

LED on-site indication, programmable

Müller Industrie-Elektronik CULO-L CL

Type series PH1520



Features

- LED on-site indication suitable for stainless steel field housing Ø 60 mm
- Display: LED with 7-segments, 8 mm high
- Input: 4...20 mA, current loop
- Display range: -999...9999, freely adjustable
- With 3 keys programmable
- Minimum/Maximum memory
- Digit (°C / °F, bar, mbar, . . .)
- Encapsulated electronics

Options

- Explosion protection

Application

The LED on-site indication is for use in the whole range of measurement technics where the standard signal of 4..20 mA is available. The display can be adjusted continuously, ensuring good readability of the 7-segment LED display from any viewing angle. The 3-button control panel makes it easy to assign display parameters.

Techn. Data

Case design

stainless steel with thread M52x1
suitable for LABOM field housing Ø 60 mm
case: material stainless steel
window: Macrolon
degree of protection: IP 67

Input

4...20 mA, $R_i < 160 \text{ Ohm}$ ($U < 3.2 \text{ V}$)

Accuracy

resolution
· -999...+9999 digit
· $\pm 0.2 \%$ of measuring range
 ± 1 digit
temperature drift: 100 ppm/K

Indication

red LED with 7-segments, 8 mm high
4 digits = indication 9999
overflow/underflow
to HI/to LO
indication time:
0,1s - 1s - 10s (adjustable)
el. connection:
with plug-in connector up to 1.5 mm²
display continuously adjustable

Ambient conditions

operating temperature 0...+60 °C
storage temperature -20...+80 °C

Programmable features

- range of indication
 - indication time
 - unit (inscription as in writing)
 - C, F
 - bar, mbar
- others upon request

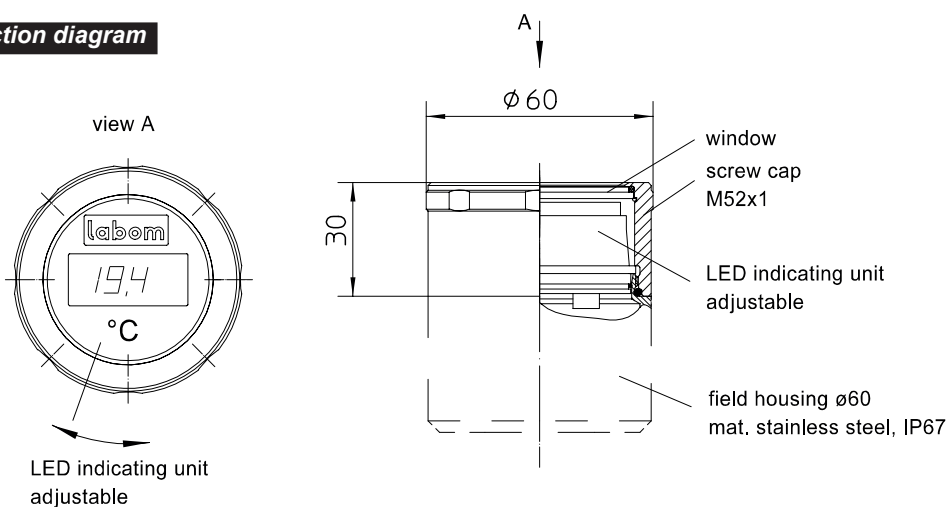
Ex-protection

Müller Industrie-Elektronik CULO-L,
Type series CL1
CSANe 22ATEX1155X
Ⓔ II 1G Ex ia IIC T6 Ga

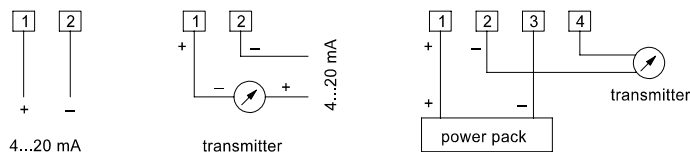
Design

The LED on-site indication is suitable for
all LABOM field housings Ø 60 mm.

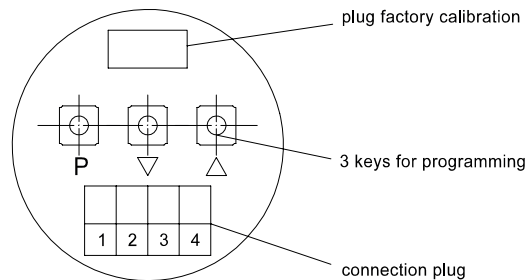
Connection diagram



Connection diagram



Operating



Program table for programming the indicator

P	description	range	factory set ¹
0	Calibration mode 0 = sensor calibration (one calibration point can be set) 1 = programming of indication (4/20 mA)	0/1	1
1	Final value (Programming indicated value at 20 mA, e.g. 600)	-999...9999	250
2	Initial value (Programming indicated value at 4 mA, e.g. 100)	-999...9999	0
3	Selection of decimal point or unit (Programming a unit the indication in the display shifts to the left)	0 0.0 0.00 0.000	°C
4	Indication and reading rate in seconds	0,5...10,0	1,0
5	Offset base characteristic (the ± range where 0000 is indicated)	0...100	1
50	Locking of programming (activating/deactivating locking function for programming)	0000...9999	0000
51	Releasing code (definition of release code for the programming locking function under PN50)	0000...9999	0000
100	Number of calibration setpoints (calibration points for sensor calibration only, calibration points reduce the measuring rate)	0...30	0
101...130	Calibration points	-999...9999	0

¹ at factory setting

Programming of indication

1. Connect the instrument according to the wiring diagram.
2. Switch power of the current loop on (current between 4...20 mA). This is followed by an initialisation and a segment test with subsequent switching of the operation mode.
3. Press the key **P**, indication of program number **P 0**
4. Change the program number by simultaneous pressing of **P** and **▲**-key or **P** and **▼**-key.
5. With the desired program number being chosen, go to the allocated value by pressing the **P**-key.
6. Short pressing of **P** results in a change of digit. The value of the chosen digit is changed by pressing the **▲** or **▼**.
7. Storing of the new settings is effected by pressing the **P** for approx. 2 sec. This procedure is acknowledged by transversal bars in the display.
8. If no other key is actuated, the unit switches to its operation mode after seven seconds.

Additional key functions in standard mode for indication of min/max values

The key **▲** serves for indicating the value of the Max memory in the display for some seconds.
The key **▼** serves for indicating the value of the Min memory in the display for some seconds.
Simultaneous pressing of the **▲** and **▼** keys erases the value of the memory shown in the display.

Order Details

- please give additional specifications for models not listed -

LED on-site indication Müller Industrie-Elektronik CULO-L CL		PH1520			
case design	suitable for field housing Ø 60 mm			A1	
programming of indication	not adjusted, without unit on label				F11
	adjusted (please indicate)				
	initial value				
	final value				
	indication time	standard 1s (0,1s - 1s - 10s)			F12
	display unit	°C or °F bar or mbar without others upon request			
Additional features (to be indicated if required)					
Ex-proof design (Müller Industrie-Elektronik CULO-L CL1)	Ex II 1G Ex ia IIC T6 Ga; CSANe 22ATEX1155X				S109
order code (example):		PH1520	A1	F11	