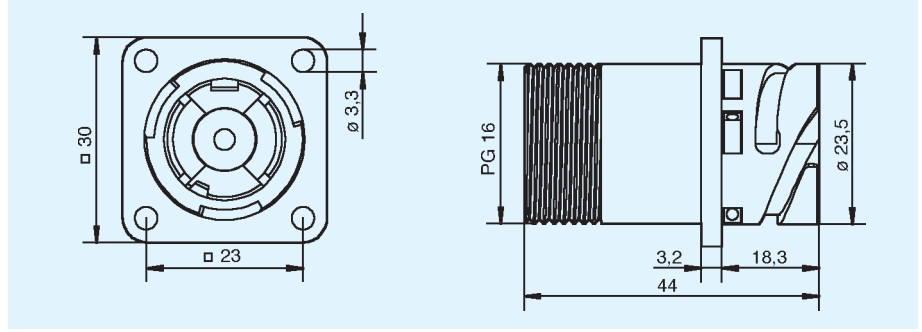
view on Mating Face



Note:
The connectors offer both - mechanical keying visual coding by different colors

Socket Crimp-Contacts, Cable seal, Hexogonal nut, see page 20 + 21

High Power Flange Receptacle, 1- way



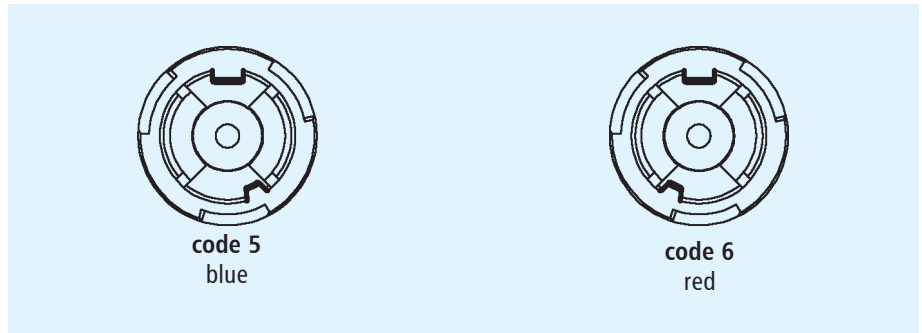
High Power Connector 1 - Way

Order No.	Designation	Code	Color
121583-0014	APD-5APH	5	blue (RAL 5012)
121583-0015	APD-6APH	6	red (RAL 2002)

Packaging unit 100 pcs.

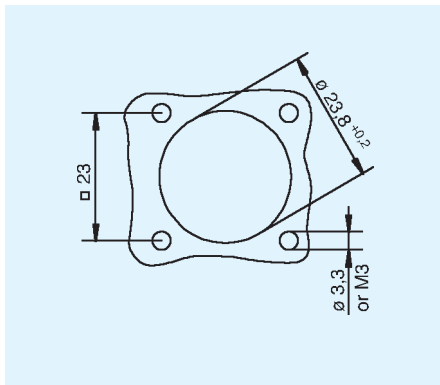
Coding, 1-way layouts

view on Mating Face

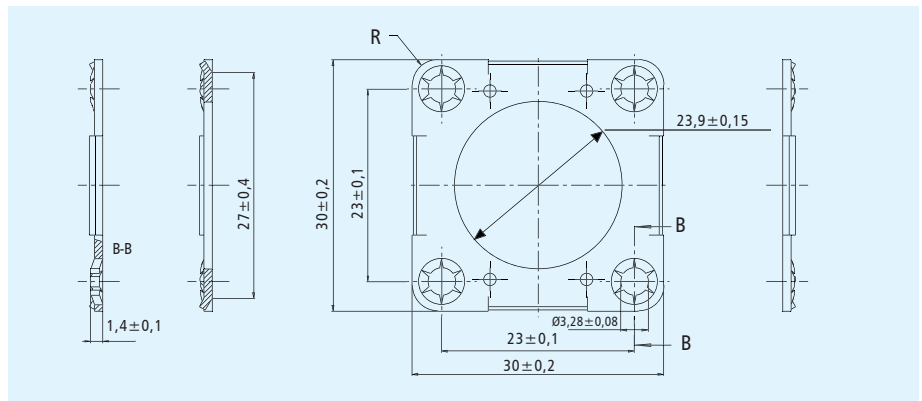


Note:
The connectors offer both - mechanical keying and visual coding by different colors

Panel cut out



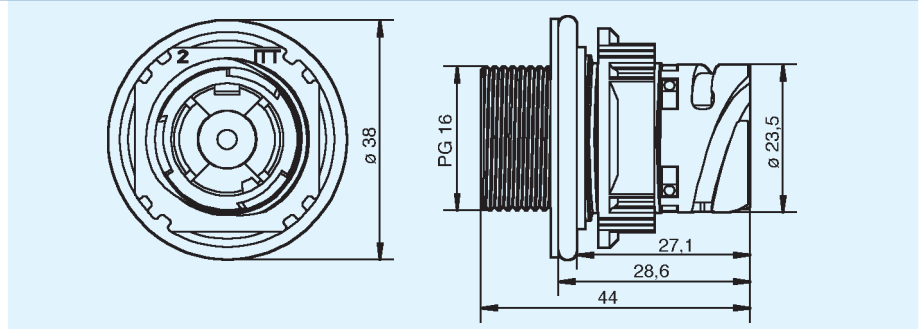
Flange for all Flange Receptacles:



Order Number: 066-8516-005

Machined Pin-Contacts, Contact for ring lock termination, O-ring, Cable seal, Hexagonal nut, Flange gasket see page 20 + 21

