

PR40 Universal Indicator with Retransmission Option

The PR40 universal indicator and alarm controller offers a one-product solution for hundreds of applications! Can be supplied pre-configured to suit your application requirements or easily configured with the TX-USB configuration kit (see page 86). Available in two versions: **PR40U** (indicator only) or **PR40UR** (indicator with 2 relay outputs and retransmission). The retransmission output option enables the indicator to also be used as a transmitter.

- Universal input
- Easy USB setup in minutes
- USB powered setup
- Pre-calibrated ranges
- Designed for harsh environments
- Large 20mm high super-bright LED display
- Relay/Retransmission options
- 20V excitation (to power transmitters)
- Shallow depth unit
- Custom linearisation
- 0.03% basic accuracy



Technical Details (Common)	
Power Supply	100-300V DC / 85-265V AC or 10-30V DC
Input	Universal (see below for input specifications)
EMC Compliance	Emissions (EN 61326), Immunity (EN 61326) Safety (EN 61010-1)
Display	Super bright 20mm (0.8") display 4 digits (7 segment)
Accuracy	< ±0.03% FSO typical
Ambient Drift	< ±0.003%/°C FSO typical
Noise Immunity	125dB CMRR average (2.0kV DC limit)
R.F. Immunity	<1% effect FSO typical
Response Time	400ms (RTD / Thermocouple), 100ms other ranges
Isolation Test Voltages	Between input/output 3750V AC for 1 minute
Operating Temperature	-10°C to +50°C
Storage Temperature	-20°C to +60°C
Operating Humidity	5-85% RH max (non-condensing)
Dimensions	96mm (W) x 48mm (H) x 53mm (D) (panel mounting)

RTD Input Specifications	
Input	Pt100 or Pt1000 DIN 3-wire type (2-wire can be used with offset calibration)
Sensor Current	0.3mA nominal
Sensor Break Output Drive	Function high upscale/low downscale
Lead Wire Resistance	Pt100 (10Ω/wire max), Pt1000 (5Ω/wire max) 0.02% FSO offset error per Ω of lead resistance mismatch
Linearity (Pt100)	0.02% FSO for span inputs ≤ +200°C 0.1% FSO for span inputs ≤ +300°C
Linearity (Pt1000)	0.02% FSO for span inputs ≤ +200°C 0.2% FSO for span inputs ≤ +300°C

Thermocouple Input Specifications	
Thermocouple Types	K, J, T, N, E, R, S, B
Input Impedance	1MΩ min
Thermocouple Lead Resistance	100Ω max
Cold Junction Compensation	-10°C to +70°C
Accuracy	Types K, J, T, N, E: < ±1°C Types R, S, B: < ±2°C
Temperature Drift	Types K, J, T, N, E: < ±0.05°C/C Types R, S, B: < ±0.2°C/C
Sensor Break Output Drive	Function high upscale/low downscale
CJC Error	< ±1°C

N.T.C. Input Specifications	
OEM Customers - contact sales for further information	

Current Input Specifications	
USB Programmable Zero	0 to ±99% of span
Field Programmable Span	1µA-24mA DC
Input Resistance	10Ω
Maximum Over-Range	50mA DC continuous
Linearity and Repeatability	< ±0.02% FSO typical

Voltage Input Specifications	
Ranges	0-1V, 0-10V, +10V to -10V, 0-30V, 0-300V
USB Programmable Zero	0 to ±99% of span
USB Programmable Span	95% of FSO
Input Resistance	1MΩ min
Linearity and Repeatability	< ±0.02% FSO typical

Potentiometer Input Specifications	
Potentiometer Input	3-wire
Excitation Voltage	Variable
Potentiometer Resistance	0-2kΩ low pot, 0-5kΩ med pot, 0-20kΩ high pot
Field Programmable Zero	0-90% of span
Field Programmable Span	0.1-100%
Linearity and Repeatability	< ±0.05% FSO typical

mV Input Specifications	
Ranges	0-200mV, ±200mV
USB Programmable Zero	0 to ±99% of span
USB Programmable Span	95% of FSO
Input Resistance	1MΩ min
Linearity and Repeatability	< ±0.02% FSO typical

Digital Input Specifications	
Flow Meter (pulse)	0-2000.0Hz open collector
RPM Meter (pulse)	0-2000.0Hz open collector

Relay Output Specifications	
2 x Form A Relays	250V AC, 3A (display includes 2 x setpoint indicator LEDs)

Retransmission Specifications	
Current Output	4~20mA or 20~4mA. 20mA max output drive (600Ω max load at 12V DC)
Resolution	1µA
Accuracy/Repeatability	0.05% of FSO
Temperature Drift	30ppm/°C typical

Order Code		Indicator Only PR40U	Indicator (2 x Relays / Retransmission) PR40UR
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