

1) ELECTRONIC PRESSURE MEASUREMENT- PRESSURE TRANSMITTER

Applications

- Mechanical engineering
- Machine tools
- Control and feedback control systems
- Hydraulics / Pneumatics
- Pumps/ Compressors

Special Features

- Pressure ranges: from 0 ... 1 bar up to 0 ... 600 bar
- Non-linearity: 0.3 % or 0.6 %
- Signal output: 4-20 mA, 0-10 V, 0-5 V and others
- Electrical connection: DIN 175301-803 A and C, M12x1, Flying leads 2m
- Pressure connection: G1/4 DIN 3852-E, 1/4NPT and others

Description

Simple - reliable – competitive

The WIKA A-10 can be used for a multitude of functions across many different applications. Exceptionally simple installation, set-up and operation with an excellent price/performance ratio set this highly-reliable product apart.

| | | | | | | | | | |
|--|---|--|------|-------|-------|----------------------------------|-------|-------|------|
| Pressure ranges | bar | 1 | 1.6 | 2,5 | 4 | 6 | 10 | 16 | 25 |
| Over pressure safety | bar | 2 | 3.2 | 5 | 8 | 12 | 20 | 32 | 50 |
| Burst pressure | bar | 5 | 10 | 10 | 17 | 34 | 34 | 100 | 100 |
| Pressure ranges | bar | 40 | 60 | 100 | 160 | 250 | 400 | 600 | |
| Over pressure safety | bar | 80 | 120 | 200 | 320 | 500 | 800 | 1200 | |
| Burst pressure | bar | 400 | 550 | 800 | 1000 | 1200 | 1700 | 2400 | |
| MPa and kg/cm ² are available {Absolute pressure: 0 ... 1 bar up to 0 ... 25 bar} | | | | | | | | | |
| Pressure ranges | psi | 15 | 25 | 30 | 50 | 100 | 160 | 200 | 300 |
| Over pressure safety | psi | 30 | 60 | 60 | 100 | 200 | 290 | 400 | 600 |
| Burst pressure | psi | 75 | 150 | 150 | 250 | 500 | 500 | 1500 | 1500 |
| Pressure ranges | psi | 500 | 1000 | 1500 | 2000 | 3000 | 5000 | 10000 | |
| Over pressure safety | psi | 1000 | 1740 | 2900 | 4000 | 6000 | 10000 | 17400 | |
| Burst pressure | psi | 2500 | 7975 | 11800 | 14500 | 17400 | 24350 | 34800 | |
| {Absolute pressure: 0 ... 15 psi up to 0 ... 300 psi}. | | | | | | | | | |
| Vacuum resistance | As of 0 ... 10 bar | | | | | | | | |
| Fatigue life | 10 Mio. max. load cycles | | | | | | | | |
| Materials | | | | | | | | | |
| ■ Wetted parts | | | | | | | | | |
| » Pressure Connection | 316 L | | | | | | | | |
| » Pressure sensor | 316 L (as of 0 ... 10 bar rel 13-8 PH) | | | | | | | | |
| ■ Internal transmission fluid | Silicone oil (only with pressure ranges up to 0 ... 6 bar and 0 ... 25 bar abs) | | | | | | | | |
| ■ Case | 316 L | | | | | | | | |
