



IQAN-LC5-X05 Input Devices

Model code

IQAN - LC5 - X05 - / / / / / / - /

spare

| Code | Description |
|------|------------------|
| L | lever |
| C | co-ordinate |
| 5 | fifth generation |

| Code | Description |
|------|-----------------|
| X | Crossed outputs |
| 0 | 0 VDC min range |
| 5 | 5 VDC max range |

| Code | Description |
|--------------|----------------------------------|
| U1 / / / / / | no handle, without bellow |
| U2 / / / / / | no handle, with bellow |
| H1 / / / / / | Handle, ball knob, Ø50mm [Ø2.0"] |

IQAN-LC5-X05 Input Devices

Application

The IQAN-LC5-X05 is a large, coordinate joystick that incorporates ruggedness, functionality, light weight with high flexibility for mobile market applications. The unit is extremely robust, able to withstand aggressive conditions during outdoor use and in outdoor installations, including EMI, vibrations and a wide temperature range. The IQAN-LC5-X05 features a compact ergonomic design making it ideal for armrest and panel installations in mobile equipment. Fourth generation ICL4 type joysticks are easily replaced with the IQAN-LC5-X05.

Design and function

The mechanical life is greatly increased over previous generations of joysticks. Full stroke force "one time loading" in any direction is >100 Nm. The torsional strength has more than doubled, compared to the previous generation.

The IQAN-LC5-X05 is designed for outdoor use. The housing is rated IP65 above the flange, and has an integrated Deutsch transportation connector. The handle cable may be routed completely through the main, non-corrosive housing. This makes field mounting of new handles or replacing a bellow very easy to accomplish. In case of water ingress (i.e. a damaged bellow), the built-in drainage from this design will protect the electronics.

All proportional output signals are of contactless Hall effect type with dual sensors to provide redundancy for high safety and reliability. This make it easy for the application designer to meet high safety requirements functions by using IQAN software. The primary signal for each axis is 10%-90% of supply voltage. The corresponding secondary signal is 90%-10% of supply voltage.

The joystick has a heavy duty stem and tough base material for long life. The precise force configuration makes it easy to feel X and Y direction.

The IQAN-LC5-X05 is made using selected components and conforms to strict international requirements.

General (Lever base)

| | |
|------------------------------|--------------|
| Weight | 0.37 kg |
| Rated power supply (V_s) | 5 VDC |
| Load resistive (min.) | 4.5K |
| Load capacitive (max.) | 1 μ F |
| Current consumption | 16 mA (5VDC) |

Mechanical (Lever base)

| | |
|------------------------------------|----------------|
| Angle of movement | $\pm 18^\circ$ |
| Expected life (full stroke cycles) | 5 million |
| Lever force in neutral, XY | 0.6 Nm |
| Full actuated, XY direction | 1.4 Nm |
| One time loading (max.) | 100 Nm |

Environmental (Lever base)

| | |
|------------------------|----------------|
| Temperature range | |
| Operating, ambient | -40 to +85° C |
| Storage, ambient | -40 to +100° C |
| Sealing (above flange) | IP65 |

Electrical (Lever base)

| | |
|--------------------|--------------------|
| Over voltage range | 11Vdc @ 10 minutes |
|--------------------|--------------------|

Connection

| | |
|-----------------------|---------------------|
| Electrical connection | Deutsch DTM, 6 pos. |
|-----------------------|---------------------|

