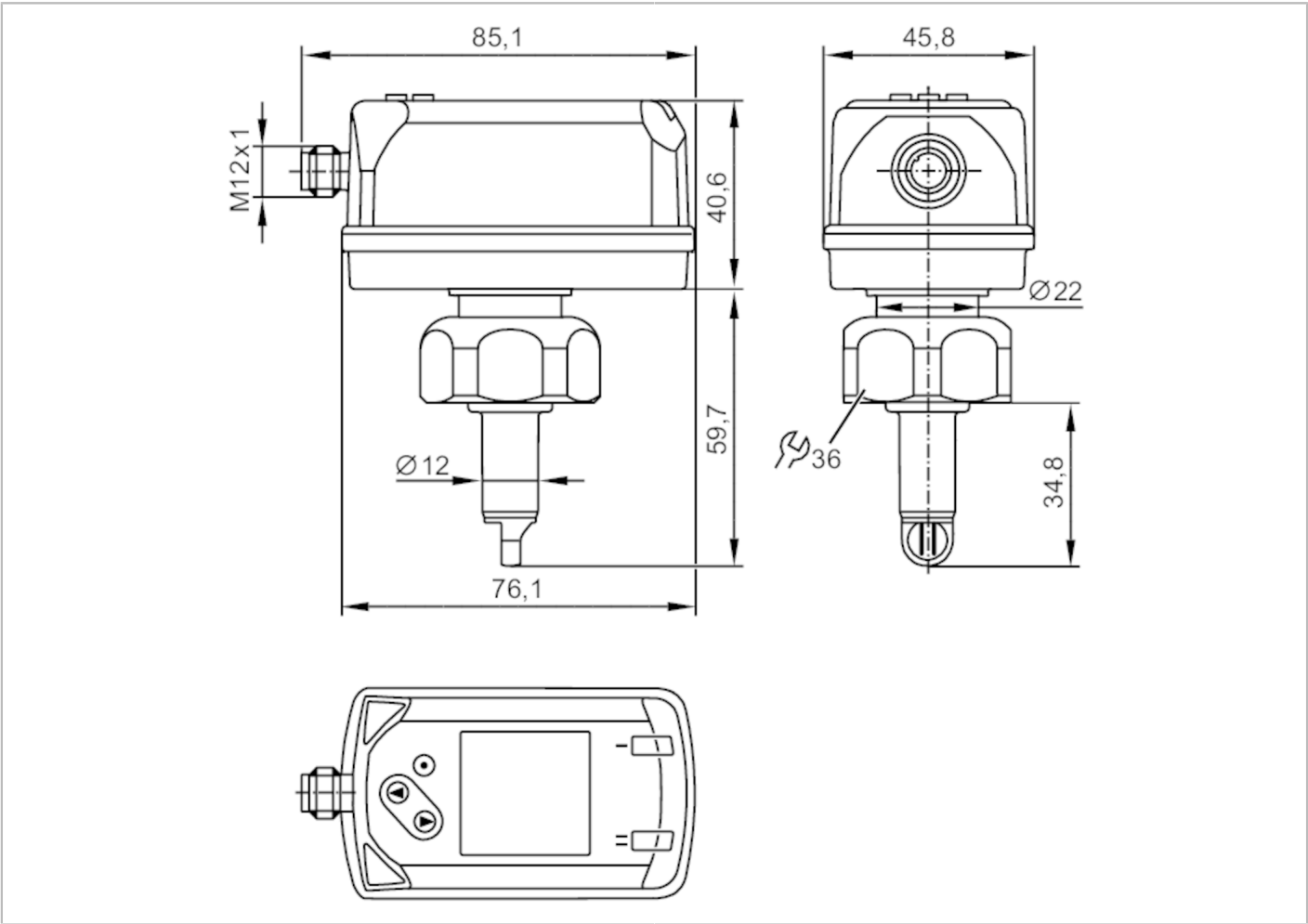


SD1440



Compressed air meter

SDD11DXXFRKG/US-100



| Product characteristics                        |                                                           |                  |                      |
|------------------------------------------------|-----------------------------------------------------------|------------------|----------------------|
| Number of inputs and outputs                   | Number of digital outputs: 2; Number of analog outputs: 1 |                  |                      |
| Measuring range                                | 0.6...143.9 m/s                                           | 0.3...26260 m³/h | 0.005...437.6 m³/min |
| Process connection                             | threaded connection G 1 Internal thread                   |                  |                      |
| Application                                    |                                                           |                  |                      |
| Application                                    | for industrial applications                               |                  |                      |
| Installation                                   | Adjustable to inside pipe diameters; ( 14...254 mm)       |                  |                      |
| Media                                          | compressed air; nitrogen (N2)                             |                  |                      |
| Medium temperature [°C]                        | -10...60                                                  |                  |                      |
| Min. bursting pressure                         | 100 bar                                                   | 10 MPa           |                      |
| Pressure rating                                | 50 bar                                                    | 5 MPa            |                      |
| MAWP (for applications according to CRN) [bar] | 10                                                        |                  |                      |
| Electrical data                                |                                                           |                  |                      |
| Operating voltage [V]                          | 18...30 DC; (to SELV/PELV)                                |                  |                      |
| Current consumption [mA]                       | < 80                                                      |                  |                      |
| Protection class                               | III                                                       |                  |                      |
| Reverse polarity protection                    | yes                                                       |                  |                      |

# SD1440



## Compressed air meter

SDD11DXXFRKG/US-100

|                     |     |   |
|---------------------|-----|---|
| Power-on delay time | [s] | 1 |
|---------------------|-----|---|

### Inputs / outputs

|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Number of inputs and outputs | Number of digital outputs: 2; Number of analog outputs: 1 |
