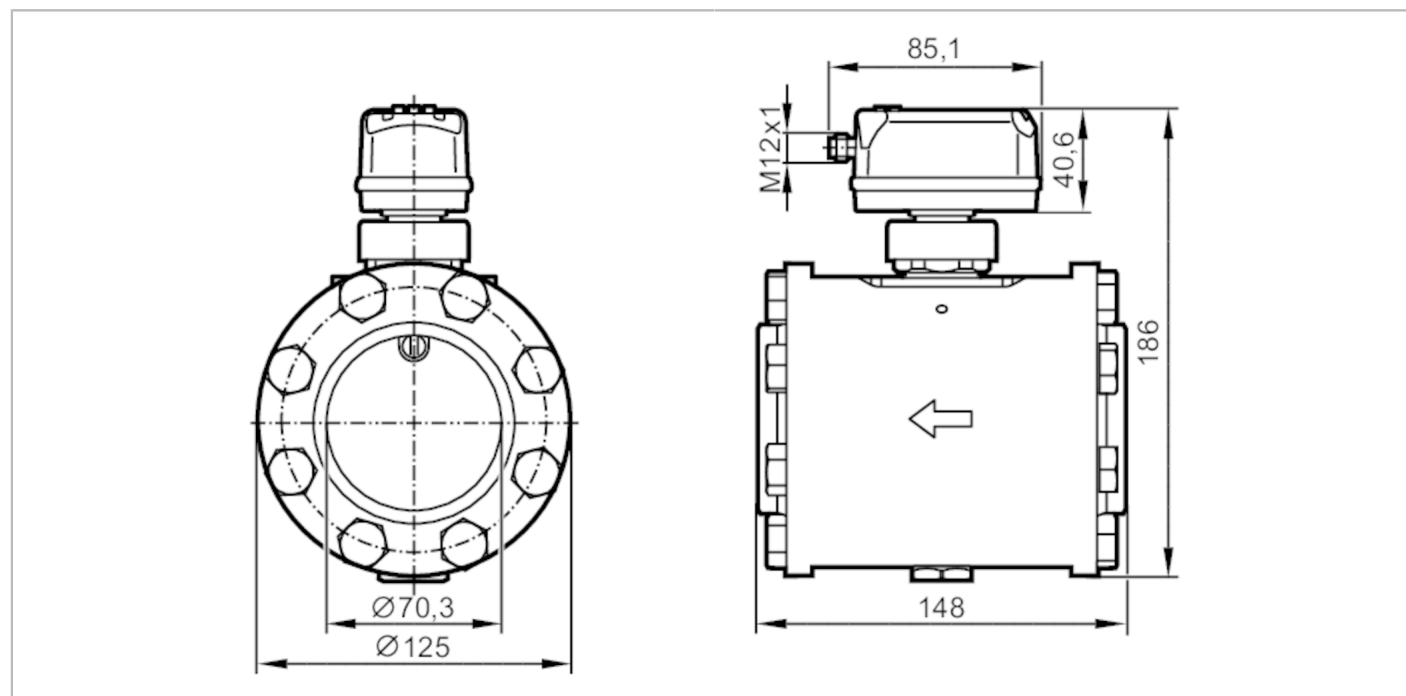


# SDG350



## Compressed air meter

SDG2 1/2"METRIS PB DN65 SS



### Product characteristics

|                              |                                                             |               |
|------------------------------|-------------------------------------------------------------|---------------|
| Number of inputs and outputs | Number of digital outputs: 2; Number of analogue outputs: 1 |               |
| Measuring range              | 0.6...143.9 m/s                                             | 8...2011 m³/h |
| Process connection           | flange DN65 DIN 2448 according to: DIN EN 10220             |               |

### Application

|                              |                             |  |
|------------------------------|-----------------------------|--|
| Application                  | for industrial applications |  |
| Media                        | compressed air              |  |
| Medium temperature [°C]      | -10...60                    |  |
| Min. bursting pressure [bar] | 64                          |  |
| Min. bursting pressure [MPa] | 6.4                         |  |
| Pressure rating [bar]        | 16                          |  |
| Pressure rating [MPa]        | 1.6                         |  |

