Catalog HY33-1825/US IQAN-MC3



General

1.1 kg

Weight Temperature range Operating, ambient Storage, ambient Protection Voltage supply Current consumption (idle)

outdoor, chassis 9 - 32 Vdc 160 mA (24V) 240 mA (12V) 41

Parker ICP

(IQAN CAN Protocol)

-40 to +85 °C

-40 to +100 °C

CAN buses Protocols

SAE J1939, Generic CAN 1) It is recommended that one CAN bus is dedicated for diagnostic purposes (PC interface)

Safety

IEC 61508 EN ISO 13849-1 PFHd Up to SIL2 Up to PLd

Outputs

Proportional outputs Current output pairs Type Signal range Dither frequency Digital outputs Dedicated digital outputs Type Max load < 10⁻⁷

4 current closed loop 100-2000 mA 70-333 Hz

5 hs+ls switch 3 x 3 A 2 x 1.5 A

Inputs

Max number of inputs Voltage inputs Signal range Frequency inputs Signal high Signal low Alternative configuration

Dedicated digital inputs Signal high Signal low 32 16 0 - 5 Vdc 8 4 Vdc - 32 Vdc 0 - 1 Vdc Quadrature in (4) Digital in (8) 8 4 Vdc - 32 Vdc 0 - 1 Vdc

Master units, IQANdesign IQAN System Products

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 bidirectional 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.



