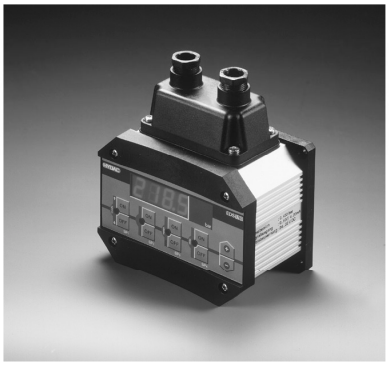
HYDAC INTERNATIONAL



Electronic Pressure Switch EDS 1700

Description:

With its integrated pressure measurement cell, 4-digit display and 4 switching outputs, the EDS 1700 offers the user all the advantages of a modern electronic pressure switch.
4 switching points and switch-back points can be adjusted very simply and independently of one another using the keypad.
For optimum integration in monitoring systems (e.g. with PLC), an analog output (4 .. 20 mA or 0 .. 10V) is also available.
The main areas of application of the EDS 1700 are in hydraulics and pneumatics. The instrument is ideal for use where frequent switching cycles (several million), stable switching point accuracy or simple and precise adjustability are required.

Special features:

- Integrated pressure sensor with strain gauge on stainless steel membrane
- Accuracy 0.25% or 0.5% FS B.F.S.L
- 4-digit digital display
- Simple operation via key programming
- 4 limit relays, switching points and switch back points can be adjusted independently
- Analog output signal selectable
- Many useful additional functions
- Optional mounting position (pressure connection on the top/ bottom, keypad and display can be turned through 180°)
- Can be set to display values in any unit of measurement e.g.: kN, kg, psi, ...

Technical data:

Input data		
Measuring ranges	232, 580, 1450, 3625, 5800, 8700 psi	
Overload pressures	464, 1160, 2900, 7250, 11600, 14500 psi	
Burst pressures	2900, 2900, 7250, 14500, 29000, 29000 psi	
Mechanical connection	Threaded port G1/4 DIN 3852	
Torque value	15 lb-ft (20Nm)	
Parts in contact with medium	Mech. connection: Stainless steel	
Output data		
Accuracy at min. setting (B.F.S.L.)	EDS 1700-P: ≤ ± 0.25% FS B.F.S.L. EDS 1700-N: ≤ ± 0.5% FS B.F.S.L.	
Repeatability	EDS 1700-P: ≤ ± 0.25 % FS max. EDS 1700-N: ≤ ± 0.5 % FS max.	
Temperature drift EDS 1700-P Temperature drift EDS 1700-N	≤ ± 0.012% FS°F max. zero point & range ≤ ± 0.017% FS°F max. zero point & range	
Analog output		
Signal (selectable)	4 .. 20 mA 0 .. 10 V	ohmic resistance ≤ 400Ω ohmic resistance ≥ 2 kΩ
Switch outputs		
Type	4 relays with change-over contacts (2 groups, common supply of each group connected)	
Switching voltage	0.1 .. 250 V AC / DC	
Switching current	0.009 .. 2 A per switch output	
Switching capacity	max. 50 W / 400 VA (for inductive load, use varistors)	
Switching cycles	20 million at minimum load 1 million at maximum load	
Reaction time	approx. 20 ms	
Environmental conditions		
Compensated temperature range	14..+158°F	
Operating temperature range	-13..+158°F	
Storage temperature range	-13..176°F	
Fluid temperature range	-13..176°F	
CE mark	EN 61000-6-1 / 2 / 3 / 4	
Vibration resistance to DIN EN 60068-2-6 (0 .. 500 Hz)	≤ 5 g	
Shock resistance to DIN EN 60068-2-29 (1 ms)	≤ 10 g	
Protection class to IEC 60529	IP 65	
Other data		
Supply voltage	22 .. 32 V DC	
Current consumption	approx. 200 mA	
Residual ripple of supply voltage	≤ 10 %	
Display	4-digit, LED, 7 segment, red, height of digits 13 mm	
Electrical connection	14-pole, terminal block	
Housing material	aluminium, anodized	
Weight	~ 800 g	

Note: Reverse polarity protection of the supply voltage, excess voltage, override and short circuit protection are provided.
FS (**F**ull **S**cale) = relative to complete measuring range

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Setting options:

The core of the unit is a microprocessor which provides many useful extra functions in addition to normal pressure switch operation. It is possible, for example, to activate switching delay times to prevent fast pressure peaks from triggering an unwanted switching cycle. All settings are made using the keypad.

Setting ranges of the switching points:

- Switching point relay 1 to 4:
  1.5 % .. 100 % FS
- Switch-back relay 1 to 4:
  1 % .. 99 % FS
  or alternatively
  switch-back hysteresis 1 to 4:
  1 % .. 99 % FS

Note: **FS** (**F**ull **S**cale) =
relative to the full measurement range

Additional setting options:

- Switching direction of the relays 1 to 4 (N/C or N/O)
- Switch-on delay relays 1 to 4 in the range 0.00 .. 90 seconds
- Switch-off delay relays 1 to 4 in the range 0.00 .. 90 seconds
- Switch-back mode (either switch-back point or switch-back hysteresis)
- Display of the actual pressure, a switching point or of the peak value
- Display filter (slow / medium / fast)
- Display range scale individually adaptable (bar, psi, user-selectable)
- Measurement unit (bar, psi) is displayed
- Analog output (4 .. 20 mA or 0 .. 10 V)
- Programming disable

Terminal assignment:

Pin	
1	$+U_B$
2	0 V
3	Analog output Signal +
4	Analog output Signal - (0 V)
5	Relay 1 N/C
6	Relay 1 N/O
7	Center relay 1 and 2
8	Relay 2 N/C
9	Relay 2 N/O
10	Relay 3 N/C
11	Relay 3 N/O
12	Center relay 3 and 4
13	Relay 4 N/C
14	Relay 4 N/O

Model code:

EDS 1 7 9 X – X – XXX – 000

Mechanical connection
9 = Threaded port G1/4 DIN 3852

Display
1 = 4-digit bar
2 = 4-digit psi

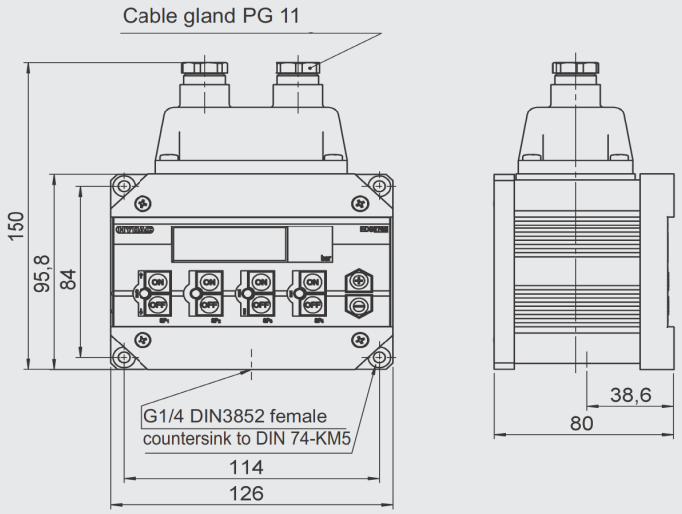
Accuracy
P = 0.5 %
N = 1 %

Pressure ranges in bar
016(232 psi), 040(580 psi), 100(1450 psi), 250(3625 psi), 400(5800 psi), 600(8700 psi)

Modification number
000 = Standard

Accessories:
Appropriate accessories, such as mechanical adapters etc. can be found in the Accessories brochure.

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.