High Power Jam Nut Receptacle, 1- way



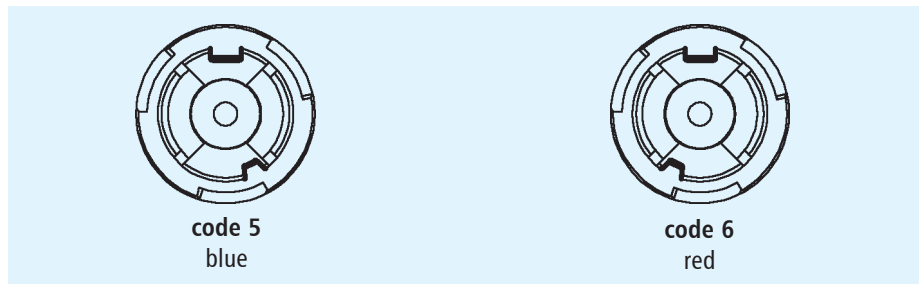
Order No.	Designation	Code	Color
121583-0016	APD-5CPH	5	blue (RAL 5012)
121583-0017	APD-6CPH	6	red (RAL 2002)

Packaging unit 100 pcs.

High Power Connector 1- Way

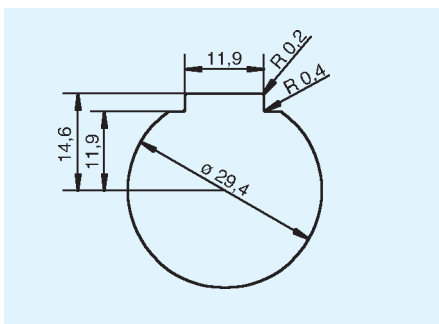
Coding, 1-way layouts

view on Mating Face

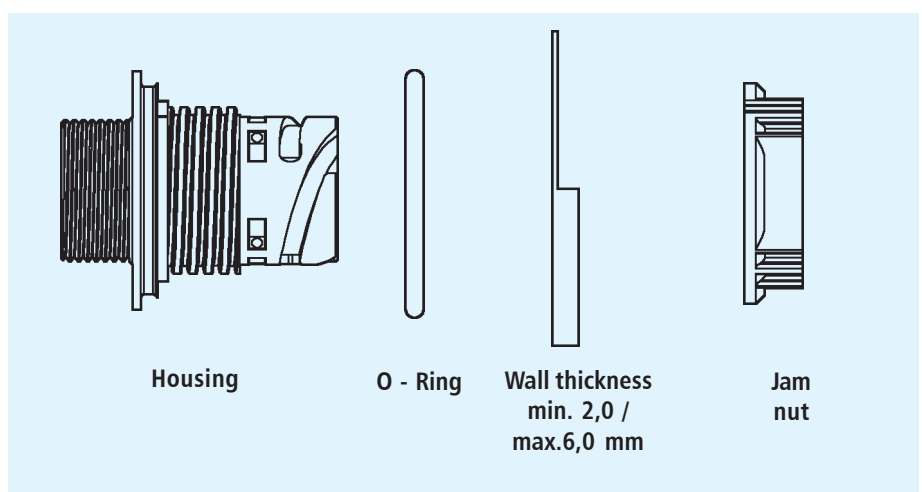


Note:
The connectors offer both - mechanical keying and visual coding by different colors

Panel cut out



Piece parts / assembly instruction



Machined Pin-Contacts, Contact for ring lock termination, O-ring, Cable seal, Hexagonal nut, Flange gasket see page 20 + 21

APD / DIN 72585 Connector

High Power 1- way, Contacts, Seals, Nut

Machined Socket Crimp Contacts Standard silver plated

for Plug, High Power 1- way

Order No.

031-8521-000 (53,40 mm²)

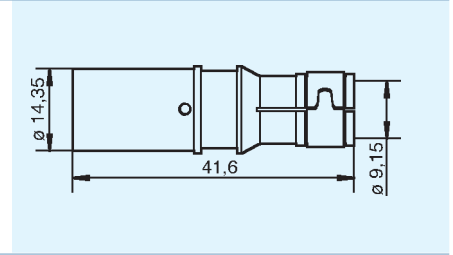
031-8561-000 (50,00 mm²)

031-8521-020 (35,00 mm²)

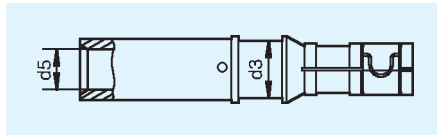
031-8521-010 (25,00 mm²)

031-8521-030 (16,00 mm²)

Packaging unit 100 pcs.



Contact dimensions Socket



High Power Connector 1- Way

Contact size	mm ²	part number	d3	d5 +0,15
0	16,0	031-8521-030	13,55	6,2
0	25,0	031-8521-010	13,55	7,6
0	35,0	031-8521-020	13,55	9,1
0	50,0	031-8561-000	13,55	10,7
0	53,4	031-8521-000	13,55	11,5

Machined Pin Crimp Contacts Standard silver plated

for Flange- and Jam Nut Receptacle, High Power 1- way

Order No.

