



Display and control unit Multitronik

Multifunctional device for displaying and controlling various measurements measured variables such as level, temperature, and pressure

Main controllers do not process all parameters recorded for monitoring hydraulic systems and oil supply systems. There are a number of systems which are monitored and controlled as autonomous units.

The necessary monitoring tools are often installed throughout the entire system and quite difficult for operating and service personnel to read.

The easyMont mounting system is a cost-effective and easy option for installing Multitronik display and control units on conventional rails in visible locations. The universal menu structure ensures devices can very quickly be configured to all parameters common in hydraulics and lubrication, such as pressure, temperature, humidity, etc., and to link these with other system components.

Compact design

Easy to read LED display with switching output statuses

Virtually any cable length between measuring point and display

Programmable for units such as cm, inch, °C, °F, bar or psi

Up to 6 programmable switching outputs

Alternative analogue output (configurable to current or voltage) plus 1, 2 or 4 programmable switching outputs

Switching output configurable as frequency output (1-100 Hz)

Switching outputs characteristics configurable as window or hysteresis

Standard menu structure based on VDMA standard sheet 24574 ff.

Min/Max memory. Logbook function



Multitronik Technical Data

Version

Housing material PA

Mount 35 mm (1.38 inch) top-hat rail mounting

Weight approx. 100 g (0.2 lb)

Degree of protection IP65

Analysis/display electronics

Display 4 character 7 segment LED

Operation Via 3 keys

Memory Min. / Max. Data memory

Starting current input approx. 100 mA for 100 ms

Current input during operation approx. 50 mA (without current- and switching outputs)

Supply voltage (U_B) 10 – 30 V DC (nominal voltage 24 V DC)

Ambient temperature -20 °C to +70 °C (-4 °F to 158 °F)

Display units Level Temperature

% , cm , L , i , Gal °C / °F

Display range adjustable -20 °C to +120 °C (-4 °F to 248 °F)

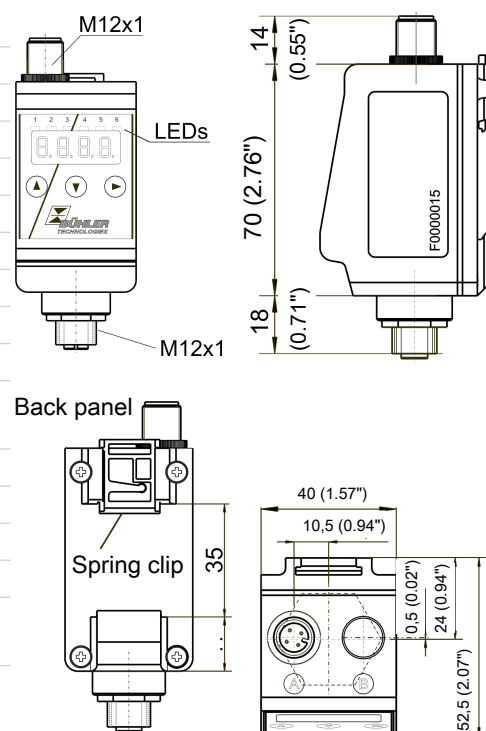
Alarm setting range e.g. 0 – 100 % 0 °C to 100 °C (32 °F to 212 °F)

Display accuracy ± 1 % from end value ± 1 % from end value

Input values

Display units b (bar), P (psi), °C, °F, L (litre) as well as various other letters and symbols to choose from

Input signal -4 – 20 mA


Optional switching outputs

	-1D1S	-2S	-4S	-6S
Plug (base)	1 x M12 – 4-pin	1 x M12 – 4-pin	1 x M12 – 8-pin	1 x M12 – 8-pin
Switching outputs	IO-Link and 1x freely programmable (set to level or temperature)	2 x freely programmable*	4 x freely programmable*	6 x freely programmable*
Alarm memory	with 1 x assignable to alarm logbook	with 1 x assignable to alarm logbook	with 1 x assignable to alarm logbook	with 1 x assignable to alarm logbook
Contact load	max. 1 A total (output 1 max 0.2 A)			
*also programmable as frequency output				

