12	trick
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	L1 L2 L3 (C A Paladin Advanage 254-XZZ Universal nable Transducer Linversal nable Transducer Linversal nable Transducer Linversal nable Transducer
	r r

PALADIN ADVANTAGE UNIVERSAL PROGRAMMABLE TRANSDUCER

KEY FEATURES

- DIN-rail enclosure
- Measurement, isolation and conversion of up to 4 parameters
- RS485 Modbus RTU protocol
- Alarm/pulsed output
- Programmable VT/CT ratio
- True rms measurement
- User programmable configuration

TE Connectivity's (TE) Crompton Instruments Paladin Advantage, 254-XZZ, is a programmable transducer which provides measurement isolation and conversion of all main electrical parameters into an industry standard DC output signal. The 254-XZZ can be used in single and three-phase balanced or unbalanced three or four-wire electrical systems. The 254-XZZ has an accuracy of CL0.2 and includes RS485 Modbus RTU communications protocol and pulse/alarm output as standard.

The 254-XZZ is an accurate device for the conversion of all main electrical parameters into a Voltage or mA output and provides measurement, isolation and conversion of up to four user defined inputs and outputs. The device is supplied programmed to the users requirements but can be easily be reprogrammed to suit any application.

Designed, developed and manufactured in the EU, with integrated microprocessor for exceptional waveform handling of distorted waveforms. The 254-XZZ is ideal for low, medium and high voltage applications and provides a high protection against continuous and short circuit protection as well as galvanically isolated inputs and outputs.

Customers can count on consistent, high quality products, driven by TE's proven innovation and backed by our extraordinary customer support.





BENEFITS

- Cost effective
- CL 0.2 accuracy
- Modbus communications
- Fully configurable

APPLICATIONS

- Motor control centres
- Energy/building management systems
- Switchgear
- Generator sets

STANDARDS

- IEC 61326
- IEC 61010-1
- IEC 62053-21
- EN60688
- RoHS Compliant

The 254-XZZ is supplied fully user configurable with up to 4 user defined inputs and outputs. It is possible to program the device as many times as required to suit any application. TE supply a free of charge software called the Paladin Tool, available for free download on the Crompton website

http://www.crompton-instruments.com/254-XZZ.html.

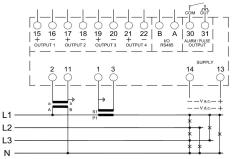
The Paladin Tool utility runs on a Personal Computer (PC) with Microsoft windows Operating System. The programmable transducer must be connected to the PC by a standard printer USB cable (not provided), and the auxiliary supply powered-on.

The USB connection to the transducer is fully isolated, allowing a safe programmability of the transducer itself even if it is completely wired to a live system.

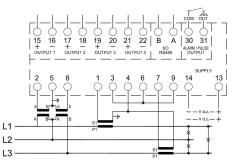
Product codes	Part number
Auxiliary 20 - 60 V AC/DC (+/- 10%) 45 - 66 Hz, 6 VA, two outputs	254-XZZ-L-02
Auxiliary 80 - 260 V AC/DC (+/- 10%) 45 - 66 Hz, 6 VA, two outputs	254-XZZ-M-02
Auiliary 20 - 60 V AC/DC (+/- 10%) 45 - 66 Hz, 6 VA, four outputs	254-XZZ-L-04
Auxiliary 80 - 260 V AC/DC (+/- 10%) 45 - 66 Hz, 6 VA, four outputs	254-XZZ-M-04