030-8614-000 (53,40 mm²)

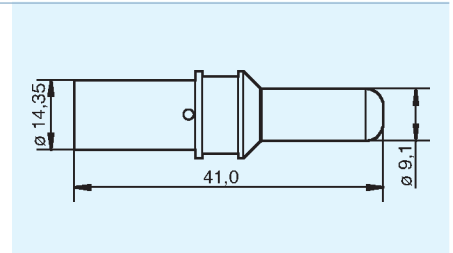
030-8592-000 (50,00 mm²)

030-8614-020 (35,00 mm²)

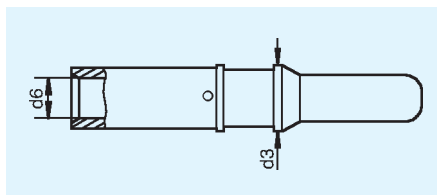
030-8614-010 (25,00 mm²)

030-8614-030 (16,00 mm²)

Packaging unit 100 pcs.



Contact dimensions Pin

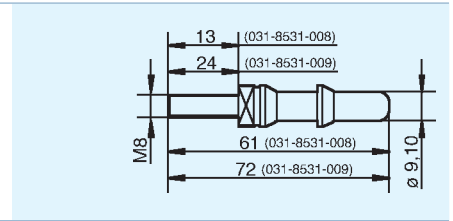


Contact size	mm ²	part number	d3	d6 +0,15
0	16,0	030-8614-030	15,15	6,2
0	25,0	030-8614-010	15,15	7,6
0	35,0	030-8614-020	15,15	9,1
0	50,0	030-8592-000	15,15	10,7
0	53,4	030-8614-030	15,5	11,5

Contact for ring lock terminals

for Flange- and Jam Nut Receptacle,
High Power 1- way

Order No.	thread
031-8531-008	M8 x 13
031-8531-009	M8 x 24
Packaging unit 100 pcs.	



O-Ring for contact sealing with treaded stud

for Pin Contact sealing High Power 1- way

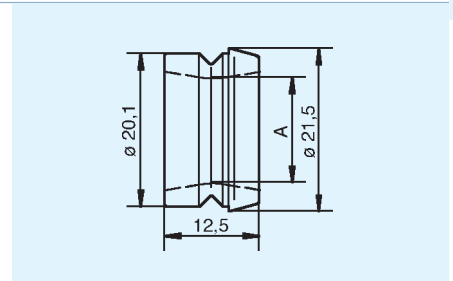
980-8605-002
Packaging unit 100 pcs.



Cable Seal for Cable in acc. to DIN 670722 FLY/ DIN72551 FLRY

for all Style, High Power 1- way

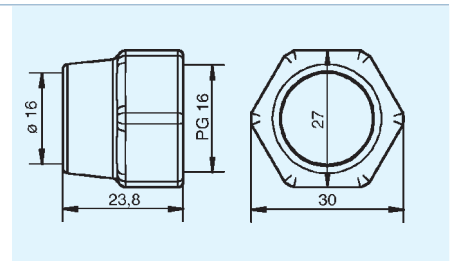
Order No.	mm ²	Insulation \varnothing	\varnothing A mm
351-8697-005 for 16	5,8 - 7,4	5,4	
351-8697-009 for 25	8,4 - 10,0	8,0	
351-8697-001 for 35	10,4 - 12,0	10,0	
351-8697-002 for 50	12,3 - 13,9	11,9	
351-8697-003 for 70	14,2 - 15,8	13,8	
Packaging unit 100 pcs.			



Hexagonal Nut

for all Style, High Power 1- way

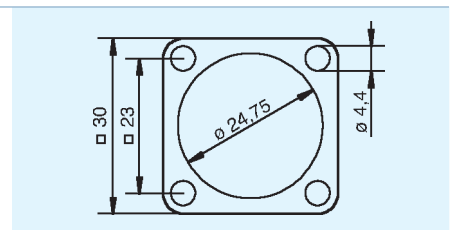
Order No.
217-8516-010
Packaging unit 100 pcs.



Flange Gasket

for Flange Receptacle, High Power 1- way

Order No.
075-8503-000 (-55/125°C)
075-8503-004 (-30/200°C)
Packaging unit 100 pcs.



Tooling for 1- way High Power Contacts

Crimp Dies

Contacts / Socket	Crimp Dies / Order No.
031-8521-000 (53,40 mm ²)	121586-5160
031-8561-000 (50,00 mm ²)	121586-5160
031-8521-020 (35,00 mm ²)	121586-5160
031-8521-010 (25,00 mm ²)	121586-5160
031-8521-030 (16,00 mm ²)	121586-5160

Contacts / Pin	Crimp Dies / Order No
030-8614-000 (53,40 mm ²)	121586-5160
030-8592-000 (50,00 mm ²)	121586-5160
030-8614-020 (35,00 mm ²)	121586-5160
030-8614-010 (25,00 mm ²)	121586-5160
030-8614-030 (16,00 mm ²)	121586-5160

Assembly tools Jam Nut Receptacle:

Square box spanner for torque moment wrench to fix the jam nut:	
Order No.	
CT317-8649-034	Torque moment max. 7 Nm

Assembly tool (hexagonal nut)

to fix the hexagonal fixing nut 980-8672-000	
Order No.	
980-8672-005	Torque moment max. 3 Nm

Assembly and torque wrench adapter

Designation	Order No.:
MA-APD-112-P	248-8653-063
MA-APD-112-R	249-8619-010

Contact Extraction Tool

(Housing can not be re-used)

Designation	Order No.:
CET-APD#0-Pin	121586-5192
CET-APD#0-Socket	121586-5193

Crimp Tool

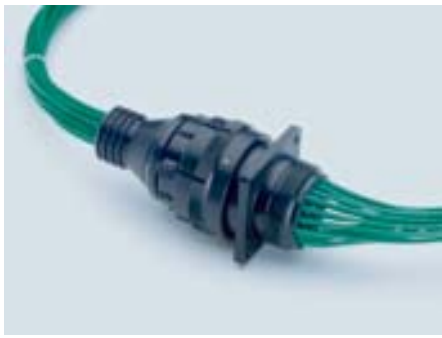
Crimp Tool	Designation	Order No.:
Hydraulic, hand operated:	HK120	CT121586-5077
Electro-hydraulic, 230 V AC operated:	HK12-EL	CT121586-5075

Wire Insulation Stripping Length:

50 mm ²	13,00 +0,8/-0,4 mm
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APD / DIN 72585 Connector

Custom-made Versions:



High density APD connector with 37 respectively 51 signal contacts (16 Amp. max.). Combinations of signal and power contacts upon request.



