SY87F009

Flow sensors ● Consumption measurement for various gases

Flow sensor and oxygen sensor, calorimetric, G 1/2", 18–36 V DC, 4–20 mA, 5-pin M12 connector, PC plastic, with display, parameterization, RS-485

The function of the flow sensor involves the calorimetric principle. The sensor is heated from the inside by a few degrees Celsius relative to the flowing medium into which it extends. When the medium flows, the heat generated in the sensor is dissipated through the medium. The temperature within the sensor is measured and compared with the medium temperature, which is also measured. The flow condition for each medium can be determined from the resulting temperature difference. The application of these sensors includes use as compressed air consumption meters.

Electrical features

Number of switching outputs	1
Display	TFT display
Type of switching function	Normally open contact (NO)
Type of analog output	4 - 20mA
Type of electrical connection	Connector M12
Type of switching output	Relay contact
Type of interface connection	Plug-in connection M12
Rated switching current	150 mA
Setting procedure	Parameterization
Coding of interface connection	A
Load resistance (current output)	500 kOhm
No-load current	140 mA
Switching voltage	48 V
Measurement principle	calorimetric
Number of pins of interface connection	5
Supported communication interface	Modbus RTU
Operating voltage (DC)	18 - 36 V
Measuring accuracy	± 1.5 % of measuring range ± 0.3 % of measuring range end
Electrical connection	M12 Connector
Operating voltage	18–36 VDC
ardTEEL_Schutzfunktionen	Short circuit protection | Reverse polarity protection
ardTEEL_PolzahlDesElektrischenAnschlusses	5
ardTEEL_KodierungDesElektrischenAnschlusses	A

Mechanical features

Type of process connection	G1/2 inch
Design	Cuboid
Width	76.5 mm
Pressure resistance	50 bar
Height	75 mm
Length	416 mm
Probe length	220 mm
Medium temperature	-30 - 110 °C
Degree of protection (IP)	IP65
Housing material	Plastic PC
Sensing element material	Stainless steel 1.4301
Measuring range flow velocity	0,18 - 50 m/s
Ambient temperature	-20 - 70 °C
dimensions	416 x 76.5 x 75 mm

Other features

Relative air humidity (non-condensing)	95 %
Reference medium / object	Oxygen
Version	Insertion sensor

Classification

ETIM 8

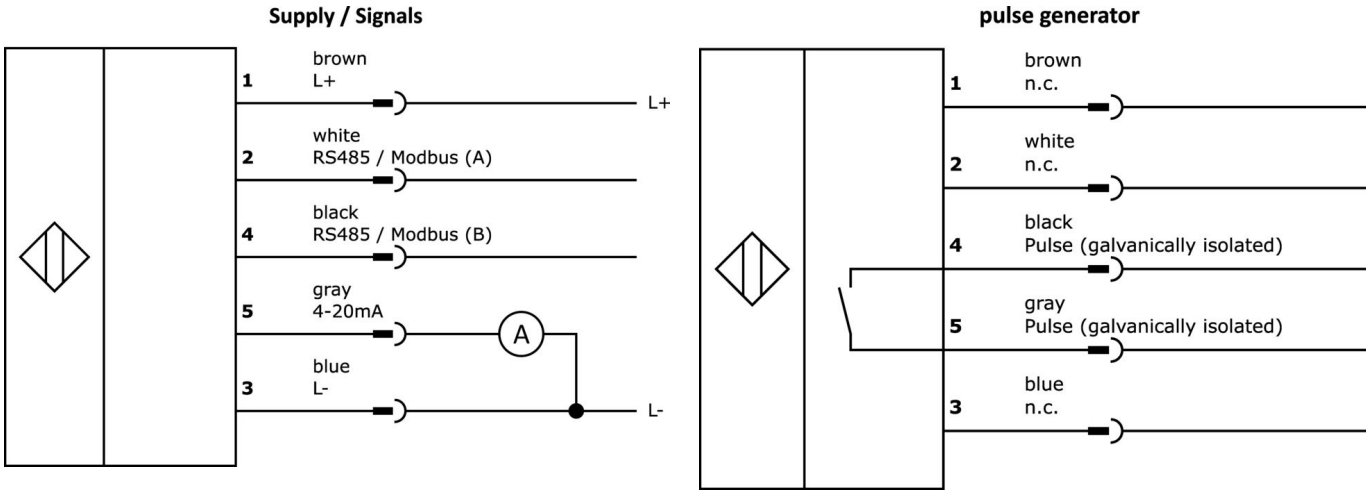
More

IPF Product Group	725 compressed air and leakage measurement
packaging dimensions	
gross weight	
Customs tariff number	90268020
WEEE number	40951076
Reach-compliant	Yes
RoHS-compliant	Yes

Important notes

/ For pressure > 10 bar - order high-pressure safety device additionally

Connection



Extract accessories program

VK205621

Connection cable, 2m, M12 socket 5-pin angular, free cable end, 5x0. 34mm², PUR (polyurethane), Ø6mm, 60V, -25-90°C, IP67, shielded, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

VK205625

Connection cable, 2m, M12 socket 5-pin straight, free cable end, 5x0. 34mm², PUR (polyurethane), Ø6mm, 60V, -25-90°C, IP67, shielded, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

AS000018

Accessories, high pressure safety device for insertion sensor, sensor length 220mm, max. 50bar

BY000002

IIoT Gateway, Master Module, 25x139x110 mm, RS485, CAN, 6x DI/DO, 4x 0-10 V / 4-20 mA, USB, terminal blocks, IP20

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