CONNECTION DIAGRAMS

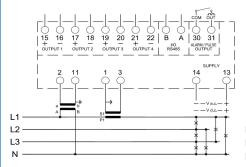
3-phase 4-wire unbalanced



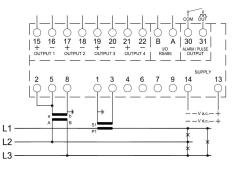
3-phase 3-wire unbalanced



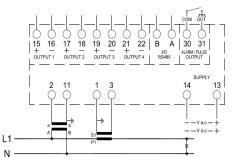
3-phase 4-wire balanced







Single-phase







SPECIFICATION		INPUT PARA	INPUT PARAMETERS		
Input		Button	ID	Description	
Nominal input voltage	57.7 V - 277 V AC L-N (100 - 480 V L-L) 480 V MAX	Voltage	VL1	Volts L1-N	
Max. Continuous input overload voltage	120% of nominal		VL2	Volts L2 - N	
Max. Short duration input voltage (300 msec)	2 x nominal voltage		VL3	Volts L3 - N	
Nominal input voltage burden	-		2VL12	Volts L1 - L2	
Nominal input current	< 0.5 VA per phase 1A AC or 5A AC rms		VL23	Volts L2 - L3	
Nominal input current burden	< 0.1 VA		VL31	Volts L3 - L1	
Max. Continuous input overload current	2 x nominal voltage		AVG V12	Average Vvlt	
Max. Short duration input current (300 msec)	20 x nominal current		V23 V31 AVG V1N	- age (L-L) Average Vvlt-	
Auxiliary			V2N V3N	age (L-N)	
Our surphise and an	80 - 260 V AC/DC (+/- 10%) 45 - 66 Hz, 6 VA or		DELTA V	Volts diff L-L	
Operating range	20 - 60 V AC/DC (+/- 10%) 45 - 66 Hz, 6 VA		DELTA VN	Volts diff L-N	
Supply burden	6 VA	Current	IL1	Current L1	
Accuracy			IL2	CurrentL2	
Voltage (V)	< 0.2%		IL3	Current L3	
Current (A)	< 0.2%		IN	Neutral I	
Neutral current calculated (A)	< 1.0%		AVG 11 12 13	Average Current	
Frequency (Hz)	< 0.1 Hz		DELTA I	Current diff	
Power factor (PF)	1% of unity		I1 MAX	I1 Max demand	
Active power (W)	+/- 0.2% of range		I2 MAX	I2 Max demand	
Reactive power (VAr)	+/- 0.2% of range		13 MAX	13 Max demand	
Apparent power (VA)	+/- 0.2% of range		I1 AVG	Average I1	
Active energy (kWh)	Class 0.2 (IEC 62053-21)		I2 AVG	Average I2	
Reactive energy (kVArh)	+/- 0.2% of range		13 AVG	Average I3	
Response time	<200 msec	Active Power	Р	System power	
Range			P1	Power L1	
Voltage (V)	5% to 120% for nominal		P2	Power L2	
Current (A)	5% to 120% of nominal		P3	Power L3	
Frequency	45 - 65 Hz		PMAX	Max power	
THD	up to 31st harmonic		PAVG	Average power	
Outputs		Reactive Power	Q	System VAr	
	0 +/- 1 mA 0 +/- 5 mA		Q1	Systme VAr L1	
	0 +/- 10 mA 0 +/- 20 mA		Q2	System VAr L2 Q3	
Analogue output	4 +/- 20 mA		Q3	System VAr L3	
	0 +/- 1 V 2 +/- 10 V	Apparent Power	s	System VA	
	All programmable		S1	System VA L1	
Pulse/alarm output relay	User defined solid state relay		S2	System VA L1	
Contact rating	100 mA @ 250 V		SZ S3	-	
Pulse duration	30 msec to 1000 msec	Dower factor	PF	System VA L3	
Alarm delay	0 - 120 secs	Power factor	•	Power Factor	
Alarm hysteresis	1 - 99%		PF AVG	Average PF	
Alarm type	User Defined Solid State Relay		PF1	PF L1	
Communication protocol	RS485 Modbus RTU		PF2	PF L2	
Туре	2-wire half duplex		PF3	PF L3	
Baud rate	9600, 19200, 38400	Angle	SYS ANGLE	System Angle	
Enclosure			ANGLE L1	Phase Angle L1	
Enclosure style	DIN-rail mounting		ANGLE L2	Phase Angle L2	
Dimensions	100 x 79 x 118 mm		ANGLE L3	Phase Angle L3	
Material	Polycarbonate to UL94-V0	THD	THDV1	THD V1	
Weight	0.42 kg		THDV2	THD V2	
Terminals	Shrouded screw-clamp 0.05 - 4 mm wire		THDV3	THDV3	
Environment			THD I1	THD V3	
Operating temperature	-10°C to +55°C		THD I2	THD I2	
Storage temperature	-30°C to +70°C		THD I3	THD I3	
	0 - 90% non-condensing	COSPHI	COSPHI 1	Displacememnt P.F	
	o som non-condensing		COSPHI 2	Displacememnt P.F	
Relative humidity	70 g in 7 planes		00011112		
Shock	30 g in 3 planes		COSPHI 3		
	30 g in 3 planes 10 Hz to 50 Hz Withstand test 4 kV, 50 Hz for 1 minute between			Displacememnt P.F	