2 to 4-way APD Sensor connector with machined crimp contacts. (Other termination methods are possible). Connector is fixed either by joint flared or over mold.



Y splice Box. (other configurations / arrangements are possible).



Pressure transmitter sensor-connector with PCB terminals. (Other termination methods are possible). Connector is fixed either by flared joint or overmould.



Sensor Application



Sensor Application



(Picture showing ITT Cannon connector in application)

Sensor Application

Electrical Data

Voltage	48 VDC max.
Current	74 A max. for wire size 16mm ² / 25°C
Voltage drop after 20 mating cycles /100mA	0,3 mV max.
Contact resistance	≤ 2mΩ
Test Voltage	1000 VAC (Ueff)
Insulation resistance	10MΩ

Mechanical Data

Sealing acc. to IEC529 and DIN 40050, Part 9	IP69K
Operating Temperature Range	-40°C / 125°C
Shock / Vibration	acc. to DIN 72585
Durability	50 Mating cycles

Materials

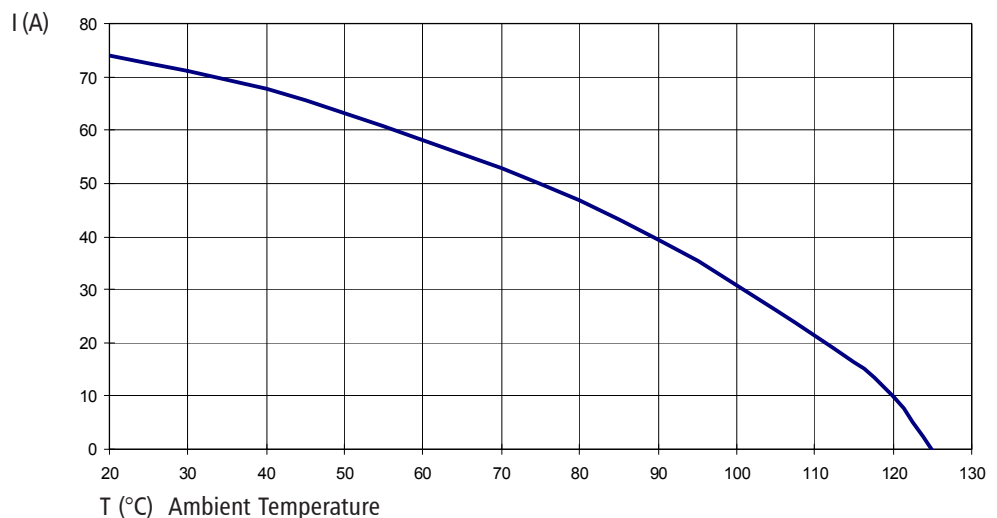
Connector housing	PBT
O - Ring	HNBR
Contacts	Copper alloy, silver plated
Coupling nut	PA

Standards and Specifications (in Accordance with DIN 72585)

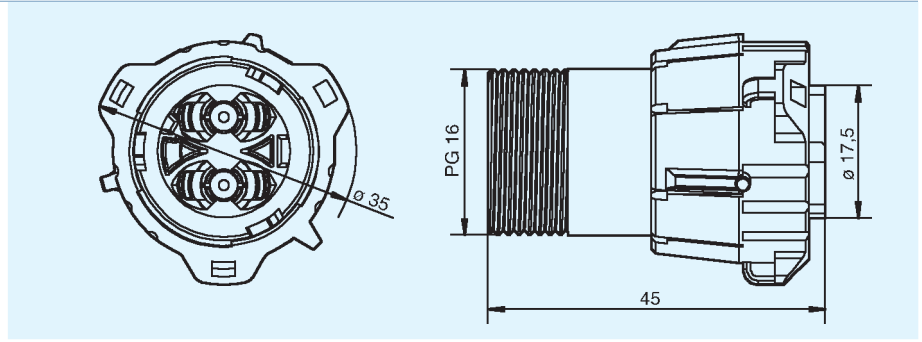
DIN 40050 Part 9	Temperature, humidity, enviromental sealing, resistance against lubricants
DIN IEC 68 Part 1	Insulation resistance, dielectric withstand- ing
DIN 41640 Part 7, 8, 14, 15 and 21	voltage, mechanical shock, vibration
DIN 50021	Severity acceleration, durability
DIN 51511	Salt spray test
DIN 51601	Lubricants such as engine oil, grease, etc.
DIN IEC 4925	Diesel fuel, gasoline Brake fluids, anti freeze, coolants

Derating curve

APD 2 Way
Cable 10mm²



High Power Plug, 2 way



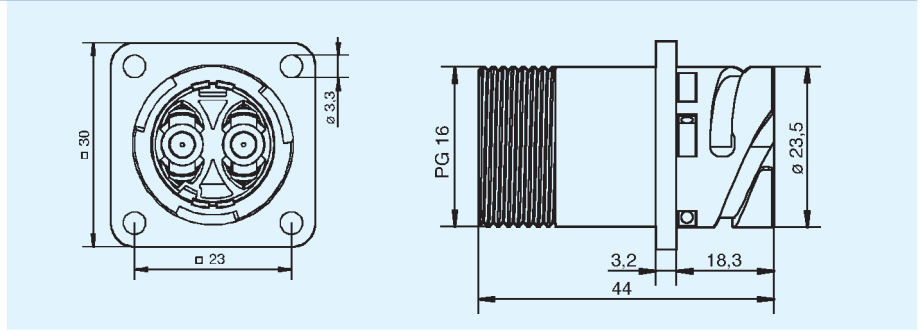
Order No.	Designation	Code	Color
121583-0025	APD-1BSH8-2	5	black (RAL 9005)

Packaging unit 100 pcs.

