



Paladin Advantage Universal Programmable Transducer

Paladin Advantage - Universal Transducer



The 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.

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

Benefits

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

Applications

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

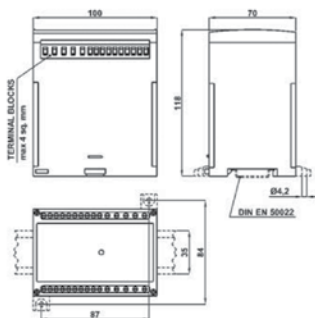
Standards

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



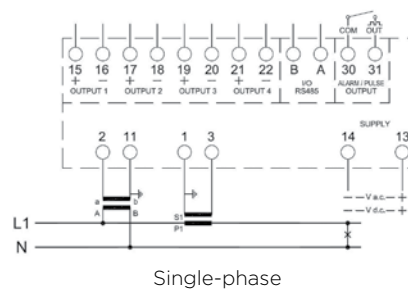
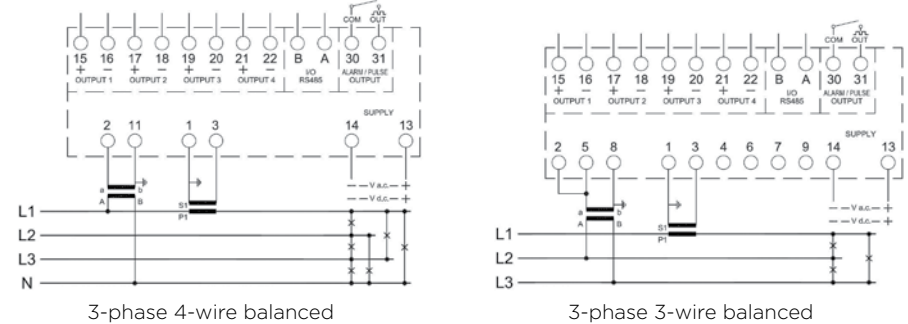
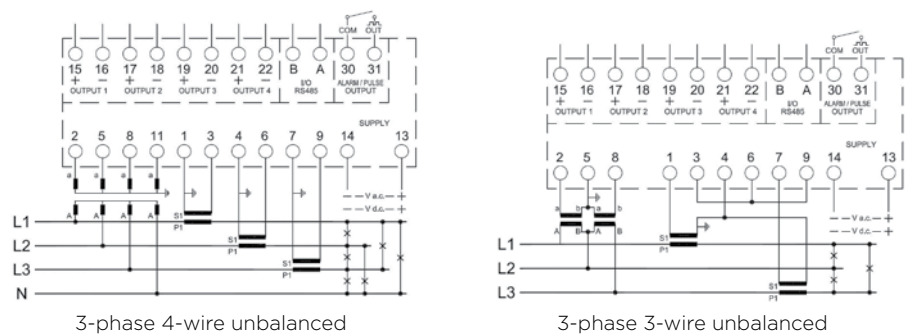
Dimensions

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



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.

