

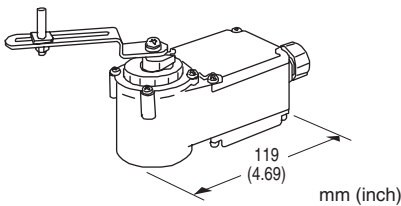
Position Sensors

2-WIRE POSITION TRANSMITTER

(linear motion type; 45 degrees)

Functions & Features

- Detecting stroke positions of a valve actuator or moving positions of other mechanisms and transmits standard 4 to 20 mA DC proportional to the position
- Light weight and compact design
- High resolution
- Excellent reliability & durability
- Field selectable direct or reverse action
- Rugged enclosure



MODEL: VOS2T-[1][2][3][4]

ORDERING INFORMATION

- Code number: VOS2T-[1][2][3][4]
- Specify a code from below for each of [1] through [4].
(e.g. VOS2T-11R0)

[1] LEVER

- 1: Stroke 10 - 30 mm (0.39" - 1.18")
- 2: Stroke 30 - 100 mm (1.18" - 3.94")
- 3: Stroke 25 - 60 mm (0.98" - 2.36")

[2] LEVER POSITION

- 1: Upper side
- 2: Lower side

[3] RETURN SPRING

- 0: None
- L: Counterclockwise return (Seen from the lever side)
- R: Clockwise return (Seen from the lever side)

[4] WIRING CONDUIT

- 0: G 1/2
- 1: 1/2" NPT fitting
- 2: G 1/2 with cable connector
- 4: Cables connected (approx. 1 meter or 3.3 ft)

RELATED PRODUCTS

- Clamp set (model: VOCP)

GENERAL SPECIFICATIONS

Degree of protection: IP66

(Screw torque for cover: 1.2 - 1.6 N·m)

Action: Direct or reverse; field selectable by change of the jumper pins' positions; factory set to direct action

Wiring conduit: G 1/2

Connection: M3.5 screw terminals (torque 0.8 N·m)

Materials

Housing: Cast aluminium

Screw terminals: Nickel-plated steel

Cable connector: Nylon 66

(applicable cable's external dia. 6.5 - 8.5 mm)

Lever: Stainless-steel

Painting color: Silver

Isolation: Output to metal housing

Zero adjustment: -2.2 - +2.2° of input angle

The Zero indicates such input angle where the transmitter outputs 12 mA.

Span adjustment: 22.5 - 45° of input angle

The Span indicates the absolute difference between such input angle for 4 mA and that for 20 mA.

INPUT SPECIFICATIONS

Input: Mechanical rotating angle

Effective rotating angle: Approx. -27 - +27° (54°)

Linearity assured range: -22.5 - +22.5° (45°)

Stopper strength: 1.37 N·m (1.011 ft·lbf)

With static load

OUTPUT SPECIFICATIONS

Output: 4 - 20 mA DC

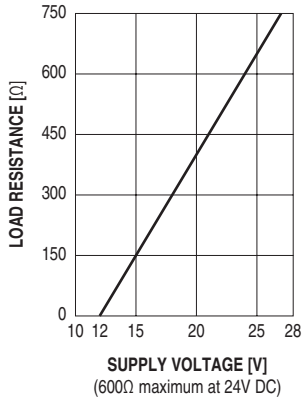
Operational range: 3.5 - 23 mA DC

Load resistance v.s. supply voltage:

Load Resistance (Ω) = (Supply Voltage (V) - 12 (V)) ÷ 0.02 (A) (including leadwire resistance)

(Refer to the graphic on the end of the section)

Output characteristics: Proportional to the sine of rotating angle of the lever



INSTALLATION

Supply voltage: 15 - 28 V DC

Operating temperature: -5 to +60°C (23 to 140°F)

Operating humidity: 30 to 90 % RH (non-condensing inside)

Environment: Protect from strong magnetic field.

Vibration: ≤ 2 G (19.6 m/s²)

Mounting position: All directions

Weight: 550 g (1.21 lb) without lever and cable

PERFORMANCE in percentage of angle ±22.5 degrees

Linearity: 1.0 % within the linearity assured range

Temp. coefficient: ±0.06 %/°C (±0.04 %/°F)

Insulation resistance: ≥ 100 MΩ with 500 V DC

Dielectric strength: 500 V AC @ 1 minute

(output to metal housing)

STANDARDS & APPROVALS

EU conformity:

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

RoHS Directive

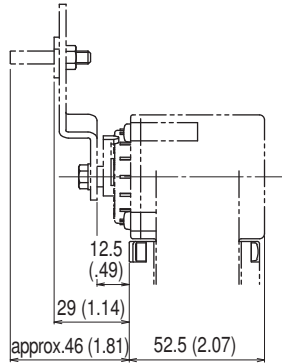
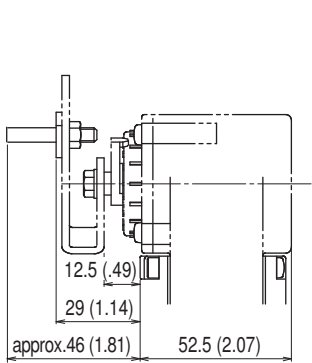
EN 50581

EXTERNAL DIMENSIONS unit: mm (inch)

