General

Weight	1.1 kg
Temperature range	
Operating, ambient	-40 to +85 °C
Storage, ambient	-40 to +100 °C
Protection	outdoor, chassis
Voltage supply	9 - 32 Vdc
Current consumption (idle)	160 mA (24V) 240 mA (12V)
CAN buses	4[1]
Protocols	Parker ICP (IQAN CAN Protocol) SAE J1939, Generic CAN

1) It is recommended that one CAN bus is dedicated for diagnostic purposes (PC interface)

Safety

IEC 61508	Up to SIL2
EN ISO 13849-1	Up to PLd
PFHd	< 10^{-7}

Outputs

Proportional outputs	
Current output pairs	4
Type	current closed loop
Signal range	100-2000 mA
Dither frequency	70-333 Hz
Digital outputs	
Dedicated digital outputs	5
Type	hs+ls switch
Max load	3 x 3 A 2 x 1.5 A

Inputs

Max number of inputs	32
Voltage inputs	16
Signal range	0 - 5 Vdc
Frequency inputs	8
Signal high	4 Vdc - 32 Vdc
Signal low	0 - 1 Vdc
Alternative configuration	Quadrature in (4) Digital in (8)
Dedicated digital inputs	8
Signal high	4 Vdc - 32 Vdc
Signal low	0 - 1 Vdc

Connector

Type	4 x DT04-18P(key A-D)

Application

The IQAN-MC3 is a SIL2 rated master module in the IQANdesign platform. It can be used as a standalone controller, as a single bus master, or together with other IQAN master modules.

All IQAN modules are designed with the functional safety requirements of mobile machines in mind. The IQAN-MC3 is especially suited for applications with higher demands on functional safety, where there is a need to prove the safety integrity of each implemented safety function. It is designed in accordance with IEC 61508, and can be used to implement safety functions of up to SIL2. When applying EN ISO 13849-1 for safety functions, it can be used as a PLd subsystem.

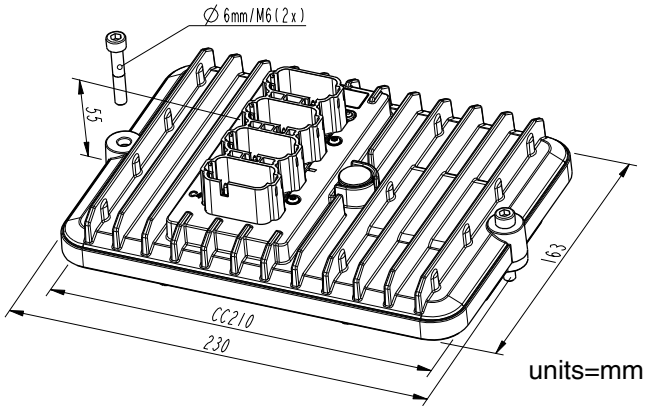
All of the 32 inputs on the IQAN-MC3 can be used for safety related signals, when the inputs are configured in pairs. On the unit there are analog inputs for 0-5 V signals from e.g. hall-effect or potentiometer sensors; digital inputs for e.g. switches; and frequency inputs. Frequency inputs can be configured to read signals from quadrature encoders, or alternatively to be used as digital inputs.

As a supply for sensors, it has two separately monitored 5 V reference signals.

All of the outputs on the IQAN-MC3 can be used for safety related signals. There are four proportional current outputs designed to drive proportional hydraulic valves, where each output controls one bi-directional valve section. The unit also has five digital outputs for driving on-off solenoids. Two of these are also intended to function as alarm outputs, for e.g. LED lamps.

The enclosure is designed to protect the electronics in a harsh environment on mobile machines. On the front of the unit, there are four sealed and individually keyed Deutsch DT connectors.

Description	**Ordering PN**
IQAN-MC3	20077717



units=mm

Parker Hannifin Corporation
Electronic Controls Division
Elk Grove Village, IL 60007 USA