

Electronic pressure switch with integrated analogue output

RE 30276/03.14
Replaces: 03.06
RE 30275

1/6

Type HEDE 10.../1/

Component series 2X



tb0002

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Features

- Suitable for measuring pressures and converting the measured values into electrical signal variables in hydraulic systems
- EMC properties allow the use of this pressure switch also in critical applications
- Ceramic / capacitive sensor
- Connecting cable with 4-pin M12 plug on housing
- Accuracy class 1.0
- Connection thread G1/4
- Parts in contact with media are made of stainless steel, ceramic and FKM
- Compact design
- One switching output and one analogue output

Ordering code

HED		E	10	A1	2X	K41	G24	1	V	*
Hydraulic electrical pressure switch										Further details in clear text
Integrated electronics		= E							V =	FKM seals
Component type			= 10							 Caution!
Hydraulic interface 1/4"				= A1						Observe compatibility of seals with hydraulic fluid used!
Component series					= 2X				1 =	One switching and one analogue output
Pressure stages										
100 bar					= 100					
250 bar					= 250					
400 bar					= 400					
600 bar					= 600					
						K41 =				Supply voltage
							G 24 =			Plug variant
										M12, 4-pin as standard

Technical data (for applications outside these parameters, please consult us!)

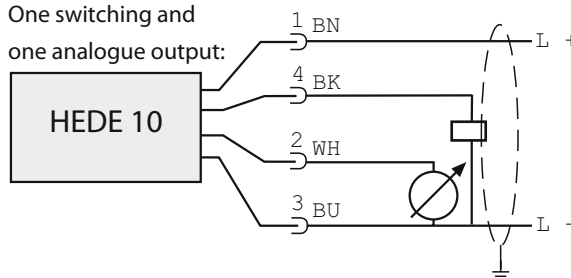
Input variables					
Auxiliary energy	U_O	18 to 36 VDC			
Current consumption	I	< 50 mA			
Measuring range	p_N in bar	100	250	400	600
Overload safety	p_{max} in bar	300	400	600	800
Burst pressure	p in bar	650	850	1000	1200
Output variables					
Analogue output	U	0 to 10 VDC minimum load 2000 Ω			
	I	4 – 20 mA (max. load ($U_O - 10$) x 50 Ω)			
	Rise time (10 to 90 %)	t	3 ms		
Switching output	Current carrying capacity	I	250 mA		
	Response time	t	< 3 ms (with response time set to dAP = 3)		
	Max. switching frequency	f	170 Hz (at dAP = 3)		
Characteristic curve deviation: (initial point setting according to DIN16086)		< ± 0.5 %			
Temperature coefficient within nominal temperature range – Highest TC of zero point – Highest TC of span		0.2 % / 10 k 0.2 % / 10 k			
Hysteresis		< ± 0.1 %			
Repeatability		0.1 %			
Long-term drift under reference conditions (6 months)		0.05 %			
Ambient conditions					
Limit temperature range		–20 to +80 °C			
Storage temperature range		–40 to +100 °C			
Medium temperature range		–25 to +80 °C			
Mechanical data					
Pressure port		G1/4			
Electrical connection		M12 plug-in connection			

Technical data (continued)

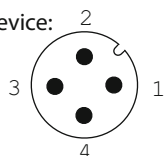
Programming options		Hysteresis / window; normally open / normally closed; pick-up, drop-out delay; attenuation; display unit / analogue output: voltage or current			
Pressure stages		100	250	400	600
Switching point SP	bar	1.0 ... 100	2 ... 250	4 ... 400	6 ... 600
Release position, rP	bar	0.5 ... 99.5	1 ... 249	2 ... 398	3 ... 597
In increments of	bar	0.5	1	2	3
Adjustable response time of a switching output and resulting switching frequency	Response time (dAP) ms	3 ... 500			
	Hz	170 ... 1			
Adjustable delay time dS, dr	s	0.0; 0.2 ... 50.0			
Environmental compatibility					
Type of protection / housing to IEC 60529		IP67			
Class of protection EN 50178		III			
Insulation resistance	MΩ	> 100 (500 VDC)			
Resistance to shock to IEC 60068-2-27	g	50 g, 11 ms			
Resistance to vibration to IEC 60068-2-6	g	20 g, 10 ... 2000 Hz			
Switching cycles min.		100 million / 50 million with pressure stage 600 bar			
Approval		cULus			
EMC	EN 61000-4-2 ESD	4 / 8 kV			
	EN 61000-4-3 HF radiated	10 V/m			
	EN 61000-4-4 burst	2 kV			
	EN 61000-4-5 surge	0.5 / 1 kV			
	EN 61000-4-6 HF cable-bound	10 V			
Housing material		EPDM/X (Santoprene); FKM; PBTP (Pocan); PC (Macrolon); V2A (1.4301)			
Materials in contact with the medium		V2A (1.4305); ceramic; FKM			
Connection		M12 plug-in connection, gold-plated contacts			

