Characteristics

1500 - MODULAR - ECONOMIC - SERIES -

- Input:	pressure 0...0,1 up to 0...1000 bar
- Output:	4...20 mA, 2-wire
- Voltage supply:	12...35 VDC
- Accuracy:	see technical details
- Process connection:	several options
- Electrical connection:	several plugs
- Temperature range:	-40...+85 °C (operation)
- Limit contacts:	2 electronically (NPN, PNP)
- Adjustment:	keys / software
- Temperature medium:	-30...+100 °C
- Protection:	at least IP65 / IP68

Technical Data

Input

Pressure:	relative: 0...0,1 up to 0...1000 bar / -1...0 bar	absolute: 0...0,25 up to 0...16 bar
Pressure ranges:	see table page 2 (with overpressure limit, burst pressure)	

Output

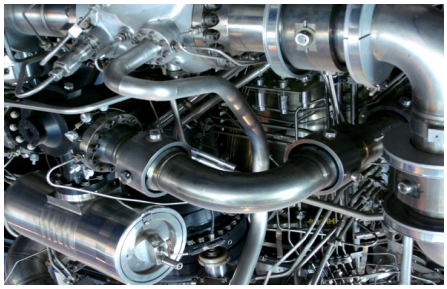
Current signal:	4...20 mA, 2-wire
Current range:	3,8...20,5 mA
Signal on error:	3,6 mA (sensor short circuit, underflow) 21 mA (sensor break, sensor open circuit, overflow)

Performance Parameters

Sensor:	Accuracy:	<0,5% of span (at reference conditions) Including non-linearity, hysteresis, zero and full scale error (corresponds to error of measurement per IEC 61298-2)
	Adjustment:	in vertical mounting position with lower pressure connection
	Non-linearity:	<0,2% of span (BFSL per IEC 61298-2)
	Non-repeatability:	<0,1% of span (per IEC 61298-2)
	1-year stability:	<0,2% of span (at reference conditions)
	Temperature coefficient:	mean temperature coefficient (TC) within rated temperature range TC zero: <0,2% of span / 10 K <0,4% span / 10 K for ranges <250 mbar TC span: <0,2% span / 10 K
	Reference conditions:	15...25 °C / 860...1060 mbar / 45...75% rH / 24 VDC
Measuring amplifier:	Accuracy:	max. 0,1% of measurement range + sensor error
	Resolution:	24 bit
	Filter setting:	5...5000 ms
	Configuration:	Keys on display / via software (TrComm)
	Switch-on delay:	5 ms

Applications

For use in industrial plants, terotechnology and public utility (e.g. tanks for drinking water). With its two configurable limit value contacts, the integrated display and the numerous electrical connections, the pressure sensor is also suitable for applications with higher requirements.



Technical Data (Continued)

Performance Parameters (Continued)

Indicator / limit values:	Resolution:	-9999...9999 digit
	Error of measurement:	±0,2% of range, ±1 digit
	Temperature drift:	100 ppm/K
	Features, operation:	according VDMA 24574-1 up to 24574-4

Indication

Display:	7-segment, 8,5 mm, red, 4 digits, representation mirror-inverted 180° possible
Display head:	rotatable approx. 330°
Memory:	minimum / maximum values
Indication:	- measuring value - unit of measurement - control menu
Decimal point:	automatically or manually, dependent on measuring range / unit
Representation:	xxxx / xxx.x / xx.xx / x.xxx

Limit Contacts

Electronically:	2x NPN or PNP (30 VDC, 200 mA) Option: 2x NPN or PNP (30 VDC, 1000 mA)
Indication:	1 LED red for each limit value
Voltage across:	<1 V
Settings:	with 3 keys (TouchM-Technology)
Setting range:	switch point and hysteresis: any value within measuring range
Switching delay:	0,0...999,9 s
Failsafe function:	adjustable
Galvanic isolation:	switch outputs are separated from measuring amplifier

Supply

Voltage:	12...35 VDC
Reverse battery protection:	available (no function, no damage)
Short-circuit resistance:	Yes

Environmental Conditions

Temperature:	Operating range:	-40...85 °C
	Nominal range:	0...+85 °C
	Storage:	-40...+85 °C
	Medium:	-30...+100 °C
Condensation:	uncritical	
CE-conformity:	Pressure equipment directive: 2014/68/EU	EMC directive: 20014/30/EU
Shock resistance:	1000 g according IEC 60068-2-27 (mechanical shock)	
Vibration resistance:	20 g according IEC 60068-2-6 (vibration under resonance)	

