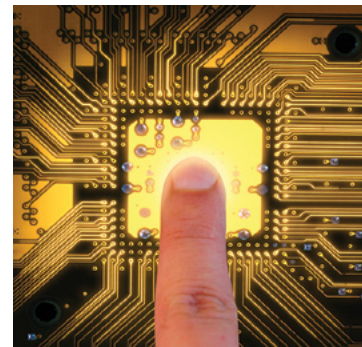




IQAN-MD4 Display Modules

Electronic Control Systems



ENGINEERING YOUR SUCCESS.

Application

The IQAN-MD4 is a family of master display units, fully compliant with the IQANdesign platform system. The IQAN-MD4 is fully programmable for use in any machine application as a master controller. The units have full graphical, diagnostic and CAN gateway capability and are used together with the easy IQAN programming tools. Together with the multimaster functionality in IQANdesign, it will be possible to use multiple master displays in a machine application.

The IQAN-MD4-10 comes with a 10.1" (26 cm) display with touch screen, the IQAN-MD4-7 has a 7" (18 cm) display with touch screen, and the IQAN-MD4-5 has a 5.7" (14 cm) display with optional touch screen depending on configuration. The IQAN-MD4 family is manufactured to be weatherproof for outdoor use.

Mechanical

The IQAN-MD4 master displays have a rugged mechanical design with no moving parts, and are completely sealed. The use of optical bonded display glass improves the readability, avoids light refraction and also eliminates possible condensation, since there is no air between the glass and LCD.

The display units have a pleasing, aesthetic design that blends with modern cabins. A touchscreen interface is offered for interactive, intuitive HMI. The IQAN-MD4 is available with IP-camera support. There is no need for separate camera monitors. Virtually an unlimited number of cameras can be connected if connected via IP switch.

Mounting is easy, with steel clips for a well integrated, flush mount in cabin panels, or the back of the unit has a stand-alone mount compatible with RAM™ mount components. The MD4 may be mounted in landscape or portrait orientation for easy integration of HMI or mechanics.

Develop HMI with IQANdesign

The IQAN-MD4 family lets you use the full benefits from IQANdesign tools and simplifies the HMI design by using predefined building blocks and 'Guided' development by templates and libraries. Easy to use 'drag-and-drop' allows all users, beginners as well as experts, to design a stylish and smart HMI in a fast and efficient way.

The simplified design process, with auto-generated diagnostic measurements and adjustments, saves valuable time. IQAN gives you a high level tool chain for machine control and HMI.

Specifications

General

Weight (MD4-7)	0.93 kg
Weight (MD4-5)	0.67 kg
Weight (MD4-10)	1.5 kg
Operating temperature	-30 °C to 70 °C ¹
Storage temperature	-40 °C to 85 °C
Protection	IP65
Voltage supply	9-32 Vdc
Current supply (idle)	300 mA (28Vdc) 600 mA(14Vdc)
Current supply RTC	3.7 mA (28Vdc) 1.7 mA(14Vdc)
CE marking	2004/108/EC 2011/65/EU (RoHS II)

Performance

Processor	ARM Cortex-A8, (800 MHz)
Memory	2Gbyte Flash, 256 Mbyte SDRAM
Logging	64 Mb
Cycle time	10 to 100 ms

Communication interface

CAN (ISO 11898) Protocols	4 (2) ³ ICP, SAE J1939, CANopen, etc
Ethernet 100Base-Tx	2 (1) ^{2,3}

Display

Touch Interface	PCAP ³
7" (18 cm) display	16:9, 800x480 pixels
5.7" (14 cm) display	4:3, 640x480 pixels
10.1" (26 cm) display	4:3, 800x600 pixels
Backlight	LED

Connection

Electrical connection	2 x Deutsch DTM, 12 pos
Ethernet	2 x M12, D-code, 4 pos

Outputs

Digital outputs	4 x Low side ⁴
Max load, 1 output	300 mA
Max load, all outputs	850 mA

Inputs

Voltage inputs	2 ⁴
Signal range	0 - 5 Vdc, 12 bit
Digital inputs	10 ⁴
Encoder input	1 ⁴
Signal range	0 - 500 Hz, 50/50 signal

1) Limited temperature -20 °C to 70 °C for IQAN-MD4-5-T1E2-M19

2) Ethernet port A dedicated for PC diagnostics.