High Power
Connector 2- Way

Socket Crimp-Contacts, Individual Wire seal, Cable seal, Hexagonal nut, see page 29

High Power Flange Receptacle, 2 way

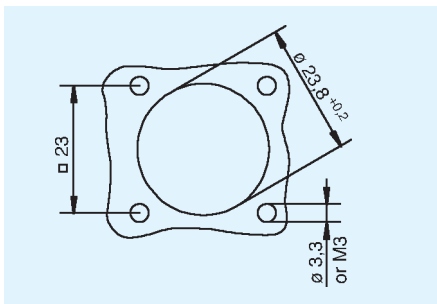


Order No.	Designation	Code	Color
121583-0026	APD-1APH8-2	5	black (RAL 9005)

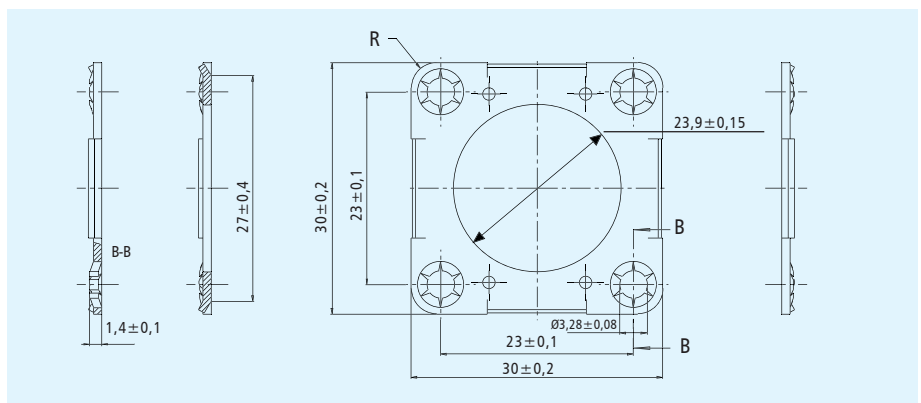
Packaging unit 100 pcs.

High Power
Connector 2- Way

Panel cut out



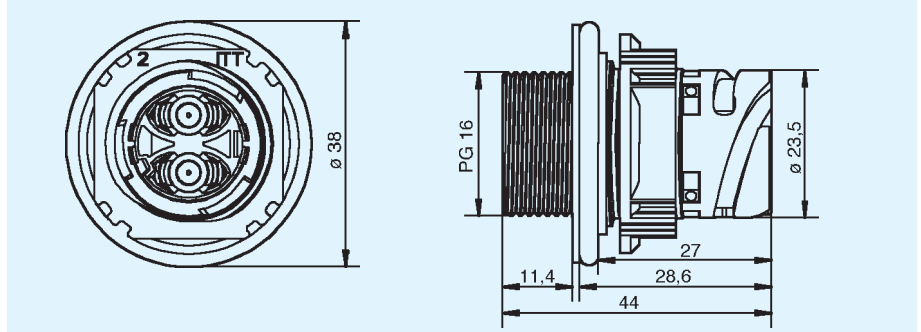
Flange for all Flange Receptacles:



Machined Pin-Contacts, Individual Wire seal, Cable seal, Hexagonal nut, Flange gasket see page 29

Order Number: 066-8516-005

High Power High Power Jam Nut Receptacle, 2 way

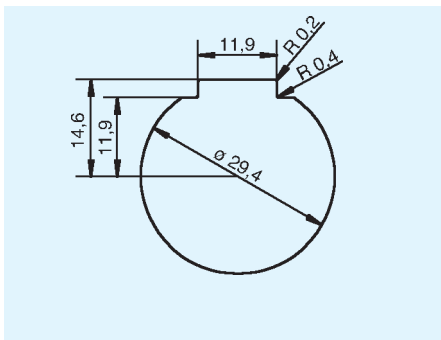


Order No.	Designation	Code	Color
121583-0027	APD-1CPH8-2	5	black (RAL 9005)

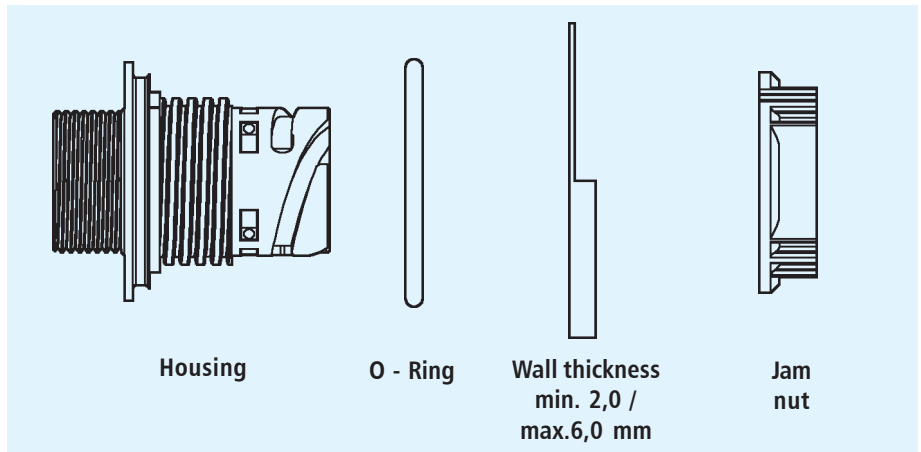
Packaging unit 100 pcs.

