

SL870027

Flow sensors • Consumption measurement for compressed air

Sensor flow, air, calorimetric, G 1/2", 18-36V DC, 4-20mA, M12 plug connector 5-pin, plastic PC, with display, parameterization, Ethernet, high-speed



The function of the flow sensor is based on the calorimetric principle. The sensor is heated by a few degrees Celsius from the inside compared to the flow medium into which it protrudes. If the medium flows, the heat generated in the sensor is dissipated by the medium. The temperature generated in the sensor is measured and compared with the temperature of the medium, which is also measured. The flow state for each medium can be derived from the temperature difference obtained. Applications for these sensors include compressed air consumption measuring devices.

Electrical features

Display	TFT display
Type of analog output	4 - 20mA
Type of electrical connection	Connector M12
Type of interface connection	Plug-in connection M12
Rated switching current	150 mA
Setting procedure	Parameterization
Coding of interface connection	X-coded
Load resistance (current output)	500 kOhm
No-load current	140 mA
Number of pins	5
Measurement principle	calorimetric
Number of pins of interface connection	8
Supported communication interface	Ethernet Modbus RTU
Operating voltage (DC)	18 - 36 V
Measuring accuracy	± 1.5 % of measuring range ± 0.3 % of measuring range end
ardSOCA_ElektrischerAnschluss	M12 5-pin plug connector
ardSOCA_Betriebsspannung	18-36VDC
ardTEEL_Schutzfunktionen	Verpolungsschutz Kurzschlusschutz

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 - 224 m/s
Ambient temperature	-20 - 70 °C
ardSOCA_Abmessungen	220mm long

Other features

Suitable for	Air
Reference medium / object	Air
Version	Insertion sensor
ardTE00_Anwendungen	Pneumatik-Anwendungen