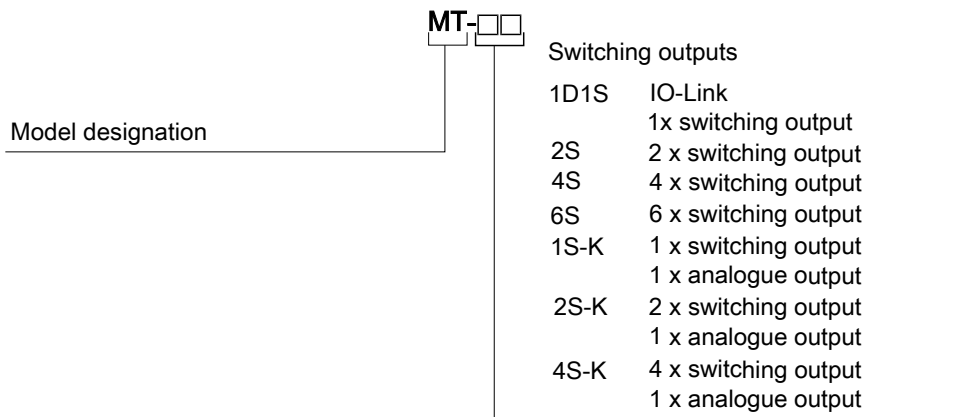
	-1S-K	-2S-K	-4S-K
Plug (base)	1 x M12 – 4-pin	1 x M12 – 5-pin	1 x M12 – 8-pin
Switching outputs	1 x freely programmable	2 x freely programmable	4 x freely programmable
Alarm memory	with 1 x assignable to alarm logbook	with 1 x assignable to alarm logbook	with 1 x assignable to alarm logbook
Contact load	max. 1 A total (output 1 max 0.2 A)		
*also programmable as frequency output			

Analogue outputs

Programmable as	1 x 4 – 20 mA, 2 – 10 V DC, 0 – 10 V DC, 0 – 5 V DC	1 x 4 – 20 mA, 2 – 10 V DC, 0 – 10 V DC, 0 – 5 V DC	1 x 4 – 20 mA, 2 – 10 V DC, 0 – 10 V DC, 0 – 5 V DC
Max. load Ω as current output	$(U_B - 8V) / 0.02 A$	$(U_B - 8V) / 0.02 A$	$(U_B - 8V) / 0.02 A$
Min. input load as voltage input	10 k Ω	10 k Ω	10 k Ω

Multitronik ordering instructions

Model key



Item no.	Model
18770099	-1D1S
18770199	-2S
18770299	-4S
18770499	-6S
18770399	-1S-K
18770599	-2S-K
18770699	-4S-K

Accessories

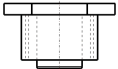
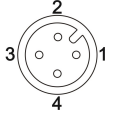
Item no. 4-pin	Item no. 5-pin	Item no. 8-pin	Description
9144 05 0010	9144 05 0016	9144 05 0048	Connecting cable M12x1, 1.5 m, angular coupling and straight plug
9144 05 0046	9144 05 0017	9144 05 0049	Connecting cable M12x1, 3.0 m, angular coupling and straight plug
9144 05 0047	9144 05 0018	9144 05 0033	Connecting cable M12x1, 5.0 m, angular coupling and strands

Note

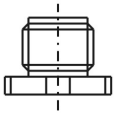
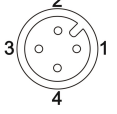
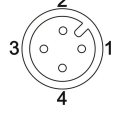
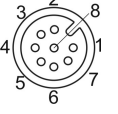
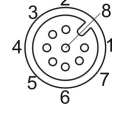
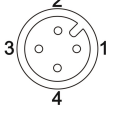
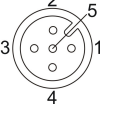
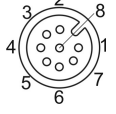
The following Bühler sensors feature a 4-20 mA output and are compatible with the display and control unit

Level measurement	Temperature measurement
Nivotemp NT63 (see data sheet no. 100210)	MK2/EK2 temperature sensor (see data sheet no. 110202)
Nivovent NV 64 (see data sheet no. 100206)	All level switches with KT option

Multitronik standard pin assignment
Remote display sensor supply

Panel jack	1x M12x1
	4-pin
	
Panel jack	
Pin	
1	+24 V DC
3 / 4	4 - 20 mA

Plug connections

Version	1D1S	2S	4S	6S	1S-K	2S-K	4S-K
Panel plug	1x M12x1 (base)						
	4-pin	4-pin	8-pin	8-pin	4-pin	5-pin	8-pin
							
Panel plug							
Pin							
1	+24 V DC	+24 V DC	+24 V DC	+24 V DC	+24 V DC	+24 V DC	+24 V DC
2	S2 (PNP)	S2 (PNP)	S2 (PNP)	S2 (PNP)	Analogue (out)	S2 (PNP)	S2 (PNP)
3	GND	GND	GND	GND	GND	GND	GND
4	C/Q (IO-Link)	S1 (PNP)	S1 (PNP)	S1 (PNP)	S1 (PNP)	S1 (PNP)	S1 (PNP)
5			S3 (PNP)	S3 (PNP)		Analogue (out)	S3 (PNP)
6			S4 (PNP)	S4 (PNP)			S4 (PNP)
7				S5 (PNP)			Analogue (out)
8				S6 (PNP)			