High Power Connector 2- Way

Panel cut out



Piece parts / assembly instruction



Machined Pin-Contacts, Individual Wire seal, Cable seal, Hexagonal nut, see page 29

Tooling for 2 - way High Power Connectors

Crimp Dies

Contacts / Socket	Crimp Dies / Order No.
031-8646-010 (6,00 mm ²) with individual wire seal	CT120090-165
031-8646-011 (10,00 mm ²)	CT120090-165
031-8646-002 (AWG 8)	CT120090-165
031-8646-003 (AWG 6)	CT120090-165
031-8646-001 (16,0 mm ²)	CT120090-171

Contacts / Pin	Crimp Dies / Order No.
430-8645-000 (6,00 mm ²) with individual wire seal	CT120090-165
430-8645-009 (10,00 mm ²)	CT120090-165
430-8645-003 (AWG 8)	CT120090-165
430-8645-002 (AWG 6)	CT120090-165
430-8645-007 (16,0 mm ²)	CT120090-171

Assembly tools Jam Nut Receptacle:

Square box spanner for torque moment wrench to tighten the jam nut: Order No.	
CT317-8649-034	Torque moment max. 7 Nm

Assembly tool (hexagonal nut)

to tighten the hexagonal fixing nut 980-8672-000 Order No.	
980-8672-005	Torque moment max. 3 Nm

Assembly and torque wrench adapter

Designation	Order No.:
MA-APD-112-P	248-8653-063
MA-APD-112-R	249-8619-010

Contact Extraction Tool

Designation	Order No.:
CET- APD-2	121586-5149

Crimp Tool

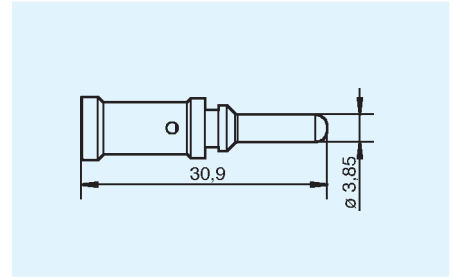
Crimp Tool	Designation	Order No.:
Hydraulic, hand operated:	HK120	CT121586-5077
Electro-hydraulic, 230 V AC operated:	HK12-EL	CT121586-5075

Wire Insulation Stripping Length:	11,00 + 0,8/ -0,4 mm
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Machined Pin Crimp Contacts Standard silver plated

for Plug, High Power 2- way

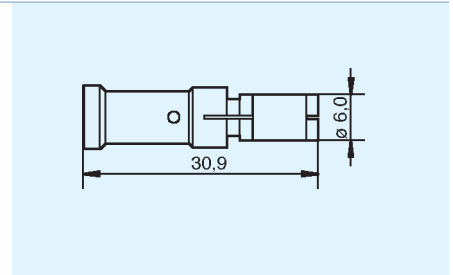
Order No.
 430-8645-000 (6,00 mm²)
 for individual Wire Seal and Grommet
 430-8645-009 (10,00 mm²)
 430-8645-003 (AWG 8)
 430-8645-002 (AWG 6)
 430-8645-007 (16,0 mm²)
 Packaging unit 100 pcs.



Machined Socket Crimp Contacts Standard silver plated

for Flange- and Jam Nut Receptacle,
High Power 2- way

Order No.
 031-8646-010 (6,00 mm²)
 for individual Wire Seal and Grommet
 031-8646-011 (10,00 mm²)
 031-8646-002 (AWG 8)
 031-8646-003 (AWG 6)
 031-8646-001 (16,00 mm²)
 Packaging unit 100 pcs.



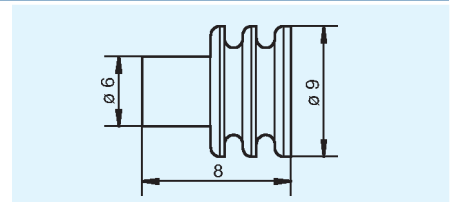
High Power Connector 2- Way

Individual Wire Seals

for High Power 2-way 6mm² only

Designation	Order No.
16GN5824	273-8506-012

wire insulation
 Ø 4,3 - 4,8mm / green

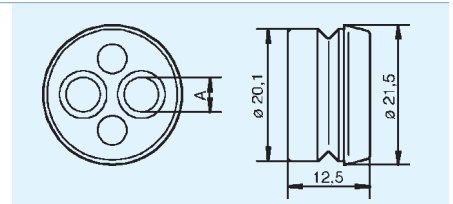


Grommet/Cable Seal for Cable in acc. to DIN 670722 FLY/ DIN72551 FLRY

for High Power 2- way

Order No.	mm ² /AWG	Insulation Ø	ØA mm
351-8697-000	for 6	4,2 - 5,8	3,8
351-8697-007	for 10 / 8	5,7 - 7,3	5,3
351-8697-008	for 16 / 6	7,4 - 9,3	7,3
351-8697-013	for 6	3,7 - 5,0	3,3

(1 cavity closed)

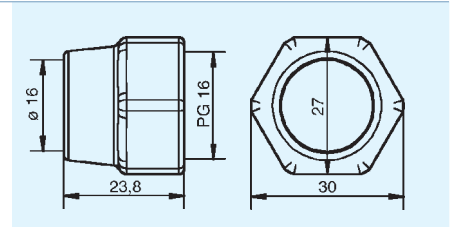
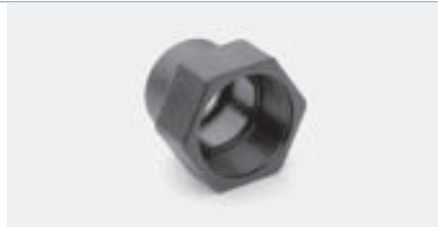


Packaging unit 100 pcs.