Classification

ETIM 8

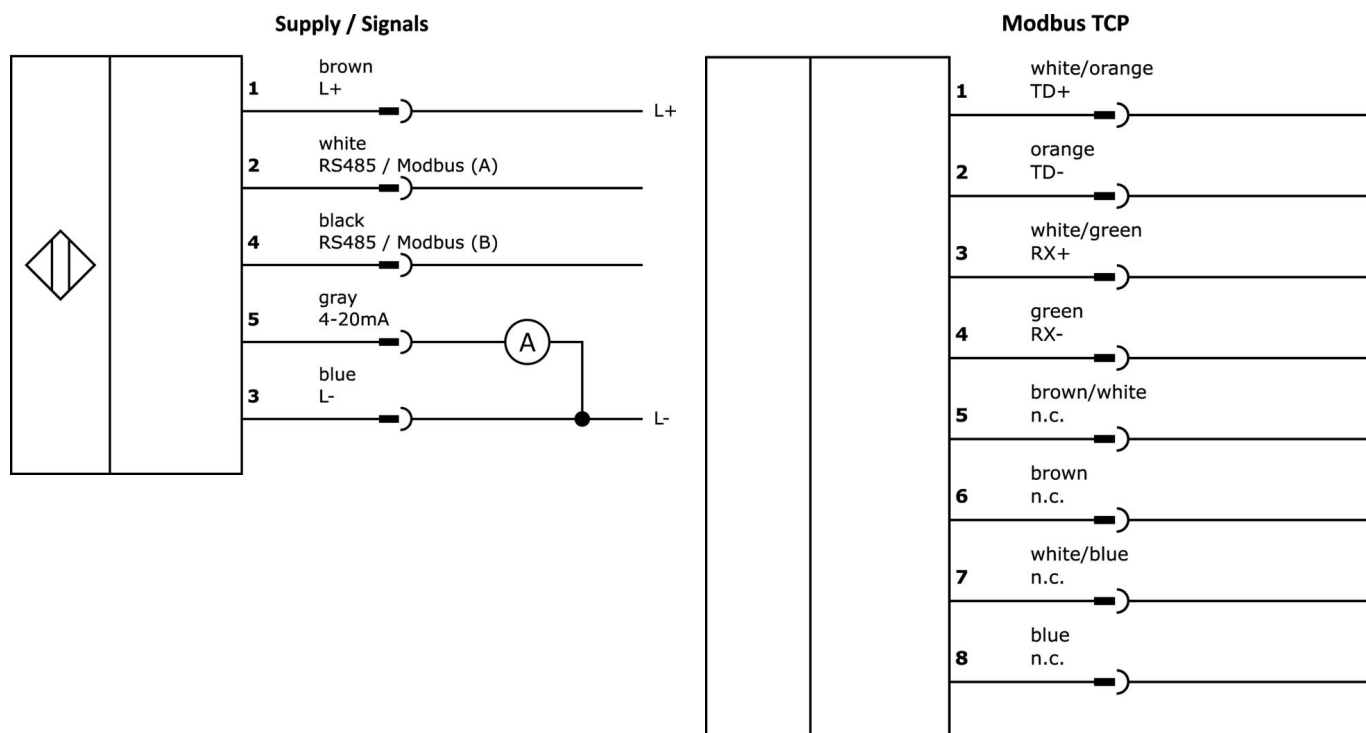
More

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

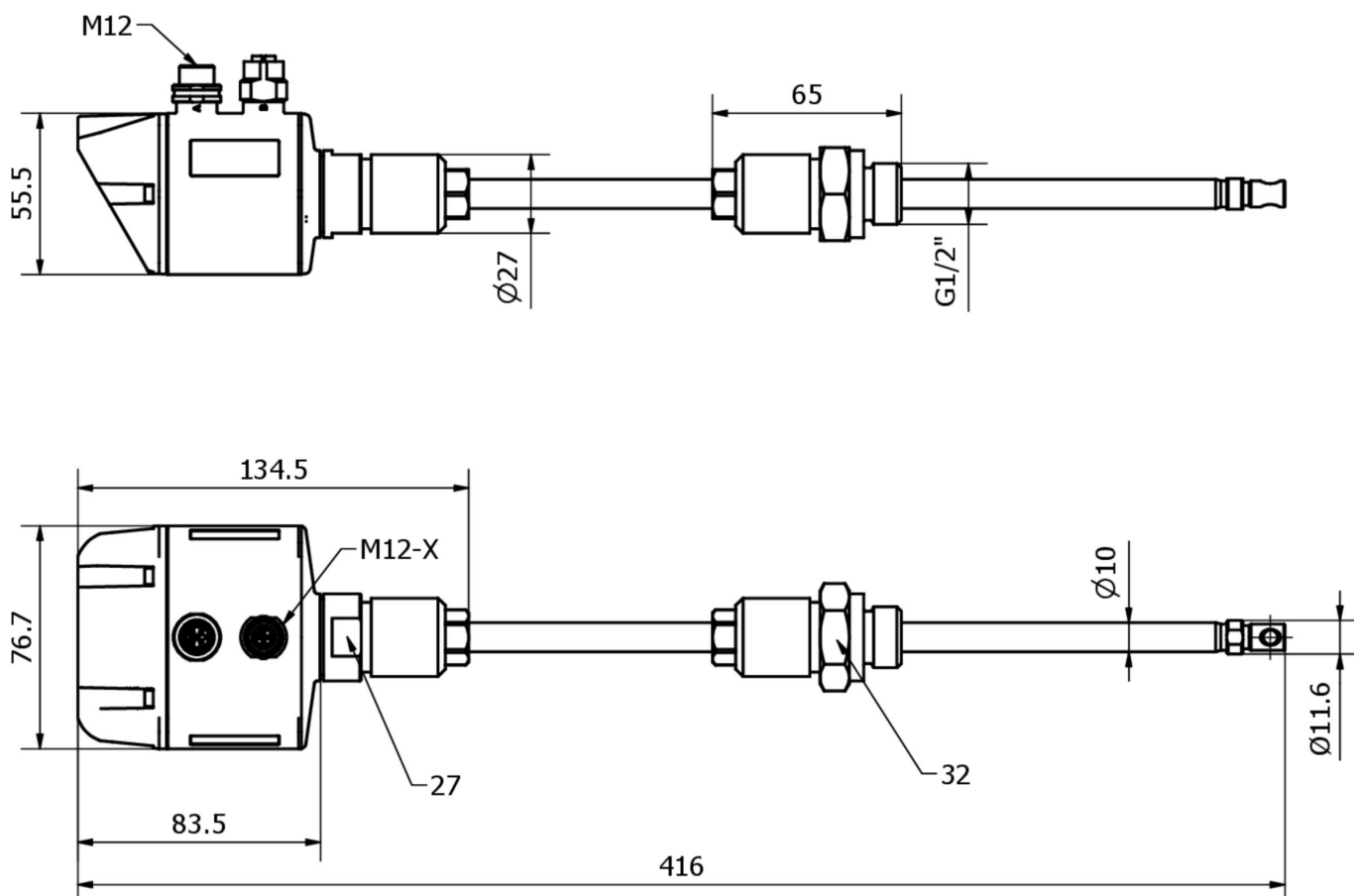
Important notes

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

Connection



Dimensional drawing



Extract accessories program

VK205621



Connection cable, 2m, M12
Female (socket) 5pin Angular, Free
conductor end, 5x0.34mm², PUR
(Polyurethane), Ø6mm, 60V, -25-
90°C, IP67, Shielded, Suitable for
trailing chain and torsion resistant,
Oil and cooling lubricants, Welding
area, Silicone-free

VK205625



Connection cable, 2m, M12
Female (socket) 5pin Straight, Free
conductor end, 5x0.34mm², PUR
(Polyurethane), Ø6mm, 60V, -25-
90°C, IP67, Shielded, Suitable for
trailing chain and torsion resistant,
Oil and cooling lubricants, Welding
area, Silicone-...

VK108F28



Data cable, Connection cable, 1m,
M12 Male (connector) 8pin
Straight, X-coding, RJ45 Male
(connector) 8pin Straight, 8x0.
14mm², Category 5E, -40-75°C,
TPU, Shielded

VKB08F28



Data cable, Connection cable,
20m, M12 Male (connector) 8pin
Straight, X-coding, RJ45 Male
(connector) 8pin Straight, 8x0.
14mm², Category 5E, -40-75°C,
TPU, Shielded

AS000018



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

VK003021



Cable socket, Angular, Suitable for
self-assembly, Screw connection,
Ø3-6.5mm, 4A, 60V, -25-90°C,
M12 Female (socket) 5pin, IP67,
PBT

VK003025



Cable socket, Straight, Suitable for
self-assembly, Screw connection,
Ø3-6.5mm, 4A, 60V, -25-90°C,
M12 Female (socket) 5pin, IP67,
PBT

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