

ifm electronic



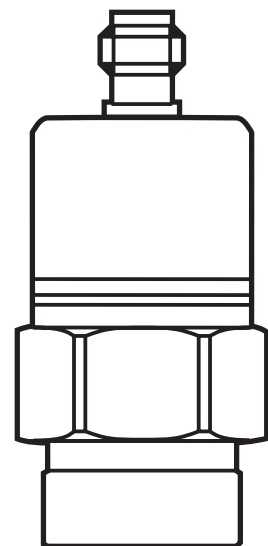
Installation Instructions  
Electronic pressure sensor

**efector500<sup>®</sup>**

**PA6229**

**UK**

704900 / 00 08 / 2010



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## 1 Safety instructions

- Please read the product description prior to installing the unit. Ensure that the product is suitable for your application without any restrictions.
- If the operating instructions or the technical data are not adhered to, personal injury and/or damage to property may occur.
- Please check for all applications that the product materials (see Technical data) are compatible with the media to be measured.

For the scope of validity cULus:

The device shall be supplied from an isolating transformer having a secondary Listed fuse rated as noted in the following table.

Overcurrent protection		
Control-circuit wire size		Maximum protective device rating Ampere
AWG	(mm <sup>2</sup> )	
26	(0.13)	1
24	(0.20)	2
22	(0.32)	3
20	(0.52)	5
18	(0.82)	7
16	(1.3)	10

The Sensor shall be connected only by using any R/C (CYJV2) cord, having suitable ratings.

## 2 Function and features

The pressure sensor detects the system pressure and converts it into an inverted analogue output signal.

- 20 mA (at the initial value of the measuring range) ... 4 mA (at the final value of the measuring range).

### 2.1 Applications

- Type of pressure: relative pressure

Order no.	Measuring range		Permissible overload pressure		Bursting pressure	
	bar	PSI	bar	PSI	bar	PSI
PA6229	-1...0	-14.5...0	10	145	30	450

$$\text{MPa} = \text{bar} \div 10 / \text{kPa} = \text{bar} \times 100$$



Static and dynamic overpressures exceeding the indicated overload pressure are to be avoided by taking appropriate measures.

The indicated bursting pressure must not be exceeded. Even if the bursting pressure is exceeded only for a short time, the unit can be destroyed.

NOTE: Risk of injury!

## 3 Installation



Before mounting and removing the sensor, make sure that no pressure is applied to the system.

- ▶ Insert the unit in a 1/4" NPT process connection.
- ▶ Tighten firmly.

## 4 Electrical connection

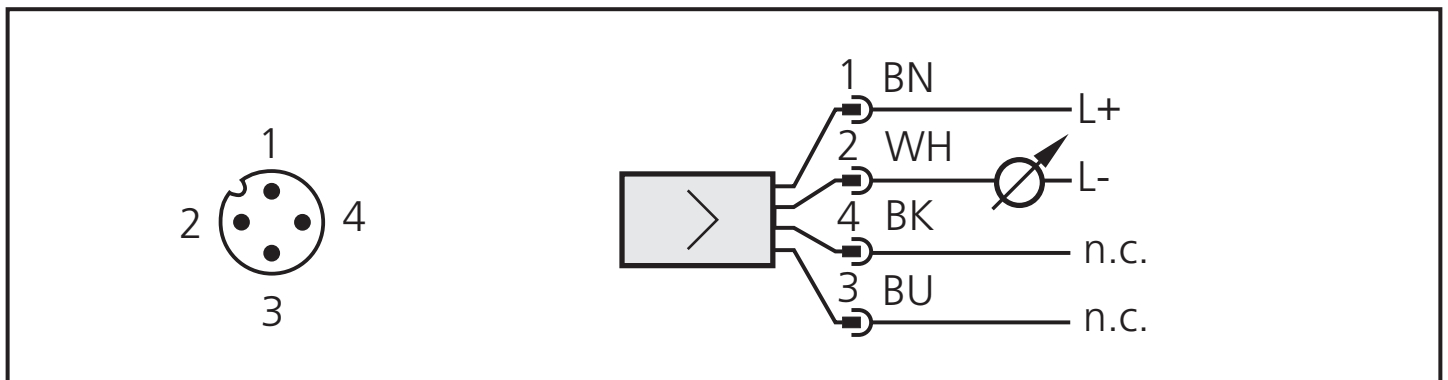


The unit must only be connected by an electrician.

The national and international regulations for the installation of electrical equipment must be observed.

Voltage supply to EN50178, SELV, PELV.

- ▶ Disconnect power.
- ▶ Connect the unit as follows:

