


● Characteristics

1510 - RESISTANCE THERMOMETER - RTD - TC - IO-LINK -

	- Input:	Pt 100 / thermocouple type J / K / N
	- Measurement range:	-50...+200 °C maximum
	- Accuracy transmitter:	max. 0,02% of range
	- Operating temperature:	-20...+80 °C
	- Output:	IO-Link
	- Resolution:	16 bit
	- Configuration:	via software (IO-Link interface)
	- Electrical connection:	Several plugs, cable
	- Internal protection:	Inside completely potted
	- Material:	Stainless steel 1.4571, PBT GF30
- Protection class:	At least IP65	

● Technical Data

Input

Pt100:	Sensor:	1x Pt100
	Connection:	3-wire
	Nominal range:	-50...+200 °C
	Sensor current:	0,9 mA
Thermocouple:		
Type J:	Measurement range:	-50...200 °C
Type K:	Measurement range:	-50...200 °C
Type N:	Measurement range:	-50...200 °C
Type K with cross-band:	Measurement range:	-50...200 °C

Output

Interface:	IO-Link
Signal level:	0/24 V (as per IO-Link specification)

Performance Parameters

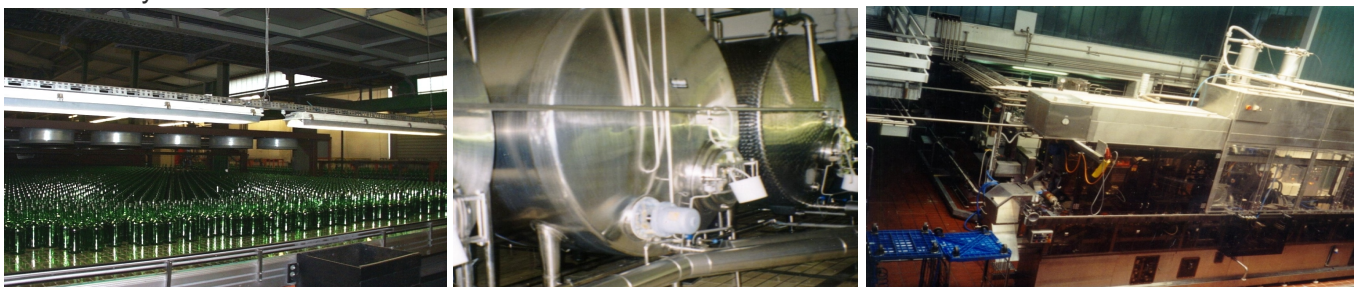
Measurement amplifier:	Accuracy:	max. 0,02% of measurement range + sensor error
	Resolution:	16 bit
	Filter setting:	25 s
	Transient response:	linear mit Temperatur
	Switch-on delay:	<5 s
	Response time:	20 ms

Supply

Voltage:	24 VDC
Current:	Standard: <30 mA
	Switching current (SIO): max. 100 mA
	Total current consumption: max. 130 mA
Reverse voltage protection:	Yes (no function, no damage)

● Applications

For use in air conditioning plants, ventilating plants and heating installations. The sensor with its compact and robust design features a programmable transmitter with an IO-Link interface. The transmitter reduces stock levels considerably.



● **Technical Data (Continued)**

Environmental Conditions

Operating temperature:	-20...+80 °C
Storage temperature:	-40...+85 °C
Medium temperature:	-50...+200 °C
System pressure:	25 bar maximum
Condensation:	uncritical