|------------------------------|-----------------------------------------------------------|

### Inputs

|        |               |
|--------|---------------|
| Inputs | counter reset |
|--------|---------------|

### Outputs

|                                                      |                                                                        |
|------------------------------------------------------|------------------------------------------------------------------------|
| Output signal                                        | switching signal; analog signal; pulse signal; IO-Link; (configurable) |
| Electrical design                                    | PNP/NPN                                                                |
| Number of digital outputs                            | 2                                                                      |
| Output function                                      | normally open / closed; (configurable)                                 |
| Max. voltage drop switching output DC [V]            | 2.5                                                                    |
| Permanent current rating of switching output DC [mA] | 150; (per output)                                                      |
| Number of analog outputs                             | 1                                                                      |
| Analog current output [mA]                           | 4...20; (scalable)                                                     |
| Max. load [Ω]                                        | 500                                                                    |
| Pulse output                                         | consumed quantity meter                                                |
| Short-circuit protection                             | yes                                                                    |
| Type of short-circuit protection                     | yes (non-latching)                                                     |
| Overload protection                                  | yes                                                                    |

### Measuring/setting range

|                        |                  |                  |                      |
|------------------------|------------------|------------------|----------------------|
| Measuring range        | 0.6...143.9 m/s  | 0.3...26260 m³/h | 0.005...437.6 m³/min |
| Display range          | 0...172.7 m/s    | 0...31520 m³/h   | 0...525.2 m³/min     |
| Resolution             | 0.1 m/s          | 0.05 m³/h        | 0.01 m³/min          |
| Set point SP           | 1.4...143.9 m/s  | 0.8...26260 m³/h | 0.013...437.6 m³/min |
| Reset point rP         | 0.7...143.2 m/s  | 0.4...26140 m³/h | 0.007...435.6 m³/min |
| Analog start point ASP | 0...115.1 m/s    | 0...21000 m³/h   | 0...350 m³/min       |
| Analog end point AEP   | 28.8...143.9 m/s | 422...26260 m³/h | 7.04...437.6 m³/min  |
| Low flow cut-off LFC   | 0.2...1.4 m/s    | 0.1...260 m³/h   | 0.002...4.4 m³/min   |
| In steps of            | 0.1 m/s          | 0.01 m³/h        | 0.001 m³/min         |