Mechanics

Dimensions:	see page 3	
Pressure connection:	G 1/2 (EN837) / G 1/4 (EN837) / G 1/4 (DIN 3852-E) / 1/2 NTP / 1/4 NPT for NPT thread: nominal size for “US standard tapered pipe thread NPT”	
Electrical connection:	see page 3	
Material:	Process connection:	stainless steel CrNi (contact with medium)
	Body:	PBT GF30
	Display head:	polycarbonate
Transmission fluid:	synthetic oil (internal), no transm. fluids for models with pressure ranges >25 bar	
Weight:	approx. 240 g	
Protection of device:	Protection class:	at least IP65 (electronics)
	PCB:	potted

Pressure Table (in bar)

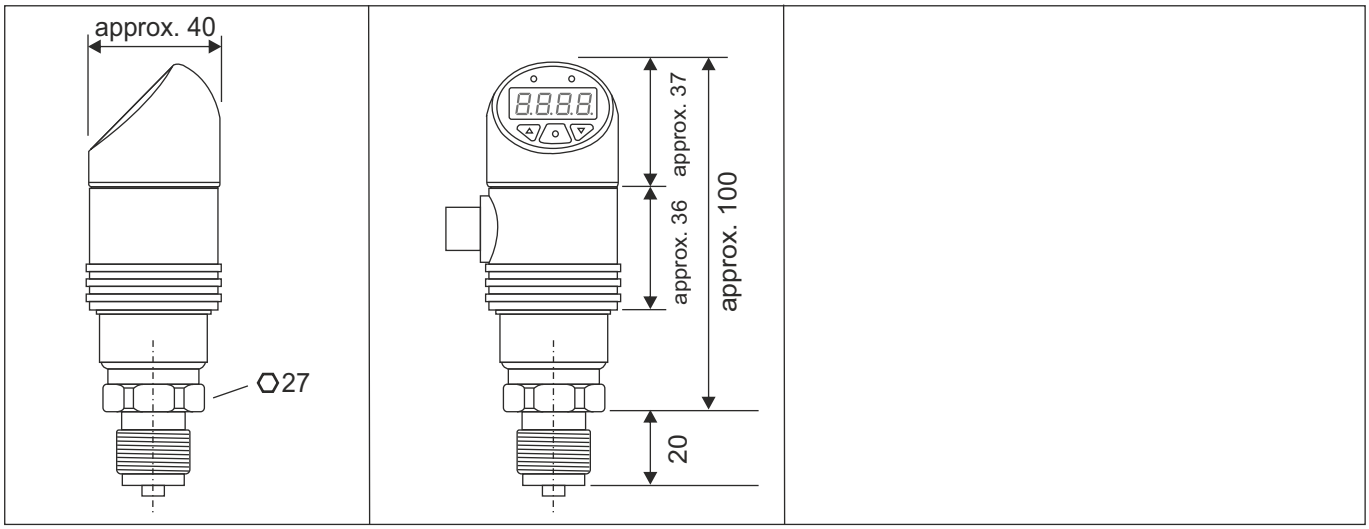
Pressure range	0,1	0,16	0,25	0,4	0,6	1	1,6	2,5
Overpressure limit	1	1,5	2	2	4	5	10	10
Burst pressure	2	2	2,4	2,4	4,8	6	12	12
Pressure range	4	6	10	16	25	40	60	100
Overpressure limit	17	35	35	80	50	80	120	200
Burst pressure	20,5	42	42	96	96	400	550	800
Pressure range	160	250	400	600	1000	-1...0		
Overpressure limit	320	500	800	1200	1500	5		
Burst pressure	1000	1200	1700	2400	3000			

