Transceiver with IO-Link Interface

SIGNAL 4.0 IO PRO
IO-Link

H$_2$O	AIR	OIL

■ OVERVIEW

Device description

The SIGNAL 4.0 IO PRO is a fully digital transceiver for industrial process measurement. The position of a magnetic float / piston is detected by means of a well-proven Hall sensor and transmitted via IO-Link Interface.

Additionally, it is possible to connect external sensors to monitor temperature and pressure. Those signals are then transmitted via the IO-Link Interface.

Application

– Use in combination with float-type sensors for various flow media (see table on page 2)
– Industry 4.0

Characteristics

– IO-Link Interface (IEC 61131-9)
– Internal recording of the flow rate
– Connection of external temperature and pressure sensors possible (Sensors not included)
– Conversion of the analog temperature and pressure signal to IO-Link
– Calculation of viscosity from measured temperature for ISO VG oils
– Same footprint as the proven SIGNAL 4.0
– Housing manufactured with additive manufacturing

Installation information

– Refer also to the applicable data sheets and operating instructions for the flowmeter!
– Additionally, refer to the operating instructions for the transceiver!
– **Download: www.meister-flow.com**

SIGNAL 4.0 IO PRO 1 0003 09-24 E

■ OPERATING DATA

Accuracy	± 1 %[1]
Operating temperature	-20 °C - 70 °C
Storage temperature	-20 °C - 70 °C

[1] The actual accuracy depends on the flow sensor used. On request the accuracy of the flow sensor used can be significantly increased by a customized calibration.

■ MATERIALS

Non-wetted parts

Housing:	Polyamide

■ POSSIBLE COMBINATIONS*

Flow

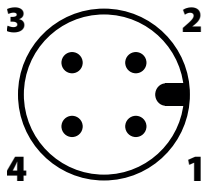| Monitor	Transceiver	Combination
DUM	+ SIGNAL 4.0 IO PRO	= DUM/IO PRO
DUM/A	+ SIGNAL 4.0 IO PRO	= DUM/A/IO PRO
DWM	+ SIGNAL 4.0 IO PRO	= DWM/IO PRO
DWM/A	+ SIGNAL 4.0 IO PRO	= DWM/A/IO PRO
RVM/U-1	+ SIGNAL 4.0 IO PRO	= RVM/U-1/IO PRO
RVM/UA-1	+ SIGNAL 4.0 IO PRO	= RVM/UA-1/IO PRO
RVM/U-2	+ SIGNAL 4.0 IO PRO	= RVM/U-2/IO PRO
RVM/UA-2	+ SIGNAL 4.0 IO PRO	= RVM/UA-2/IO PRO
RVM/U-4	+ SIGNAL 4.0 IO PRO	= RVM/U-4/IO PRO
WY	+ SIGNAL 4.0 IO PRO	= WY/IO PRO
DKM-1	+ SIGNAL 4.0 IO PRO	= DKM-1/IO PRO
DKM/A-1	+ SIGNAL 4.0 IO PRO	= DKM/A-1/IO PRO
DKM-2	+ SIGNAL 4.0 IO PRO	= DKM-2/IO PRO
DKM/A-2	+ SIGNAL 4.0 IO PRO	= DKM/A-2/IO PRO
DKME-1	+ SIGNAL 4.0 IO PRO	= DKME-1/IO PRO
DKME/A-1	+ SIGNAL 4.0 IO PRO	= DKME/A-1/IO PRO
DWM-L	+ SIGNAL 4.0 IO PRO	= DWM-L/IO PRO
DWM/A-L	+ SIGNAL 4.0 IO PRO	= DWM/A-L/IO PRO
RVM/U-L1	+ SIGNAL 4.0 IO PRO	= RVM/U-L1/IO PRO
RVM/U-L2	+ SIGNAL 4.0 IO PRO	= RVM/U-L2/IO PRO
RVM/U-L4	+ SIGNAL 4.0 IO PRO	= RVM/U-L4/IO PRO

* Further combinations are listed in the operating instructions.

■ TECHNICAL DRAWING

26

48,5

77,5

SIGNAL 4.0 IO PRO®

MADE IN GERMANY - 3D PRINTED

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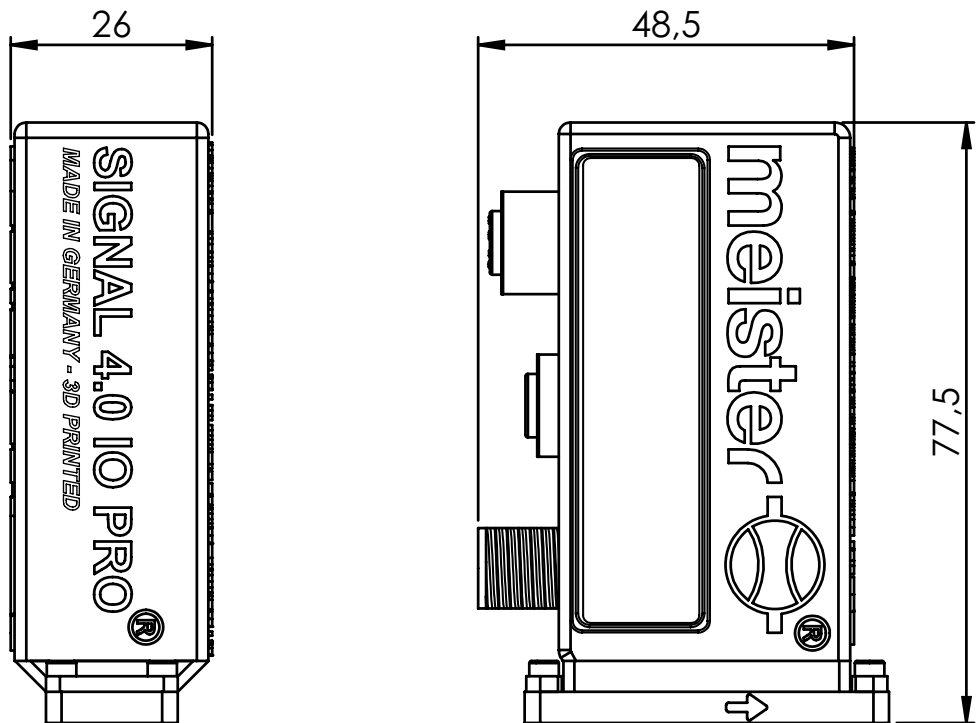
■ CONNECTION DIAGRAMS