3) Depending on configuration.

4) The outputs and inputs share the same physical pins. The user defines the channels/pins with IQANdesign.



⚠ WARNING

This product can expose you to chemicals including **DIISONONYL PHTHALATE (DINP)** which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

Model code

IQAN - MD4 - 7 - T1 E2

Code	Description
7	display, 7.0" (18 cm)
5	display, 5.7" (14 cm)
10	display, 10.1" (26 cm)

Code	Description
E1	1 x Ethernet port, no camera support
E2	2 x Ethernet port, IP camera support

Code	Description
T0	no touchscreen, 2 CAN buses
T1	with touchscreen, 4 CAN buses

Ordering part numbers

IQAN-MD4-7 ¹	20077771
IQAN-MD4-5-T0E1	20077772
IQAN-MD4-5-T1E2	20077773
IQAN-MD4-5-T1E2-M19 ²	20085164
IQAN-MD4-10 ¹	20077774

1) Only available in T1E2 version.

2) This part requires software version 5.05 or higher.



⚠ WARNING

This product can expose you to chemicals including **DIISONONYL PHTHALATE (DINP)** which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

Graphics design

It has never been easier to design the graphical user interface for your machine. With IQANdesign and the IQAN-MD4 family you have a what-you-see-is-what-you-get experience, by using built-in display controls such as gauges, touch screen buttons, indicator lamps and much more. Simply drag and drop the controls where you want them and change their properties to get your desired look and feel. You can even test drive your user interface directly on your PC to see how your design behaves.



IQANdesign display page design screen shot

A large graphics library with different gauge dials, all the common ISO standard symbols and much more is included in IQANdesign. Layers, groups, snap and align are helpful tools when designing complex graphical user interfaces. Space saving controls, such as containers for lamp indicators that automatically only shows the most critical errors or alarms, or for buttons that can be expanded when needed, are available, right out of the box.

Display pages

Display pages are used to display necessary information in different situations to the machine operator. The difference between this display and a “traditional” operator or driver environment is that all of the information does not necessarily need to always be shown. By using several dedicated display pages it is possible to show enough of the correct information in different situations. A page can be configured to be shown by a trigger, for example the press of a button or when the driver seat is turned backwards.



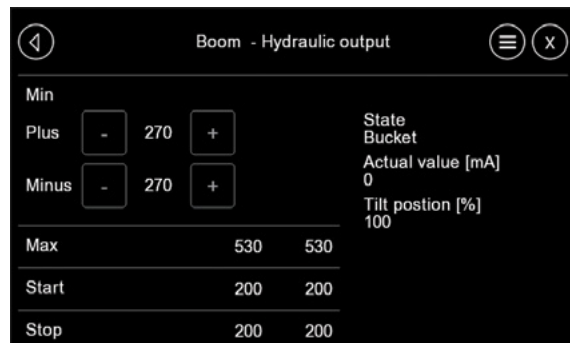
MD4 display page image

The display pages are well integrated with your application logic. Controls, such as gauges, lamp indicators or texts, are easily connected to any input or output signal in your control system, with just a mouse click. No programming needed.

IQANdesign and the MD4 family have support for multiple languages. Every text displayed on the MD4 can easily be translated to any language you like. Non-western languages, such as Chinese, Japanese, Korean or Russian, can of course be used.

System menu

The IQAN-MD4 family comes with a pre-defined system menu with all the operations and settings you need. It is of course configurable by IQANdesign. You can define exactly what the machine operators will be able to measure and adjust and which logs they will be able to view. Measurements can be performed on groups of items and even graphically to let you see trends and correlations. Adjusting is done with user friendly controls, such as sliders or up/down buttons.



