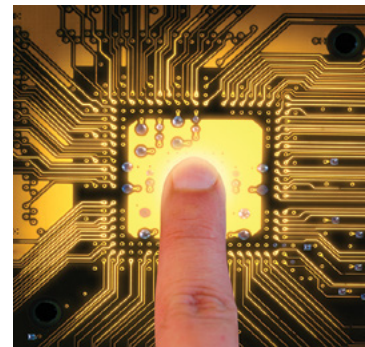




IQAN-MD3 **Display Modules**

Electronic Control Systems



ENGINEERING YOUR SUCCESS.

Application

The IQAN-MD3 is a master unit that works with the expansion modules in the IQANdesign platform control system. The IQAN-MD3 is fully programmable for use in any machine application, as a graphical user interface and as a CAN gateway.

The IQAN-MD3 is constructed to be weatherproof for outdoor use. The unit will display vehicle data and system information.

Design and function

The IQAN-MD3 has a 3.5" QVGA color LCD display. There are five navigation buttons and four 'soft' function buttons to make interaction with the control simple for the operator.

The unit is designed to be easily mounted in a vehicle dashboard or exterior control panel. The unit has two sealed and keyed Deutsch DTM 12 position connectors.

The 32-bit microprocessor in the IQAN-MD3 uses the same kernel as our other IQANdesign master units. This allows application function groups to be imported between unit types. For time critical functions the sample rate can be set as low as 10 ms. The unit has a large internal memory for events and logging that is capable of storing 80,000 records.

The IQAN-MD3 analog inputs accept 0-5V signals from input devices or sensors. These inputs can also be set up as on-off inputs. A digital output is available and may be used for alarm or alert signals.

The IQAN-MD3 has three CAN buses for connection to other modules. The CAN buses may be configured for IQAN expansion modules, IQAN diagnostics, SAE J1939 or Generic CAN.

The IQAN-MD3 is made using selected components and conforms to strict international requirements.

Specifications

General

Weight	0.3 Kg
Temperature range	
Operating, ambient	-30 to 60°C (-25°C>LCD off >75°C)
Storage, ambient	-30 to 75°C
Protection	outdoor use
Voltage supply	9 - 32 Vdc
Current consumption (idle)	130 mA (28 Vdc) 190 mA (14 Vdc)
Screen resolution	320 x 240

Performance

Processor	32-bit (144 MHz)
Logging	80K records
Sample time	min 10ms
Software tools	IQANdesign family

Communication interfaces

CAN (ISO 11898)	3 ¹
Protocols	IQAN proprietary, SAE J1939, CANopen etc.
RS-232	Hint: used for modems on legacy systems
USB 2.0	0 (IQAN-MD3-M18) 1 (IQAN-MD3/MD3-15)

Outputs

Digital output	1
Type	high side switch
Max load	200 mA

Inputs

Voltage inputs	7
Signal range	0 - 5 Vdc
Resolution	1.2 mV
Digital inputs	(7) ²
Signal high	>4 Vdc
Signal low	<1 Vdc

- 1) It is recommended to reserve one CAN bus for diagnostic purposes.
- 2) The voltage and digital inputs share the same physical pins. The user defines the channels/pins with IQANdesign.

Ordering part number

IQAN-MD3-M18	20085160 ³
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Phased-out part numbers

IQAN-MD3-M15	20077793 ³
(replaced by 20085160 from February 1, 2019)	
IQAN-MD3	20072409
(replaced by 20077793 from May 1, 2015)	

- 3) these p/ns require software versions 2.63 and 3.15 or higher.

Environmental Protection

EMI

ISO 14982:2009 (radiated emission)
EN 55025:2003 (radiated emission)
ISO 11452-2:2004 (immunity vs EM field)
ISO 11452-4:2005 (immunity vs injected RF)
ISO 7637-2:2004 (immunity vs supply transients)
ISO 7637-3:2007 (immunity vs supply transients)

ESD

ISO 10605:2008 (handling)

Mechanical environment

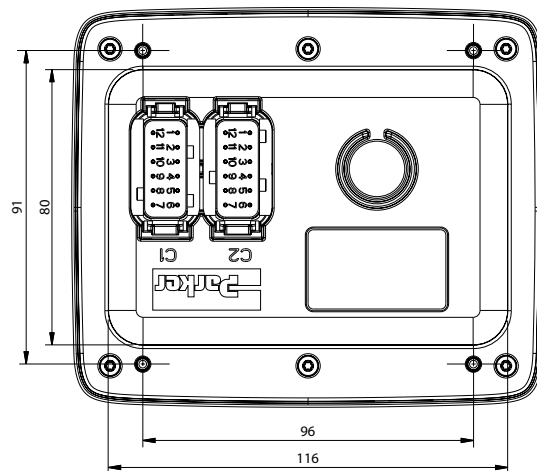
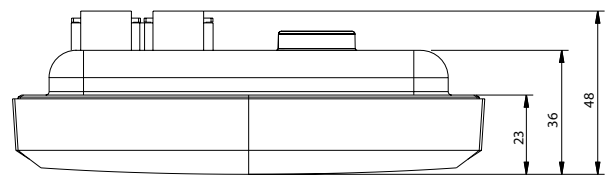
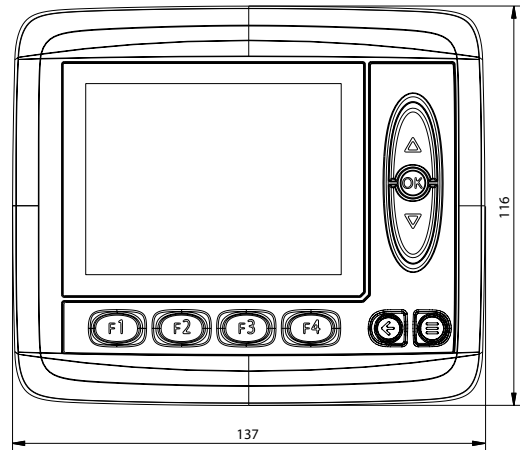
IEC 60068-2-64:2008 Fh (random)
IEC 60068-2-29:1987 Eb (bump)

Climate environment

IEC 60529:2001 IP66 (water)
DIN 40050 Part 9:1993 IP6K9K
IEC 60068-2-30:2005 Db (var1, damp, cyclic)
IEC 60068-2-78:2001 (damp heat, steady state)
IEC 60068-2-2:2007 Bb (heat)
IEC 60068-2-1:1993-02 Ab (cold)
IEC 60068-2-14:1984 Nb (change of temperature)

Chemical environment

IEC 60068-2-52:1996 Kb (salt mist, cyclic)



unit = mm

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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