

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

- Piezoresistive pressure sensor chip, encapsulated insulated
- Direct analog signal path with high bandwidth
- Robust stainless-steel housing

Typical applications

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

Accuracy

± 0,25 %FS

Total error band

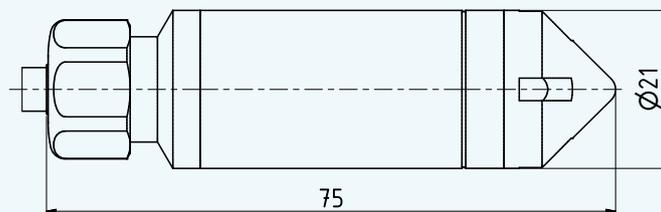
± 0,5 %FS @ 0...50 °C

Pressure ranges

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



Series 26Y



Edition 06/2025
Subject to alterations
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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 | |
| 0...40 | 0...4 | 0.8...5 | 12 |
| 0...60 | 0...6 | 0.8...7 | 18 |
| 0...100 | 0...10 | 0.8...11 | 30 |
| mH2O | 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 | PAA 0,8...2 bar: Special measuring ranges are required for installations above 2000 m a.s.l.. | | |

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 compensated 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 | | |
| 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 with lightning protection | 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 | ± 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 5,8 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 IEC 61326-1 / EN IEC 61326-2-3 / EN IEC 61000-6-1 / EN IEC 61000-6-2 / EN IEC 61000-6-3 / EN IEC 61000-6-4 | |
| Shock voltage protection according to EN 61000-4-5 | Standard | Line-Line: 50 A @ 8/20 μ s |
| | | Line-CASE: 200 A @ 8/20 μ s |
| Lightning protection (extended surge protection) according to EN 61000-4-5 | 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 | |
| End 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 |
|---------------------------------|--------------|

Further details

| | | |
|--------------------------|-------------------------------|-----------------------------|
| Pressure connection | None (end cap), optional G1/4 | See Dimensions and variants |
| 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, 6 ms | IEC 60068-2-27 | |

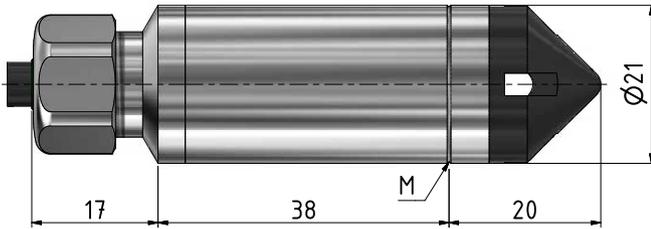
Explosion protection 26Y-Ei

| | | |
|---|---|--|
| Intrinsically safe version in accordance with 2014/34/EU (ATEX) UKSI 2016/1107 (UKEX) and IECEx | 26Y-Ei | Ex II 1G Ex ia IIC T6-T4 Ga Ex II 1D Ex ia IIIC T 130 °C Da |
| Note | The conditions for safe use can be found in the operating instructions. | |



Series 26Y – Dimensions and variants

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 |
|------------------------|-------------------|
| End cap | G1/4 |
| | |
| Recessed diaphragm (M) | DIN EN ISO 1179-2 |

Customised configurations on request

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

Examples of similar 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 with SDI-12 interface
- Series 36XiW-CTD: Level probe with excellent accuracy with RS485 or SDI-12 interface

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Series 26Y – Scope of delivery and accessories

Scope of delivery

| |
|---|
| USIT ring |
|  |
| With G1/4 pressure connection enclosed. |

Accessories

| Calibration certificate | Calibration certificate |
|--|---|
|  |  |
| Issued by KELLER Pressure. | Issued by an external, accredited calibration laboratory according to DAkkS or SAS. |