Hexagonal Nut

for High Power 2- way

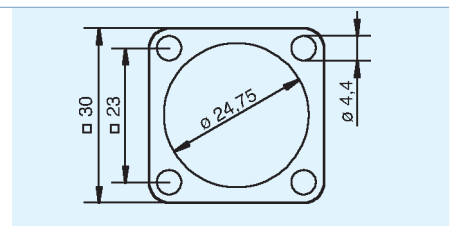
Order No.
 217-8516-010
 Packaging unit 100 pcs.



Flange Gasket

for Flange Receptacle, High Power 2- way

Order No.
 075-8503-000 (-55/125°C)
 075-8503-004 (-30/200°C)
 Packaging unit 100 pcs.



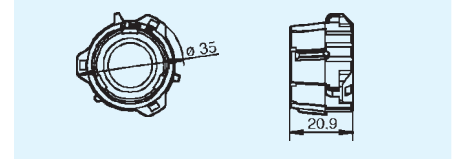
Sealing Cap for Receptacle

Applicable for 4-way and 7-way, 1-way HP und 2-way HP

Designation / Order No.

APD-DP / 121583-0021

Packaging unit 100 pcs.

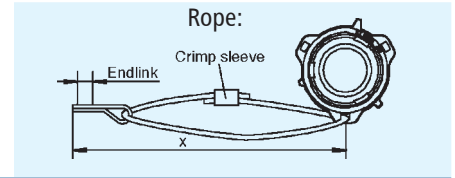


with rope upon request

End link upon request

X = Total rope length upon request

Crimp sleeve upon request



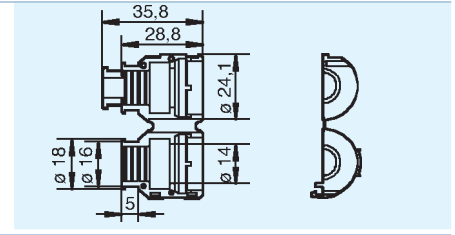
Straight Endbell for Flex Tube

Applicable for 4-way and 7-way

Ø 8,5 mm Order No. 058-8578-100

Ø 10,0 mm Order No. 058-8578-102

Packaging unit 100 pcs.



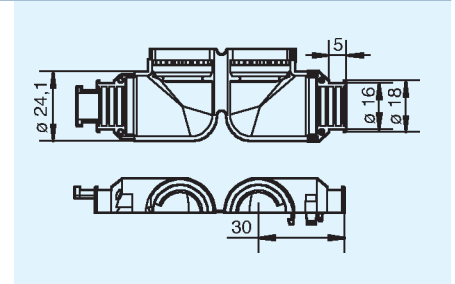
90° End Bell for Flex Tube

Applicable for 4-way and 7-way

Ø 8,5 mm Order No. 058-8578-101

Ø 10,0 mm Order No. 058-8578-103

Packaging unit 100 pcs.



Flex Tube Adapter Ø 21 mm

Applicable for 1- and 2-way High Power

for 1 and 2 way High Power Connector

Order No

980-8672-010

Torque: $2 \pm 0,3$ Nm

Packaging unit 50 pcs.



90° End Bell

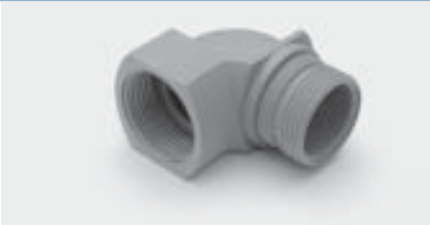
Applicable for 1-way High Power up to 25 mm² wire

Order No

980-8672-004

Torque: $2 \pm 0,3$ Nm

Packaging unit 100 pcs.



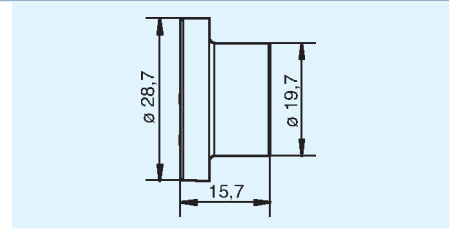
Dust Cap for Plug

025-8636-005

Packaging unit 100 pcs.



Applicable for all APD Plug



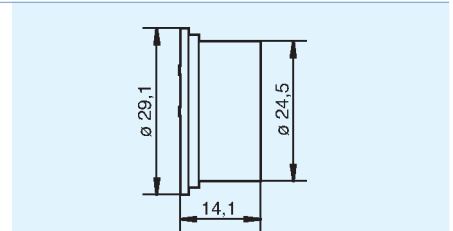
Dust Cap for Receptacle

025-0480-000

Packaging unit 100 pcs.



