

Smart Box

Overview

SmartBox – Series Model M-1448 provides smart and intelligent interface for field measurement signals. It can be used to convert commonly used analog signals at any site to serial RS485 MODBUS RTU protocol. This enables transmission of signal values over large distances without any loss in accuracy and resolution. Smart box also reduces copper. Two voltage or mA signals and one RTD signal can be interfaced using SmartBox



Benefits and Features:

- Smart signal interface solution
- One RTD (PT100 or PT1000) input channel
- Two analog input (mV or mA) channels.
- Analog input channels can be configured individually at site.
- Optional calibration input constant for mV input channels.
- 24 bits ADC resolution.
- Sampling rate 10Hz.
- Isolated RS485 serial communication.
- High accuracy.
- Available for AC or DC power supply.
- Field mounted IP65 enclosure.

Technical Specifications

Sr. No	Parameter		Specification
1	Power Supply	Model- M1448-A	220VAC Power supply
		Model- M1448-D	9-32VDC Power Supply
2	Analog Input Channel 1 & 2	0-1000mV	Either mV or mA input is user selectable at site. Optional calibration constant for mV input. Option for four sample average filter.
		4-20mA	
3	RTD Input	PT100	RTD input class A Range -20 to +120°C Unit selectable at site °C, °K or °F
		PT1000	
4	ADC Resolution		24 bits
5	Sampling Rate		10Hz
6	Accuracy		0.10%

General Specifications

Parameter	Specification
Charger Sensor Enclosure	Powder coated cast aluminum
Ingress Protection	IP65
Enclosure Size	125 (L) x 80 (W) x 57 (H) mm
Weight	500 grams (approx.)
Cable terminals	1.5 sq. mm. for signals and 4.0 sq. mm for power
Ambient operating temperature	-30 to 70°C
Ambient operating humidity	0 to 99% RH

Communication Parameters

Parameter	Specification
Communication Port	RS485
Isolation	1.5KV
Protocol	MODBUS RTU
Baud rates	4200, 9600 or 19200 (site configurable)
Parity	Odd, Even or None
Device ID	1 to 247

Ordering String

Model	Power Supply	RTD Input	Features
M1448-XX	-A		Smart Box with AC power supply
	-D		Smart Box with DC power supply
		- PT100	RTD input PT100
		- PT1000	RTD input PT1000

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