Connection Diagrams



Specification	
Input	
Nominal input voltage	57.7V - 277V AC L-N (100 -480V L-L) 480V MAX
Max. continuous input overload voltage	120% of nominal
Max. short duration input voltage (300 msec)	2 x nominal voltage
Nominal input voltage burden	< 0.5VA per phase
Nominal input current	1A AC or 5A AC rms
Max. continuous input overload current	2 x nominal voltage
Max. short duration input current (300 msec)	20 x nominal current
Auxiliary	
Operating range	80-260V AC/DC (+/- 10%) 45-66Hz, 6VA or 20-60V AC/DC (+/- 10%) 45-66Hz, 6VA
Supply burden	6 VA
Accuracy	
Voltage (V)	< 0.2%
Current (A)	< 0.2%
Neutral current calculated (A)	< 1.0%
Frequency (Hz)	< 0.1 Hz
Power factor (PF)	1% of unity
Active power (W)	+/- 0.2% of range
Reactive power (VAr)	+/- 0.2% of range
Apparent power (VA)	+/- 0.2% of range
Active energy (kWh)	Class 0.2 (IEC 62053-21)
Reactive energy (kVArh)	+/- 0.2% of range
Response time	<200 msec
Range	
Voltage (V)	5% to 120% for nominal
Current (A)	5% to 120% of nominal
Frequency	45-65 Hz
THD	up to 31st harmonic
Outputs	
Analogue output	0... +/- 1mA 0... +/- 5mA 0... +/- 10mA 0... +/- 20mA 4... +/- 20mA 0... +/- 1V 2... +/- 10V
	All programmable
Pulse/alarm output relay	User defined solid state relay
Pulse/alarm contact rating	100mA at 250V
Pulse duration	30msec to 1000 msec
Alarm delay	0-120 secs
Alarm hysteresis	1 - 99%
Alarm type	User Defined Solid State Relay
Communication protocol	RS485 Modbus RTU
Type	2-wire half duplex
Baud rate	9600, 19200, 38400
Enclosure	
Enclosure style	DIN-rail mounting
Dimensions	100 x 79 x 118mm
Material	Polycarbonate to UL94-V0
Weight	0.42kg
Terminals	Shrouded screw-clamp 0.05-4mm wire
Environment	
Operating temperature	-10°C to +55°C
Storage temperature	-30°C to +70°C
Relative humidity	0-90% non-condensing
Shock	30g in 3 planes
Vibration	10Hz to 50Hz
Dielectric voltage	Withstand test 4kV, 50Hz for 1 minute between auxiliary/input/output

Product Codes

Product codes	Part number
Paladin Advantage	254-XZZ
Options	
Auxiliary	
80-260V AC/DC (+/- 10%) 45-66Hz, 6VA	254-XZZ-M
20-60V AC/DC (+/- 10%) 45-66Hz, 6VA	254-XZZ-L
Analogue Outputs	
Two programmable outputs	254-XZZ-*-02
Four programmable outputs	254-XZZ-*-04

Input Parameters

Button	Id	Description
Voltage	VL1	Volts L1 - N
	VL2	Volts L2 - N
	VL3	Volts L3 - N
	2VL12	Volts L1 - L2
	VL23	Volts L2 - L3
	VL31	Volts L3 - L1
	AVG V12	Average Vvlt - age (L-L)
	V23 V31	- age (L-L)
	AVG VIN	Average Vvlt- age (L-N)
	V2N V3N	(L-N)
DELTA V	Volts diff L-L	
DELTA VN	Volts diff L-N	
Current	IL1	Current L1
	IL2	Current L2
	IL3	Current L3
	IN	Neutral I
	AVG I1 I2 I3	Average Current
	DELTA I	Current diff
	I1 MAX	I1 Max demand
	I2 MAX	I2 Max demand
	I3 MAX	I3 Max demand
	I1 AVG	Average I1
	I2 AVG	Average I2
	I3 AVG	Average I3
	Active Power	P
P1		Power L1
P2		Power L2
P3		Power L3
PMAX		Max power
PAVG		Average power
Reactive Power	Q	System VAR
	Q1	System VAR L1
	Q2	System VAR L2
	Q3	System VAR L3
Apparent Power	S	System VA
	S1	System VA L1
	S2	System VA L2
	S3	System VA L3
Power Factor	PF	Power factor
	PF AVG	Average PF
	PF1	PF L1
	PF2	PF L2
	PF3	PF L3
ANGLE	SYS ANGLE	System Angle
	ANGLE L1	Phase Angle L1
	ANGLE L2	Phase Angle L2
	ANGLE L3	Phase Angle L3
FREQ	FREQ	Frequency
	THD	THD V1
	THDV1	THD V2
	THDV3	THD V3
	THD I1	THD I1
	THD I2	THD I2
	THD I3	THD I3
COSPHI	COSPHI 1	Displacemmnt P.F
	COSPHI 2	Displacemmnt P.F
	COSPHI 3	Displacemmnt P.F

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Tyco Electronics UK Ltd
TE Energy
Freebournes Road
Witham, Essex CM8 3AH

Registered office:
Faraday Road, Dorcan
Swindon, SN3 5HH
Reg. no. 550 926

Phone: +44 (0)870 870 7500
Fax: +44 (0)870 240 5287
Email: Crompton.info@te.com

www.crompton-instruments.com
energy.te.com