| Power supply UB | UB in VDC | 8 ... 30 (14 ... 30 with signal output 0 ... 10 V) | | | | | | | |
| maximum ohmic load RA | | 0 ... 10 V, 3-wire $R_A > 10 \text{ k}$ | | | | | | | |
| | | 0 ... 5 V, 3-wire $R_A > 5 \text{ k}$ | | | | | | | |
| | | 1 ... 5 V, 3-wire $R_A > 5 \text{ k}$ | | | | | | | |
| | | 0,5 ... 4,5 V, 3-wire $R_A > 4,5 \text{ k}$ (Other signal output on request) | | | | | | | |
| Response time | ms | < 4 | | | | | | | |
| Current consumption | mA | Signal current (max. 25) for current output | | | | | | | |
| | | Max. 8 for voltage output signal | | | | | | | |
| Insulation voltage | VDC | 500 ¹⁾ | | | | | | | |
| ¹⁾ For power supply, use a circuit with energy limitation (EN/UL/IEC 61010-1, section 9.3) with the following maximum values for the current: bei UB = 30 V (DC): 5 A. Provide a separate switch for the external power supply. | | | | | | | | | |
| Alternative for North America: The connection may also be made to „Class 2 Circuits“ or „Class 2 Power Units“ according to CEC (Canadian Electrical Code) or NEC (National Electrical Code). | | | | | | | | | |
| Non-linearity | % of span | $\leq \pm 0.3$ according to IEC 61298-2 | | | | | | | |
| | | $\leq \pm 0.6$ | | | | | | | |
| Accuracy ²⁾ | % of span | Adjusted in vertical mounting position with lower pressure connection | | | | | | | |
| | | $\leq \pm 0.5$ (with non-linearity 0.3 %) | | | | | | | |
| | | $\leq \pm 0.6$ (with non-linearity 0.3 % and with signal output 0 ... 5 V) | | | | | | | |
| | | $\leq \pm 1.0$ (with non-linearity 0.6 %) | | | | | | | |
| ²⁾ Including non-linearity, hysteresis, zero point and full scale error (corresponds to error of measurement per IEC 61298-2) | | | | | | | | | |
| Zero offset | % of span | ≤ 0.15 typ., ≤ 0.4 max. (with non-linearity 0.3 %) | | | | | | | |
| | | ≤ 0.5 typ., ≤ 0.8 max. (with non-linearity 0.6 %) | | | | | | | |
| Hysteresis | % of span | ≤ 0.16 | | | | | | | |
| Non-repeatability | % of span | ≤ 0.1 | | | | | | | |
| Long-term drift | % of span | ≤ 0.1 according to IEC 61298-2 | | | | | | | |
| Signal noise | % of span | ≤ 0.3 | | | | | | | |
| Permissible temperature of | | | | | | | | | |
| ■ Medium | 0 ... +80 °C (-30 ... +85 °C) | | | | | 32 ... +176 °F (-22 ... +185 °F) | | | |
| ■ Ambient | 0 ... +80 °C (-20 ... +80 °C) | | | | | 32 ... +176 °F (-4 ... +176 °F) | | | |
| ■ Storage | -20 ... +80 °C | | | | | -4 ... +176 °F | | | |
| Operating temperature range | 0 ... +80 °C | | | | | 32 ... +176 °F | | | |

