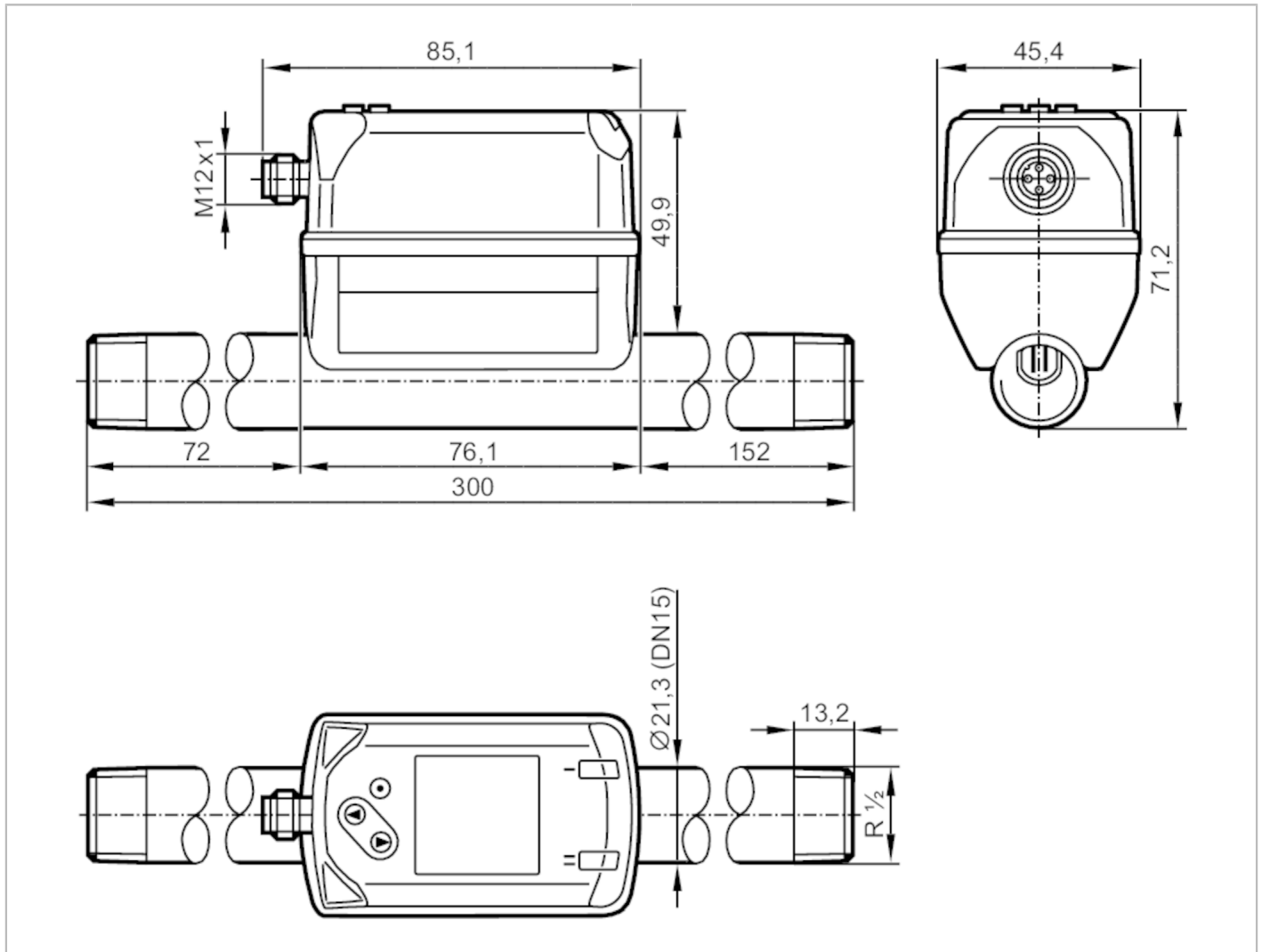


# SD6500



## Compressed air meter

SDR12DGXFRKG/US-100



### Product characteristics

|                              |   |                |                |
|------------------------------|---|----------------|----------------|
| Number of inputs and outputs | Number of digital outputs: 2; Number of analogue outputs: 1 |                |                |
| Measuring range              | 4...1250 l/min  | 0.3...99.8 m/s | 0.25...75 m³/h |
| Process connection           | threaded connection R 1/2 DN15                              |                |                |

