

Series 26Y

High-accuracy piezoresistive level probe

Features

- Compensated over the entire temperature range
- Excellent long-term stability
- For many years of maintenance-free operation
- Intrinsically safe version 26Y-Ei available for use in explosive environments

Technology

- Insulated and encapsulated piezoresistive pressure sensor
- Robust stainless-steel housing
- Direct analog signal path with high bandwidth

Typical applications

- Hydrostatic pressure measurement
- Level measurement: groundwater, surface water
- Fill level measurement: water tanks, fuel tanks

Accuracy

± 0,25 %FS

Total error band

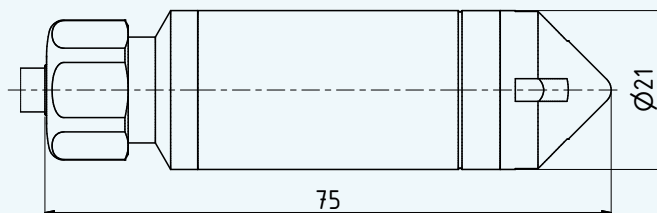
± 0,5 %FS @ 0...50 °C

Pressure ranges

0...0,1 to 0...10 bar



Series 26Y



Series 26Y – Specifications

Standard pressure ranges

Water column approx.	Relative pressure PR	Absolute pressure PAA	Proof pressure
0...1	0...0,1		3
0...1,6	0...0,16		
0...2,5	0...0,25		
0...4	0...0,4		
0...6	0...0,6		
0...10	0...1	0.8...2	9
0...16	0...1,6	0.8...2,6	
0...25	0...2,5	0.8...3,5	12
0...40	0...4	0.8...5	
0...60	0...6	0.8...7	18
0...100	0...10	0.8...11	30
mH ₂ O	bar rel.	bar abs.	bar
Analog interface also scaleable to other units	Reference pressure at atmospheric pressure	Reference pressure at 0 bar abs. (vacuum)	With reference to reference pressure
Note	Absolute pressure PAA: for installation heights greater than 2000 m above sea level, special measuring ranges may be required		

Performance

Accuracy @ RT (20...25 °C)	$\leq \pm 0,25$ %FS	> 0,3...10 bar	Non-linearity (best fit straight line, BFSL), pressure hysteresis, non-repeatability
	$\leq \pm 0,5$ %FS	> 0,15...0,3 bar	
	$\leq \pm 1,0$ %FS	0,1...0,15 bar	
Total error band @ 0...50 °C	$\pm 0,5$ %FS	> 2...10 bar	Maximum deviation within the specified pressure and temperature range
	$\pm 1,0$ %FS	> 0,3...2 bar	
	± 3 mbar	0,1...0,3 bar	
Compensated temperature range	0...50 °C	Other temperature ranges between -20...85 °C are possible on request	
Long term stability	$\leq \pm 0,2$ %FS	> 2 bar	Per year under reference conditions
	± 4 mbar	≤ 2 bar	
Position dependency	$\leq \pm 1,5$ mbar	Calibrated in vertical installation position with pressure connection facing downwards	

Series 26Y – Specifications

Electrical data

Connectivity	2-wire
Analog interface	4...20 mA
Signal output limitation	3,2...22,3 mA
Voltage supply	8...32 VDC
Voltage supply 26Y-Ei	10...30 VDC
Note	Pressure range \leq 0,15 bar signal output limitation higher than listed max. 31,5 mA

Start-up time (power supply ON)	< 5 ms (0...99 %)
Overvoltage protection and reverse polarity protection	\pm 32 VDC
GND case isolation	> 10 M Ω @ 200 VDC

Analog interface

Load resistance	< (U - 8 V) / 25 mA	2-wire
Load resistance 26Y-Ei	< (U - 10 V) / 25 mA	2-wire
Limiting frequency	1 kHz	

Electrical connection

Cable for water applications	PR: polyethylene (PE) \varnothing 5,8 mm	Integrated capillary
	PAA: polyolefin (PE-based) \varnothing 5,8 mm	
Cable for fuel applications	PR: TPE-E \varnothing 6,1 mm	Integrated capillary
	PAA: TPE-E \varnothing 4,7 mm	
Standard cable lengths	5 m, 10 m, 15 m, 25 m, 40 m	Others on request

Electromagnetic compatibility

CE conformity as per 2014/30/EU (EMC)	EN 61326-1 / EN 61326-2-3 / EN 61000-6-1 / EN 61000-6-2 / EN 61000-6-3 / EN 61000-6-4	
Lightning protection standard	EN 61000-4-5	Line-line: 50 A @ 8/20 μ s
		Line-CASE: 200 A @ 8/20 μ s
Extended lightning protection	Optional	Line-line: 10 kA @ 8/20 μ s
		Line-CASE: 10 kA @ 8/20 μ s