| | | |
|--|-----------|---|
| Temperature error within operating temperature range | % of span | ≤ 1.0 typ., ≤ 2.5 max. |
| Approvals | | UL, CSA |
| RoHS-conformity | | Yes |
| CE-conformity | | |
| ■ Pressure equipment directive | | 97/23/EC |
| ■ EMC directive | | 89/336/EEC emission (class B) and immunity according to EN 61 326 |
| Shock resistance | g | 500 according to IEC 60068-2-27 (mechanical shock) |
| Vibration resistance | g | 10 according to IEC 60068-2-6 (vibration under resonance) |
| Wiring protection | | |
| ■ Overvoltage protection | VDC | 32; 36 with 4 ... 20 mA |
| ■ Short-circuit proofness | | Sig+ towards UB- |
| ■ Reverse polarity protection | | UB+ towards UB- |
| Reference conditions | | According to IEC 61298-1 |
| ■ Relative humidity | % | 45 ... 75 |
| Weight | g | Approx. 80 |

() Items in curved brackets are optional extras for additional price.

Dimensions in mm

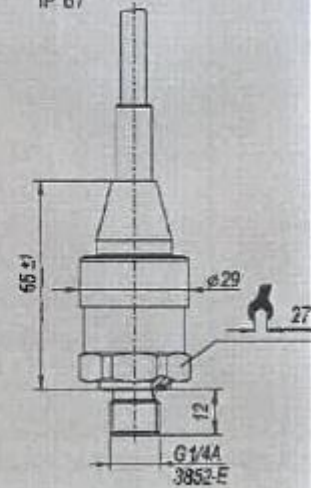
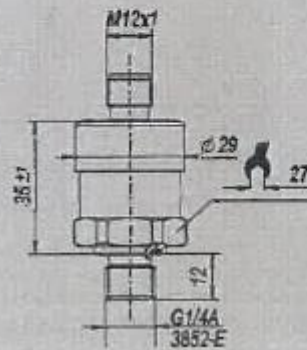
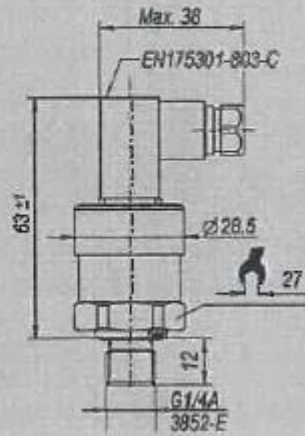
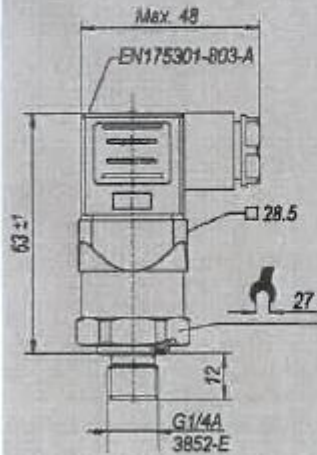
Ingress protection IP per IEC 60529. The ingress protection classes specified only apply while the pressure transmitter is connected with female connectors that provide the corresponding ingress protection.

DIN 175301-803 A
L-connector
for conductor cross section up to max. 1.5 mm²,
conductor outer diameter
6-8 mm
IP 65

DIN 175301-803 C
L-connector
for conductor cross section up to max. 0.75 mm²,
conductor outer diameter 4.5-6 mm
IP 65

M 12x1, 4-pin
IP 67

Flying leads,
conductor cross section
3x 0.34 mm²,
conductor outer diameter
6.6 mm,
PUR cable - unshielded,
IP 67



2) FLOW MEASUREMENT- ELECTRONIC FLOW SWITCH WITH DIGITAL DISPLAY

Measuring ranges

Flow

Water: 5 ... 160 cm/s

Oil: 3 ... 300 cm/s

The in-factory adjustment is carried out with the medium water. It is recommended to carry out the adjustment, relative to the minimum/maximum flows of the system, via the menu.

Temperature (option)

-20 ... +85 °C (-4 ... +185 °F)

Display

14-segment LED, red, 4-digit, 9 mm (0.35 in) character size
Display can be turned electronically by 180°

Output signals

| Switching output | |
|------------------|-----|
| Standard | PNP |
| Option | NPN |

Analogue signal (option)

4 ... 20 mA

Circuit

| | Switching output | | Analogue signal |
|----------|---------------------------|---------------------------|-----------------|
| | SP1 | SP2 | |
| Option 1 | Flow | - | - |
| Option 2 | Flow | - | Flow |
| Option 3 | Flow | Temperature | - |
| Option 4 | Flow | - | Temperature |
| Option 5 | Flow | Diagnostics ¹⁾ | - |
| Option 6 | Temperature | - | Flow |
| Option 7 | Diagnostics ¹⁾ | - | Flow |

¹⁾ Switching signal on sensor defect

Scaling temperature (option)

Zero point: -20 ... +5 °C (-4 ... +41 °F)

End value: 60 ... 85 °C (140 ... 185 °F)

Switching thresholds

Switch point 1 and switch point 2 are individually adjustable

Switching functions

Normally open, normally closed, window, hysteresis

Freely adjustable

Switching voltage

Power supply - 1 V

Switching current

max. 250 mA

Switch-on drift

10 s

Settling time

Flow (0 ... 100 %, 100 ... 0 %): 6 s

Flow (50 ... 100 %, 100 ... 50 %): 4 s

Temperature t_{90} : 4 s

Temperature t_{93} : 2 s

Load

Analogue signal 4 ... 20 mA: $\leq 0.5 \text{ k}\Omega$

Service life

100 million switching cycles

Materials

Wetted parts

Process connection, probe: Stainless steel 316Ti

Sealing: See table under "Process connections"

