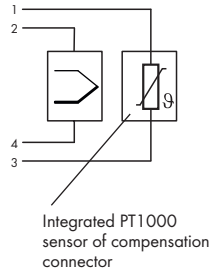


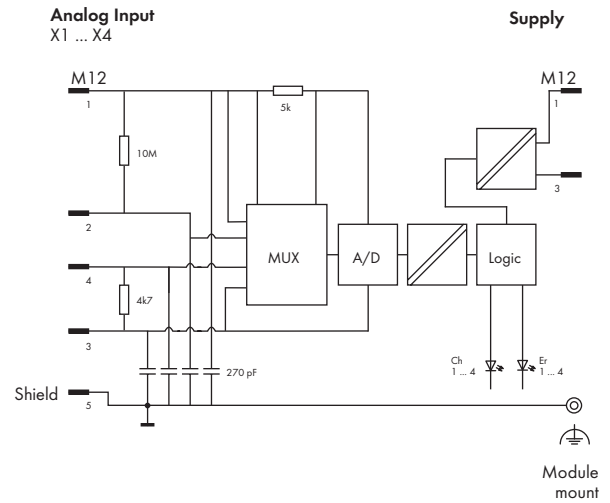
- 1: RD+/TD+
 - 2: RD-/TD-
 - 3: TD-/RD-
 - 4: TD+/RD+
 - 5: GND
- Housing: Shield

- 1: Compln/Pt1000
- 2: In+/TC+
- 3: GND/Pt1000
- 4: In-/TC-
- 5: Shield

- 1: 24 V U_{IS}
- 2: 24 V U_A
- 3: 0 V U_{IS}
- 4: 0 V U_A



Block diagram of an input



Technical Data	
Analog inputs:	
Signal measuring range	
Measuring range	Thermocouples:
	Type B: +200 °C ... +1,820 °C
	Type C: 0 °C ... +2320 °C
	Type E: -250 °C ... +1000 °C
	Type J: -210 °C... +1200 °C
	Type K: -210 °C ... +1370 °C
	Type N: -210 °C ... +1300 °C
	Type R: -50 °C ... +1768 °C
	Type S: -50 °C ... +1768 °C
	Type T: -210 °C ... +400 °C
	Voltage sensors:
	MB1: ± 36 mV
	MB2: ± 72 mV
	MB3: ± 145 mV
	MB4: ± 290 mV
Resolution (over entire range)	0.1 °C or 0.01 mV
Type of cable, cable length	shielded, ≤ 30 m
Analog value creation:	
Resolution	16 bits
Integration time	2 - 120ms
Conversion method	SigmaDelta
Monotonicity without error code	Yes
Conversion time	Integration time x 3
Sampling repeat time	Number of active channels x conversion time
Failures and errors:	
Max. measuring error (without temperature compensation)	≤ ± 1 K over the entire measuring range (for type K)
Max. measuring error cold junction	≤ ± 1K
Temperature error	± 0.05 K/K (type K)
Maximum error over the full temperature range	± 3K
System bus:	
Connection type (3)	M12 connectors, B coded, 5 poles, shielded
Standards and approvals:	
Conformity marking	CE
Korea Certification	
UL 508	

Technical Data	
Standards and approvals:	
⊕ BVS 15 ATEX E 098 X	II 3G Ex nA IIC T5 Gc, II 3D Ex tc IIIB T90 °C Dc
IECEx BVS 15.0083X	Ex nA IIC T5 Gc, Ex tc IIIB T90 °C Dc
Isolation:	
Channel - Channel	No
U_{IS} , U_A , system bus	500 V DC each
Configurable functions:	
Measuring range (per channel)	Type B; C; E; J; K; N; R; S; T MB 1; MB 2; MB 3; MB 4; user-defined
Limiting values (per channel)	Min./Max.
Integration time (per channel)	2, 4, 8, 16.7, 20, 30, 60, 120ms
Linearization (per channel)	Linear; Type B; C; ...T
Substitute value (per channel)	Value
Cold junction compensation (per channel)	Type: Fixed temperature; Compensation on the current input; Compensation on the previous input;
Online simulation (per channel)	Temperature: Value Offset: Value Lock/unlock; simulation value: (according to measuring range)
Online simulation (per channel/module)	Diagnostics
I/O diagnostics:	
I/O diagnostics (per channel)	Overrange/measuring range underflow Limit value violation (min/max) Wire break
I/O diagnostics (per module)	Undervoltage (U_{IS} + U_A)
Process image:	
Process data width	8-byte data + status
LED indicators:	
SB: System bus status	LED (green/red/orange)
F: Error status	LED (red)
Ch1 ... Ch4: Input signal status	LED (yellow)
Er1 ... Er4: Input signal error	LED (red)
General Specifications	
Dimensions (mm) W x H x L	50 x 35.7 x 117
Weight	280 g