



● Characteristics

1500 - MODULAR - ECONOMIC - SERIES -

 	- Input:	pressure 0...0,1 up to 0...1000 bar
	- Output:	4...20 mA, 2-wire / 0...10 V, 3-wire
	- Voltage supply:	12...30 VDC
	- Accuracy:	see technical details
	- Process connection:	several options
	- Electrical connection:	lateral, Option: top
	- Electrical connection:	several plugs / cable
	- Temperature range:	-20...+75 °C, 2-wire / -20...+50 °C, 3-wire
	- Explosion protection:	ATEX, IECEx
	- Protection class:	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

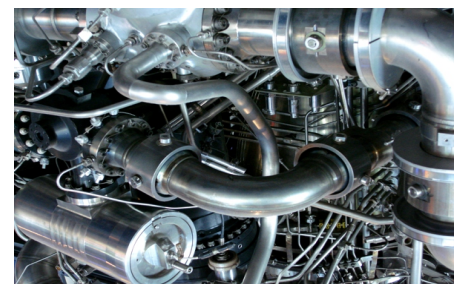
Current signal: 4...20 mA, 2-wire
 Current range: 3,8...20,5 mA
 Signal interference: 3,6 mA (sensor short circuit, underflow)
 21 mA (sensor break, sensor open circuit, overflow)
 Voltage signal: 0...10 V, 3-wire
 0,5...10 V, 3-wire
 2...10 V, 3-wire

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, pressure connection facing down
	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 coefficient (TC) within compensated 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:	Resolution:
Accuracy:		max. 0,1% of measurement range + sensor error
Filter setting:		5...5000 ms
Configuration:		via software (TrComm)
Switch-on delay:		5 ms

● Applications

For use in industrial facilities, plant engineering or utility companies. The sensor is compact and robust. With its many electrical connections and the possibility to configure via software, the pressure sensor MEPS-TE_x is suitable even for applications with higher requirements.



● Technical Data (Continued)

Supply

Voltage: 12...30 VDC
 Reverse voltage protection: available (no function, no damage)
 Short-circuit strength: Yes

Environmental Conditions

Temperature: Operating range: -20...+75 °C (2-wire) / -20...+50 °C (3-wire)
 Storage: -20...+85 °C
 Medium: 0...+100 °C

Condensation: uncritical
 CE-conformity: Pressure equipment directive: 2014/68/EU EMC directive: 2014/30/EU
 Shock resistance: 1000 g as per IEC 60068-2-27 (mechanical shock)
 Vibration resistance: 20 g as per IEC 60068-2-6 (vibration under resonance)
 Approval: ATEX: TÜV 21 ATEX 201293 X
 IECEx: IECEx TUN 21 0005X

Mechanics

Dimensions: see page 7
 Pressure connection: G 1/2 (EN837) / G 1/4 (EN837) / G 1/4 (DIN 3852-E) / 1/2 NPT / 1/4 NPT
 for NPT thread: nominal size for "US standard tapered pipe thread NPT"
 Electrical connection: lateral
 Option: upwards
 Plugs and cables: see page 7
 Material: Process connection: stainless steel CrNi (contact with medium)
 Body: PBT GF30
 Cover: PBT GF30
 Transmission fluid: synthetic oil (internal), no transmission fluids for pressure ranges >25 bar
 Weight: approx. 230 g
 Device protection: Protection class: at least IP65 (electronics)
 PCB: potted

Pressure Table (in bar)

Measurement 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	0	10
Burst pressure	2	2	2,4	2,4	4,8	6	12	12
Measurement 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
Measurement range	160	250	400	600	1000	-1...0		
Overpressure limit	320	500	800	1200	1500	5		
Burst pressure	1000	1200	1700	2400	3000			

● Ex Safety Instructions

For Your Safety



Danger

Danger!

Danger to life due to loss of explosion protection.

Failure to comply with these contents and instructions can lead to a loss of explosion protection.