Non-wetted parts

Case: Stainless steel 304

Keyboard: TPE-E

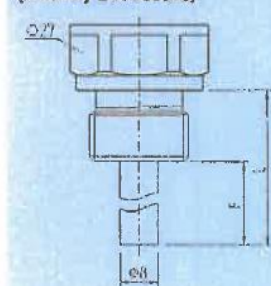
Display window: PC

Display head: PC+ABS blend

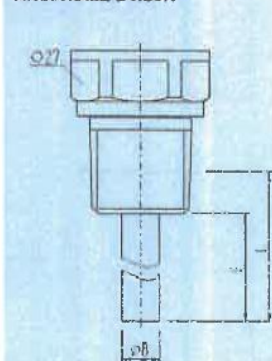
Process connections

| | Standard | Thread | Probe length F | Insertion length L |
|----------|---|-----------|------------------|--------------------|
| Option 1 | ISO 225-1 | M18 x 1.5 | 45 mm (1.77 in) | 52 mm (2.05 in) |
| Option 2 | DIN EN ISO 1179-2 (formerly DIN 3852-E) | G 1/4 A | 16 mm (0.63 in) | 26 mm (1.10 in) |
| Option 3 | DIN EN ISO 1179-2 (formerly DIN 3852-E) | G 1/4 A | 16 mm (0.63 in) | 30 mm (1.18 in) |
| Option 4 | DIN EN ISO 1179-2 (formerly DIN 3852-E) | G 1/4 A | 36 mm (1.38 in) | 49 mm (1.93 in) |
| Option 5 | DIN EN ISO 1179-2 (formerly DIN 3852-E) | G 1/2 A | 65 mm (2.56 in) | 79 mm (3.11 in) |
| Option 6 | DIN EN ISO 1179-2 (formerly DIN 3852-E) | G 1/2 A | 105 mm (4.13 in) | 119 mm (4.69 in) |
| Option 7 | ANSI/ASME B1.20.1 | 1/4 NPT | 16 mm (0.63 in) | 22 mm (0.87 in) |
| Option 8 | ANSI/ASME B1.20.1 | 1/2 NPT | 30 mm (1.18 in) | 38 mm (1.50 in) |

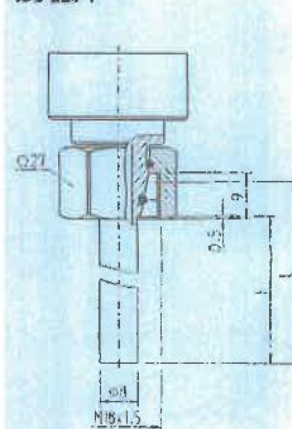
DIN EN ISO 1179-2
(formerly DIN 3852-E)



ANSI/ASME B1.20.1



ISO 225-1



Sealings

| | Process connection | |
|----------|--|-----------|
| | DIN EN ISO 1179-2 (formerly DIN 3852-E) | ISO 225-1 |
| Standard | NBR | FPM/FKM |
| Option 1 | FPM/FKM | - |
| Option 2 | without | - |

Voltage supply

Power supply

DC 15 ... 35V

Current consumption

● Switching outputs with analogue signal: 175 mA

● Switching outputs without analogue signal: 150 mA

Total current consumption

max. 650 mA including switching current

Accuracy specifications

Non-repeatability

Flow (5 ... 100 cm/s): ≤ 2 cm/s

Temperature: ≤ 0.5 K

Accuracy at reference conditions

Flow (5 ... ≤ 100 cm/s): $\leq \pm 5$ % of end value of measuring range

Flow (> 100 ... 175 cm/s): $\leq \pm 10$ % of end value of measuring range

Temperature: $\leq \pm 1.5$ K

Including non-linearity, hysteresis, zero offset and end value deviation (corresponds to measuring deviation per IEC 61298-2).

The accuracy of the flow sensor is dependent on the thermal conductivity and the contamination of the probe.

The flow switch serves for reliable monitoring of the flow losses and of dry running. Also with analogue signal it should only be used as a trend indicator, in order to monitor process changes, such as filter blocking.

Temperature error at -20 ... +85 °C (-4 ... +185 °F)

Flow: $\leq \pm 0.4$ cm/s per K

Reference conditions

Temperature: 15 ... 25 °C (59 ... 77 °F)

Atmospheric pressure: 860 ... 1,060 mbar (12.47 ... 15.38 psi)

Humidity: 45 ... 75 % r. h.