SOFTWARE SCREENS

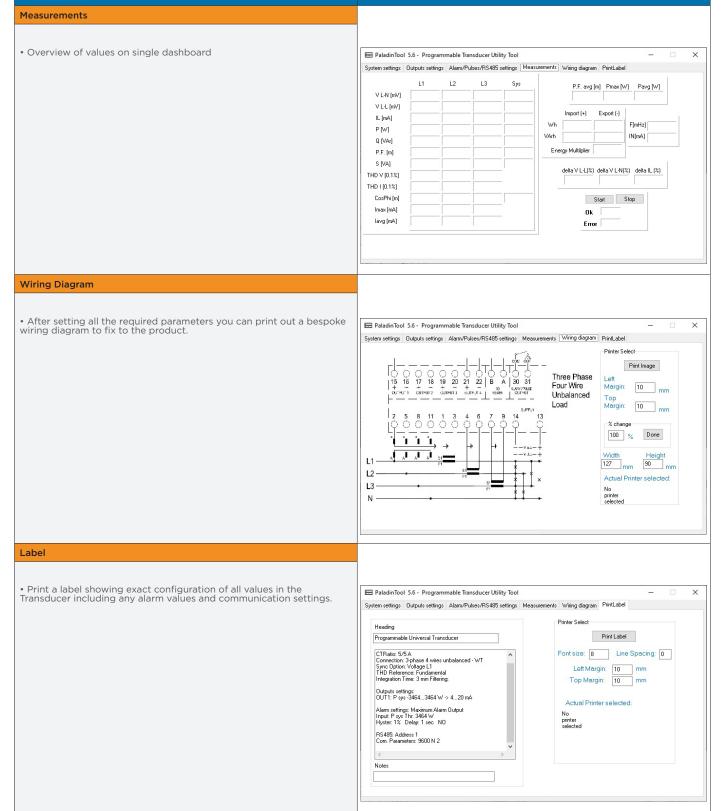
System Settings Current and Voltage transformer ratio's settings E PaladinTool 5.6 - Programmable Transducer Utility Tool Х System settings Outputs settings Alarm/Pulses/RS485 settings Measurements Wiring diagram PrintLabel • Settings for 3 phase 3 wire, 3 phase 4 wire and single phase 2 wire System configuration CT and VT ratios V THD Reference Integration time ○ Nominal ○ RMS / 400 3 ~ minutes (max 30) VT Ratio 400 ● /1 ○ /R3 ● /1 ○ /R3 Fundamental Filtering / <u>A</u> 5 А I Signed Output Full Scale No Filter CT Ratio 5 □ Yes Forced Connection Set system parameters 3-phase 4 wires unbalanced - WT Reset utilities ID and Firmware version FW Ver 0.0 ID Reset Pmax, Pavg, Imax and lavg Reset all energy Read ID and version FW Rel 0.00 DEMO Mode File and import utilities Import from file Import from transducer Save to file Input/ Output Settings Set the required inputs and output values 📼 PaladinTool 5.6 - Programmable Transducer Utility Tool × System settings Outputs settings Alarm/Pulses/RS485 settings Measurements Wiring diagram PrintLabel • 2 or 4 outputs available Measurement selection Mid enable INPUT Min Mid Max CH1 P sys ~ W ✓ ·3464 C ~ 0 _____ 3464 ~ ~ 0 ∨ 0 ∨ □ 0 ~ CH2 NOT USED CH3 NOT USED L ~ 0 ~ 🗆 0 ~ 0 с ~ CH4 NOT USED ~ 0 · · 0 · · □. 0 ~ Output configuration VALUES Mid Mid 12 OUTPUT (V · mA) Min 4 0 Max CH1 OV ۱ 🔘 20 CH2 OV 0 0 ا (Set output parameters 0 CH3 OV ا ھ 0 0 0 0 0 CH4 OV ا ۱ Alarms & Comms • Set parameters and values for any required alarm outputs and set E PaladinTool 5.6 - Programmable Transducer Utility Tool × communication values System settings Outputs settings Alarm/Pulses/RS485 settings Measurements Wiring diagram PrintLabel Photo-Mos output RS485 Photo-Mos output Mode O Active Energy (+) Pulse Dutput O Active Energy (+) Pulse Dutput O Reactive Energy (+) Pulse Dutput O Reactive Energy (+) Pulse Dutput Address Maximum Alarm Output O Minimum Alarm Output Address (1..247) 1 ○ WATCHDOG Set address Weight 1 pulse/KWh Forma Width (ms) 30 Baudrate 9600 🗸 Alarm settings Input Parity Threshold 3464 Unit W \sim ○EVEN ○ODD ● NONE Hyster. % 1 Delay(s) 1 Set format ● N.O. ○ N.C. Set







