Technical Information — IQAN-XA2 I/O Modules

Environmental protection

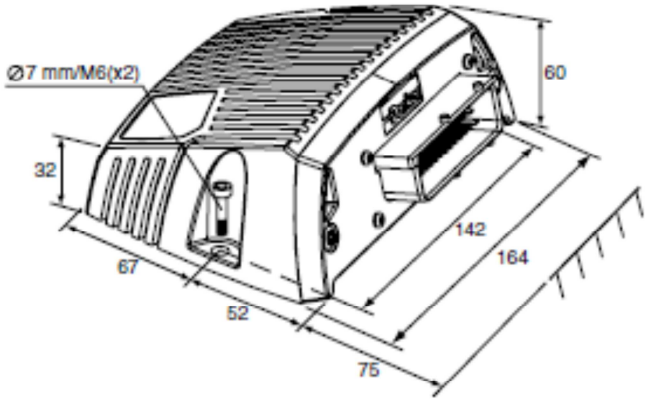
EMI
ISO 14982:1998, Radiated emission
EN 55025:2003, Conducted emission
ISO 11452-2:1995, Radiated susceptibility
ISO 11452-4:2001, Conducted susceptibility
ISO 7637-2:2004, Conducted transient
ISO 7637-3:1995, Conducted transient
EN 61000-4-8:1993, Magnetic field

ESD
ISO 10605:2001, ESD

Mechanical environment
IEC 60068-2-64:1993 Fh, Random vibration
IEC 60068-2-29:1987 Eb, Bump

Climate environment
IEC 60529:2001, Enclosure protection
DIN 40050 Part 9:1993, Enclosure protection
IEC 60068-2-30:1985 Db, Damp heat cyclic
IEC 60068-2-78:2001, Damp heat, steady state
IEC 60068-2-14:1984 Nb, Change of temperature

Chemical environment
IEC 60068-2-52:1996 Kb, Salt mist



unit=mm

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Application

The IQAN-XA2 is an IQANdesign platform expansion module in the IQAN product group. This unit is designed for high digital I/O count, weather resistance, and safety.

All IQAN expansion modules communicate with a master over a CAN bus. The IQAN-XA2 module has increased I/O flexibility that allows the user greater freedom in defining signals for measurement and control.

I/O flexibility

Inputs

The IQAN-XA2 module has eight voltage inputs for connection of 0-5 Vdc signals. Four of the inputs are multi-purpose and for flexibility may be configured as frequency inputs or as directional frequency (quadrature) inputs for measuring speed and position.

Outputs

The XA2 module has six on-off outputs that are high-side power outputs.

The XA2 module also has six double proportional outputs for controlling proportional valves. These outputs can control six bi-directional valve sections or six single solenoid devices (ie. proportional cartridge valves).

The proportional outputs can be used in two different modes. Either Current mode (current closed-loop) or PWM mode (voltage open-loop) signals can be selected and the parameters configured using IQAN software.

For flexibility these outputs may also be configured as up to six on/off outputs and up to twelve on/off inputs. The proportional outputs, on-off outputs and on-off inputs share pin positions.

Weather resistance

The aluminum housing is designed to be rugged, but light and has a sealed, automotive AMP/Tyco power timer connector. The IQAN-XA2 has a membrane to prevent condensation inside the housing. This controller is designed for the outdoor environment.

Safety

The unit executes a self-test during start up and cyclic operation. An internal watch dog checks for software errors and will interrupt outputs if errors are detected. The IQAN-XA2 is made using selected components and conforms to strict international requirements.

Diagnostics: If an error is detected an LED on the top of the controller flashes a sequence to indicate the nature of the error.

General

Weight	0.7 Kg
Operating temperature	-40 to +70 °C
Protection	outdoor use
Voltage supply	11- 32 Vdc
Current consumption (idle)	180 mA (28 Vdc) 170 mA (14 Vdc)
Data interface	Parker ICP (IQAN CAN Protocol)

Outputs

Proportional outputs	
Type current mode	current - closed-loop
PWM mode	voltage - open-loop
Signal range	100 - 2000 mA
Dither frequency	25 - 333 Hz
Resolution	1 mA
Digital outputs	
Type	high side switch
Max load	2 A

Inputs

Voltage inputs	
Signal range	0 - 5 Vdc
Resolution	5 mV
Frequency inputs	
Signal range (speed mode)	2 - 30000 Hz
(position mode)	0 - 30000 Hz
Quadrature inputs	
Signal range (speed mode)	2 - 30000 Hz
(position mode)	0 - 30000 Hz
Digital inputs	
Signal high	4 Vdc - V_{BAT}
Signal low	0 - 1 Vdc

Ordering part number

IQAN-XA2	5010033