



## Electronic Pressure Switch EDS 810

### Description:

The electronic pressure switch EDS 810 has been specially developed for use in volume production machines.


The highly compact instrument is equipped with a very robust pressure sensor with thin-film strain gauge on a stainless steel membrane.

The transistor switching output is available with either N/C or N/O function.



The switching and switch-back point of the EDS 810 is factory-set according to customer specification (not field-adjustable).

Various pressure ranges between 0 .. 500 psi and 0 .. 9000 psi are available.

### Special features:

- Accuracy  $\leq \pm 0.5\%$  FS B.F.S.L.
- Outstanding performance in terms of temperature effect and EMC
- Very compact design
- ECE type approval  (approved for road vehicles)

### Technical data:

Input data	
Measuring ranges	500; 750; 1000; 1500; 3000; 6000; 9000 psi
Overload pressures	1160; 1740; 2900; 2900; 7250; 11600; 14500 psi
Burst pressures	2900; 4350; 7250; 7250; 14500; 29000; 29000 psi
Mechanical connection (Torque value)	SAE 4, 7/16-20 UNF 2A (11 lb-ft; 15 Nm) SAE 6, 9/16-18 UNF 2A (15 lb-ft; 20 Nm) G1/4 A DIN 3852 (15 lb-ft; 20 Nm) each with orifice 0.5 mm
Parts in contact with medium	Mech. conn.: Stainless steel Seal: FPM
Output data	
Switch output	Either: - 1 PNP or 1 NPN transistor switching output - 2 PNP transistor switching outputs (only in conjunction with electrical connection M12x1, 4 pole)
Switching direction	N/C / N/O function (according to customer specification)
Output load	$\leq 500$ mA per switching output
Switching points	according to customer specification
Switch-back points	according to customer specification
Accuracy to DIN 16086, Max. setting	$\leq \pm 0.5\%$ FS typ. $\leq \pm 1\%$ FS max.
Repeatability (at 13 °F)	$\leq \pm 0.1\%$ FS max.
Temperature drift	$\leq \pm 0.017\%$ FS / °F max. zero point $\leq \pm 0.017\%$ FS / °F max. range
Rising switch point and falling switch point delay	8 ms to 2000 ms (standard 32 ms); factory-set according to customer spec.
Long-term drift	$\leq \pm 0.3\%$ FS typ. / year
Environmental conditions	
Compensated temperature range	-13 .. +185 °F
Operating temperature range <sup>1)</sup>	-40 .. +212 °F / -13 .. +212 °F
Storage temperature range	-40 .. +212 °F
Fluid temperature range <sup>1)</sup>	-40 .. +257 °F / -13 .. +257 °F
 mark	EN 61000-6-1 / 2 / 3 / 4
 mark <sup>2)</sup>	Certificate No. E318391
Vibration resistance to DIN EN 60068-2-6 at 5 .. 2000 Hz	$\leq 25$ g
Shock resistance to DIN EN 60068-2-27	100 g / 6 ms / half sine 500 g / 1 ms / half sine
Protection class to IEC 60529 to ISO 20653	IP 65, IP 67 (depending on the electrical connection) IP 69 K (depending on the electrical connection)
Other data	
Electrical connection	M12x1, 4 pole AMP DIN 72585 code 1, 3 pole Packard Metri Pack series 150, 3 pole Deutsch DT 04, 3 pole AMP Superseal, 3 pole AMP Junior Power Timer, 3 pole Flying leads, 1 m cable length EN175301-803 (DIN 43650), 3 pole
Supply voltage for use acc. to UL spec.	8 .. 32 V DC - limited energy - according to 9.3 UL 61010; Class 2; UL 1310/1585; LPS UL 60950
Current consumption	1 PNP max. 0.52 A total/max. 20 mA with inactive switch output 2 PNP max. 1.02 A total/max. 20 mA with inactive switch outputs NPN max. 20 mA total
Residual ripple of supply voltage	$\leq 5\%$
Life expectancy	> 10 million cycles 0 .. 100 % FS
Weight	~ 55 g

