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IQAN-XC22/23 I/O Modules

Electronic Control Systems



ENGINEERING YOUR SUCCESS.

Application

The IQAN-XC22 and IQAN-XC23 are IQAN design platform expansion modules in the IQAN system. This type of unit is a small dimension I/O module to be used as an expansion unit in an IQAN control system.

All IQAN expansion modules communicate with a master over a CAN bus, using the IQAN CAN protocol. The IQAN-XC22/23 modules have I/O flexibility that allows the user freedom in defining signals for measurement and control.

I/O

Inputs

The IQAN-XC22 has up to 12 digital inputs for connection to switches. These inputs can be configured as up to 10 frequency inputs and 1 encoder input for measuring speed and position.

The IQAN-XC23 has up to 20 digital inputs for connection to switches. Up to 8 of these inputs may be configured as voltage inputs for connection of 0-5 Vdc signals from resistive or Hall-effect sensors and joysticks. The remaining 12 inputs can be configured as up to 10 frequency inputs and 1 encoder input for measuring speed and position.

Outputs

The module's low power digital outputs are designed for driving low power loads such as relays, LEDs or alarm buzzers. The outputs share pins with the inputs and are configured using IQAN software.

Installation

The IQAN-XC22/23 is designed for outdoor use on mobile machinery. It uses 2 or 3 keyed Deutsch DTM connectors, depending on model, to prevent wiring mix-ups. The module has addressing in the wiring harness through use of an IDtag; the addressing of the IQAN-XC22/23 allows up to 8 modules of this type on the bus.

The housing is designed for stacking multiple modules, providing a high density of I/O in a small footprint.

Diagnostics

The module provides diagnostics by monitoring its voltage references, input voltages, output status, and temperature. This information is sent on CAN and easily viewed on the IQAN master module.

Specifications

General

Weight	0.2 kg
Temperature range	
Operating, ambient	-40 to +70 °C
Storage, ambient	-40 to +100 °C
Protection	IP65, IP6K9K
Voltage supply	9 - 32 Vdc
Current consumption (idle)	20 mA (28 Vdc) 30 mA (14 Vdc)
CE marking	2004/108/EC
Data interface	Parker ICP (IQAN CAN Protocol)

Outputs

Digital out low	up to 8 ¹
Type	low-side switch
Max load, 1 output	300 mA
Max load, all outputs	1700 mA

Inputs

Voltage inputs	up to 8 ^{1,2}
Signal range	0 - 5 Vdc
Resolution	1.22 mV
Frequency inputs	up to 10 ¹
Signal range (FIN-A to B)	1 - 20000 Hz
Signal range (FIN-C to J)	1 - 4000 Hz
Logic level high	>4 Vdc
Logic level low	<1 Vdc
Encoder inputs	up to 1 ¹
Signal range	0 - 20000 Hz
Logic level high	>4 Vdc
Logic level low	<1 Vdc
Digital inputs	up to 12 ¹ (20 ^{1,2})
Signal high	>4 Vdc
Signal low	<1 Vdc

1) depending on configuration

2) -XC23 only

Ordering part numbers

IQAN-XC22	20077784
Connector kits, -XC22	C1: 20072408 C2: 20072406
Cables, -XC22	5030125, 5030127
IQAN-XC23	20077792
Connector kits, -XC23	C1: 20072408 C2 & C3: 20073081
Cables, -XC23	5030125, 5030126, 5030127

Environmental protection

EMI

ISO 13766:2010/ISO 14982:2009, Radiated emission
EN 55025:2003, Conducted emission
ISO 11452-2:2004, Radiated susceptibility
ISO 11452-4:2005, Conducted susceptibility
ISO 7637-2:2004, Conducted transient on power
ISO 7637-3:2007, Conducted transient on signal

ESD

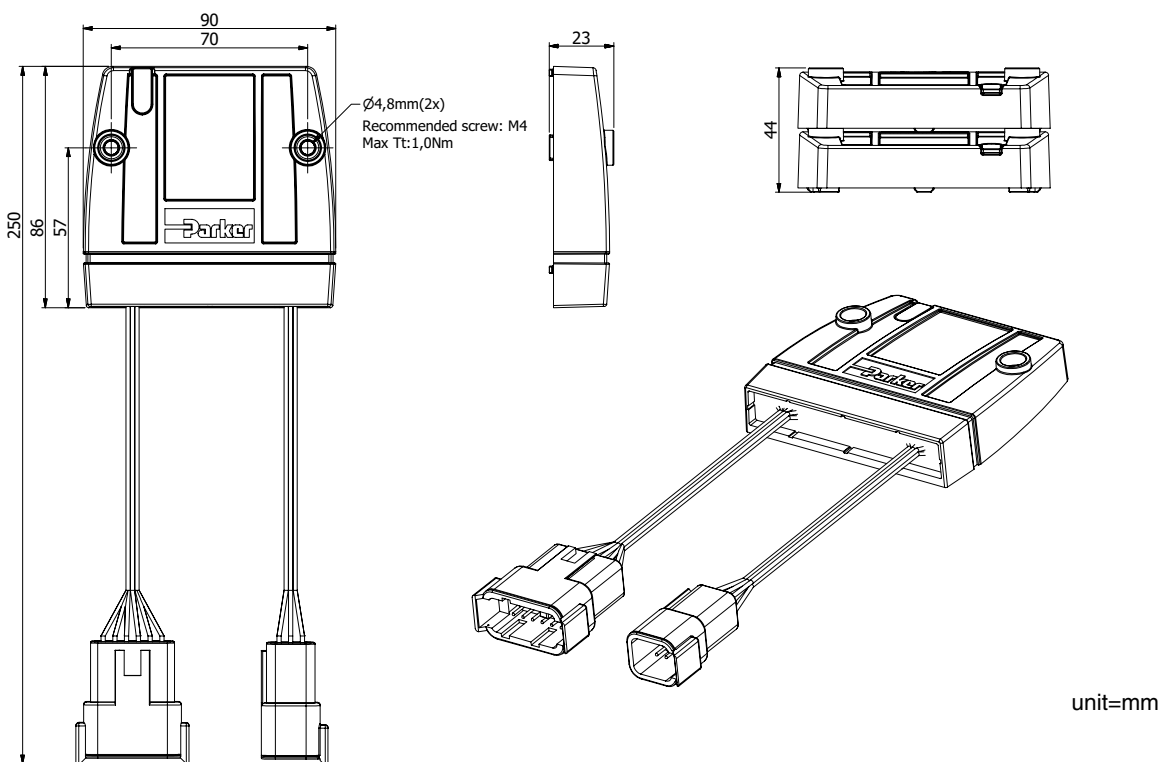
ISO 10605:2008, Operation
ISO 10605:2008, Handling

Mechanical environment

IEC 60068-2-64: 2008 Fh, Random vibration
IEC 60068-2-27:2008 Ea, Bump

Climate environment

IEC 60529:2001 IP65 (water)
IEC 60068-2-30:2005 Db, Damp heat cyclic
IEC 60068-2-78:2001 Cab, Damp heat, steady state
IEC 60068-2-14:1984 Nb, Change of temperature
IEC 60068-2-2:2007 Bb, Heat, operation
IEC 60068-2-1:1993 Ab, Cold
IEC 60068-2-52:1996 Kb, Salt mist



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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