Pin assignment K41

One switching and one analogue output:

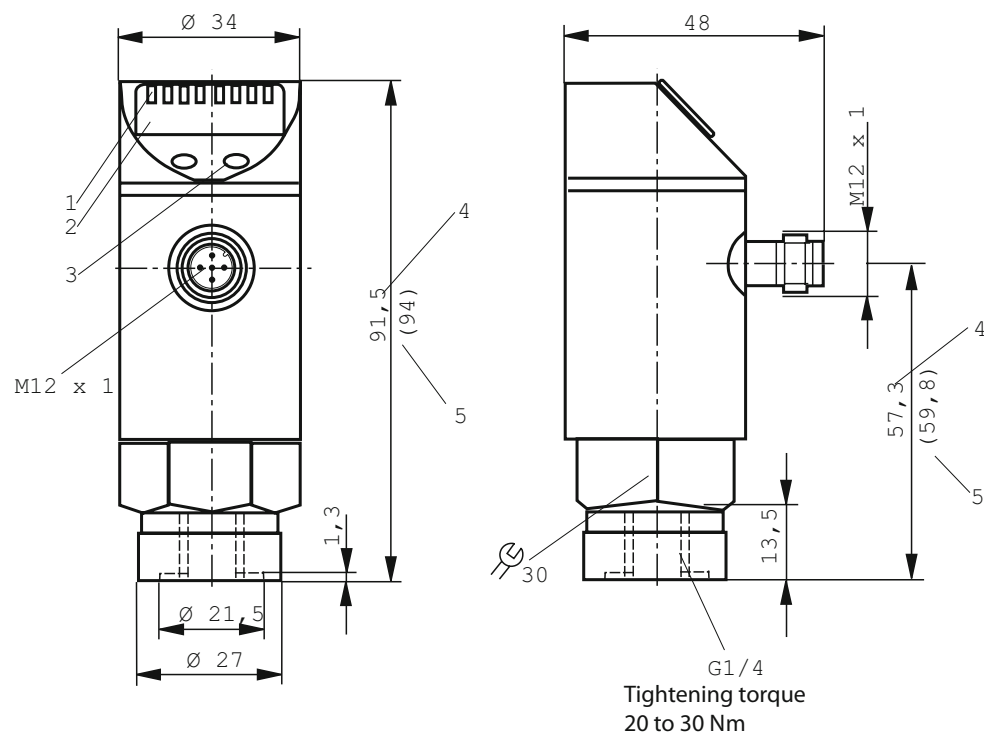


Detail of plug on the device:



1	BN	Brown
2	WH	White
3	BU	Blue
4	BK	Black

Unit dimensions (nominal dimensions in mm)

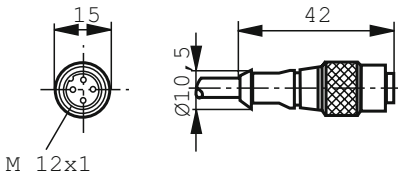
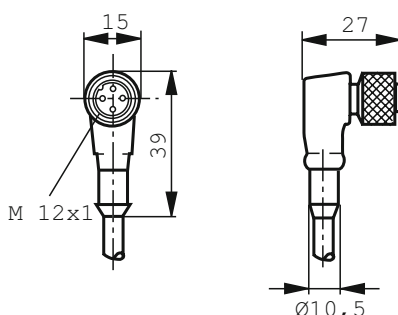
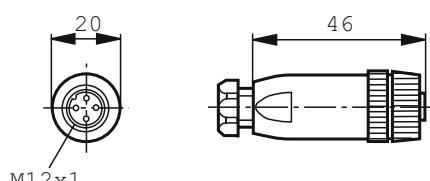
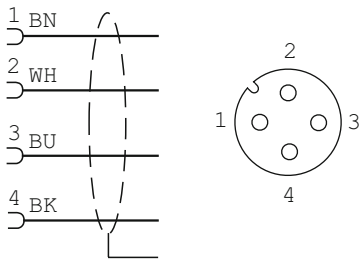
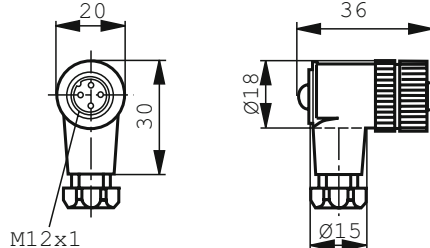