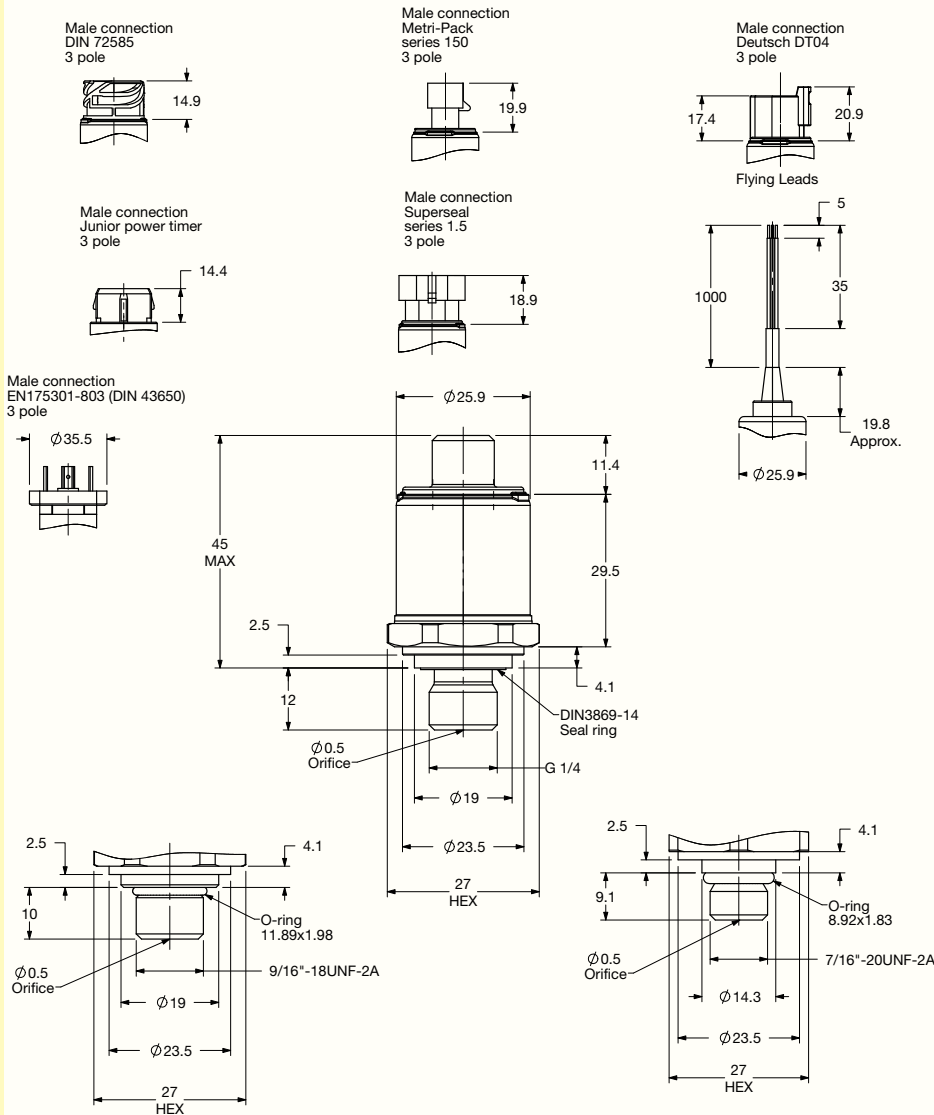
Note: Reverse polarity protection of the supply voltage, excess voltage, override, short-circuit protection are provided.

FS (Full Scale) = relative to the complete measurement range

<sup>1)</sup> -13 °F with FPM seal, -40 °F on request

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

## Dimensions:



## 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.

For bar ranges see European Catalog

## Order details:

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

## HYDAC ELECTRONICS

90 Southland Dr. Bethlehem, PA 18107  
Telephone: 610.266.0100  
E-mail: [electronics@hydacusa.com](mailto:electronics@hydacusa.com)  
Website: [www.hydac-na.com](http://www.hydac-na.com)