### Application

|                              |                             |  |  |
|------------------------------|-----------------------------|--|--|
| Application                  | for industrial applications |  |  |
| Media                        | compressed air              |  |  |
| Medium temperature [°C]      | -10...60                    |  |  |
| Min. bursting pressure [bar] | 64                          |  |  |
| Pressure rating [bar]        | 16                          |  |  |

### Electrical data

|                             |   |  |  |
|-----------------------------|---|--|--|
| Operating voltage [V]       | 18...30 DC; (according to EN 50178 SELV/PELV) |  |  |
| Current consumption [mA]    | < 80  |  |  |
| Protection class            | III   |  |  |
| Reverse polarity protection | yes   |  |  |
| Power-on delay time [s]     | 1   |  |  |

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| Inputs / outputs                                     |  |                |                   |
|--|--|----------------|-------------------|
| Number of inputs and outputs                         | Number of digital outputs: 2; Number of analogue outputs: 1              |                |                   |
| Inputs   |  |                |                   |
| Inputs   | counter reset  |                |                   |
| Outputs  |  |                |                   |
| Output signal  | switching signal; analogue signal; pulse signal; IO-Link; (configurable) |                |                   |
| Electrical design                                    | PNP/NPN  |                |                   |
| Number of digital outputs                            | 2  |                |                   |
| Output function                                      | normally open / normally closed; (parameterisable)                       |                |                   |
| Max. voltage drop switching output DC [V]            | 2.5  |                |                   |
| Permanent current rating of switching output DC [mA] | 150; (per output)  |                |                   |
| Number of analogue outputs                           | 1  |                |                   |
| Analogue current output [mA]                         | 4...20; (scalable)   |                |                   |
| Max. load [Ω]  | 500  |                |                   |
| Pulse output   | consumed quantity meter  |                |                   |
| Short-circuit protection                             | yes  |                |                   |
| Type of short-circuit protection                     | pulsed   |                |                   |
| Overload protection                                  | yes  |                |                   |
| Measuring/setting range                              |  |                |                   |
| Measuring range                                      | 4...1250 l/min   | 0.3...99.8 m/s | 0.25...75 m³/h    |
| Display range  | 0...1500 l/min   | 0...119.8 m/s  | 0...90 m³/h       |
| Resolution   | 1 l/min  | 0.1 m/s        | 0.05 m³/h         |
| Set point SP   | 11...1250 l/min  | 0.9...99.8 m/s | 0.65...74.97 m³/h |
| Reset point rP                                       | 5...1243 l/min   | 0.4...99.3 m/s | 0.28...74.6 m³/h  |
| Analogue start point ASP                             | 0...1000 l/min   | 0...79.8 m/s   | 0...60 m³/h       |
| Analogue end point AEP                               | 250...1250 l/min   | 20...99.8 m/s  | 15...75 m³/h      |
| Low flow cut-off LFC                                 | 1...13 l/min   | 0.1...1.1 m/s  | 0.09...0.8 m³/h   |
| In steps of  | 1 l/min  | 0.1 m/s        | 0.01 m³/h         |
| Pressure monitoring                                  |  |                |                   |
| Measuring range [bar]                                | -1...16  |                |                   |
| Display range [bar]                                  | -1...20  |                |                   |
| Resolution [bar]                                     | 0.05   |                |                   |
| Set point SP [bar]                                   | -0.92...16   |                |                   |
| Reset point rP [bar]                                 | -1...15.92   |                |                   |
| Analogue start point [bar]                           | -1...12.8  |                |                   |
| Analogue end point [bar]                             | 2.2...16   |                |                   |
| In steps of [bar]                                    | 0.01   |                |                   |

