5505
RTD input module

- Input values scaled and linearized
- Data returned as 32-bit floating point number
- Low power consumption
- Automatic 3-wire RTD compensation
- 5503 emulation mode for legacy systems

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Product Data Sheet 5505
Specifications

> 5505 RTD input module

General	
Input Points	4, RTD
RTD Type	100-ohm platinum, 3 and 4-wire, auto-detection and compensation
Calibration	0.00385Ω/ Ω /°C standard based on ASTM E 1137/E 1137M-04, ITS-90
Ranges	5505: Can be configured to return data in ohms, °C, °F or °K • -200°C to 800°C (-328°F to 1472°F) • 0 to 500Ω 5503 Emulation: Dipswitch selectable • 0°C to 200°C (32°F to 392°F) • -100°C to 100°C (-148°F to 212°F) • -200°C to 0°C (-328°F to 32°F) • 0°C to 800°C (32°F to 1472°F) • 0°C to 400°C (32°F to 752°F) • 0 to 400Ω
Data Format	• 5505: 32-bit floating point and 12 status bits • 5503 Emulation: 16-bit signed integer
Resolution	• 5505: > 17-bit effective • 5505 Emulation: 15-bit
RTD Status	• RTD is good (not open) • RTD in range • RTD 3 or 4-wire • RTD status not available in 5503 Emulation
Accuracy on RTD Ranges	Percent of full scale over operational temperature range including linearization errors: +0.10%/-0.05%
Accuracy on 0 to 500ohms	Percent of full scale over operational temperature range: ±0.03%
Excitation Current	4mA, 7.2% duty cycle in 4-wire mode, 14.4% in 3-wire mode, 250ms scan interval
Line Resistance	100Ω max., in each line
Converter Type	24-bit delta-sigma
Response Time	380ms typical for 10% to 90% signal change at minimum filter setting
Transient Protection	2.5kV surge-withstand capability as per ANSI/IEEE C37.90.1-1989
Isolation	Isolation from logic supply and chassis, voltage 500Vrms
5V Power Requirements	6mA
11 - 30VDC Power Requirements	12V operation: 4mA • plus 0.6mA per 4-wire RTD • plus 1.2mA per 3-wire RTD 24V operation: 2.2mA • plus 0.3mA per 4-wire RTD • plus 0.6mA per 3-wire RTD
11-30VDC - Connector	Removable. Shared with RTD inputs 0-1
11-30VDC - Isolation	Isolation from logic supply and chassis
Terminations	8 and 10 pole, removable terminal block,12 to 22 AWG, 15A contacts
Dimensions	74mm wide x 124mm high x 45mm deep (2.9in. x 4.9in. x 1.8in.)
Mounting	7.5 x 35 DIN rail
Packaging	Corrosion-resistant zinc-plated steel with black enamel paint
Environment	5% RH to 95% RH, non-condensing, -40°C to 70°C (-40°F to 158°F) operation, -40°C to 85°C (-40°F to 185°F) storage
Safety	• Non-Incendive Electrical Equipment for Use in Class I, Division2 • Groups A, B C and D Hazardous Locations • ATEX II 3G and IECEx: Ex nA IIC T4 per EN 60079-15, protection type n (Zone 2)
Part Number	TBUX297318

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