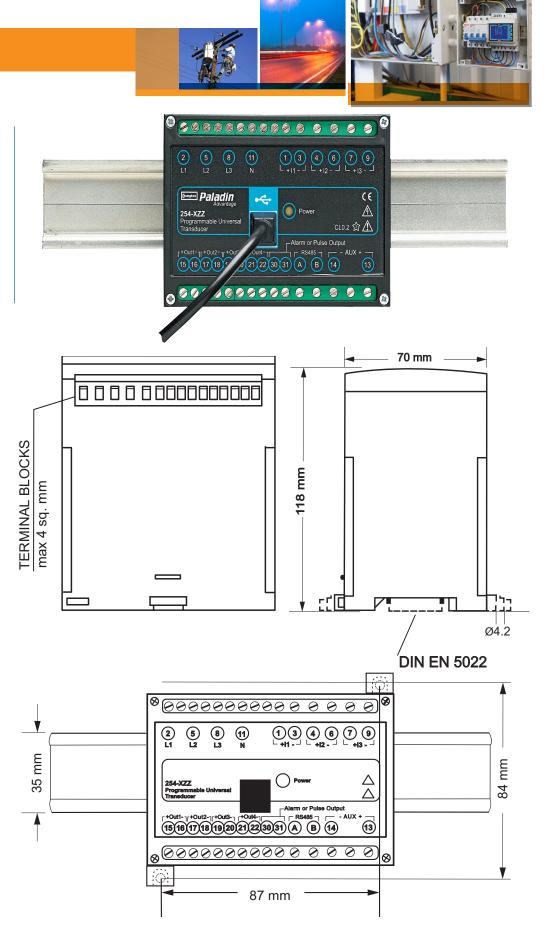
SOFTWARE SCREENS





DIMENSIONS

- 100 x 70 x 118 mm
- 3.94" x 3.11" x 4.65"
- Weight 0.42 kg
- User programmable configuration



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