

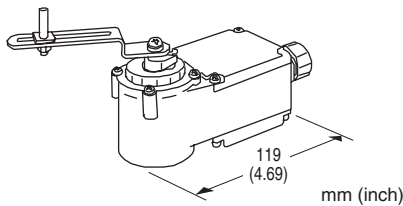
Position Sensors

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]R[3]

ORDERING INFORMATION

Code number: VOS2T-[1][2]R[3]

Specify a code from below for each [1] through [3].
(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

RETURN SPRING

R: Clockwise return (Seen from the lever side)

[3] 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)

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·lbs)

With static load

OUTPUT SPECIFICATIONS

Output: 4 – 20 mA DC

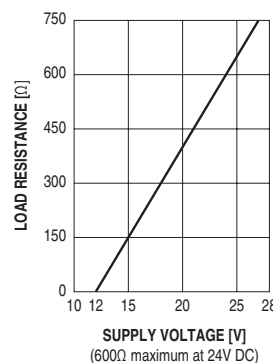
Operational range: 3.5 – 23 mA DC

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

Mounting position: All directions

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

PERFORMANCE in percentage of angle ±22.5 degrees

Linearity: 1.0 % within the linearity assured range

Temp. coefficient: ±0.03 %/°C (±0.02 %/°F)

Insulation resistance: ≥ 100 MΩ with 500 V DC

Dielectric strength: 500 V AC @ 1 minute

(output to metal housing)

STANDARDS & APPROVALS

CE conformity:

EMC Directive (2004/108/EC)

EMI EN 61000-6-4: 2007

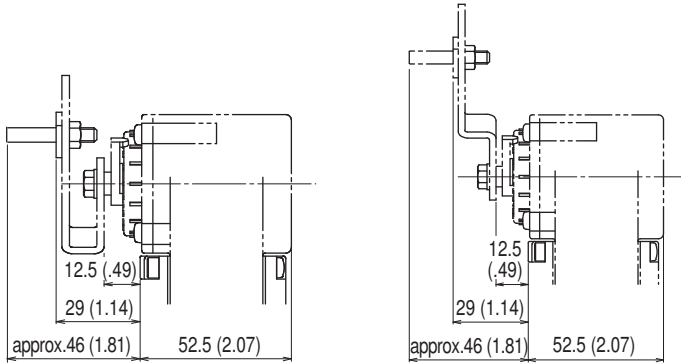
EMS EN 61000-6-2: 2005

DIMENSIONS unit: mm (inch)