ATEX

European guideline for explosion protection (Atmosphere=AT, Explosion=EX). The product complies with the requirements of the European directive 2014/34/EU (ATEX) on explosion protection.

Installation and start-up may only be carried out by qualified personnel with knowledge of ignition protection types as well as provisions and regulations for explosion protection. The country-specific regulations for installation and operation in hazardous areas must be complied with. The classification of the device must be suitable for the application. (see "ATEX Approvals" and product label marking)

ATEX Approvals

II 1 G Ex ia IIC T6..T1 Ga
II 1/2 G Ex ia IIC T6..T1 Ga/Gb
II 2 G Ex ia IIC T6..T1 Gb

Approval properties: For gases; Installation in zone 0, zone 1 and zone 2.

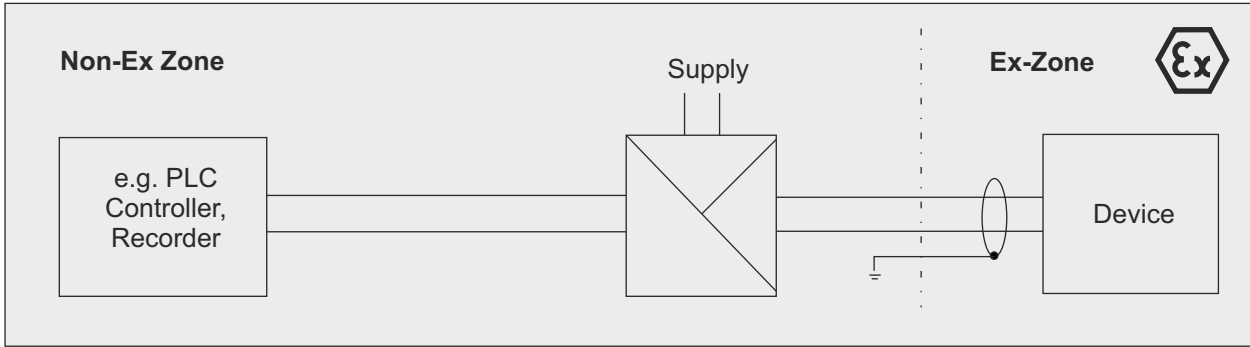
ATEX: TÜV 21 ATEX 201293 X

IECEx: IECEx TUN 21.0005X

The complete certificates are available on request and for download from our website www.mueller-ie.com.

● Ex Safety Instructions (Continued)

Special Provisions for Operation in Hazardous Areas



- The single wires and the free cable ends have to comply with the requirements of clause 9 of IEC 60079-14.
- For EPL Ga/Gb applications, reverse heat flow from the process exceeding the permissible ambient temperature is not allowed and shall be avoided by suitable thermal insulation or suitable neck length of the tubing.
- For EPL Ga/Gb applications and at risks by pendulum or vibration the respective parts have to be secured effectively against these dangers.
- For EPL Ga/Gb applications any ignition hazards caused by impact or friction have to be excluded.
- The ambient temperature range depending on temperature class is to be taken from the operating manual.
- The materials in contact with the medium have to be resistant to the medium.
- For EPL Ga/Gb applications the whole device shall be mounted in a way that allows an installation that results in a sufficient tight joint (IP66 or IP67) or a flameproof joint (IEC 60079-1) in the direction of the less endangered area.
- The installation in the partition wall between areas with EPL Ga/Gb requirements has to be carried out in such a way that all metal parts are conductively connected to the metallic container wall, or in the case of containers made of plastic, all insulated metal parts have to be included in the potential equalization.
- For EPL Ga, EPL Ga/Gb and EPL Gb applications, the temperature sensor METS-WTE_x has to be installed and used in such a way that electrostatic charges due to operation, maintenance and cleaning are excluded.

