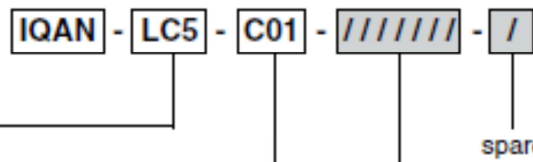




IQAN-LC5-C01 Input Devices

Model code



Code	Description
L	lever
C	co-ordinate
5	fifth generation

Code	Description
C01	CANbus (ICP)
C02	repl. IQAN-LL-2U

Code	Description
U1/////	no handle, without bellow
U2/////	no handle, with bellow, Ø40mm [Ø1.57"]
H1/////	Handle, ball knob, Ø50mm [Ø1.97"]

Note: H1 option is not available with IQAN-LC5-C02

IQAN-LC5-C01 Input Devices

Application

The IQAN-LC5-C01 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-C01 features a compact ergonomic design making it ideal for armrest and panel installations in mobile equipment. The IQAN-LC5-C01 has high I/O count and the ability to support up to 5 axes in IQANdesign platform applications. Fourth generation IQAN-LL-2U joysticks are easily replaced with the IQAN-LC5-C02 version.

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-C01 is designed for outdoor use. The housing is rated IP65 above the flange, and has integrated Deutsch transportation connectors. 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 inputs 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 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-C01 CAN levers are connected to other modules through a CAN bus which makes data exchange more efficient, simplifies installation and increases noise immunity.

The wide operating voltage range allows the IQAN-LC5-C01 to connect to both 12 VDC and 24 VDC systems. All inputs and outputs are protected against short circuit to ground and to main power supply. LED indicators show supply voltage and internal operation.

The IQAN-LC5-C01 is made using selected components and conforms to strict international requirements.

General (Lever base)

Weight	.41 kg
Voltage supply	9 - 32 Vdc
Current consumption	45mA @ 14Vdc 30mA @ 28Vdc
CAN (ISO 11898) Protocol	CAN 2.0b ICP (IQAN CAN Protocol)

Mechanical (Lever base)

Angle of movement	±18°
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)

Addressing	idTag (address 0-7 without termination)
Termination	idTag (address 0-7 with termination)

Connection

Electrical connection	Deutsch DTM, 2x 6 pos., 1x 12 pos.
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Inputs

Voltage inputs ¹	8(1)
Signal range	0-5 Vdc
Resolution	1.2 mV
Digital inputs	5
Signal high	>4 Vdc
Signal low	<= 1 Vdc

1) The voltage inputs share the same physical pins. The user defines the channels/pins with IQAN software.

