

ES-21. ELECTRONIC SAFETY SWITCHING DEVICE FOR PRESSURE MONITORING

ES-21

Pressure limiter or pressure switch

Type-tested according to 2014/68/EU

- ✓ Simple and precise setting of switching thresholds, reset values and delay times
- ✓ Robust, industrial-suited and fail-safe design
- ✓ Integrated self-test functions
- ✓ Measured value and alarm indication on the display
- ✓ Comprehensive service functions, as well as data logging
- ✓ On-site operation on the unit and via smartphone



Technical data

Characteristics

Operating voltage	16...32 V DC (max. 3,1 W)
Dimensions	150 x 60 x 42 mm (L x W x H)
Housing	Anodised aluminium
Parts in contact with the medium	Stainless steel (relative pressure version)
Protection class	IP65

Operating conditions

Pressure type	Relative pressure Differential pressure
Media temperature	-40...+125 °C
Ambient temperature	-20...+65 °C

Process connection

Relative pressure version	G 1/4" internal thread
Differential pressure version	G 1/8" internal thread

Adapter available upon request

Electrical connections

Analogue current output	1 x 4...20 mA
Digital inputs/outputs	Configurable as 2 x alarm or 1 x alarm and 1 x remote unlocking

Load capacity of the switching contacts

DC1/DC13: 16 A (24 V)	AC1: 16 A
2 A (40 V)	AC3: 10 A
0.3 A (200 V)	AC16: 8 A

	Relative pressure	Differential pressure
Measuring range nominal pressure	-1...500 bar freely selectable	0...1 mbar 0...10 mbar 0...50 mbar 0...100 mbar 0...250 mbar 0...1,000 mbar
Overload pressure	2 x nominal pressure	10 x nominal pressure
Bursting pressure	4 x nominal pressure	15 x nominal pressure
Setting accuracy	0.1 % of nominal pressure	

Other measuring ranges available upon request

Possible applications

- ✓ Refrigeration systems and heat pumps
- ✓ Ventilation, heating and climate technology
- ✓ Filter and pump monitoring
- ✓ Hot water and steam boiler monitoring
- ✓ Process measurement technology
- ✓ Mechanical and plant engineering

Technical modifications reserved.

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ES-2.. ELECTRONIC SAFETY SWITCHING DEVICE FOR PRESSURE MONITORING

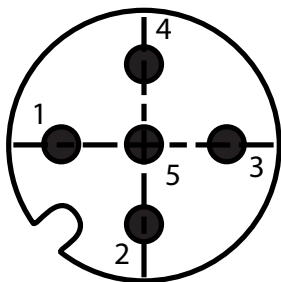
Wiring diagram of the cable sockets and connectors

Connector 1: 5-pin M12

A-coded

Pin assignment (male):

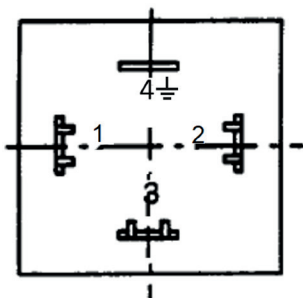
- 1: GND
- 2: 16...32 V DC (max. 3.2 W)
- 3: Digital I/O 1 (configurable)
- 4: Current output (4...20 mA)
- 5: Digital I/O 2 (configurable)



Connector 2: Rectangular connector, according to EN 175301 form A

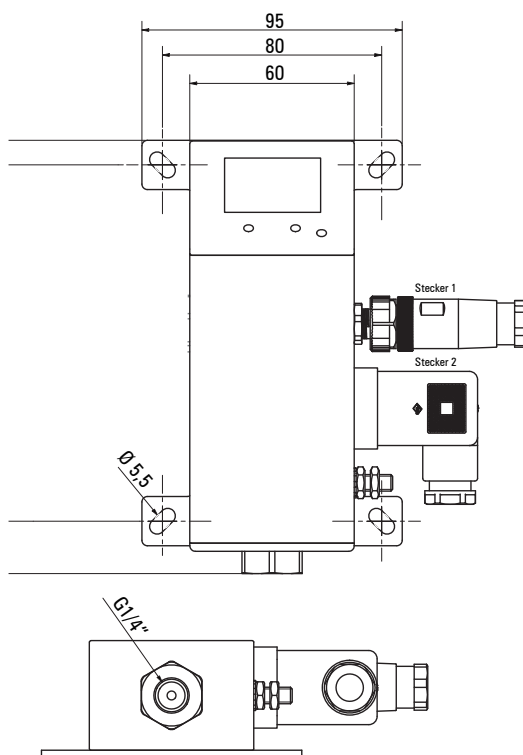
Pin assignment:

- 1 and 2: Switching channel
- 3 and 4: d.n.c. / do not connect



Attention Do not connect contact 4 to earth

Device design and dimensions



Model number

Basic designation

Measurand

D = Pressure

DD = Differential pressure

Safety function

A = DKW (pressure switch)

B = DBK (pressure limiter)

Direction of action

(H) = Rising/maximum

(L) = Falling/mimum

Measuring range

___ (in bar) = e.g. 60 for 60 bar

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Smartphone App



- ✓ Retrieval of setting and test protocols
- ✓ Comfortable setting of limit values & delay times
- ✓ Configuration of the device
- ✓ Management of multiple devices

More information: www.zila.de/es20

Test the app now!

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