Medium: Water

Nominal position: Process connection M18 x 1.5 downwards

Inner diameter of pipe 26 mm

Upstream/Downstream pipe 1 m/0.5 m

Marking towards the inflow side twist of $\pm 5^\circ$

Power supply: DC 24 V

Load: 100 Ω

Operating conditions

Permissible temperature ranges

Medium: -20 ... +85 °C (-4 ... +185 °F)

Ambient: -20 ... +80 °C (-4 ... +176 °F)

Storage: -20 ... +80 °C (-4 ... +176 °F)

Humidity

45 ... 75 % r. h.

Max. operating pressure

40 bar (580 psi)

30 bar (435 psi) with process connection M18 x 1.5

Vibration resistance

6 g (IEC 60068-2-6, under resonance)

Shock resistance

50 g (IEC 60068-2-27, mechanical)

Ingress protection

IP65 and IP67

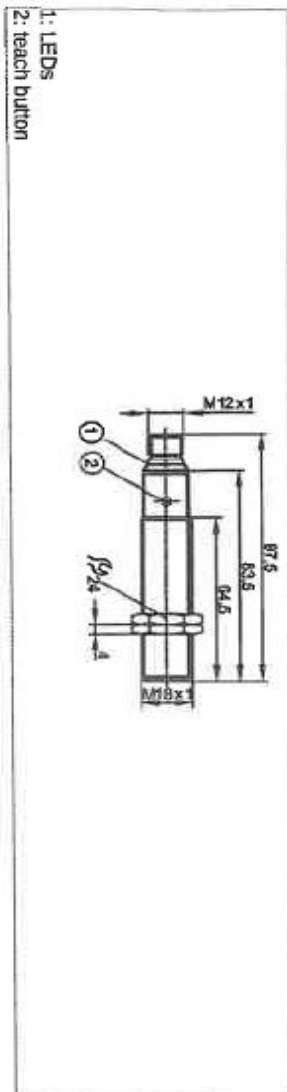
The stated ingress protection (per EN/IEC 60529) only applies when plugged in using mating connectors that have the appropriate ingress protection.

3) FLOW SENSOR- CONTINUOUS FLOW MEASUREMENT

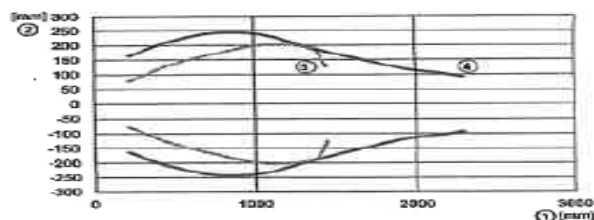
| General data | |
|--|---|
| Compatibility | with fittings S012 |
| Materials | |
| Housing | PPS |
| Cable plug M12 (cable on request) | PA |
| Materials wetted parts | |
| Fitting | Brass, stainless steel 1.4404/316L, PVC, PP or PVDF |
| Paddle-wheel, holder | PVDF |
| Axis and bearing | Ceramics (Al ₂ O ₃) |
| Seal | FKM (EPDM optional) |
| Electrical connection | Cable plug M12-8pin (or with 1 m cable length, on request) |
| Connection cable | 1.5 mm ² max. cross-section |
| Complete device data (fitting + electronic module) | |
| Pipe diameter | 1/4" to 2" (DN 06 to 50) |
| Measuring range | 1.0 l/s to 92.8 l/s (0.2 m/s to 10 m/s) |
| Measuring element | optical (or magnetic paddle-wheel, on request) |
| Medium temperature with | |
| PVC fitting | 32°F up to 140°F (0°C up to 60°C) |
| PP fitting | 32°F up to 176°F (0°C up to 80°C) |
| Stal., brass or PVDF fitting | 5°F up to 312°F (-15°C up to 160°C) (if T _{ambient} ≤ 113°F (45°C)) or 5°F up to 194°F (-15°C up to 90°C) (if 113°F (45°C) ≤ T _{ambient} ≤ 140°F (60°C)) |
| Fluid pressure max. | 145 PSI (PN10) (with plastic fitting) 292 PSI (PN16) (with metal fitting) |
| Viscosity / Solid particles rate | 900 cSt max. / max. 1% (size of particles 0.5 mm max.) |
| Accuracy | with standard K-factor ≤ ±(0.5% of FS.* + 2.5% of Reading) ¹⁾ |
| Linearity | ≤ ±0.5% of FS.* (at 10 m/s) |
| Repeatability | ≤ ±0.4% of Reading ¹⁾ |