LEVER ATTACHED TO THE LOWER SIDE

• Stroke 10 – 30 mm

• Stroke 30 – 100, or 25 – 60 mm



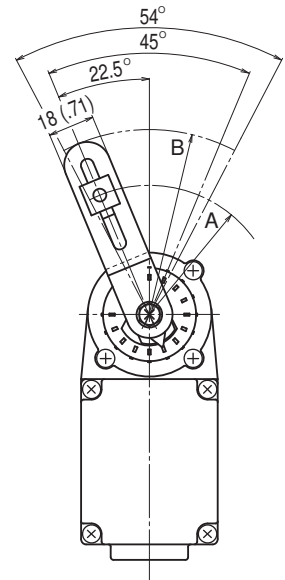
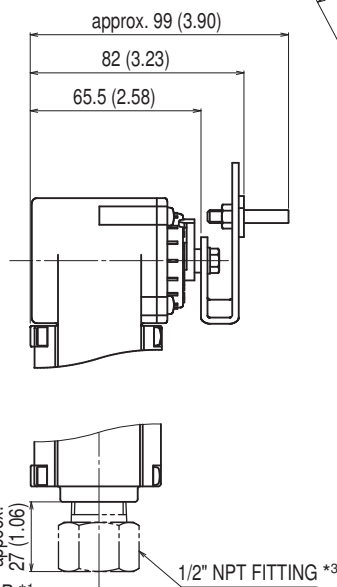
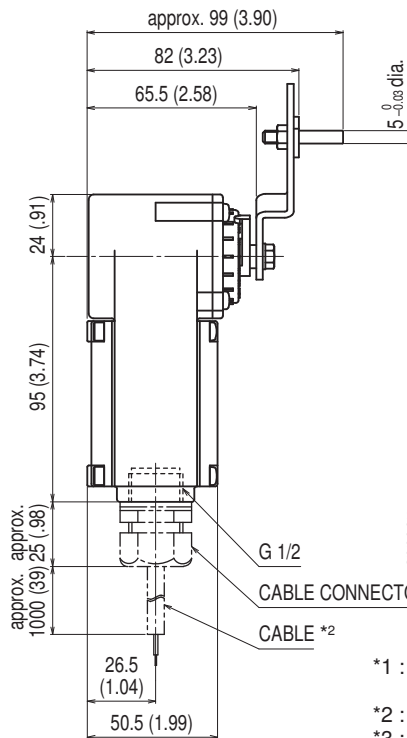
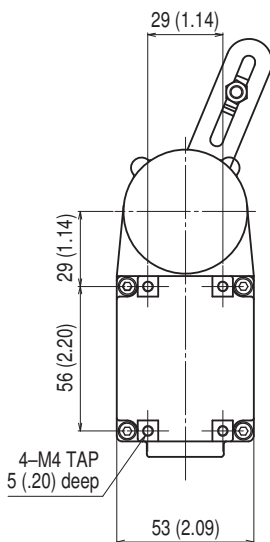
LEVER SIZE mm (inch)

| LEVER TYPE | A | B |
|------------------------------------|-------------|-------------|
| Stroke 10 – 30 mm (.39" – 1.18") | R12 – R45 | 54 (2.13) |
| Stroke 30 – 100 mm (1.18" – 3.94") | R38 – R132 | 141 (5.55) |
| Stroke 25 – 60 mm (.98" – 2.36") | R30 – R82.5 | 91.5 (3.60) |

LEVER ATTACHED TO THE UPPER SIDE

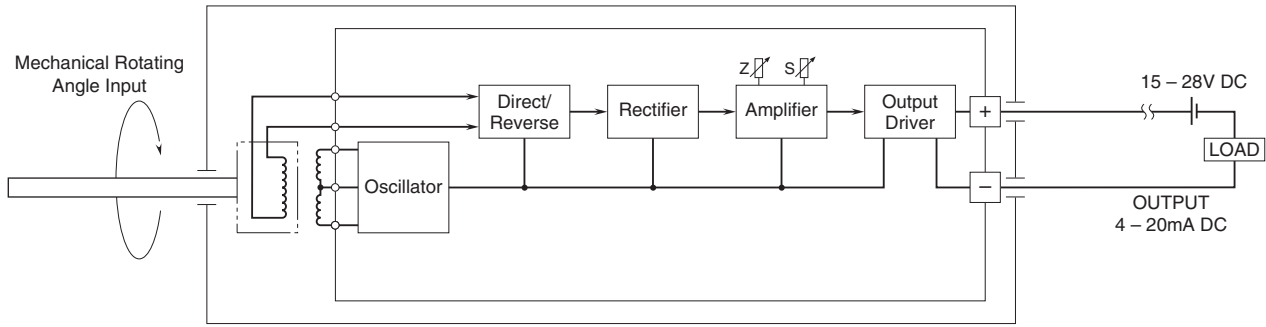
• Stroke 30 – 100, or 25 – 60 mm

• Stroke 10 – 30 mm

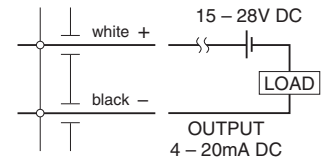


- *1 : Provided when cable connector or cable connected type is selected.
- *2 : Provided when cable connected type is selected.
- *3 : Provided when NPT fitting is selected.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



■ Cable Connected Type



Specifications are subject to change without notice.