

Transceiver with IO-Link Interface

SIGNAL 4.0 IO PRO[®]



IO-Link



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**

OPERATING DATA

| | |
|------------------------------|----------------------|
| Accuracy | ± 1 % ⁽¹⁾ |
| Operating temperature | 0 °C - 70 °C |
| Storage temperature | 0 °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

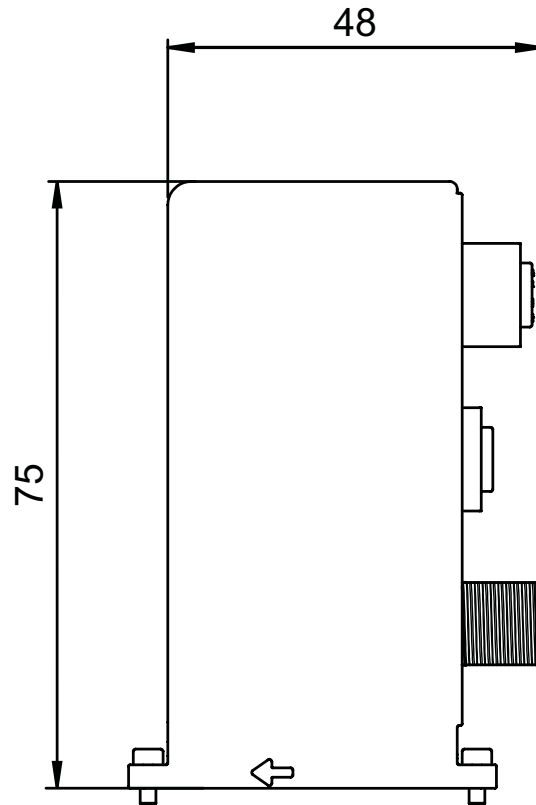
| | |
|----------|-----------|
| Housing: | Polyamide |
|----------|-----------|

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.

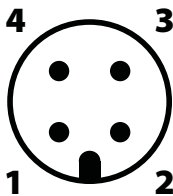
TECHNICAL DRAWING



CONNECTION DIAGRAMS

Round plug M12x1, A-coding

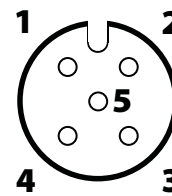
Connection for IO-Link (Plug)



Pin assignment

- 1: 24 V
- 2: not connected
- 3: GND
- 4: IO-Link

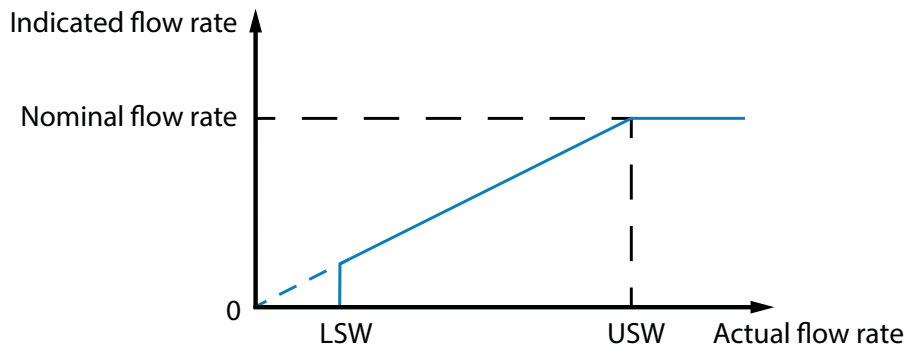
Connection for external sensor (Socket)



Pin assignment (Socket)

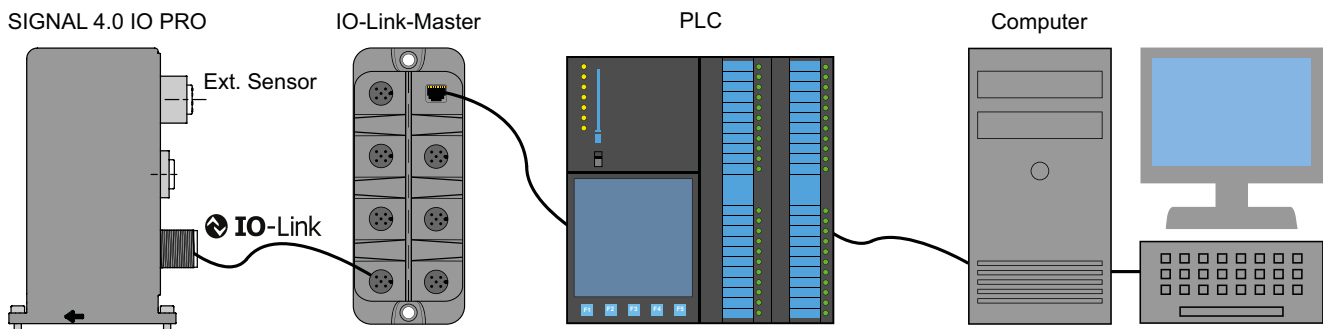
- 1: Supply out
- 2: PT1000
- 3: GND
- 4: 0 ... 10 V in
- 5: PT1000

CHARACTERISTICS



LSW = Lower scale value
USW = Upper scale value

SIGNAL ROUTING



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 is necessary.

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