

## DW52310K

### Pressure sensors • Pressure monitor

Pressure sensor, Ø38mm 135long, -1 to 10bar, 12-30V DC, G1/2 "A, 2x PNP NC/NO, 0-5/10V / 0/4-20mA, M12 plug connector 4-pin, IP67, PC (plastic), TFT display, IO-Link



### TFT color display with plain text display IO-Link interface

The pressure sensors of the DW5x series for pressure ranges from -1bar...+600bar are the "Swiss army knives" among the pressure sensors from ipf electronic. Highly flexible for use with liquid and gaseous media in all conceivable applications, these devices leave nothing to be desired in terms of convenient operation and technical features. The sensors with IO-Link interface have a switching output and a second variable output that can be defined as a switching, analog or alarm output as required. All settings of the DW5x can be checked before practical use in an application using an "offline test function" without having to apply pressure to the sensors.

The focus is on the integrated, easy-to-read TFT color display with its extremely diverse options for different display modes. Just a few examples: Display of the pressure in plain text with trend display and accurate identification of the switching points or color display options for reaching previously defined switching points. But the potential of the easily switchable color display is far from exhausted.

The display is perfectly readable in any installation position, as the display can be rotated in 90° steps and the housing can also be continuously rotated by 305°. The sensors with full stainless steel measuring cell and integrated processor not only provide the pressure, but also determine a relative temperature value of the medium if required.

**Electrical features**

|                                                |                                                        |
|------------------------------------------------|--------------------------------------------------------|
| Response/decay time                            | 10 ms                                                  |
| Number of switching outputs                    | 2                                                      |
| Display                                        | TFT display                                            |
| Type of switching function                     | Programmable/configurable                              |
| Type of alarm output                           | PNP                                                    |
| Type of analog output                          | 0 - 10V   0 - 20mA   0 - 5V   4 - 20mA                 |
| Type of electrical connection                  | Connector M12                                          |
| Type of switching output                       | PNP/NPN                                                |
| Turn-off delay                                 | 0 - 10 s                                               |
| Rated switching current                        | 250 mA                                                 |
| Readiness delay                                | 2000 ms                                                |
| Turn-on delay                                  | 0 - 10 s                                               |
| Setting procedure                              | Parameterization                                       |
| No-load current                                | 40 mA                                                  |
| Measuring range pressure                       | -1 - 10 bar                                            |
| Measurement method                             | Relative                                               |
| Number of pins                                 | 4                                                      |
| Relative linearity deviation                   | 0.25 %                                                 |
| Relative repeat accuracy                       | 0.15 %                                                 |
| Switching frequency                            | 50 Hz                                                  |
| Voltage drop                                   | 2 V                                                    |
| Temperature drift over entire measuring range  | 0.7 %                                                  |
| Operating voltage (DC)                         | 12 - 30 V                                              |
| Suitable as limiter                            | Yes                                                    |
| Suitable as monitor                            | Yes                                                    |
| Number of analog output channels               | 1                                                      |
| ardSOCA_ElektrischerAnschluss                  | M12 4-pin plug connector                               |
| ardSOCA_Betriebsspannung                       | 12-30VDC                                               |
| ardTEEL_Lebensdauer                            | 10 Millionen Lastwechsel                               |
| ardTEEL_Einstellungsbereich                    | 0,2% vom Endwert zwischen Ein- und Ausschaltpunkt      |
| ardTEEL_EinstellbareDaempungszeitAnalogausgang | 0 - 10 s                                               |
| ardTEEL_EinstellbareDaempungszeitAnzeigewert   | 0 - 10 s                                               |
| ardTEEL_Schutzfunktionen                       | Reverse polarity protection   Short circuit protection |

**Mechanical features**

|                                        |                                                                                                                                                                                                                    |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type of process connection             | G1/2 inch A                                                                                                                                                                                                        |
| Design                                 | Cylinder plain                                                                                                                                                                                                     |
| Diameter                               | 38 mm                                                                                                                                                                                                              |
| Thread length                          | 14 mm                                                                                                                                                                                                              |
| Thread pitch                           | 1.81 mm                                                                                                                                                                                                            |
| Length                                 | 135 mm                                                                                                                                                                                                             |
| Max. operating pressure                | 40 bar                                                                                                                                                                                                             |
| Medium temperature                     | -20 - 80 °C                                                                                                                                                                                                        |
| Nominal pressure                       | 10 bar                                                                                                                                                                                                             |
| Wrench size                            | 27 mm                                                                                                                                                                                                              |
| Degree of protection (IP)              | IP67                                                                                                                                                                                                               |
| Housing material                       | Plastic                                                                                                                                                                                                            |
| Seal material at process connection    | Plastic (NBR)                                                                                                                                                                                                      |
| Front-flush membrane                   | Yes                                                                                                                                                                                                                |
| Long-term drift per year               | 0.1 %                                                                                                                                                                                                              |
| Ambient temperature                    | -20 - 80 °C                                                                                                                                                                                                        |
| ardSOCA_Abmessungen                    | Ø38mm, 135mm long                                                                                                                                                                                                  |
| ardTEME_WerkstoffDesProzessanschlusses | Edelstahl 1.4305                                                                                                                                                                                                   |
| ardTEME_WerkstoffDerMesszelle          | Stainless steel 1.4404                                                                                                                                                                                             |
| ardTEME_SchockUndVibrationsfestigkeit  | Schock (EN 60068-2-27): 250m/s <sup>2</sup> , Halbsinus Impulsform, 6 ms Impulsdauer, 1000 Impulse je Achse und Richtung   Schwingen (EN 60068-2-6): 30 m/s <sup>2</sup> , 10-150 Hz, 20 Zyklen in 90 min je Achse |

