PERFORMANCE MADE SMARTER

Profibus PA / Foundation Fieldbus transmitter

5350B

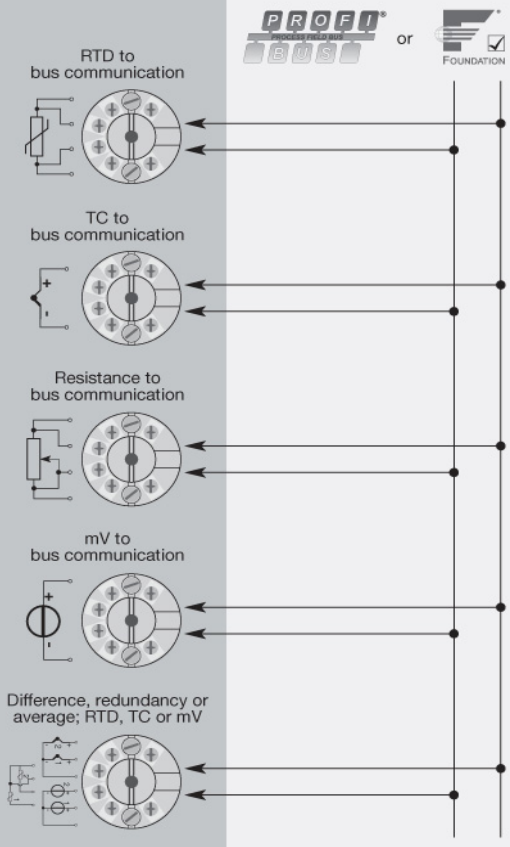
– PROFIBUS PA ver. 3.0
– FOUNDATION Fieldbus ver. ITK 4.6
– Automatic switch between protocols
– FISCO-certified
– Basic or LAS capability with F.F.

Application
- Linearized temperature measurement with RTD or TC sensor.
- Difference, average or redundancy temperature measurement with RTD or TC sensor.
- Linear resistance, potentiometer and bipolar mV measurement.

Technical characteristics
- Bus transmitter with both PROFIBUS PA and FOUNDATION Fieldbus communication. A unique switch function ensures automatic shift between the two protocols.
- Set-up for PROFIBUS PA can be done via Siemens Simatic® PDM®, ABB Melody / Harmony and Metso DNA software and for FOUNDATION Fieldbus via Emerson DeltaV, Yokogawa CS 1000 / CS 3000, ABB Melody / Harmony and Honeywell Experion software.
- The simulation mode function can be activated by way of a magnet.
- Polarity-independent bus connection.
- 24 bit A/D converter ensures high resolution.
- PROFIBUS PA function blocks: 2 analog.
- FOUNDATION Fieldbus function blocks:2 analog and 1 PID.
- FOUNDATION Fieldbus capability: Basic or LAS.

Mounting / installation
- For DIN form B sensor head mounting.

Connections



Order:

Type
5350B

Environmental Conditions

Specifications range	-40°C to +85°C
Calibration temperature	20...28°C
Relative humidity	< 95% RH (non-cond.)
Protection degree (encl./terminal)	IP68 / IP00

Mechanical specifications

Dimensions	Ø 44 x 20.2 mm
Weight approx.	55 g
Screw terminal torque	0.4 Nm
Vibration	DIN class B, IEC 60068-2-6 and IEC 60068-2-64
Vibration: 2...25 Hz	±1.6 mm
Vibration: 25...100 Hz	±4 g

Common specifications

Supply

Supply voltage	9.0...30 VDC
Supply voltage in FISCO installations	9.0...17.5 VDC

Isolation voltage

Test voltage	1.5 kVAC for 60 s
Working voltage	50 VRMS / 75 VDC

Response time

Response time (programmable)	1...60 s
Max. required power	< 350 mW
Max. current increase in the event of an error	< 7 mA
Warm-up time	30 s
Signal / noise ratio	Min. 60 dB
Updating time	< 400 ms
Execution time, analog input	< 50 ms
Accuracy	Better than 0.05% of selected range
Signal dynamics, input	24 bit
EMC immunity influence	< ±0.1% of reading
Extended EMC immunity: NAMUR NE 21, A criterion, burst	< ±1% of reading

Input specifications

RTD input

RTD type	Pt25…1000, Ni25…1000, Cu10…1000, lin. R, potentiometer
Cable resistance per wire (max.)	50 Ω
Sensor current	Nom. 0.2 mA
Effect of sensor cable resistance (3-/4-wire)	< 0.002 Ω / Ω
Sensor error detection	Yes
Short circuit detection	< 15 Ω

TC input

Thermocouple type	B, E, J, K, L, N, R, S, T, U, W3, W5
Cold junction compensation (CJC)	< ±0.5°C
Sensor error detection	Yes
Sensor error current: When detecting / else	Nom. 4 µA / 0 µA
Short circuit detection	< 3 mV

Voltage input

Measurement range	-800...+800 mV
Input resistance	10 MΩ

Output specifications

PROFIBUS PA connection

PROFIBUS PA protocol	Profile A&B, ver. 3.0
PROFIBUS PA protocol standard	EN 50170 vol. 2
PROFIBUS PA address (at delivery)	126
PROFIBUS PA function blocks	2 analog

FOUNDATION Fieldbus connection

FOUNDATION Fieldbus protocol	FF protocol
FOUNDATION Fieldbus protocol standard	FF design specifications
FOUNDATION Fieldbus version	ITK 4.6
FOUNDATION Fieldbus capability	Basic or LAS
FOUNDATION Fieldbus function blocks	2 analog and 1 PID

Observed authority requirements

EMC	2014/30/EU
RoHS	2011/65/EU

Approvals

ATEX 2014/34/EU	KEMA 02ATEX1318 X
IECEx	BVS 12.0035X
FM	3015609
CSA	1418937
INMETRO	NCC 12.1009 X
NEPSI	GYJ14.1101X
EAC	TR-CU 020/2011
EAC Ex TR-CU 012/2011	RU C-DK.GB08.V.00410