| Electrical data | |
|---|---|
| Power supply (V+) | 12-36 V DC |
| Current consumption | < 50 mA (at 12 V DC for current version - without load) |
| Reversed polarity of DC | Protected |
| Voltage peak | Protected |
| Short circuit | Protected for transistor output |
| Output | |
| Transistor version | Transistor NPN (default setting) / PNP (programmable on request), open collector, max. 700 mA, output NPN: 0.2-36 V DC (default setting) output PNP: V+ power supply frequency or switching mode 4-20 mA, sinking (default setting), image of flow velocity (default setting), programmable on request (sourcing mode); Loop impedance max.: 1125 Ω at 36 V DC, 650 Ω at 24 V DC; 140 Ω at 12 V DC |
| Current version (programmable on request) | |
| Environment | |
| Ambient temperature | 5°F up to 140°F (-15°C up to +60°C) (operating and storage) |
| Relative humidity | ≤ 80%, non condensed |
| Standards and approvals | |
| Protection class | IP67 with Multipin M12 (IP65 with cable) |
| Standard | |
| EMC | EN 61000-6-3, EN 61000-6-2 |
| Vibration | EN 60068-2-6 |
| Shock | EN 60068-2-27 |
| Approval / Certificate on request | 3.1 Certificate; 2.2 Certificate; Rugosity Certificate; Calibration Certificate; FDA (with EPDM seal) - stainless steel fitting only |

4) ULTRASONIC DIFFUSE- REFLECTION SENSOR



Response curve



1: Distance; 2: Sound beam; 3: Target Ø 25 mm; 4: Target 200 x 200 mm

| | | |
|---|---------|---|
| Angle of aperture | [°] | 8 ± 2 |
| Max. deviation from the 90° angle sensor / object | [°] | ± 4 |
| Accuracy / deviations | | |
| Notes on the accuracy / deviation | | |
| Temperature compensation | | The indicated values are reached after a warm-up time of ≥ 20 minutes |
| Hysteresis | [%] | yes |
| Switch-point drift | [%] | 1 |
| Linearity error | [%] | ± 2 |
| Resolution | [mm] | 1 |
| Repeatability | [%] | < 3 |
| Interfaces | | |
| IO-Link device | | COM2 (38.4 kBaud) |
| Transfer type | | 1.1 |
| IO-Link revision | | IEC 61131-9 |
| SDCI standard | | Smart Sensor: Process Data Variable; Device Identification |
| Profiles | | yes |
| SIO mode | | A |
| Required master port class | | |
| Environment | | |
| Ambient temperature | [°C] | -20...70 |
| Protection | | IP 67 |
| Tests / approvals | | |
| EMC | | EN 61000-4-2 ESD: 4 kV CD / plastics 8 kV AD / metal EN 61000-4-3 HF radiated: 3 V/m EN 61000-4-4 Burst: 2 kV EN 61000-4-6 HF conducted: 3 V EN 55011: class A |
| MTTF | [Years] | 142 |
| Vibration resistance | | (10-55) Hz 1 mm amplitude, oscillation period 5 min., 30 min. per axis at resonance or 55 Hz |
| | | EN 60068-2-6 Fc |
| Shock resistance | | EN 60068-2-27 Ea yes |
| Mechanical data | | |
| Housing materials | | 1.4404; polyamide; Epoxid-Glaskeramik |
| Weight | [kg] | 0.1 |

| Electrical data | | |
|-----------------------------|-------|---|
| Electrical design | | DC PNP |
| Operating voltage | [V] | 10...30 DC; "supply class 2" to cULus. |
| Current consumption | [mA] | 55 |
| Protection class | | III |
| Reverse polarity protection | | yes |
| Power-on delay time | [s] | < 0.3 |
| Converter frequency | [kHz] | 200 |
| Inputs | | |
| Teach | | yes |
| Outputs | | |
| Output function | | 1 x NO / NC programmable + 1 x current output |
| Current rating | [mA] | 100 |
| Voltage drop | [V] | 2.2 |
| Short-circuit protection | | yes |
| Overload protection | | yes |
| Analogue output | | |
| current output | [mA] | 4...20 |
| Max. load | [Ω] | 500 |
| Switching frequency | [Hz] | 2 |
| Range | | |
| Sensing range | [mm] | 2200 |
| blind zone | [mm] | 200 |