● **Ex Safety Instructions (Continued)**

Electrical Characteristics









Parameter	Current Output (2-Wire)	Voltage Output (3-Wire)
Connections	+ / - (I_{out})	+ / -
Voltage U_i	30 VDC	30 VDC
Current I_i	110 mA	110 mA
Power P_i	1 W	1 W
Effective internal capacitance C_i	Capacitance of 330m cable = 66 nF	Capacitance of 330m cable = 66 nF
Effective internal inductance L_i	Inductance of 330m cable = 330 μ H	Inductance of 330m cable = 330 μ H
Connections	...	U_{out}
Voltage U_o	...	= 12,6 V
Current I_o	...	= 48 mA
Power P_o	...	= 148 mW
Characteristic line	...	linear
Effective internal capacitance C_i	...	Negligibly small
Effective internal inductance L_i	...	Negligibly small

● **Ex Safety Instructions (Continued)**

Environmental Conditions

Current Output (2-Wire)		
Temperature Class	Environmental Temperature	Medium Temperature
T1	-20 °C ... +75 °C	0 °C ... +100 °C
T2	-20 °C ... +75 °C	0 °C ... +100 °C
T3	-20 °C ... +75 °C	0 °C ... +100 °C
T4	-20 °C ... +75 °C	0 °C ... +100 °C
T5	-20 °C ... +(95 °C - $P_i \times 45 \text{ K/W}$), max. 75 °C	0 °C ... +85 °C
T6	-20 °C ... +(80 °C - $P_i \times 45 \text{ K/W}$), max. 75 °C	0 °C ... +70 °C
Voltage Output (3-Wire)		
Temperature Class	Environmental Temperature	Medium Temperature
T1	-20 °C ... +50 °C	0 °C ... +100 °C
T2	-20 °C ... +50 °C	0 °C ... +100 °C
T3	-20 °C ... +50 °C	0 °C ... +100 °C
T4	-20 °C ... +50 °C	0 °C ... +100 °C
T5	-20 °C ... +(95 °C - $P_i \times 55 \text{ K/W}$), max. 50 °C	0 °C ... +85 °C
T6	-20 °C ... +(80 °C - $P_i \times 55 \text{ K/W}$), max. 50 °C	0 °C ... +70 °C

● **Electrical Connections**

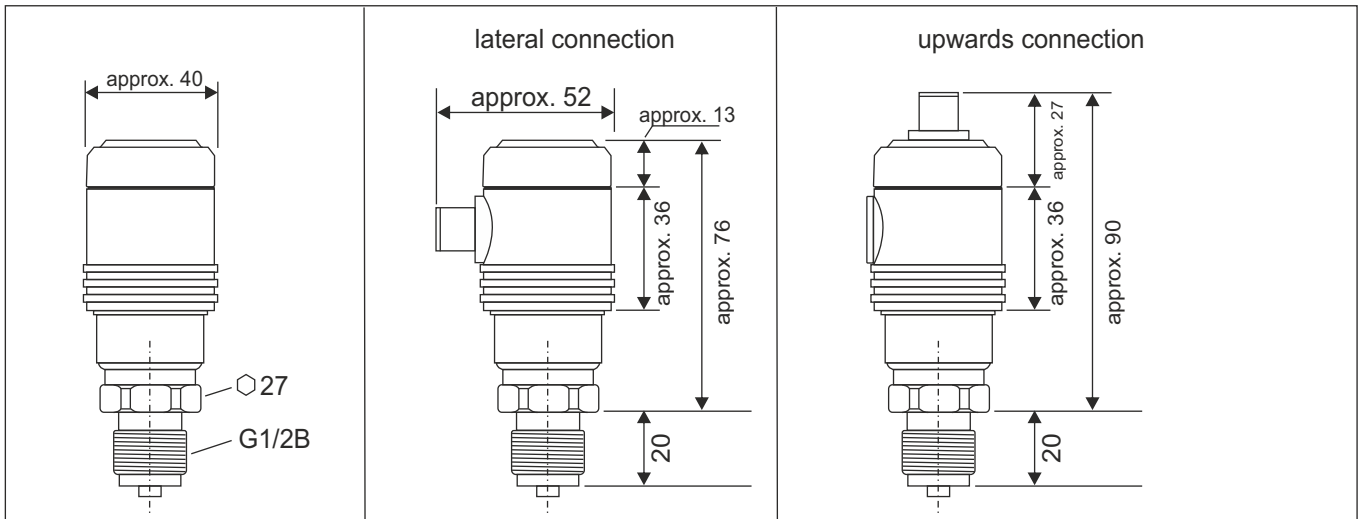
M12x1	Super Seal	Deutsch	Deutsch	Bayonet	Valve	MIL	Cable
							
