



Technical Information

IQAN-MD3 Display Modules

Environmental Protection

EMI

ISO 14982:1998 (radiated emission)
EN 55025:2003 (radiated emission)
ISO 11452-2:1995 (immunity vs EM field)
ISO 11452-4:2001 (immunity vs injected RF)
ISO 7637-2:1990 (immunity vs supply transients)
ISO 7637-3:1995 (immunity vs supply transients)

ESD

ISO 10605:2001 (handling)

Mechanical environment

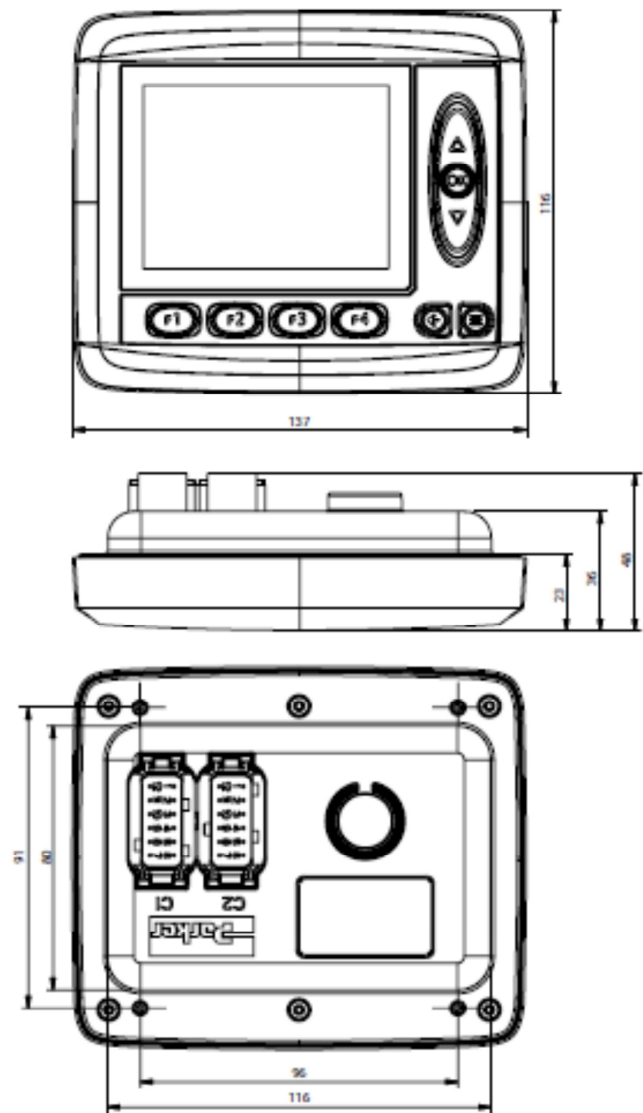
IEC 60068-2-64:1993 Fh (random)
IEC 60068-2-29:1987 Eb (bump)

Climate environment

IEC 60529:2001 IP66 (water)
DIN 40050 Part 9:1993 IP6K9K
IEC 60068-2-30:1985 Db (var1, damp, cyclic)
IEC 60068-2-78:2001 (damp heat, steady state)
IEC 60068-2-2:1993-01 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

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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" transfective TFT color 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. Additionally, display screens from the IQAN-MDL are readily adapted to the IQAN-MD3. 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 is connected to other units by two CAN buses. All CAN buses may be configured as ICP (IQAN CAN Protocol), SAE J1939 or Generic CAN. A third CAN bus may be used for diagnostics. The unit supports RS232 for modem (remote diagnostic) connection and USB for communication with a PC.

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

Specifications

General

Weight	0.3 Kg
Operating temperature	-30 to 60°C (-25°C>LCD off >75°C)
Protection	outdoor use
Voltage supply	9 - 32 Vdc
Current consumption (idle)	130 mA (28 Vdc) 190 mA (14 Vdc)

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	ICP, SAE J1939, CANopen, etc
RS-232	1
Protocols	AT-Hayes, GSM07.07, GSM07.05, IDP
USB 2.0 (full speed)	1

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

Ordering part number

IQAN-MD3	20072409
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1) The 3rd CAN bus is recommended to be used only for diagnostic purposes. Works with IQANdesign 2.0 or later software.

2) The voltage and digital inputs share the same physical pins. The user defines the channels/pins with IQANdesign.