- 1 Status LEDs
- 2 4-digit alphanumerical display
- 3 Programming key
- 4 Dimension for pressure stage 100 bar and 250 bar
- 5 Dimension for pressure stage 400 bar and 600 bar

Recommended installation:
Vibration-free installation!

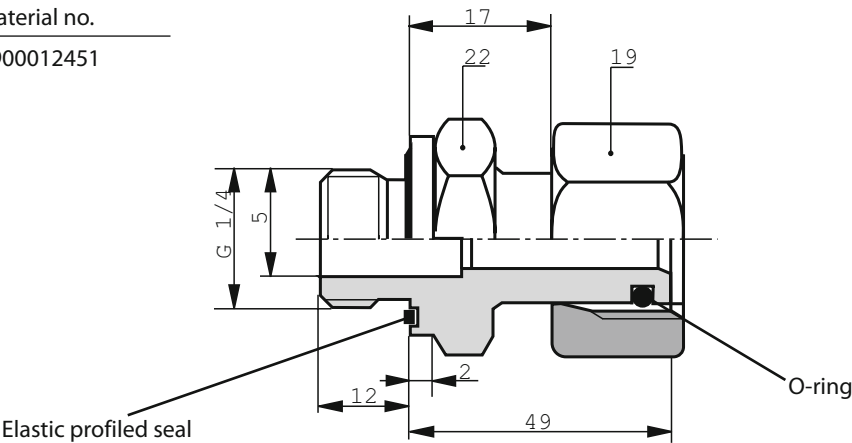
Accessories

Cable sockets:

Technical data:			Designation	Material no.
Current carrying capacity	4 A		04 POL (with 2 m cable)	R900773031
Temperature range	−25...90 °C		04 POL (with 5 m cable)	R900779498
Type of protection	IP 67			
Contacts	CuZn			
Contact surface	Gold-plated			
Housing	TPU			
Seal	FKM		04 POL (with 2 m cable)	R900779504
Fitting	CuZn/Ni		04 POL (with 5 m cable)	R900779503
Wire cross-section	4 x 0,34 mm			
Sheath material	PUR			
Shield	Not connected on plug side			
Sheath diameter	Ø 5.0 mm		04 POL (without cable) ¹⁾	R900773042
Sheath colour	Black			
Bending radius for dyn. application	min. 50 mm			
Connection: 			04 POL (without cable) ¹⁾	R900779509
				
			¹⁾ Type of protection IP68	

Hydraulic fitting:

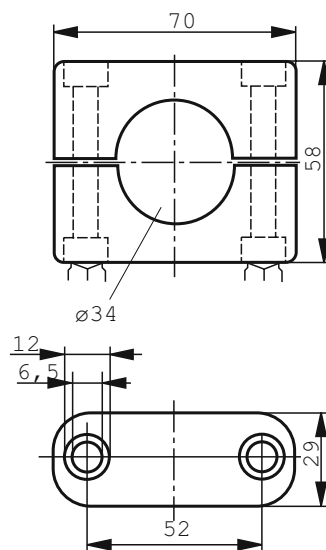
Designation	Material no.
AB 20-28	R900012451



Accessories (continued)

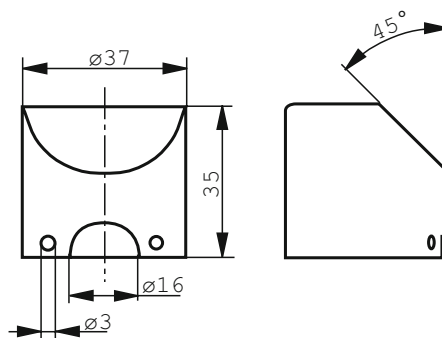
Mounting clamp for HEDE 10

Designation	Material no.
Mounting clamp	R900786138



Protective cap for HEDE 10

Designation	Material no.
Protective cap M12	R900786141



Notes

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Notes