■ LEVER ATTACHED TO THE LOWER SIDE

• Stroke 10 – 30 mm

• Stroke 30 – 100, or 25 – 60 mm



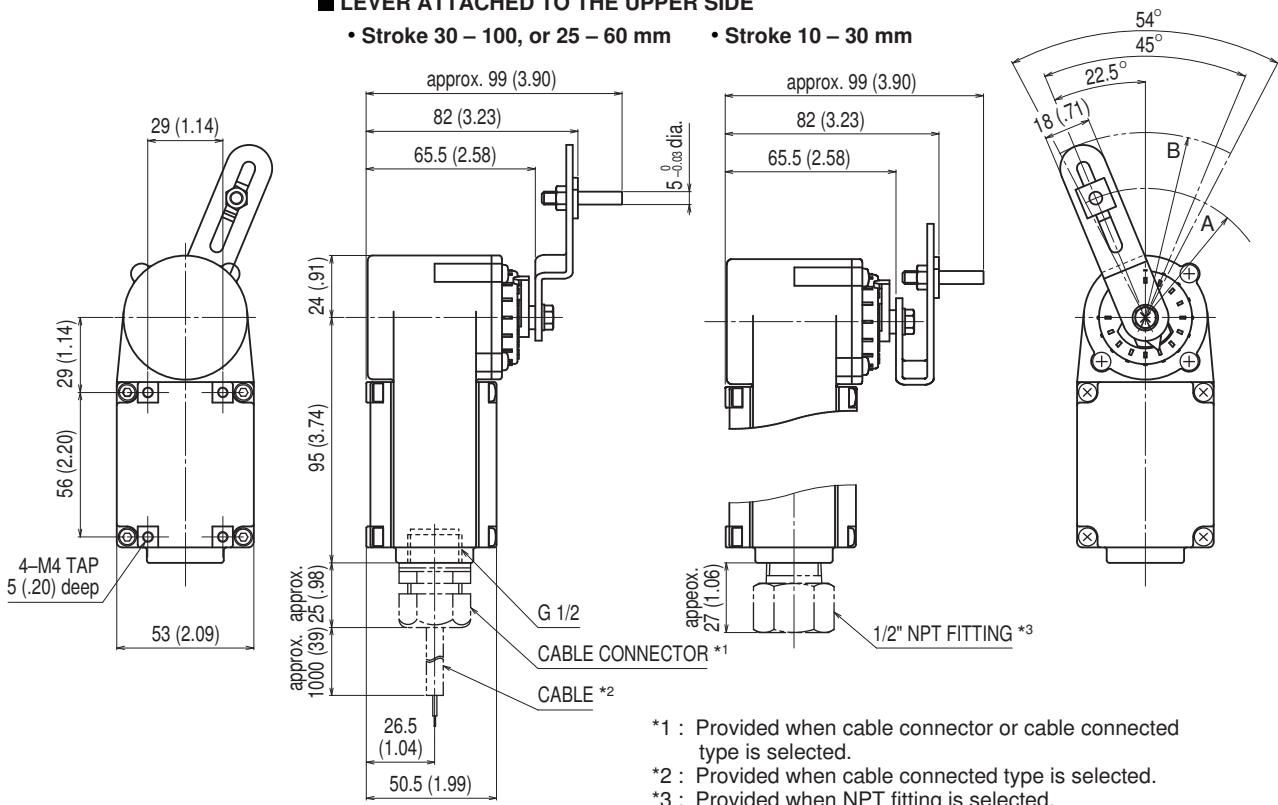
LEVER SIZE mm (inch)

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

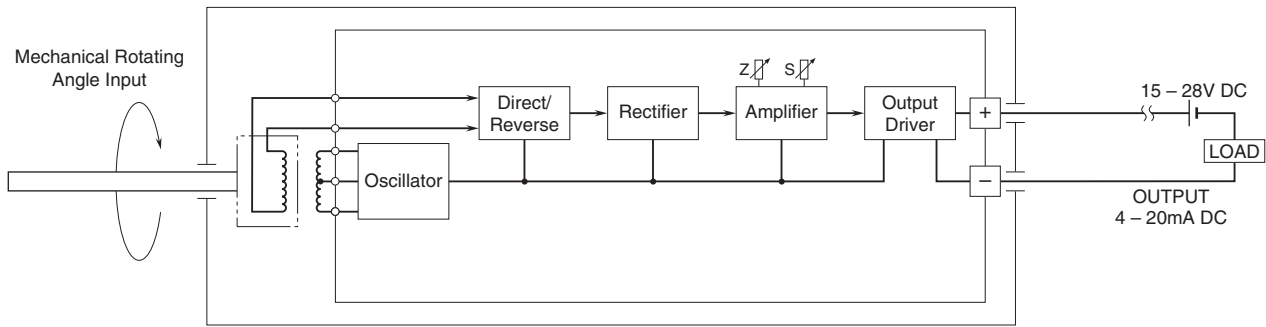


*1 : Provided when cable connector or cable connected type is selected.

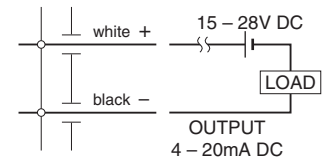
*2 : Provided when cable connected type is selected.

*3 : Provided when NPT fitting is selected.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



■ Cable Connected Type



Specifications are subject to change without notice.