Pressure Switch
EDS 820

Relative pressure | **Status display**

IO-Link

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Description:

IO-Link is the communication between the sensor/actuator (IO-Link device) and an IO-Link master based on a point-to-point interface. This technology has been integrated into the pressure switch series EDS 820.

The advantages:
Process data, parameters and diagnostic information of the pressure switch can be transmitted via a standard cable (SDCI mode). An integrated LED display provides information on the operating mode and the switching statuses.

Simple exchange – the IO-Link master saves the parameters of the connected pressure switch and transmits them to the newly connected pressure transmitter when replaced. Thus, time-consuming new parameterisations will no longer be required.

If IO-Link is not used, the sensor functions as a pressure switch with two switching outputs (SIO mode).

To create customer-specific small series or to duplicate sensor settings across the system, the sensor can also be easily adjusted outside the system to suit the particular application, with the HYDAC Programming Device HPG P1-000, the HYDAC Programming Adapter ZBE P1-000 or by means of the Portable Data Recorder HMG 4000.

Typical fields of application are machine tools, handling and assembly automation, intralogistics or the packaging industry.

Technical data:

Input data									
Measuring ranges	bar	16	25	40	60	100	250	400	600
Overload pressures	bar	32	50	80	120	200	500	800	1000
Burst pressure	bar	80	100	200	300	500	1250	2000	2000
Mechanical connection		G 1/4 A ISO 1179-2 with 0.5 mm orifice							
Tightening torque, recommended		20 Nm							
Parts in contact with fluid		Mech. connection: Stainless steel Seal: FKM							
Output data									
Switching outputs		PNP transistor outputs Switching current: max. 250 mA each switching output							
Accuracy acc. to DIN 16086, terminal based		≤ ± 0.5 % FS typ. ≤ ± 1.0 % 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.							
Reaction time		< 10 ms							
Long-term drift		≤ ± 0.3 % FS typ. / year							
Environmental conditions									
Compensated temperature range		-25 .. +85 °C							
Operating temperature range[1)]		-40 .. +85 °C / -25 .. +85 °C							
Storage temperature range		-40 .. +100 °C							
Fluid temperature range[1)]		-40 .. +125 °C / -25 .. +125 °C							
CE mark		EN 61000-6-1 / 2 / 3 / 4							
Vibration resistance acc. to DIN EN 60068-2-6 at 10 .. 500 Hz		≤ 25 g							
Shock resistance acc. to DIN EN 60068-2-27 (11 ms)		≤ 50 g							
Protection class acc. to DIN EN 60529[3)]		IP 67							
IO-Link specific data									
IO-Link revision		V1.1 / support V1.0							
Transmission rate, baud rate[2)]		38.4 kBaud (COM2)							
Minimum cycle time		2.5 ms							
Process data width		16 bit							
SIO mode supported		Yes							
M-sequence capability		PREOPERATE = TYPE_0 OPERATE = TYPE_2_2 ISDU supported							
IO Device Description (IODD) download at: https://ioddfinder.io-link.com/#/									
Other data									
Supply voltage		10 .. 32 V DC							
Residual ripple of supply voltage		≤ 5 %							
Power consumption		≤ 1 W without active outputs							
Weight		~ 65 g							

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

[1)] -25 °C with FKM seal, -40 °C on request
[2)] Connection with unshielded standard sensor line possible up to a maximum line length of 20 m.
[3)] With mounted mating connector in corresponding protection class

Setting options:

The EDS 820 IO-Link has 2 switching outputs whose switching characteristics are parameterisable.

Setting ranges for the switching outputs:

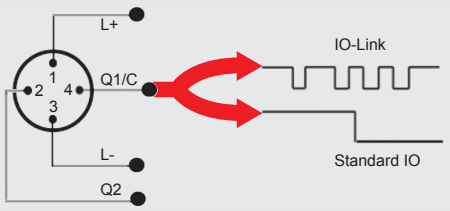
Measuring range in bar	Lower limit of RP / FL in bar	Upper limit of SP / FH in bar
0 .. 16	0.15	16.00
0 .. 25	0.25	25.00
0 .. 40	0.4	40.0
0 .. 100	1.0	100.0
0 .. 250	2.5	250.0
0 .. 400	4	400
0 .. 600	6	600

Measuring range in bar	Min. difference betw. RP and SP & FL and FH	Incre-ment* in bar
0 .. 16	0.15	0.05
0 .. 25	0.25	0.05
0 .. 40	0.4	0.1
0 .. 100	1.0	0.2
0 .. 250	2.5	0.5
0 .. 400	4	1
0 .. 600	6	1

* All ranges given in the table can be adjusted by the increments shown.
SP = switch point
RP = switch-back point
FL = pressure window lower value
FH = pressure window upper value

Pin connections:

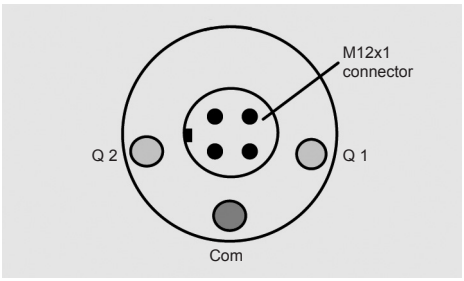
M12x1, 4 pole



Pin	Signal	Description
1	L+	$+U_B$
2	Q2	Switching output (SP2)
3	L-	0 V
4	Q1/C	IO-Link communication / switching output (SP1)

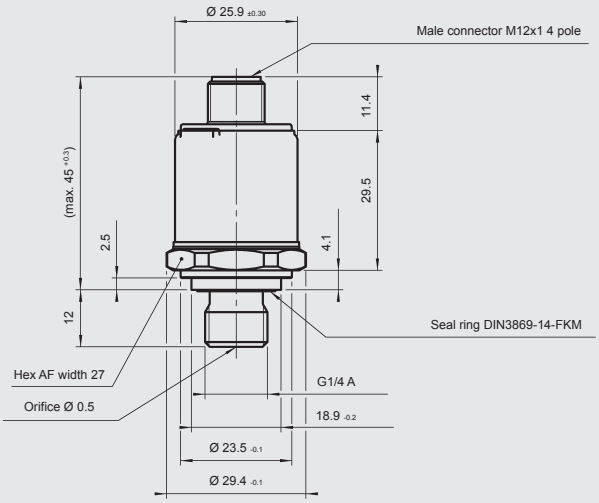
Status LEDs:

The pressure switch provides three status LEDs at the electrical connection:



LED 1 (Q 1)	Yellow	Switching output 1 active (high)
LED 2 (Q 2)	Yellow	Switching output 2 active (high)
LED 3 (Com)	Green, continuous	Switch in SIO mode
	Green, flashing	Switch in IO-Link mode (SDCI)

Dimensions:



Model code:

EDS 8 2 4 – F31 – XXXX – 000

Mechanical connection
4 = G 1/4 A ISO 1179-2

Output
F31 = IO-Link interface

Measuring ranges in bar
0016; 0025; 0040; 0060; 0100; 0250; 0400; 0600

Modification number
000 = standard

Accessories:
Appropriate accessories, such as mating connectors and programming units, can be found in the Accessories brochure.

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.

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