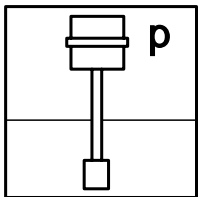


Hydrostatic pressure sensor



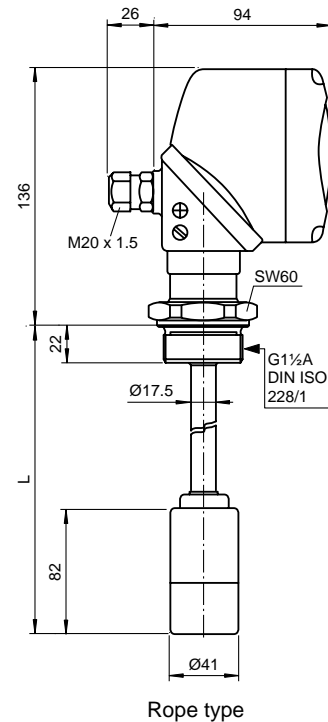
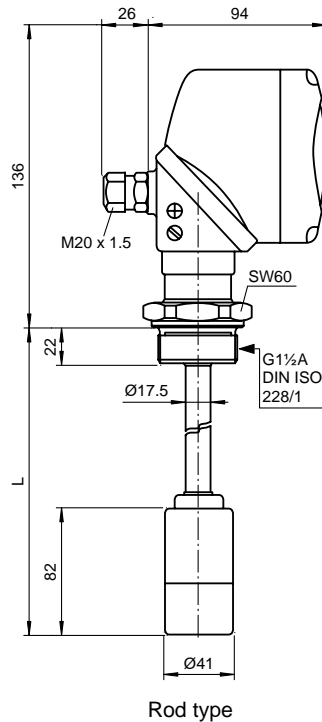
BARCON LHC



Features

- Continuous, hydrostatic level control in liquids, pastes and muds
- 2-wire transmitter
- Sensor can be used in Ex zone 0
- Easiest on-site calibration with push buttons
- Menu-driven display for indication and parameterisation of a wide functionality
- 32 point vessel linearisation
- Designed as externally mounted type, rod type and rope type
- Convertible, compact housing
- Extremely high piezoresistive, overload resistant and long-term stable measurement cell
- Parameterisation via HART communication

Dimensions

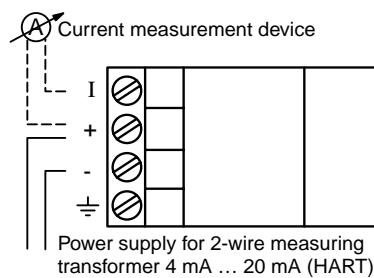


Function

The pressure transducer is designed as externally mounted type, rod type or rope type and has a fully welded piezoresistive measurement cell. The level in various liquid or paste-like media is measured via conversion of the hydrostatic pressure which develops at the measurement point.

The voltage and temperature compensated measuring transducer guarantees an accuracy of the output signal higher than 0.2 % of the measurement range as well as the highest linearity and measurement value stability.