### Electrical data

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

### 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) |  |
|---------------|--------------------------------------------------------------------------|--|



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|                                                      |                                                    |
|------------------------------------------------------|----------------------------------------------------|
| 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 | 0.6...143.9 m/s | 8...2011 m³/h  |
| Display range   | 1.2...172.7 m/s | 16...2413 m³/h |
| In steps of     | 0.1 m/s         | 1 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       |

## Volumetric flow quantity monitoring

|                  |                     |                        |
|------------------|---------------------|------------------------|
| Measuring range  | 0...100000000 m³    | 0...353146667.2 scf    |
| Display range    | 0...100000000 m³    | 0...353146667.2 scf    |
| Set point SP     | 0.001...10000000 m³ | 0.05...353146667.2 scf |
| Pulse value      | 0.001...10000000 m³ | 0.05...353146667.2 scf |
| In steps of      | 0.0001 m³           | 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

|                                   |                                                                                                                                                                                                                          |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Accuracy (in the measuring range) | class 141: $\pm (3 \% \text{ MW} + 0,3 \% \text{ MEW})$ ; class 344: $\pm (6 \% \text{ MW} + 0,6 \% \text{ MEW})$ ; air quality to ISO 8573-1:2010; reference conditions: inlet pipe length $\geq 113 \text{ cm}$ outlet |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



## Compressed air meter

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pipe length  $\geq 15$  cm; reference temperature: 18...26 °C; standard volume flow 8...1155 m³/h; (standard volume flow DIN\_ISO\_2533 15 °C , 1013,25 mbar, 0 % r.H.)

|                                                     |                                                                                                                                              |                    |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Pressure monitoring                                 |                                                                                                                                              |                    |
| Repeatability<br>[% of the final value]             | ± 0,2                                                                                                                                        |                    |
| Characteristics deviation<br>[% of the final value] | < ± 0,5; (BFSL = Best Fit Straight Line)                                                                                                     |                    |
| Greatest TEMPCO of the span<br>[% MEW / 10 K]       | ± 0,3                                                                                                                                        |                    |
| Greatest TEMPCO of the zero point<br>[% MEW / 10 K] | ± 0,1                                                                                                                                        |                    |
| 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 process value 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 |                    |
| 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 type                           | A                                                                                                                                            |                    |
| Process data analogue                               | 8                                                                                                                                            |                    |
| Process data binary                                 | 2                                                                                                                                            |                    |
| Min. process cycle time [ms]                        | 7.2                                                                                                                                          |                    |
| Supported DeviceIDs                                 | Type of operation                                                                                                                            | DeviceID           |
|                                                     | default                                                                                                                                      | 1537               |
| 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) |



## Compressed air meter

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|                               |                                                                                                                                                                               |                                        |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| MTTF                          | [years]                                                                                                                                                                       | 167                                    |
| Pressure Equipment Directive  | Modul A; can be used for group 2 fluids; group 1 fluids on request                                                                                                            |                                        |
| Mechanical data               |                                                                                                                                                                               |                                        |
| Weight                        | [g]                                                                                                                                                                           | 9630                                   |
| Materials                     | PBT+PC-GF30; PPS GF40; stainless steel (304/1.4301); stainless steel (303/1.4305); stainless steel (316L/1.4404); FKM                                                         |                                        |
| Materials (wetted parts)      | stainless steel (304/1.4301); stainless steel (316L/1.4404); FKM; ceramics glass passivated; PPS GF40; Al2O3 (ceramics); acrylate; pipe section: stainless steel (304/1.4301) |                                        |
| Process connection            | flange DN65 DIN 2448 according to: DIN EN 10220                                                                                                                               |                                        |
| Displays / operating elements |                                                                                                                                                                               |                                        |
| Display                       |                                                                                                                                                                               | colour 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 the 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





## 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