**Other features**

|                               |                                                                    |
|-------------------------------|--------------------------------------------------------------------|
| Range of functions            | Spitzenwertspeicher                                                |
| Suitable for                  | Fluid group 2                                                      |
| Measuring display             | Relative                                                           |
| IO-Link version               | V1.1.4                                                             |
| Relative measurement accuracy | 0.15 %                                                             |
| ardTE00_Anwendungen           | Hydraulic applications   Pneumatic applications   Zweipunktreglung |

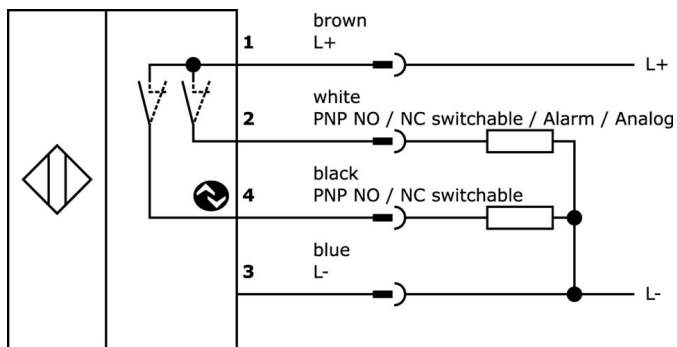
**Classification**

|        |
|--------|
| ETIM 8 |
|--------|

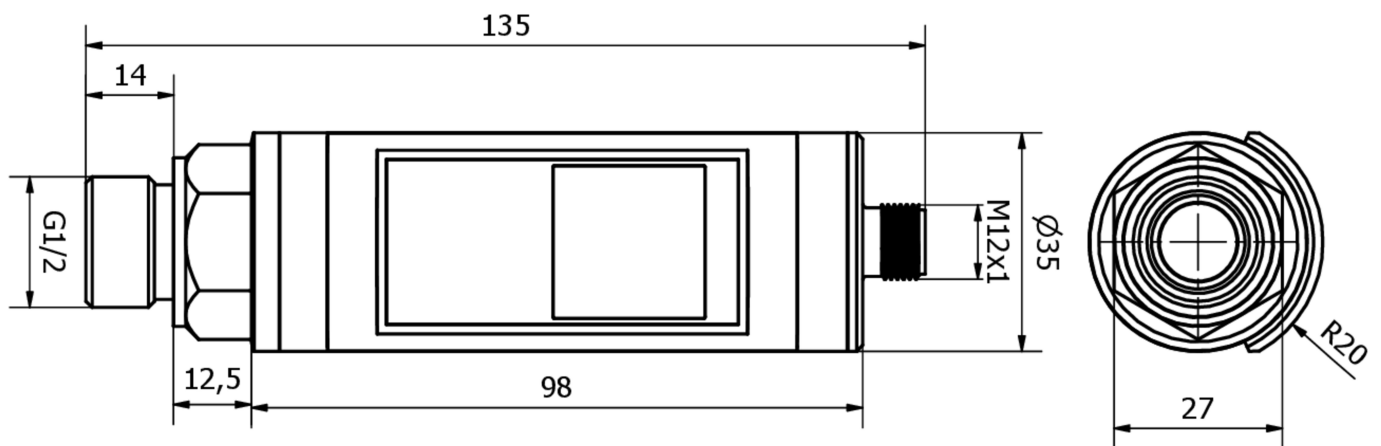
**More**

|                       |                      |
|-----------------------|----------------------|
| IPF Product Group     | 360 pressure sensors |
| packaging dimensions  | 160 x 99 x 60 mm     |
| gross weight          | 344 g                |
| Customs tariff number | 90262020             |
| WEEE number           | 40951076             |
| Reach-compliant       | Yes                  |
| RoHS-compliant        | Yes                  |

## Connection



## Dimensional drawing



## Extract accessories program

## VK205321



Connection cable, 2m, M12  
Female (socket) 4pin Angular, Free  
conductor end, 4x0.34mm<sup>2</sup>, PUR  
(Polyurethane), Ø5.5mm, 250V, -  
25-90°C, IP67, Shielded, Suitable  
for trailing chain and torsion  
resistant, Oil and cooling  
lubricants, Welding area, Silicon...

## VK205325



- Connection cable, 2m, M12
- Female (socket) 4pin Straight, Free conductor end, 4x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø5.5mm, 250V, -25-90°C, IP67, Shielded, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silico...

**VY000005**



IO-Link master, 41x24x67mm, IO-Link, M12, With USB interface

## AD000019



Accessories pressure, profile seal  
G1/2", Ø24mm 1,5high,  
fluorocarbon rubber FKM, green

**You can find further accessories on our homepage**



## Installation

Mounting / installation may only be carried out by a qualified electrician!



## Disposal

WEEE number according to § 6 para. 3  
ElektroG: 40951076

---

**Safety warnings**

- / Before initial operation, please make sure to follow all safety instructions that may be provided in the product information.
- / Never use these devices in applications where the safety of a person depends on their functionality.
- / Any software, drivers or IODD files that may be required to operate your device can be downloaded free of charge from our homepage: [www.ipf-electronic.com](http://www.ipf-electronic.com)