### Volumetric flow quantity monitoring

|                  |                     |                         |
|------------------|---------------------|-------------------------|
| Measuring range  | 0...1000000000 m³   | 0...35314666721 scf     |
| Display range    | 0...1000000000 m³   | 0...35314666721 scf     |
| Set point SP     | 0.01...100000000 m³ | 0.35...3531466672.1 scf |
| Pulse value      | 0.01...100000000 m³ | 0.35...3531466672.1 scf |
| In steps of      | 0.001 m³            | 0.05 scf                |
| Pulse length [s] | 0.001...2           |                         |

### Temperature monitoring

|                    |               |                  |
|--------------------|---------------|------------------|
| Measuring range    | -10...60 °C   | 14...140 °F      |
| Display range      | -24...74 °C   | -11.2...165.2 °F |
| Resolution         | 0.2 °C        | 0.5 °F           |
| Set point SP       | -9.7...60 °C  | 14.6...140 °F    |
| Reset point rP     | -10...59.7 °C | 14...139.4 °F    |
| Analog start point | -10...46 °C   | 14...114.8 °F    |
| Analog end point   | 4...60 °C     | 39.2...140 °F    |

# SD1440



## Compressed air meter

SDD11DXXFRKG/US-100

|                                   |                                                                                                                                     |                                                                                                                                                                                             |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| In steps of                       | 0.1 °C                                                                                                                              | 0.1 °F                                                                                                                                                                                      |
| Accuracy / deviations             |                                                                                                                                     |                                                                                                                                                                                             |
| Temperature coefficient           | [1/K]                                                                                                                               | ± 0,07 % MW                                                                                                                                                                                 |
| Accuracy (in the measuring range) |                                                                                                                                     | ± (6 % MW + 0,6 % MEW); (reference conditions: diA = 73 mm; inlet pipe length >= 3 m; outlet pipe length >= 0,5 m; reference temperature: 20...25 °C; standard volume flow: 50...850 Nm³/h) |
| Repeatability                     |                                                                                                                                     | ± 1,5 % MW                                                                                                                                                                                  |
| Temperature monitoring            |                                                                                                                                     |                                                                                                                                                                                             |
| Accuracy                          | [K]                                                                                                                                 | ± 0,5; (medium flow in the limit area of the flow measurement range)                                                                                                                        |
| Reaction times                    |                                                                                                                                     |                                                                                                                                                                                             |
| Response time                     | [s]                                                                                                                                 | 0.1; (dAP = 0)                                                                                                                                                                              |
| Damping process value dAP         | [s]                                                                                                                                 | 0...5                                                                                                                                                                                       |
| Temperature monitoring            |                                                                                                                                     |                                                                                                                                                                                             |
| Dynamic response T05 / T09        | [s]                                                                                                                                 | T09 = 0,5                                                                                                                                                                                   |
| Software / programming            |                                                                                                                                     |                                                                                                                                                                                             |
| Parameter setting options         | hysteresis / window; normally open / closed; current/pulse output; display can be rotated and switched off; Display unit; totalizer |                                                                                                                                                                                             |
| Interfaces                        |                                                                                                                                     |                                                                                                                                                                                             |
| Communication interface           | IO-Link                                                                                                                             |                                                                                                                                                                                             |
| Transmission type                 | COM2 (38,4 kBaud)                                                                                                                   |                                                                                                                                                                                             |
| IO-Link revision                  | 1.1                                                                                                                                 |                                                                                                                                                                                             |
| SDCI standard                     | IEC 61131-9 CDV                                                                                                                     |                                                                                                                                                                                             |
| Profiles                          | Digital Measuring Sensor (0x800A), Identification and Diagnosis (0x4000)                                                            |                                                                                                                                                                                             |
| SIO mode                          | yes                                                                                                                                 |                                                                                                                                                                                             |
| Required master port class        | A                                                                                                                                   |                                                                                                                                                                                             |
| Process data analog               | 8                                                                                                                                   |                                                                                                                                                                                             |
| Process data binary               | 2                                                                                                                                   |                                                                                                                                                                                             |
| Min. process cycle time           | [ms]                                                                                                                                | 6.8                                                                                                                                                                                         |
| Supported DeviceIDs               | Type of operation                                                                                                                   | DeviceID                                                                                                                                                                                    |
|                                   | default                                                                                                                             | 1592                                                                                                                                                                                        |
| Operating conditions              |                                                                                                                                     |                                                                                                                                                                                             |
| Ambient temperature               | [°C]                                                                                                                                | 0...60                                                                                                                                                                                      |
| Storage temperature               | [°C]                                                                                                                                | -20...85                                                                                                                                                                                    |
| Max. relative air humidity        | [%]                                                                                                                                 | 90                                                                                                                                                                                          |
| Protection                        | IP 65; IP 67                                                                                                                        |                                                                                                                                                                                             |
| Tests / approvals                 |                                                                                                                                     |                                                                                                                                                                                             |
| EMC                               | DIN EN 60947-5-9                                                                                                                    |                                                                                                                                                                                             |
| Vibration resistance              | DIN EN 68000-2-6                                                                                                                    |                                                                                                                                                                                             |
| MTTF                              | [years]                                                                                                                             | 190                                                                                                                                                                                         |
| Mechanical data                   |                                                                                                                                     |                                                                                                                                                                                             |
| Weight                            | [g]                                                                                                                                 | 372.6                                                                                                                                                                                       |
| Housing                           | rectangular                                                                                                                         |                                                                                                                                                                                             |
| Dimensions                        | [mm]                                                                                                                                | 85.1 x 45.8 x 100.3                                                                                                                                                                         |

