

Application

The IQAN-XC21 is an IQANdesign platform expansion module in the IQAN product group. This unit is a small dimension I/O module to be used as an expansion unit in an IQAN system. It is also useful as an interface with the IQAN-LC6-X05 joystick to provide CAN capability.

All IQAN expansion modules communicate with a master over a CAN bus, using the IQAN CAN protocol. The IQAN-XC21 module has I/O flexibility that allows the user freedom in defining signals for measurement and control.

I/O

Inputs

The IQAN-XC21 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 sensors can be powered from one of the 5 Vdc reference voltages on the module.

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-XC21 is designed for in-cab use on mobile machinery. It uses four Molex Micro-fit connectors of varying pin density to prevent wiring mix-ups. The module has addressing in the wiring harness through use of an IDtag; the addressing of the IQAN-XC21 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. The module also has pins that allow 'daisy chaining' of power and CAN for simplified cable harness installation.

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	0.1 kg
Temperature range	
Operating, ambient	-30 to +70 °C
Storage, ambient	-40 to +85 °C
Protection	IP32
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, DOUT-A+B+C+D	850 mA
Max load, DOUT-E+F+G+H	850 mA

Inputs

Voltage inputs	up to 8 ¹
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 20 ¹
Signal high	>4 Vdc
Signal low	<1 Vdc

Sensor supplies

Voltage references	2
Supply range	5 Vdc ±100 mV
Max load C2 connector	70 mA (has 2 pins)
Max load C3 connector	70 mA (has 1 pin)

1) depending on configuration

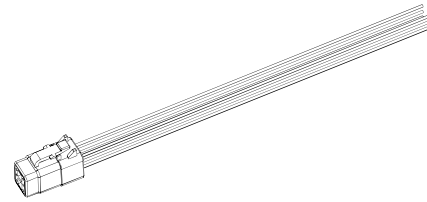
Ordering part numbers

IQAN-XC21	20077775
Connector kit, -XC21	20077776
Cables kit, -XC21	20077777

Prototype installation cables

5030127

C1-cable: 2,5 meters, fits to IQAN-LC5-X05,
-LC5-C0x



5030216

C1-cable: 2,5 meters, fits to IQAN-MC3
Black, key A (for power, CAN and outputs)

5030217

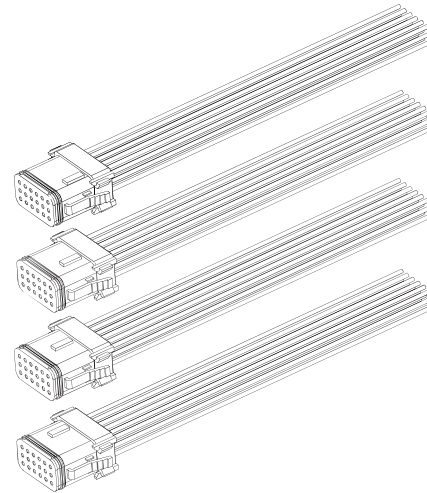
C2-cable: 2,5 meters, fits to IQAN-MC3
Black, key B (for inputs and VREF)

5030218

C3-cable: 2,5 meters, fits to IQAN-MC3
Black, key C (for inputs and VREF)

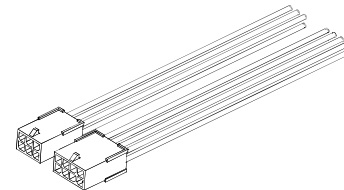
5030219

C4-cable: 2,5 meters, fits to IQAN-MC3
Black, key D (for outputs)



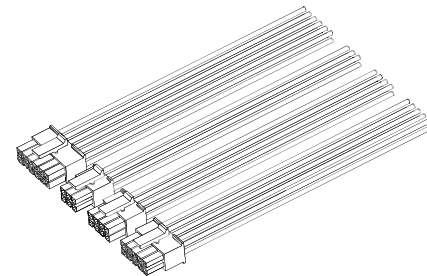
20077763

C1-C2 cables: 2,5 meters, fits to IQAN-LC6-X05



20077777

C1-C4 cables: 2,5 meters, fits to IQAN-XC21



20085102

C1-C2 cables: 2,5 meters, fits to IQAN-XC10,
Black & white Ampseal