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| Volumetric flow quantity monitoring              |  |                        |
|--|--|------------------------|
| Measuring range                                  | 0...100000000 m <sup>3</sup>   | 0...353146667.2 scf    |
| Display range                                    | 0...100000000 m <sup>3</sup>   | 0...353146667.2 scf    |
| Set point SP                                     | 0.001...10000000 m <sup>3</sup>  | 0.05...353146667.2 scf |
| Pulse value                                      | 0.001...10000000 m <sup>3</sup>  | 0.05...353146667.2 scf |
| In steps of                                      | 0.0001 m <sup>3</sup>  | 0.005 scf              |
| Pulse length [s]                                 | 0.002...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          |
| Analogue start point                             | -10...46 °C  | 14...114.8 °F          |
| Analogue end point                               | 4...60 °C  | 39.2...140 °F          |
| In steps of                                      | 0.1 °C   | 0.1 °F                 |
| Accuracy / deviations                            |  |                        |
| Temperature coefficient [1/K]                    | ± 0,07 % MW  |                        |
| Accuracy (in the measuring range)                | class 141: ± (2 % MW + 0,5 % MEW); class 344: ± (6 % MW + 0,6 % MEW) ; air quality to ISO 8573-1:2010; at medium temperature 23 °C           |                        |
| Repeatability                                    | 0,8 % MW + 0,2 % MEW   |                        |
| Pressure monitoring                              |  |                        |
| Repeatability [% of the final value]             | ± 0,2  |                        |
| Characteristics deviation [% of the final value] | < ± 0,5; (BFSL = Best Fit Straight Line)   |                        |
| Greatest TEMPCO of the span [% MEW / 10 K]       | ± 0,15   |                        |
| Greatest TEMPCO of the zero point [% MEW / 10 K] | ± 0,25   |                        |
| Temperature monitoring                           |  |                        |
| Accuracy [K]                                     | ± 0,5; (medium flow in the limit area of the flow measurement range)   |                        |
| Response times                                   |  |                        |
| Response time [s]                                | 0.1; (dAP = 0)   |                        |
| Damping for the switching output dAP [s]         | 0...5  |                        |
| Pressure monitoring                              |  |                        |
| Response time [s]                                | 0.05   |                        |
| Temperature monitoring                           |  |                        |
| Dynamic response T05 / T09 [s]                   | T09 = 0,5  |                        |
| Software / programming                           |  |                        |
| Parameter setting options                        | hysteresis / window; normally open / normally closed; current/pulse output; display can be rotated and switched off; Display unit; totaliser |                        |

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## Compressed air meter

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| Interfaces                   |  |
|------------------------------|--|
| Communication interface      | IO-Link  |
| Transmission type            | COM2 (38,4 kBaud)  |
| IO-Link revision             | 1.1  |
| SDCI standard                | IEC 61131-9 CDV  |
| IO-Link device ID            | 862 d / 00 03 5d h   |
| Profiles                     | Digital Measuring Sensor (0x800A), Identification and Diagnosis (0x4000) |
| SIO mode                     | yes  |
| Required master port type    | A  |
| Process data analogue        | 8  |
| Process data binary          | 2  |
| Min. process cycle time [ms] | 7.2  |

| 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   | 5 g (10...2000 Hz) |
| MTTF [years]                 |  | 183                |
| UL approval                  | UL Approval no.  | I012               |
|                              | File number UL   | E174189            |
| Pressure Equipment Directive | Sound engineering practice; can be used for stable gases fluid group 2 |                    |

| Mechanical data          |  |
|--------------------------|--|
| Weight [g]               | 728.5  |
| Materials                | PBT+PC-GF30; PPS GF40; stainless steel (1.4301 / 304); stainless steel (1.4305 / 303); steel (1.5523) galvanised; 2.0401 (brass / CW614N); FKM |
| Materials (wetted parts) | stainless steel (1.4301 / 304); stainless steel (1.4305 / 303); FKM; ceramics glass passivated; PPS GF40; Al2O3 (ceramics); acrylate           |
| Process connection       | threaded connection R 1/2 DN15   |

| Displays / operating elements |   |
|-------------------------------|---|
| Display                       | colour display 1,44", 128 x 128 pixels<br>2 x LED, yellow |

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

| Electrical connection |         |
|-----------------------|---------|
| Connector:            | 1 x M12 |

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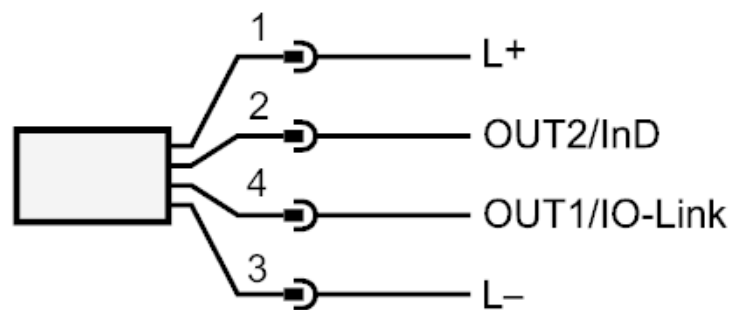


## Compressed air meter

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### Connection



OUT1/IO-Link: switching output flow  
switching output temperature  
switching output pressure  
Pulse output quantity meter  
signal output Preset counter

OUT2/InD: switching output flow  
switching output temperature  
switching output pressure  
analogue output flow  
analogue output temperature  
analogue output pressure  
signal output Preset counter  
Pulse output quantity meter  
input counter reset