Outputs

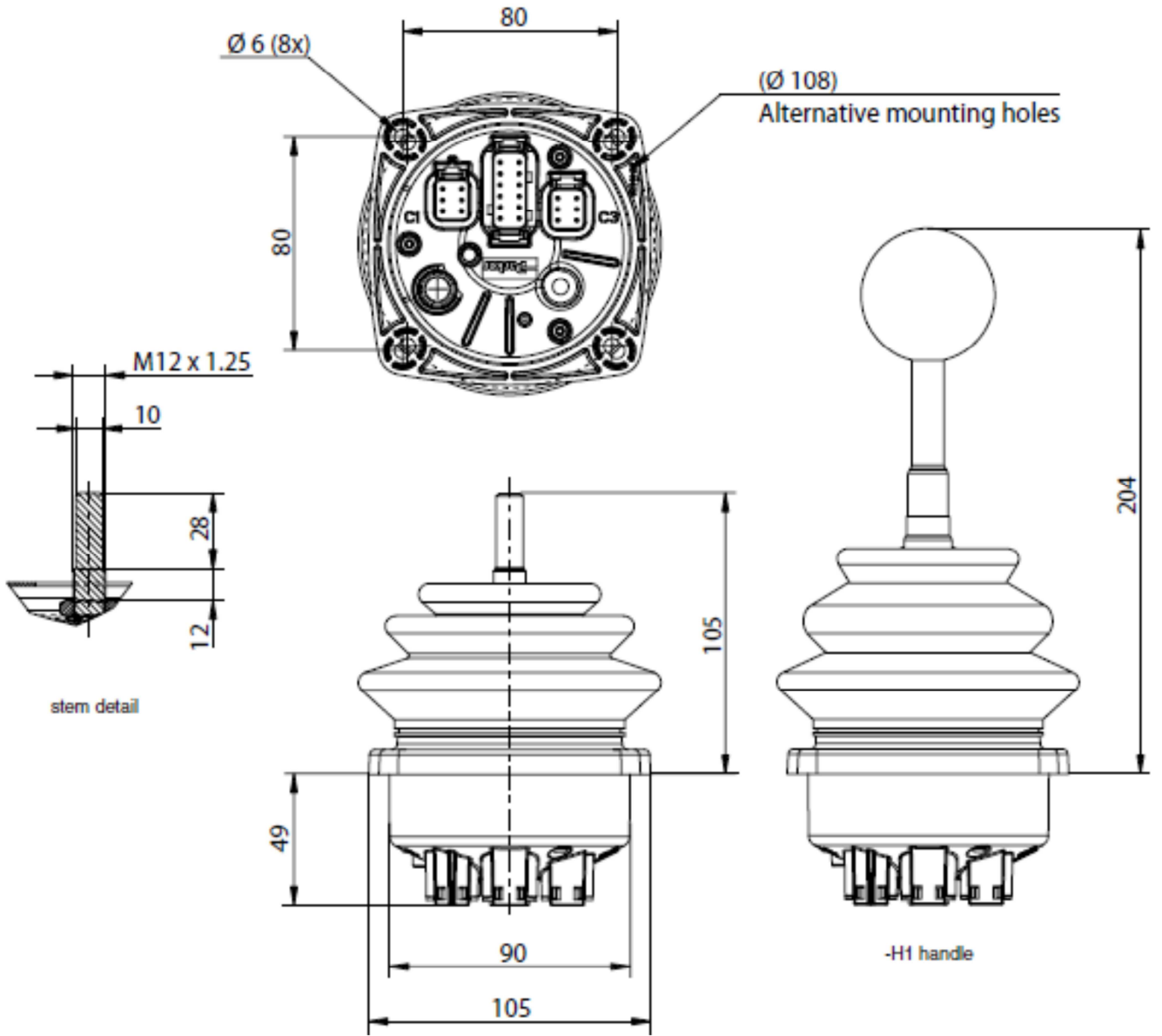
Digital output	1
Type	high side switch
Max load	200 mA

Ordering part numbers

IQAN-LC5-C01-U1 / / / / /	20076330
IQAN-LC5-C01-U2 / / / / /	20076331
IQAN-LC5-C01-H1 / / / / /	20076332
IQAN-LC5-C02-U1 / / / / /	20076333
IQAN-LC5-C02-U2 / / / / /	20076334

Technical Information

IQAN-LC5-C01 Input Devices



units=mm

Technical Information**IQAN-LC5-C01 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)
ISO 7637-2:2004 (conducted transient susceptibility)

ESD

ISO 10605:2001, (Handling)

Climate Environment

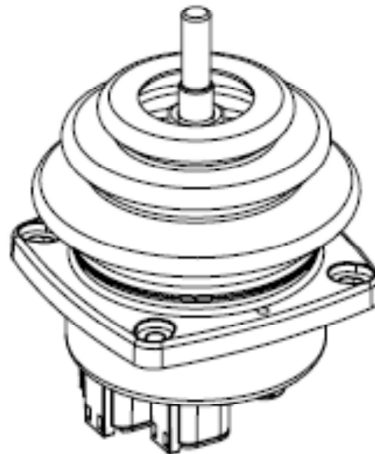
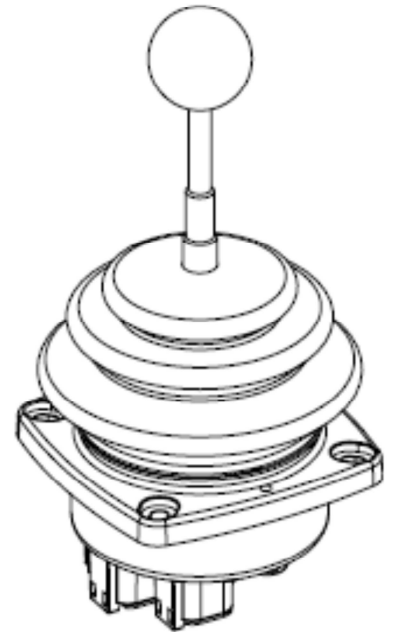
IEC 60529:2001 IP65 (water)¹
IEC 60068-2-78:2001 (damp heat, steady state)
IEC 60068-2-30 :1985 Db (var1,damp,cyclic)
IEC 60068-2-14:1984 Nb (change of temp.)
IEC 60068-2-2:1993 Bb (dry heat)
IEC 60068-2-1:1993 Ab (cold)

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)



¹ with sealed handle and bellows