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IQAN-LST Input Devices

Electronic Control Systems



ENGINEERING YOUR SUCCESS.

Application

The IQAN-LST is a paddle style mini-lever in the IQAN product group. This lever focuses on compact design, weather resistance and safety.

The LST is a small single-axis joystick 0.5 - 4.5 Vdc, intended for the proportional control of one double-acting hydraulic function. The combination of a mini-lever and armrest can provide substantial ergonomic benefits. The LST can be mounted in the armrest or on the dashboard in mobile vehicles. It is easily actuated with a fingertip for good ergonomics.

Design and function

The IQAN-LST is lightweight with small installation dimensions. The LST also has low, well-adapted forces designed in for ease of operation in close quarters. The lever is covered with friction rubber on either side, to prevent the fingers from slipping and to provide a comfortable feel. Mounting screws are installed from underneath for a clean appearance of the dashboard, panel or armrest.

The IQAN-LST is designed for the outdoor environment. The electronics are potted and the cable has a choice of of a Saab sealed AMP junior-power timer connector or a Deutsch DT series transportation connector. These features combine to give the LST an IP66 rating. The IQAN-LST is also available with an unsealed, Molex MicroFit 3.0 connector and shortened cable suited for armrest installations.

The IQAN-LST is a spring centered, dual sensor device. The dual sensors provide 0.5 - 4.5 Vdc and 4.5 - 0.5 Vdc outputs which allows error checking to meet high safety requirements. All inputs and outputs are protected against short circuit to ground. It is well suited as a control unit for a variety of valve drivers. The LST fits to the IQAN platform and is designed to meet typical environmental stresses in mobile hydraulic applications.

General

Weight	40 g
Rated power supply (V_s)	5 VDC
Load resistive (min.)	4.5K Ω
Load capacitive (max.)	1 μ F
Current consumption	16 mA

Mechanical

Angle of movement	$\pm 30^\circ$
Expected life (operations)	5 million

Environment

Operating temperature	-40° to 70 °C
Sealing	IP66

Analog outputs

Active range (VDC out)	10%-90% V_s
Resolution	<2mV

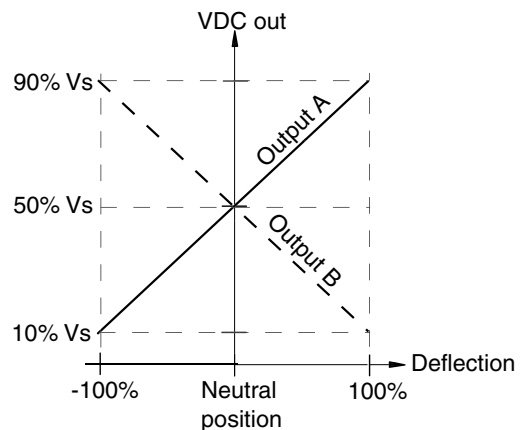
Connectors

S	Saab (AMP/Tyco JPT)
D	Deutsch DT04
MF	Molex MicroFit 3.0

Ordering part numbers

IQAN-LST-S	20011381
IQAN-LST-D	20014070
IQAN-LST-MF	20077729

Deflection vs. output diagram



Environmental Protection

EMI

- ISO 11452-2 (immunity vs EM field)
- ISO 14982 (radiated emission)
- ISO 11452-4 (immunity vs injected RF)
- ISO 7637-2 (immunity vs supply transients)
- EN61000-4-8 (immunity vs magnetic field)

ESD

- EN 61000-4-2 (external)
- ISO TR 10605 (external)

Mechanical environment

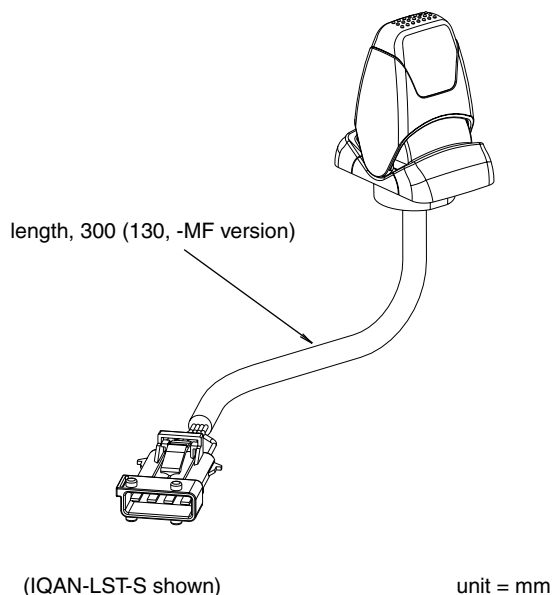
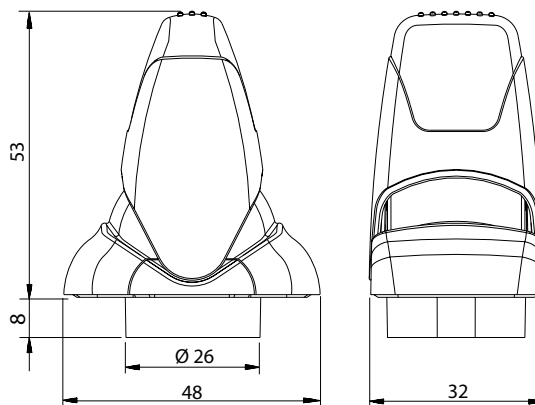
- IEC 68-2-64 Fh (random)
- IEC 68-2-29 Eb (bump)

Climate environment

- IEC 68-2-18 Rb3 (water)
- IEC 68-2-30 Db (var1, damp, cyclic)
- IEC 68-2-3 Ca (damp, heat steady state)
- IEC 68-2-2 Bb (heat)
- IEC 68-2-1 Ab (cold)
- IEC 68-2-14 Nb (change of temperature)

Chemical environment

- IEC 68-2-52 Kb (salt mist, cyclic)



! WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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