Analog outputs

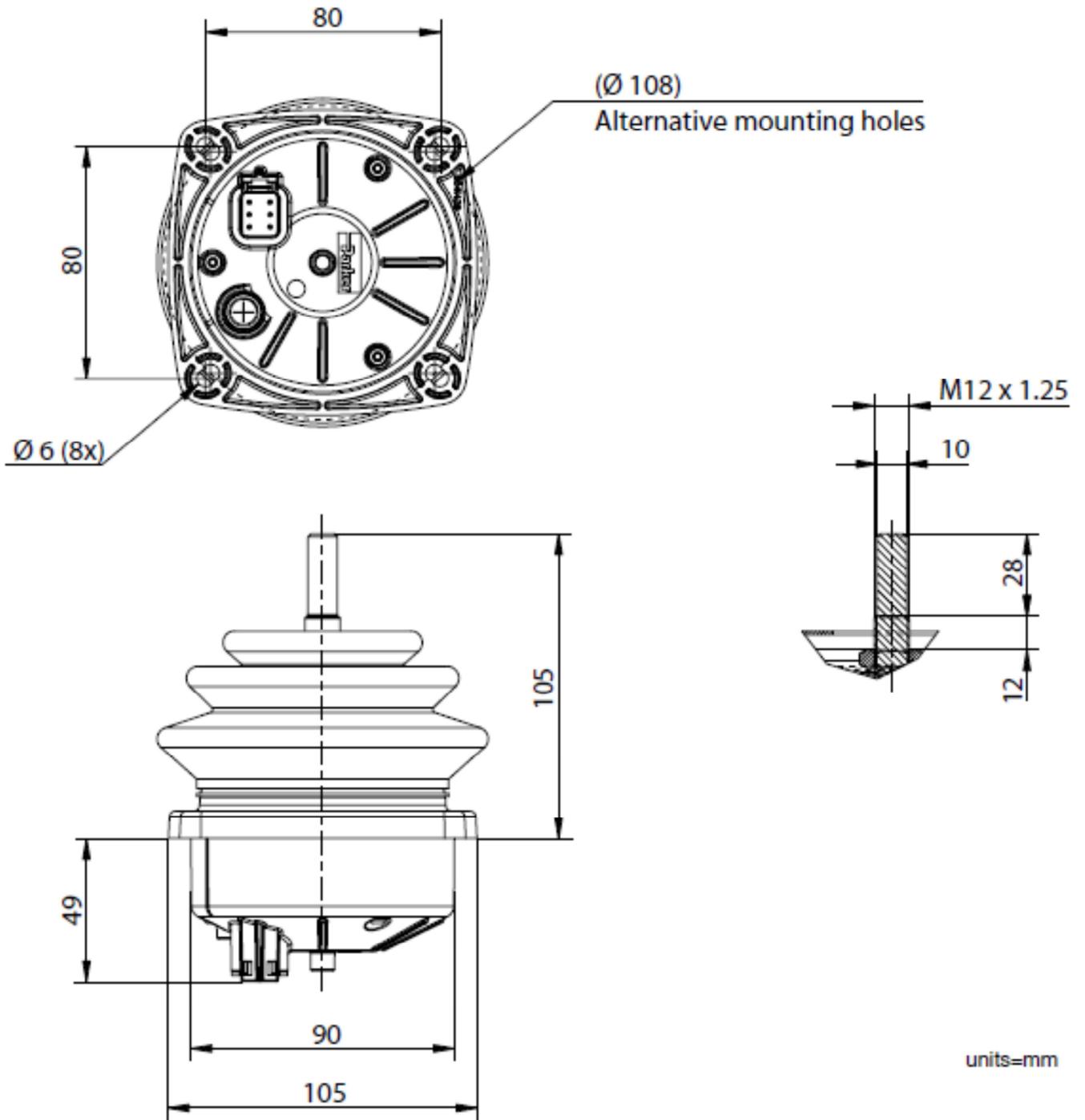
| | |
|------------------------|---------------|
| Active range (Vdc out) | 10%-90% V_s |
| Resolution | <2 mV |

Ordering part numbers

| | |
|---------------------------|----------|
| IQAN-LC5-X05-U1 / / / / / | 20076317 |
| IQAN-LC5-X05-U2 / / / / / | 20076318 |
| IQAN-LC5-X05-H1 / / / / / | 20076319 |

Technical Information

IQAN-LC5-X05 Input Devices



Technical Information**IQAN-LC5-X05 Input Devices****Environmental Protection****EMI**

ISO 13766/ISO 14982 (radiated emission)
EN 55025:2003 (conducted emission)
ISO 11452-4:2005 (conducted susceptibility)
ISO 11452-2:2004 (radiated susceptibility)
ISO 7637-3:2007 (immunity vs supply transients)

ESD

ISO 10605:2001, (Handling)

Climate Environment

IEC 60529:2001 IP65 (water)
IEC 60068-2-78:2001 (damp heat, steady state)
IEC 60068-2-30 :1985 Db (var1,damp,cyclic)
IEC 60068-2-14:1984 Nb (change of temp.)
IEC 60068-2-2:1993 Bb (dry heat)
IEC 60068-2-1:1993 Ab (cold)

Mechanical

IEC 60068-2-29:1987 Eb (bump)
IEC 60068-2-64:1993 Fh, Fh (random vibration)

Chemical environment

IEC 60068-2-52:1996 Kb (salt,mist,cyclic)