4-, 5-, 8-pole	3-pole	3-pole	4-pole	4-pole	4-pole	6-pole	4-pole

● **Configuration**

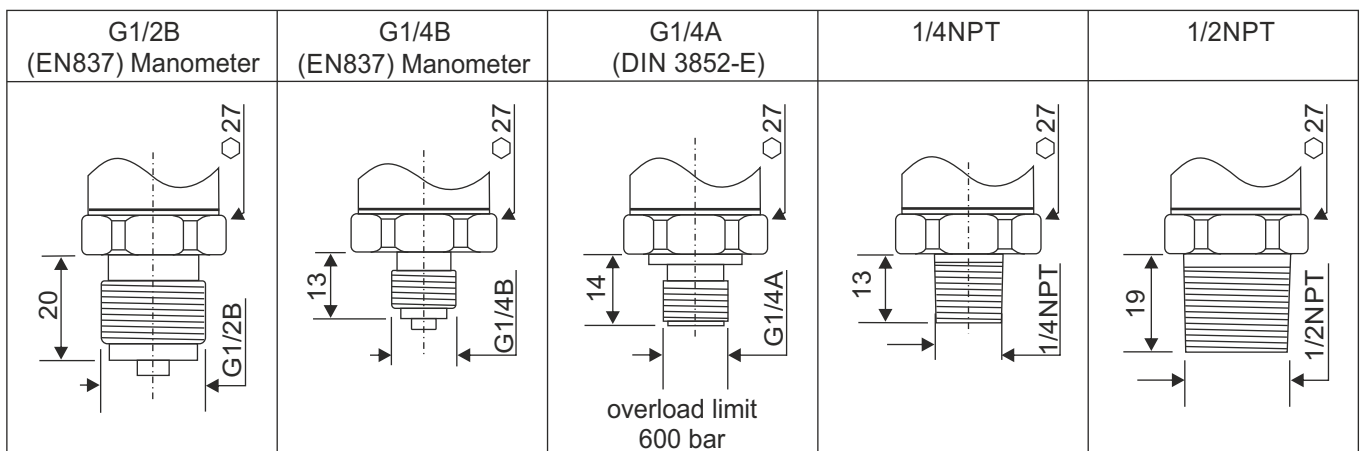
The MEPS-TE_x can be programmed with the help of the configuration and calibration software TrComm. A DEV-KMA configurator is required for programming. The TrComm-software is included in the scope of delivery of the DEV-KMA, alternatively the software is also available separately on request.

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

● **Dimensions (in mm)**



● **Pressure Connection (in mm)**



● **Order Code**

G H X X X X X X - X X X X

Pressure type:	Relative pressure	0																		
	Absolute pressure	1																		
Output:	4...20 mA (2-wire)	0																		
	0...10 V (3-wire)	1																		
	0,5...10,5 (3-wire)	2																		
	2...10 V (3-wire)	3																		
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 (please specify)	5																		
Contact with medium:	CrNi steel	0																		
Pressure range:	Please specify ¹									X										
Electrical connection:	Lateral (standard)																			0
	Upwards																			1
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
	Cable, 2 m																			8
	MIL, 6-pole																			9
Configuration:	Factory setting ²																			0
	Customized (please specify) ³																			1
Special model:	No																			0
	Yes (please specify)																			1

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 / Indicating range

3) Please select according to technical data. For values not given, factory settings will be used..

Accessories:

DEV-KMA, TrComm-Software

Order No.: **1310-00564**