MD4 system menu image

The system menu is easy to navigate using the touch screen or an external encoder. It has a modern and neutral look that you can customize by yourself to fit your graphical profile. Both icons and text are used to make it clear where to click and where you are in the menu hierarchy.

Sensitive items can be protected by either PIN codes or login with user name and password. The built-in on-screen keyboard is used when entering PIN codes or logging in.



WARNING
 This product can expose you to chemicals including **DIISONONYL PHTHALATE (DINP)** which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

Environmental Protection

EMI

- ISO 13766:2010 (radiated emission)
- ISO 14982:2009 (radiated emission)
- EN 55025:2008 (conducted 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)

Mechanical environment

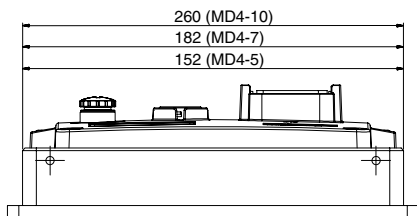
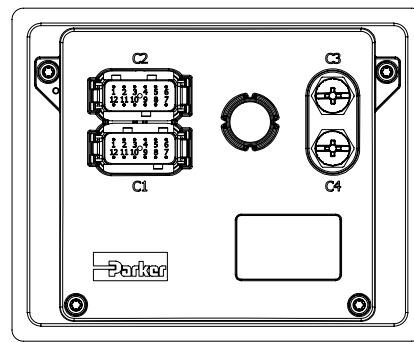
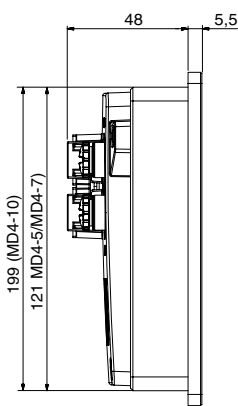
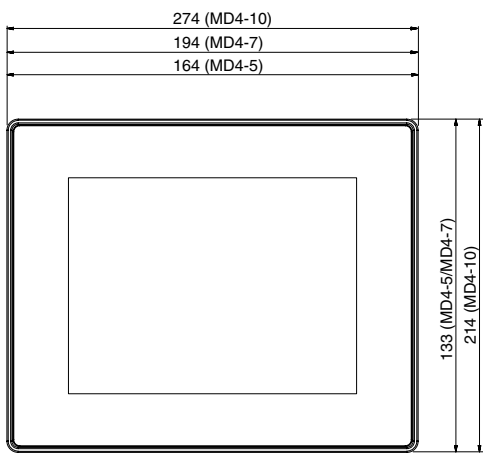
- IEC 60068-2-64:2008 Fh (random)
- IEC 60068-2-27:2008 Ea (bump)

ESD

- ISO 10605:2008 (operation and handling)

Climate environment

- IEC 60529:2001 IP65 (water)
- 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 Ab (cold)
- IEC 60068-2-14:1984 Nb (change of temperature)
- 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.

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application, including consequences of any failure, and review the information concerning the product or system in the current product catalogue. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

Offer of Sale

Please contact your Parker representation for a detailed "Offer of Sale".



! WARNING

This product can expose you to chemicals including **DIISONONYL PHTHALATE (DINP)** which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