5) CONDUCTIVITY METER

| Item | Menu Illustration | Ex Factory Setting | Setting Range |
|------|---------------------------------------|---|--------------------------|
| 1 | Electrode constant setting | 1.000 | 0.500 – 1.500 |
| 2 | Measurement unit selecting | When the electrode constant is 10.0, this menu will appear. | |
| 3 | 4mA transferable value setting | 0000 | The setting range:0—1999 |
| 4 | 4mA transferable radix point setting | 00.00 | 0.000、00.00、000.0、0000 |
| 5 | 20mA current transferable setting | 1999 | The setting range:0—1999 |
| 6 | 20mA transferable radix point setting | 19.99 | 1.999、19.99、199.9、1999 |

3. Main technical specification:

Measurement range:

Conductivity: 0~19.99 0~199.9 μ S/cm(0.1cm⁻¹ electrode)
 0~19.99 0~199.9、0~1999 μ S/cm (1.0 cm⁻¹ electrode)
 0~199.9 μ S/cm 0~1999 μ S/cm 0~19.99mS/cm(10cm⁻¹ electrode)

Temperature: 0-50°C.

Auxiliary electrode:

- 0.1cm⁻¹ 316L stainless steel electrode , 1/2" (1/2 inch) pipe screw connection:
- 1.00cm⁻¹ plastic platinum gold electrode, 1/2" (1/2 inch) pipe screw connection:
- 1.00cm⁻¹ stainless steel electrode, 1/2" (1/2 inch) pipe screw connection:
- 10.0 cm⁻¹ teflon platinum electrode, 3/4" (3/4 inch) pipe screw connection:

Note:
 Please choose the Stainless Steel Sensor or Titanium Sensor to be used for the fields of Medicine, Electronics, Power plants, etc.

Medium pressure: 0~0.5MPa;

Medium temperature: 0~50°C;

Component of temperature compensation: NTC;

Display mode: conductivity:3.5-bits LCD Digit display, temperature: 3- bits Digit display;

Accuracy: 1.5%(FS) ;

Stability: $\pm 1.5 \times 10^{-3}$ (FS) /24h;

Temperature compensation: Digit calculating compensation, with 25°C as the reference temperature;

Output signal : non- isolated, transferable 4~20mA current;

Power supply : AC 220V \pm 10%, 50Hz;

Power consumption: 2W

Environment conditions: Temperature: 0~50°C; Humidity: \leq 85%RH;

Outer dimension: 48×96×100mm(height×width×depth)

Slot dimension for installation: 45×91mm(height×width)

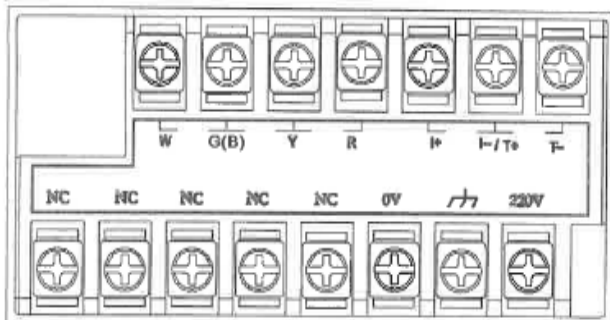
Installation : panel

Check standard : Q/SKY01—2005

6) CONDUCTIVITY (TDS) MONITOR

| Instrument parameter | | |
|----------------------------|----------------------------------|--|
| Item | Measurement range (μS/cm) | Conductivity cell constant (cm-1) |
| Measurement range | 0.5-199.9 | 0.100 |
| | 1.0-1999 | 1.000 |
| | 5-9999 | 5.000 |
| Accuracy | Conductivity | 1.5%(FS) |
| | Temp. value | ±0.8℃ |
| Temp. range | (0~50)℃; with 25℃ as standard | |
| 4-20mA output | Channels | Single channel |
| | Characteristic | Isolated, reversible, fully adjustable |
| | Accuracy | ±0.1mA |
| Power supply | AC 220V±10% 50/60Hz | |
| Power consumption | ≤2.5W | |
| Working environment | Temp. 0~50℃; Humidity: ≤85% | |
| Dimension | (48×96×80) mm (H×W×D) | |
| Hole size | (44×92) mm (H×W) (Panel mounted) | |
| Conductivity cell constant | | |
| Medium temp. | (5~50)℃ | |
| Thread size | 1/2" pipe thread | |
| Medium pressure | 0~0.5MPa | |
| Cable length | About 5m or for selection | |