SD1440



Compressed air meter

SDD11DXXFRKG/US-100

|                          |                                                                                                                             |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Material                 | PBT+PC-GF30; PPS GF40; stainless steel (1.4301 / 304); stainless steel (1.4305 / 303); stainless steel (1.4404 / 316L); FKM |
| Materials (wetted parts) | stainless steel (1.4301 / 304); stainless steel (1.4404 / 316L); FKM; ceramics glass passivated; PPS GF40; acrylate         |
| Process connection       | threaded connection G 1 Internal thread                                                                                     |

| Displays / operating elements |  |                                       |
|-------------------------------|--|---------------------------------------|
| Display                       |  | Color display 1,44", 128 x 128 pixels |
|                               |  | 2 x LED, yellow                       |

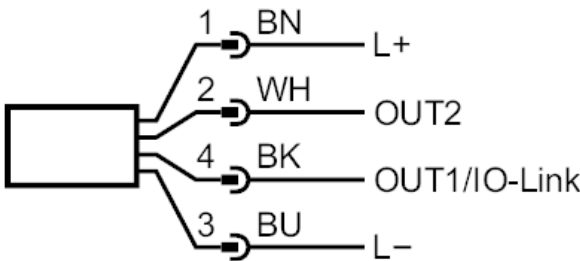
| Remarks       |  |                                                                                                |
|---------------|--|------------------------------------------------------------------------------------------------|
| Remarks       |  | MW = Measured value                                                                            |
|               |  | MEW = Final value of the measuring range                                                       |
|               |  | D = inside pipe diameter                                                                       |
|               |  | Measuring, display and setting ranges refer to standard volume flow according to DIN ISO 2533. |
|               |  | For information about installation and operation please see the operating instructions.        |
| Pack quantity |  | 1 pcs.                                                                                         |

Electrical connection

Connector: 1 x M12; coding: A



Connection



|               |                                                                                                                                                                                                |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OUT1/IO-Link: | Switching output flow<br>Switching output temperature<br>Pulse output quantity meter<br>signal output Preset counter                                                                           |
| OUT2/InD:     | Switching output flow<br>Switching output temperature<br>analog output flow<br>analog output temperature<br>signal output Preset counter<br>Pulse output quantity meter<br>Input counter reset |