Series 26Y – Specifications

Mechanical data

Materials in contact with media

Housing and optional pressure connection	Stainless steel AISI 316L	
Pressure transducer separating diaphragm	Stainless steel AISI 316L	
Pressure transducer seal (internal)	FKM	Others on request
Cable gland seal (internal)	FKM	
Protective cap	POM	
Cable sheath	PR: polyethylene (PE)	Medium: water
	PAA: polyolefin (PE-based)	
	PR/PAA: TPE-E	Medium: fuels

Other materials

Pressure transducer oil filling	Silicone oil
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Further details

Pressure connection	None (protective cap), optional G1/4	See Dimensions and options
Diameter × length	ø 21 mm × approx. 73 mm	
Weight (excluding cable)	approx. 60 g	

Environmental conditions

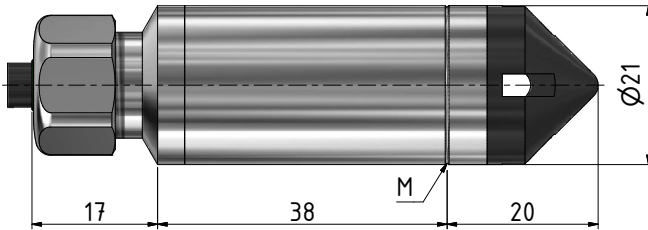
Medium temperature range	-20...85 °C		Icing not permitted
Ambient temperature range	-20...85 °C		
Ambient temperature range 26Y-Ei	see operating instructions		
Storage temperature range	-20...85 °C		
Protection	IP68	Cable gland	for relative pressure, use a cable with integrated capillary
Vibration resistance	10 g, 10...2000 Hz, ± 10 mm	IEC 60068-2-6	
Shock resistance	50 g, 11 ms	IEC 60068-2-27	

Explosion protection 26Y-Ei

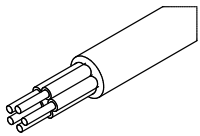
Intrinsically safe version in accordance with 2014/34/EU (ATEX) and IECEx	26Y-Ei	Ex II 1G Ex ia IIC T6-T4 Ga Ex II 1D Ex ia IIIC T 130 °C Da
	26Y-MEi	Ex I M1 Ex ia I Ma
Note	The conditions for safe use can be found in the operating instructions	

Series 26Y – Dimensions and options

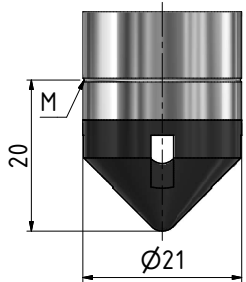
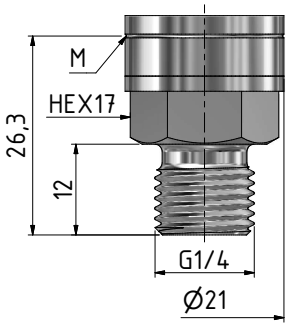
Electrical connections



M: marking of diaphragm position

Cable gland	2-wire
Cable	4...20 mA
	WH n.c.
	RD OUT/GND
	BK +Vs
	BU n.c.
	Shield on CASE

Available pressure connections

Standard	Optional
Protective cap	G1/4
	
Restored diaphragm (M)	DIN EN ISO 1179-2

Other customer-specific options

- Other compensated pressure ranges
- Other compensated temperature ranges between -20...85 °C
- Extended lightning protection
- O-rings made of other materials
- Modifications to customer-specific options

Examples of related products

- Series 26X: Highly accurate level probe with RS485 and analog interface
- Series 26Xi: Highly accurate level probe with SDI-12 interface
- Series 36XS: Level probe with 16 mm diameter and RS485 and analog interface
- Series 36XiW: Level probe with excellent accuracy (pressure and temperature) with SDI-12 interface
- Series 36XiW-CTD: Level probe with excellent accuracy (pressure, temperature and conductivity) with RS485 or SDI-12 interface

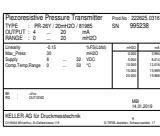

Series 26Y – Scope of delivery and accessories

Scope of delivery

USIT ring

attached in case of G1/4 pressure connection

Accessories

KELLER test report	Calibration certificate
	
Issued by KELLER AG	Issued by the external calibration laboratory of the German accreditation body DAkkS or the Swiss accreditation body SAS