



## Pressure Switch

### EDS 810 for series applications

Relative pressure

Factory-set

Customised designs thanks to  
diverse electrical and mechanical  
connections  
Up to 2 switching outputs



### Description:

The electronic pressure switch EDS 810 has been specially developed for use in series applications.

The highly compact unit has a very robust pressure sensor with thin-film strain gauge.

All of the parts in contact with the fluid (sensor and pressure port) are made of stainless steel and are welded together. This means that there are no sealing points in the interior of the sensor. The risk of leakage has been eliminated.

The transistor output is available with either an N/C or a N/O function. The switch and switch-back point of the EDS 810 each are factory-set acc. to customer specification (not field-adjustable). Various pressure ranges between 0 and 40 bar and 0 and 600 bar are available.

Especially for the use in public traffic vehicles, EDS 810 has approval (approved for road vehicles) in accordance with ECE type approval.

### Technical data:

Input data								
Measuring ranges	bar	40	60	100	160	250	400	600
Overload pressures	bar	80	120	200	320	500	800	1000
Burst pressure	bar	200	300	500	800	1250	2000	2000
Mechanical connection				G1/4 A ISO 1179-2 7/16-20 UNF 2A 9/16-18 UNF 2A				
Tightening torque, recommended				15 Nm (7/16-20 UNF 2A) 20 Nm (G1/4 A ISO 1179-2, 9/16-18 UNF 2A)				
Parts in contact with fluid <sup>1)</sup>				Mech. connection: Stainless steel Seal: FKM				
Output data								
Switching output				- 1 PNP or 1 NPN transistor output - 2 PNP transistor outputs (only in conjunction with electrical connection M12x1, 4 pole, DT04-4p, DIN 72585-4p) Switching current: ≤ 500 mA per switching output Switching cycles: > 100 million Switch point/switch-back point: acc. to customer specification Switch-on and switch-off delay: 8 .. 2000 ms (standard 32 ms); factory-set acc. to customer specification				
Accuracy acc. to DIN 16086, terminal based				≤ ± 0.5 % FS typ. ≤ ± 1 % FS max.				
Temperature compensation, zero point				≤ ± 0.02 % FS / °C typ. ≤ ± 0.03 % FS / °C max.				
Temperature compensation, span				≤ ± 0.02 % FS / °C typ. ≤ ± 0.03 % FS / °C max.				
Repeatability				≤ 0.1 % FS max.				
Long-term drift				≤ ± 0.3 % FS typ. / year				
Environmental conditions								
Compensated temperature range				-25 .. +85 °C				
Operating temperature range <sup>2)</sup>				-40 .. +100 °C / -25 .. +100 °C				
Storage temperature range				-40 .. +100 °C				
Fluid temperature range <sup>2)</sup>				-40 .. +125 °C / -25 .. +125 °C				
CE mark				EN 61000-6-1 / 2 / 3 / 4				
cULus mark <sup>3)</sup>				Certificate no.: E318391				
(E) mark				E13*10R00*1DR03*3969*01				
Vibration resistance acc. to DIN EN 60068-2-6				≤ 25 g (at 5 .. 2000 Hz)				
Shock resistance acc. to DIN EN 60068-2-27				100 g / 6 ms / half-sine 500 g / 1 ms / half-sine				
Protection class <sup>4)</sup> acc. to DIN EN 60529 ISO 20653				IP 65, IP 67 IP 6K9K				
Other data								
Electrical connection				Various male connectors e.g. M12x1, Packard Metri Pack, Deutsch DT 04, AMP Superseal, AMP Junior Power Timer, jacketed cable				
Supply voltage when applied acc. to UL specifications				8 .. 36 V DC - limited energy - acc. to 9.3 UL 61010; Class 2; UL 1310/1585; LPS UL 60950				
Residual ripple of supply voltage				≤ 5 %				
Current consumption				1 PNP max. 0.52 A total / max. 20 mA with inactive switching output 2 PNP max. 1.02 A total / max. 20 mA with inactive switching outputs NPN max. 20 mA total				
Weight				~ 55 g				

Note: Reverse polarity protection of the supply voltage, overvoltage, overcurrent and short circuit protection are provided.

FS (Full Scale) = relative to complete measuring range

<sup>1)</sup> Other seal materials on request

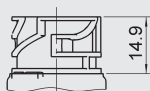
<sup>2)</sup> -25 °C with FKM seal, -40 °C on request

<sup>3)</sup> Environmental conditions acc. to 1.4.2 UL 61010-1; C22.2 No 61010-1

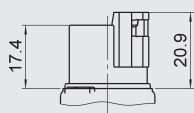
<sup>4)</sup> With mounted mating connector in corresponding protection class

## Dimensions:

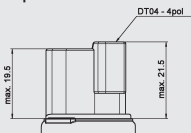
Male connector  
DIN 72585  
3 pole/4 pole



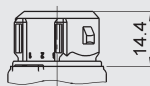
Male connector  
Deutsch DT 04  
3 pole



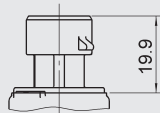
Male connector  
Deutsch DT 04  
4 pole



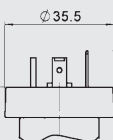
Male connector  
Junior Power Timer  
3 pole



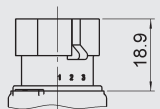
Male connector  
Metri-Pack series 150  
3 pole



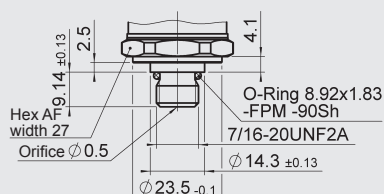
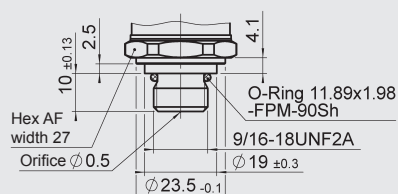
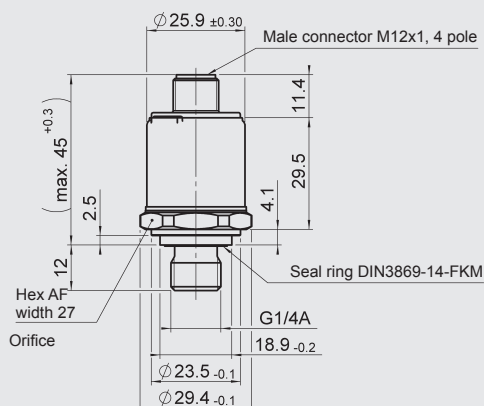
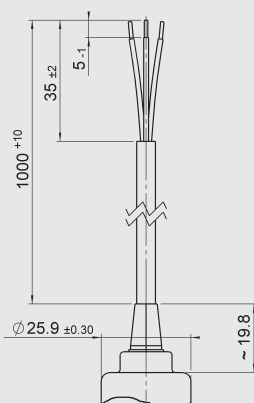
Male connector  
DIN EN175301-803  
3 pole



Male connector  
Superseal series 1.5  
3 pole



Jacketed cable



## Note:

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

## Order details:

The electronic pressure switch EDS 810 has been specially developed for OEM customers and is available for minimum order quantities of 500 units per type.

For precise specifications, please contact the Sales Department of HYDAC ELECTRONIC.