Parker Worldwide

Europe, Middle East, Africa

AE – United Arab Emirates,
Dubai

Tel: +971 4 8127100
parker.me@parker.com

AT – Austria, St. Florian

Tel: +43 (0)7224 66201
parker.austria@parker.com

AZ – Azerbaijan, Baku

Tel: +994 50 2233 458
parker.azerbaijan@parker.com

BE/NL/LU – Benelux,

Hendrik Ido Ambacht
Tel: +31 (0)541 585 000
parker.nl@parker.com

BG – Bulgaria, Sofia

Tel: +359 2 980 1344
parker.bulgaria@parker.com

BY – Belarus, Minsk

Tel: +48 (0)22 573 24 00
parker.poland@parker.com

CH – Switzerland, Etoy

Tel: +41 (0)21 821 87 00
parker.switzerland@parker.com

CZ – Czech Republic, Klecany

Tel: +420 284 083 111
parker.czechrepublic@parker.com

DE – Germany, Kaarst

Tel: +49 (0)2131 4016 0
parker.germany@parker.com

DK – Denmark, Ballerup

Tel: +45 43 56 04 00
parker.denmark@parker.com

ES – Spain, Madrid

Tel: +34 902 330 001
parker.spain@parker.com

FI – Finland, Vantaa

Tel: +358 (0)20 753 2500
parker.finland@parker.com

FR – France, Contamine s/Arve

Tel: +33 (0)4 50 25 80 25
parker.france@parker.com

GR – Greece, Piraeus

Tel: +30 210 933 6450
parker.greece@parker.com

HU – Hungary, Budaörs

Tel: +36 23 885 470
parker.hungary@parker.com

IE – Ireland, Dublin

Tel: +353 (0)1 466 6370
parker.ireland@parker.com

IL – Israel

Tel: +39 02 45 19 21
parker.israel@parker.com

IT – Italy, Corsico (MI)

Tel: +39 02 45 19 21
parker.italy@parker.com

KZ – Kazakhstan, Almaty

Tel: +7 7273 561 000
parker.easteurope@parker.com

NO – Norway, Asker

Tel: +47 66 75 34 00
parker.norway@parker.com

PL – Poland, Warsaw

Tel: +48 (0)22 573 24 00
parker.poland@parker.com

PT – Portugal

Tel: +351 22 999 7360
parker.portugal@parker.com

RO – Romania, Bucharest

Tel: +40 21 252 1382
parker.romania@parker.com

RU – Russia, Moscow

Tel: +7 495 645-2156
parker.russia@parker.com

SE – Sweden, Borås

Tel: +46 (0)8 59 79 50 00
parker.sweden@parker.com

SK – Slovakia, Banská Bystrica

Tel: +421 484 162 252
parker.slovakia@parker.com

SL – Slovenia, Novo Mesto

Tel: +386 7 337 6650
parker.slovenia@parker.com

TR – Turkey, Istanbul

Tel: +90 216 4997081
parker.turkey@parker.com

UA – Ukraine, Kiev

Tel: +48 (0)22 573 24 00
parker.poland@parker.com

UK – United Kingdom, Warwick

Tel: +44 (0)1926 317 878
parker.uk@parker.com

ZA – South Africa, Kempton Park

Tel: +27 (0)11 961 0700
parker.southafrica@parker.com

North America

CA – Canada, Milton, Ontario

Tel: +1 905 693 3000

US – USA, Cleveland

Tel: +1 216 896 3000

Asia Pacific

AU – Australia, Castle Hill

Tel: +61 (0)2-9634 7777

CN – China, Shanghai

Tel: +86 21 2899 5000

HK – Hong Kong

Tel: +852 2428 8008

IN – India, Mumbai

Tel: +91 22 6513 7081-85

JP – Japan, Tokyo

Tel: +81 (0)3 6408 3901

KR – South Korea, Seoul

Tel: +82 2 559 0400

MY – Malaysia, Shah Alam

Tel: +60 3 7849 0800

NZ – New Zealand, Mt Wellington

Tel: +64 9 574 1744

SG – Singapore

Tel: +65 6887 6300

TH – Thailand, Bangkok

Tel: +662 186 7000

TW – Taiwan, Taipei

Tel: +886 2 2298 8987

South America

AR – Argentina, Buenos Aires

Tel: +54 3327 44 4129

BR – Brazil, Sao Jose dos Campos

Tel: +55 800 727 5374

CL – Chile, Santiago

Tel: +56 2 623 1216

MX – Mexico, Toluca

Tel: +52 72 2275 4200

Ed. 2018-109



EMEA Product Information Centre

Free phone: 00 800 27 27 5374

(from AT, BE, CH, CZ, DE, DK, EE, ES, FI, FR, IE, IL,
IS, IT, LU, MT, NL, NO, PL, PT, RU, SE, SK, UK, ZA)

US Product Information Centre

Toll-free number: 1-800-272-7537

www.parker.com

Your local authorized Parker distributor