Electrical Connection

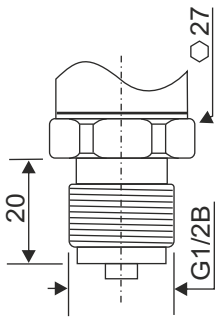
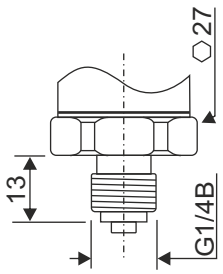
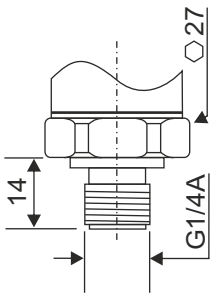
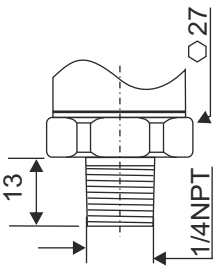
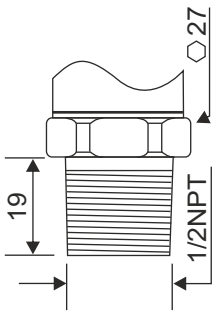
M12x1	Super Seal	Deutsch	Deutsch	Bayonet	Valve	MIL	
							
4-, 5-, 8-pole	3-pole	3-pole	4-pole	4-pole	4-pole	6-pole	

Connection Limit value (LV)	M12 4-pole	M12 5-pole	M12 8-pole	Bayonet 4-pole	Deutsch 4-pole	Deutsch 3-pole	Super Seal 3-pole	Valve 4-pole	MIL 6-pole	
1 electronical LV	X	X	X	X	X			X	X	
2 electronical LV		X	X						X	

Dimensions (in mm)



Pressure Connection (in mm)

G1/2B (EN837) manometer	G1/4B (EN837) manometer	G1/4A (DIN 3852-E)	1/4NPT	1/2NPT
				

Configuration

The MEPS-S can be programmed with the help of the configuration and calibration software *TrComm*. A DEV-KMA configurator is required for programming. The *TrComm*-software is included in the scope of delivery of the DEV-KMA, alternatively the software is also available separately on request.

For further information, see data sheet DEV-KMA on **www.mueller-ie.com**.

For conventional setting via the integrated display, see operating manual MEPS-S.

Order Code

O	P	X	X	X	X	X	X	-	X	X	X

Kind of pressure:	Relative pressure	0
	Absolute pressure	1
Temperature medium:	-30...+100 °C	0
Process connection:	G1/2” (EN 837), manometer	0
	G1/4” (EN 837), manometer	1
	G1/4” (DIN 3852 E)	2
	1/2”NPT	3
	1/4"NPT	4
	Other connection (to indicate)	5
Contact with medium:	CrNi steel	0
Pressure range:	Please specify[1]	X
Limit contacts:	2x PNP, 30 VDC, 200 mA (standard)	0
	1x PNP, 30 VDC, 200 mA	1
	Without	2
	2x NPN, 30 VDC, 200 mA	3
	1x NPN, 30 VDC, 200 mA	4
	2x PNP, 30 VDC, 1000 mA	5
	1x PNP, 30 VDC, 1000 mA	6
	2x NPN, 30 VDC, 1000 mA	7
	1x NPN, 30 VDC, 1000 mA	8
Electrical connection:	M12, 4-pole	0
	M12, 5-pole	1
	M12, 8-pole	2
	Deutsch DT04, 3-pole	3
	Deutsch DT04, 4-pole	4
	Super Seal 1.5, 3-pole	5
	Bayonet (DIN), 4-pole	6
	Valve plug, 4-pole	7
	MIL, 6-pole	9
Configuration:	Factory setting[2]	0
	Customized (please specify)[3]	1
Other:	Special model	0

1) Pressure range absolute: 2 = 0...0,25 / 3 = 0...0,4 / 4 = 0...0,6 / 5 = 0...1 / 6 = 0...1,6 / 7 = 0...2,5 / 8 = 0...4 / 9 = 0...6 / A = 0...10 / B = 0...16 bar

Pressure range relative: 0 = 0...0,1 / 1 = 0...0,16 / 2 = 0...0,25 / 3 = 0...0,4 / 4 = 0...0,6 / 5 = 0...1 / 6 = 0...1,6 / 7 = 0...2,5 / 8 = 0...4 / 9 = 0...6 / A = 0...10 / B = 0...16 / C = 0...25 / D = 0...40 / E = 0...60 / F = 0...100 bar / G = 0...160 / H = 0...250 / I = 0...400 / J = 0...600 / K = 0...1000 / L = -1...0 bar

2) Measuring range: Full measurement range / Limit values: 40% / 80%

3) Please select settings as per technical data. Factory settings will be used for any values not given.

Accessories:

DEV-KMA Order No.: **1310-00564**