Applicable for all APD Receptacle



Cross reference AWG Size / metric size (mm²)

AWG	mm ²	AWG	mm ²	AWG	mm ²
6/0	170,3	10	5,27	25	0,163
5/0	135,1	11	4,15	26	0,128
4/0	107,2	12	3,31	27	0,102
3/0	85,0	13	2,63	28	0,0804
2/0	67,5	14	2,08	29	0,0646
0	53,4	15	1,65	30	0,0503
1	42,4	16	1,31	31	0,0400
2	33,6	17	1,04	32	0,0320
3	26,7	18	0,823	33	0,0252
4	21,2	19	0,653	34	0,0200
5	16,8	20	0,519	35	0,0161
6	13,3	21	0,412	36	0,0123
7	10,6	22	0,325	37	0,0100
8	8,35	23	0,259	38	0,00795
9	6,62	24	0,205	39	0,00632

Simply photocopy, fill in with printed letters,
and fax to the ITT Industries, Cannon
Product Management in Weinstadt, Germany:

Fax Number: +49 (0) 71 51 69 92 21

Please contact me, I am interested in a
connector with the following specification:

Company _____
Name _____
Department _____
Street / POB _____
Town _____ Post Code _____
Telephone _____ Fax _____
e-mail _____

Application

Electrical Data

Operating voltage _____
Current rating _____

Mechanical Data

Number of contacts _____
Water Resistance IP 69K _____
Operating temperature _____
Shock / Vibration _____
Mating cycles _____
Coding system _____
Wire (mm² / AWG) _____

Material

Shell _____
Contacts _____
Insulator _____

Standards and Specifications

Customer Specification _____

others

Product Safety Information

THIS NOTE SHOULD BE READ IN CON-JUNCTION WITH THE PRODUCT DATA SHEET/CATALOGUE. FAILURE TO OBSERVE THE ADVICE IN THIS INFORMATION SHEET AND THE OPERATING CONDITIONS SPECIFIED IN THE PRODUCT DATA SHEET/CATALOGUE COULD RESULT IN HAZARDOUS SITUATIONS.

1. MATERIAL CONTENT AND PHYSICAL FORM

Electrical connectors do not usually contain hazardous materials. They contain conducting and non-conducting materials and can be divided into two groups.

a) Printed circuit types and low cost audio types which employ all plastic insulators and casings.

b) Rugged, Fire Barrier and High Reliability types with metal casings and either natural rubber, synthetic rubber, plastic or glass insulating materials.

Contact materials vary with type of connector and also application and are usually manufactured from either copper, copper alloys, nickel, alumel, chromel or steel. In special applications, other alloys may be specified.

2. FIRE CHARACTERISTICS AND ELECTRIC SHOCK HAZARD

There is no fire hazard when the connector is correctly wired and used within the specified parameters. Incorrect wiring or assembly of the connector or careless use of metal tools or conductive fluids, or transit damage to any of the component parts may cause electric shock or burns. Live circuits must not be broken by separating mated connectors as this may cause arcing, ionisation and burning.

Heat dissipation is greater at maximum resistance in a circuit. Hot spots may occur when resistance is raised locally by damage, e.g. cracked or deformed contacts, broken strands of wire. Local overheating may also result from the use of the incorrect application tools or from poor quality soldering or slack screw terminals. Overheating may occur if the ratings in the Product Data Sheet/Catalogue are exceeded and can cause breakdown of insulation and hence electric shock.

If heating is allowed to continue it intensifies by further increasing the local resistance through loss of temper of spring contacts, formation of oxide film on contacts and wires, and leakage currents through carbonisation of insulation and tracking paths. Fire can then result in the presence of combustible materials and this may release noxious fumes. Overheating may not be visually apparent. Burns may result from touching overheated components.

3. HANDLING

Care must be taken to avoid damage to any component parts of electrical connectors during installation and use. Although there are normally no sharp edges, care must be taken when handling certain components to avoid injury to fingers.

Electrical connectors may be damaged in transit to the customers, and damage may result in creation of hazards. Products should therefore be examined prior to installation/use and rejected if found to be damaged.

4. DISPOSAL

Incineration of certain materials may release noxious or even toxic fumes.

5. APPLICATION

Connectors with exposed contacts should not be selected for use on the current supply side of an electrical circuit, because an electric shock could result from touching exposed contacts on an unmated connector. Voltages in excess of 30 V ac or 42.5 V dc are potentially hazardous and care should be taken to ensure that such voltages can not be transmitted in any way to exposed metal parts of the connector body. The connector and wiring should be checked, before making live, to have no damage to metal parts or insulators, no solder blobs, loose strands, conducting lubricants, swarf, or any other undesired conducting particles. Insulation resistance should be checked to make certain that no low resistance joints or spurious conducting path are existing between contacts and exposed metal parts of the connector body. Further the contact resistance of the connectors should be measured within the electrical circuit in order to identify high resistances which result in excessive connector heating.

Always use the correct application tools as specified in the Data Sheet/Catalogue.

Do not permit untrained personnel to wire, assemble or tamper with connectors.

For operation voltage please see appropriate national regulations.

IMPORTANT GENERAL INFORMATION.

1. Air and creepage paths/Operating voltage.

The admissible operating voltages depend on the individual applications and the valid national and other applicable safety regulations.

For this reason the air and creepage path data are only reference values. Observe reduction of air and creepage paths due to PC board and/or harnessing.

2. Temperature

All information given are temperature limits. The operation temperature depends on the individual application.

3. Other important information

Cannon continuously endeavours to improve their products. Therefore, Cannon products may deviate from the description, technical data and shape as shown in this catalogue and data sheets.

4. Harnessing and Assembly Instructions

If applicable, our special harnessing and/or assembly instruction has to be adhered to. This is provided at request.

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