Electrical connection



	BARCON LHC		
Application			
Description	device for relative and absolute pressure measurement in gases, vapours and liquids		
Function and system design			
Equipment architecture	<ul style="list-style-type: none"> Ex version: a measuring system consists of LHC and a transmitter power supply, e. g. KFD2-STC4-Ex1 (1 channel) or KFD2-STC4-Ex2 (2 channel) Non-Ex version: a measuring system consists of LHC and a transmitter power supply, e. g. KFD2-CRG-1.D 		
Input characteristics			
Measuring range		overload limit	bursting limit
	0 ... 0.4 bar	2 bar	2 bar
	0 ... 1.6 bar	10 bar	10 bar
	0 ... 6 bar	35 bar	35 bar
	0 ... 16 bar	80 bar	80 bar
	adjustment of the measuring span: 1:20 (Turndown) zero point adjustment: 0 ... 99 %		
Measuring conditions	measurement frequency: 100 Hz, 10 Hz for Ex		
Output characteristics			
Output signal	2-wire 4 ... 20 mA (max. load: $(U_B - 12 V)/23 mA$) optionally with overvoltage protection		
Integration time	0 ... 40 s, adjustable		
Auxiliary energy			
Electrical connection	observe the installation criteria to EN 60079-14, the terminal voltage must not exceed 36 V (30 V for Ex devices)		
Supply voltage	30 V DC		
Power consumption	T5/T6: 697 mW T4: 750 mW		
Current consumption	T5/T6: 93 mA T4: 100 mA		
Connectable load	$C_i = < 9 nF, L_i = \text{negligible}$		
Performance characteristics			
Accuracy	< 0.2 % of measuring range < 0.1 %/10 K temperature influence < 0.1 %/year long-time drift		
Operating conditions			
Ambient conditions			
Ambient temperature	-40 ... +85 °C (233 ... 358 K), Non-Ex -40 ... +60 °C (233 ... 333 K), T6 -40 ... +70 °C (233 ... 343 K), T4		
Protection class	DIN EN 60529, IP65		
Process conditions			
Medium temperature	-30 ... +100 °C (243 ... 373 K) for silicone oil -10 ... +100 °C (263 ... 373 K) for vegetable oil		
Cleaning temperature	max. 120 °C (393 K) (10 min)		
Mechanical construction			
Design	convertible housing, with view direction to top or front		
Versions	<ul style="list-style-type: none"> LHCR1DR2-G5S1-EMPI2D, rod version with display LHCR1DR2-G5S1-EMPI2B, rod version without display LHCS1DR2-G5S1-EMPI2D-Ex, rope version with display EEx ia version 		
Dimensions	rod version: length L max. 3 m (10 ft) rope version: length L max. 20 m (66 ft)		
Material	<ul style="list-style-type: none"> housing: plastic PBT, glass-fibre-reinforced process connection: stainless steel 1.4571 wetted parts: stainless steel 1.4571, Hastelloy C4 (diaphragm only) 		
Connection	cable gland 2 x M20 x 1.5, inside terminal block		
Indication and operation			
Display elements	LCD-display, installable at a later date		
Operating elements	The calibration of zero point and span is easily performed via the integrated programming keys and can be performed when completely fitted as well as when dismounted. In case of versions with display (optionally) the calibration as well as the complete parameterisation of a wide functionality (such as tank linearisation, alarm setting, service functions, temperature display, minimum/maximum value display etc.) can be performed via the display as well as the programming keys. The clearance of the push buttons for programming is performed by pressing the two keys ok + esc (2 s). For the exact procedure of calibration, please refer to the instructions.		

Date of issue 09/24/03

	BARCON LHC	
Certificates and approvals		
Ex approval	DMT 99 ATEX E070	
Type of protection	⊕ ATEX II 1/2 G EEx ia IIC T4/T6	
General information		
Directive conformity		
Directive 94/9/EC (ATEX)	approval	standards
	DMT 99 ATEX E070, ⊕ II 1/2 G EEx ia IIC T4/T6	EN 50014, EN 50020, EN 50281
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity and instructions have to be observed. This information can be found under www.pepperl-fuchs.com .	

Type code/model number

L H C - - - R 2 - - - - E M - - - - E X

- Approvals**
EX ⊕ ATEX II 1/2 G EEx ia IIC T4/T6
- Display**
B basic version without display
D display version
- Electronical output**
I2 2-wire, 4 mA ... 20 mA
2L 2-wire, 4 mA ... 20 mA with OV protection
IH 2-wire, 4 mA ... 20 mA, HART
HL 2-wire, 4 mA ... 20 mA, HART with OV protection
PA PROFIBUS PA
PL PROFIBUS PA with OV protection
- Housing and cable entry**
P plastic housing with cable entry M20 x 1.5
- Sensor filling media**
1 standard filling
2 filling for food application
- Media touching materials**
S stainless steel 1.4571
H Hastelloy C4 (diaphragm only)
- Process connection**
G5 G1½A with flush mounted diaphragm, stainless steel 1.4571
N5 1½ NPT with flush mounted diaphragm, stainless steel 1.4571
M4 sanitary coupling DN40
T2 Triclamp 2"
F1 flange DN50 PN40
A2 flange ANSI 2", 150 psi
- Pressure type/accuracy**
R2 accuracy < 0.2 %
- Pressure measurement range**
1D 0 bar ... 0.4 bar
2B 0 bar ... 1.6 bar
2E 0 bar ... 6 bar
3B 0 bar ... 16 bar
SX special range (default settings in acc. with customer specifications)
- Version**
R rod version (extension acc. to the specification, max. 3 m (10 ft))
S rope version (extension acc. to the specification, max. 20 m (66 ft))