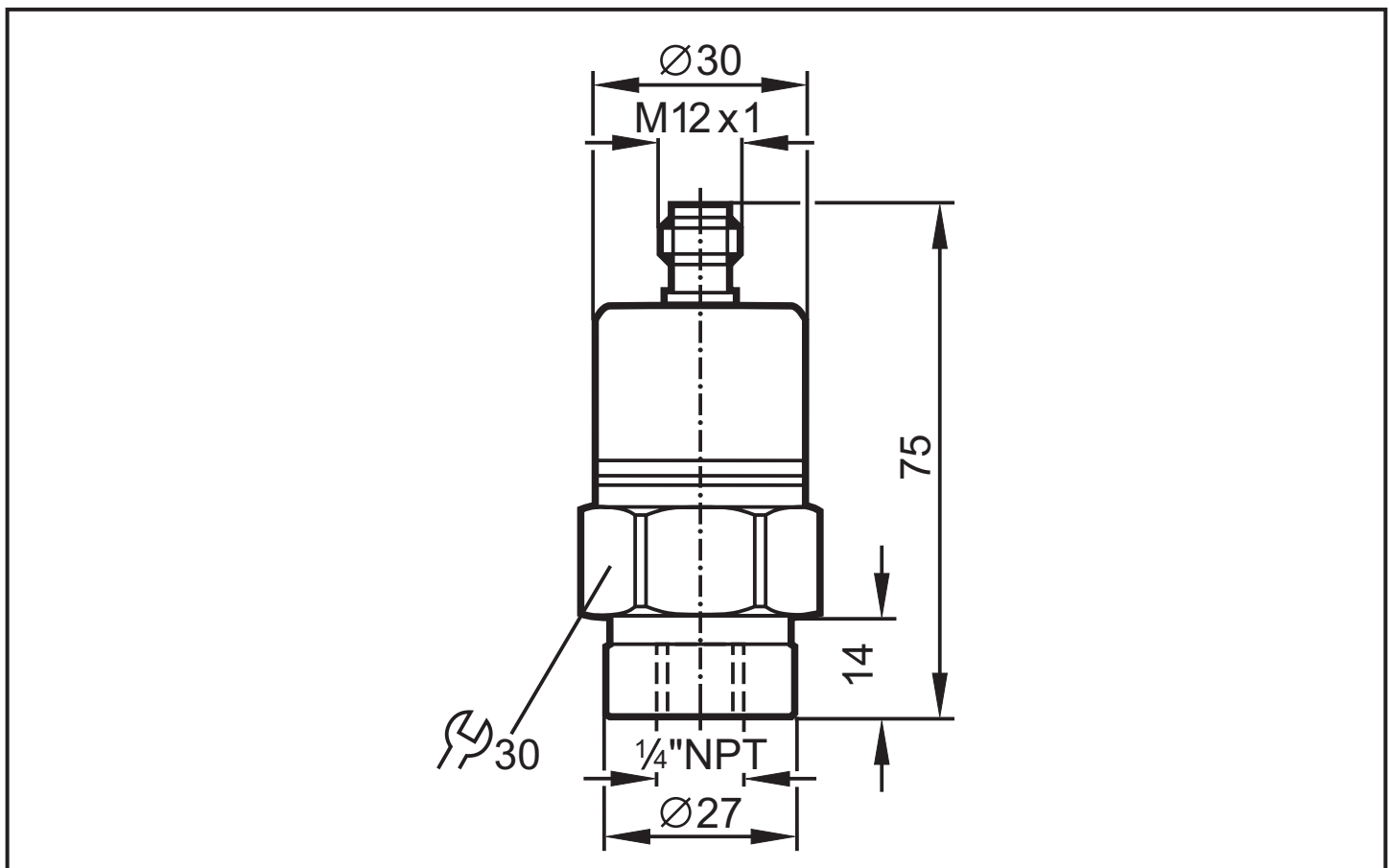


Core colours of ifm sockets:

1 = BN (brown), 2 = WH (white), 3 = BU (blue), 4 = BK (black),

n.c. = not connected.

## 5 Scale drawing



Dimensions are in millimeters

## 6 Technical data

Operating voltage [V].....	9,6 ... 32 DC <sup>1)</sup>
Analogue output .....	20 ... 4 mA
Load [ $\Omega$ ].....	max. (UB - 9.6) x 50; 720 at UB = 24 V
Step response time analogue output [ms].....	3
Characteristics deviation [%] .....	< $\pm$ 0.25 (BFSL) / < $\pm$ 0.5 (LS)
Repeatability [%].....	< 0.1
Long-term stability [% of value of measuring range / 6 months].....	< $\pm$ 0.05
Temperature coefficients (TEMPCO) in the compensated temperature range 0 ... 80°C (in% of the span/10K) <sup>2)</sup>	
- greatest TEMPCO of the zero point .....	0.1
- greatest TEMPCO of the span .....	0.2
Housing material.....	stainless steel (316S12); FPM (Viton); PA; EPDM/X (Santoprene)
Materials (wetted parts).....	stainless steel (303S22); ceramics; FPM (Viton)
Operating temperature [°C] .....	-25 ... +80
Medium temperature [°C] .....	-25 ... +90 <sup>2)</sup>
Storage temperature [°C].....	-40 ... +100
Protection .....	IP 65
Protection class .....	III
Insulation resistance [ $M\Omega$ ] .....	> 100 (500 V DC)
Shock resistance [g] .....	50 (DIN / IEC 68-2-27, 11 ms)
Vibration resistance [g] .....	20 (DIN / IEC 68-2-6, 10 - 2000 Hz)
EMC	
EN 61000-4-2 ESD:.....	4 kV CD / 8 kV AD
EN 61000-4-3 HF radiated: .....	30 V/m
EN 61000-4-4 Burst:.....	2 kV
EN 61000-4-6 HF conducted:.....	10 V
radiation of interference .....	according to the automotive directive 2004/104/EC / CISPR25
noise immunity.....	according to the automotive directive 2004/104/EC / ISO 11452-2
HF radiated.....	100 V/m
pulse resistance.....	according to ISO7637-2 / severity level 3

<sup>1)</sup> to EN50178, SELV, PELV

<sup>2)</sup> -40...90°C upon request

BFSL = Best Fit Straight Line / LS = Limit Value Setting

More information at [www.ifm.com](http://www.ifm.com)

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