2. Outline Dimension and Rear Terminals



G/B—Conductivity cell Green line;
Y—Conductivity cell Yellow line;
R—Conductivity cell Red line;

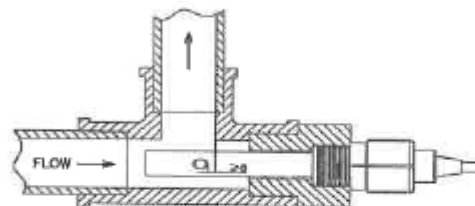
I+/I-: 4-20mA Instrument mode, power from instrument's internal;
T+/T-: 4-20mA Transmitter mode, power from conditioning modules;
0V/220V: AC supply; AC 220V switch-in;



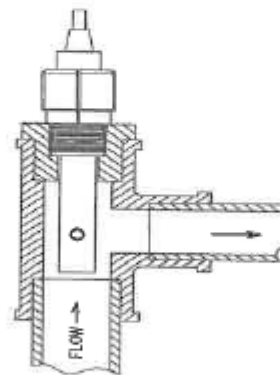
Electromagnetic compatibility on field protection terminal (connected with ground);
NC: Empty terminal (no internal connection).

3. Electrical Connection:

Please follow the correct installation method to install the electrode strictly. The incorrect installation will cause the reading error:



Correct installation(1), Ensure the stretching length is enough.



Correct installation(2), Ensure that the conductivity small hole is in the water windows.

Note:

- (1) The electrode should be installed in a place in the pipeline where the stream is steady and air bubbles are hard to generate.
- (2) No matter the conductance cell is horizontally or vertically installed, it should be deeply inserted into the moving water.
- (3) The conductivity signal is weak electronic signal and its collecting cable should be

7) Ph/ORP TRANSMITTING RECORDER

1.1 Main Features

- ☆ There are two modes for measurement collection single high-resistance mode, and double high-resistance model.
- ☆ Switch pH&ORP function by program. Meter can work with kinds of pH & ORP sensor
- ☆ Double channels relay or double channels photoelectric switch can be selected.
- ☆ Double channels relay can support two point alarm control which is suitable for pH or ORP measurement hysteresis.
- ☆ There are 2 calibration methods can supports buffer solution calibration and directly input calibration.
- ☆ Isolated external auto temperature compensation to satisfy high accurate measurement.
- ☆ Isolated/transferable/reversible/passive/active, (4~20) mA
- ☆ Power supply DC 24V.
- ☆ The meters with rear cover for seal.
- ☆ The meter with strong ability for anti interference. There are Power filter and hardware watchdog circuit

| | | |
|--------------------------|----------|--|
| Measurement range | pH | 0.00 ~ 14.00 |
| | ORP | (-1999 ~ +1999) mV |
| | Temp. | (0.0 ~ 99.9) °C |
| Resolution | pH | 0.01 |
| | ORP | 1mV |
| | Temp. | 0.1°C |
| Accuracy | pH | ±0.1 |
| | ORP | ±5mV |
| | Temp. | ±0.5°C |
| Input impedance | | ≥1.5×10 ¹² Ω |
| Temp. Compensation range | | (0 ~ 99.9) °C |
| Environment | Temp. | (0 ~ 50) °C |
| | Humidity | ≤85% RH |
| Temperature sensor | | NTC-10K |
| Cable length | | Standard 10m (or customized ≤20m) |
| Control output | | Double relay (double contact ON/OFF), backlash of high and low limit can be set |
| contact capacity | | AC 220V/AC 110V 2A(Max) DC 24V 2A(Max) |
| Current output | | Isolated/transferable/reversible/passive/active, (4~20) mA current loop (loop resistance ≤500Ω) accuracy: ±0.5%FS |
| Power supply | | DC 24V ±4V |
| protection | | IP65 (with back cover) |