

# ES-2.. 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

<b>DC 24 V:</b>	<b>AC 230 V:</b>
DC1: 16 A	AC1: 16 A
DC13: 1,5 A	AC3: 10 A
	AC15: 7 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

### Applied standards and approvals

- ✳ DIN EN 378
- ✓ DIN EN 12952-11
- ✓ DIN EN 61508:2010
- ✓ DGRL 2014/68/EU
- ✓ DIN EN 12953-9
- ✓ DIN EN 12263:1998

Technical modifications reserved.

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## Applications

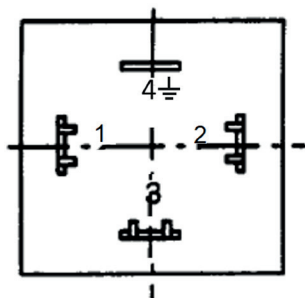
- ✓ Refrigeration systems and heat pumps
- ✓ Ventilation, heating and climate technology
- ✓ Filter and pump monitoring
- ✓ Hot water and steam boiler monitoring
- ✓ Process measurement technology
- ✓ Mechanical and plant engineering

## 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)

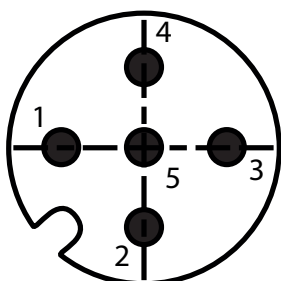


Attention Do not connect contact 4 to earth

### 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



## Smart Pressostat App

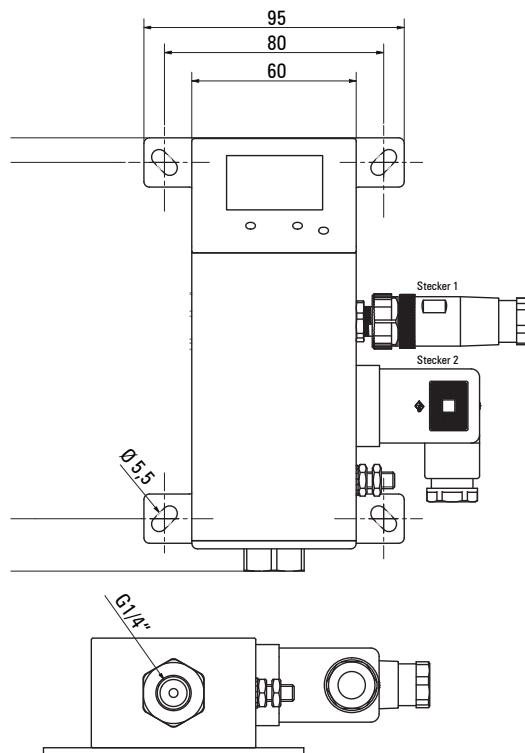


- ✓ Retrieval of settings- and test protocols
- ✓ Convenient setting of limit values & delay times
- ✓ Configuration of the device
- ✓ Management of multiple devices

More information: [www.fluidio.de/es2x](http://www.fluidio.de/es2x)



## 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/mimumum

#### Measuring range

\_\_ (in bar) = e.g. 60 for 60 bar

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