Round plug M12x1, A-coding

Connection for IO-Link (Plug)

3   2

4   1

Connection for external sensor (Socket)

2   3

5

1   4

Pin assignment

1: 24 V

2: not connected
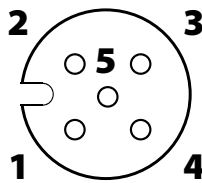
3: GND

4: IO-Link

Pin assignment (Socket)

1: Supply out

2: PT1000

3: GND

4: 0 ... 10 V in

5: PT1000

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◼ CHARACTERISTICS

Indicated flow rate

Nominal flow rate

0   LSW   USW   Actual flow rate

LSW = Lower scale value
USW = Upper scale value

◼ SIGNAL ROUTING

SIGNAL 4.0 IO PRO   IO-Link-Master   PLC   Computer

Ext. Sensor
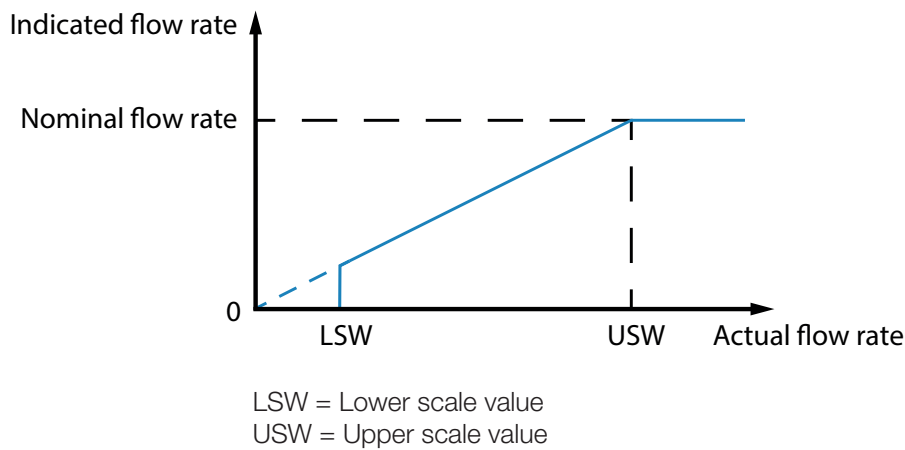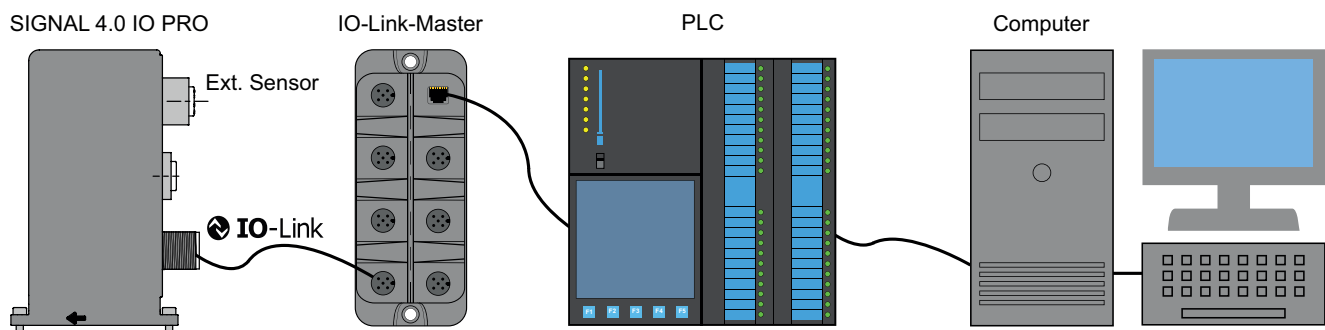
⊘ IO-Link

◼ ELECTRICAL DATA

Signal output

IO-Link Specification V1.1

Power supply

24 VDC (20 ... 30 VDC)

Power consumption

approx. 1,5 W

Data transfer rate

COM3 (230,4 kBaud)

Connection

For round plug M12x1, A-coding
– 4-pin for IO-Link Interface (Plug)
– 5-pin for connection of external temperature and pressure sensors (Socket)

Ingress protection

IP 65
IP 67

Notes

Please note that the flowmeter and the SIGNAL 4.0 IO PRO digital transceiver have been optimally adjusted to each other and should not be exchanged! If the unit however needs to be exchanged, a new parameterization at the factory is necessary.

Please also refer to the data sheets and operating instructions of the respective flowmeter!

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