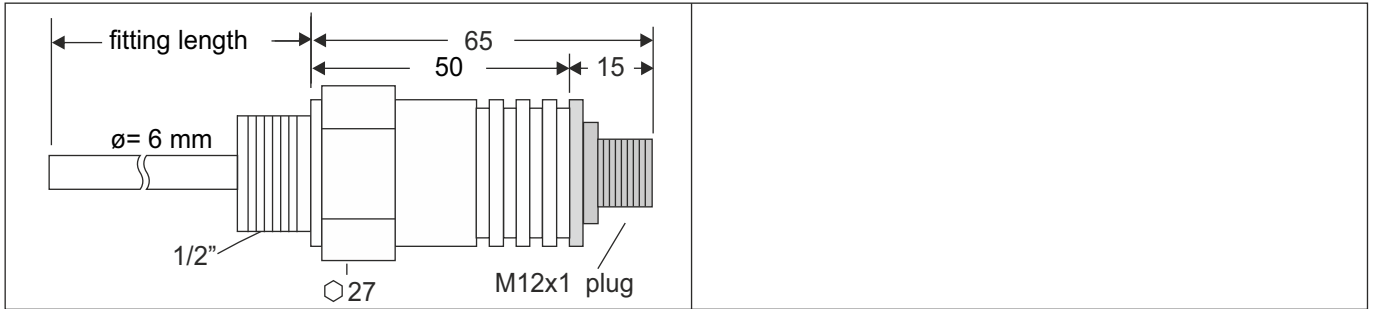
Mechanics

Dimensions:	see page 3
Process connection:	without / 1/4" / 3/8" / 1/2" / 3/4" / 1" / 1/4NPT / 3/8NPT / 1/2NPT
Electrical connection:	see page 3
Sensor measuring pipe:	Ø6 mm
Material:	Sensor pipe: stainless steel 1.4571
	Process connection: stainless steel 1.4571
	Casing body: stainless steel 1.4571
	Electr. connection insert: PBT GF30
	Option: Stainless steel 1.4571
Weight:	approx. 200 g (1/2", 45 mm, M12)
Fitting position:	any
Equipment protection:	Protection class: at least IP65 (electronics)
	IP68 (sensor)
	Casing: inside completely potted

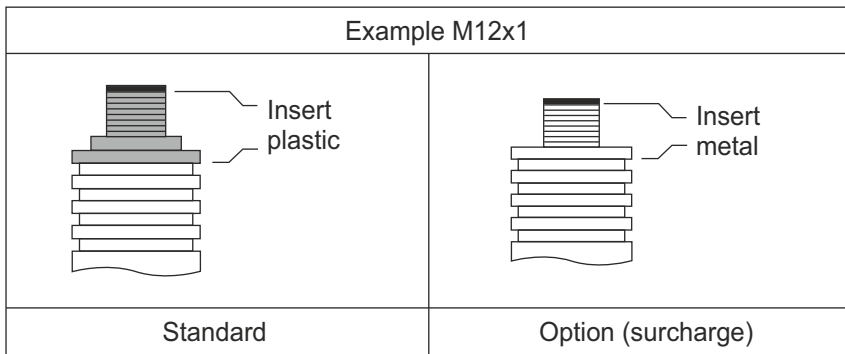
Configurable Parameter IO-Link

Measuring amplifier:	See Technical Overview IODD MKTS-IO
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● **Dimensions, Connection (M12x1)**



● **Electrical Connection Insert**



● **Electrical Connection**

M12x1	
4-pole	
Connections with metal insert	
4-pole	

Pin assignment											
	<table border="1"> <thead> <tr> <th colspan="3">IO-Link</th> </tr> <tr> <th>U+</th> <th>U-</th> <th>C/Q</th> </tr> </thead> <tbody> <tr> <td>○</td> <td>○</td> <td>○</td> </tr> </tbody> </table>		IO-Link			U+	U-	C/Q	○	○	○
IO-Link											
U+	U-	C/Q									
○	○	○									
Connection at sensor											
M12, 4-pole	1	3 4									

● **Order Code**

M X X X X X - X - X X X X X X

Transmitter:	IO-Link	0																			
Sensor:	Pt100	0																			
	Type J	1																			
	Type K	2																			
	Type N	3																			
Sensor connection:	3-wire	0																			
Sensor accuracy:	Pt100 class A	1																			
	Pt100 class B	2																			
	Pt100 class AA	3																			
	Pt100 class C (on request)	4																			
	Thermocouple J/K/N	X																			
Fitting length:¹⁾	50 mm																			50	
	100 mm																			100	
	160 mm																			160	
	200 mm																			200	
	250 mm																			250	
	400 mm																			400	
	600 mm																			600	
	1000 mm																			A00	
Diameter sensor pipe:	6 mm (standard)																			6	
Process connection:	without																				0
	1/4"																				1
	3/8"																				2
	1/2"																				3
	3/4"																				4
	1"																				5
	1/4NPT																				7
	3/8NPT																				8
	1/2NPT																				9
Insert electr. connection:²⁾	Plastic (standard)																				1
	Metal																				2
Electrical connection:	M12x1, 4-pole																				1
Configuration:	without																				0
	Factory setting ³⁾																				1
	customized (please specify) ⁴⁾																				2
Special model:	No																				0
	Yes (please specify)																				1

- 1): For coding see price list, lengths are in 5 mm steps
- 2): see page 3, „Electrical Connection Insert“
- 3): Factory setting: Nominal measurement range: -50...200 °C (LRL...URL) / Measurement range: 0...100 °C (LRV...URV) / Damping: 0 s
- 4): Please select details from within the range of available technical data.