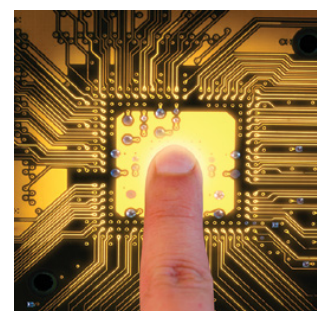


IQAN-XC4 Expansion Module Family

Electronic Control Systems



ENGINEERING YOUR SUCCESS.

IQAN-XC4

Efficiency in focus – throughout the entire machine life cycle

The IQAN-XC4 is a family of expansion modules in the IQANdesign platform, and used together with the IQAN master modules. There are 4 versions that can be used in different ways to meet the requirements of any system.

- XC41 small-size I/O distribution
- XC42 mid-size I/O distribution
- XC43 large-size I/O distribution
- XC44 large-size I/O distribution configured for on/off control

The XC4 family of expansion modules share the same pinout, making it possible for easy up-/down-scaling of the application.

IQAN-XC41, -XC42 and -XC43 are designed and certified to IEC 61508 SIL2. When controlled via an IQAN-MC4xFS master module, these expansions can be used in safety functions up to EN ISO 13849-1 PLd.

CAN

For connecting to the IQAN master, the XC4 modules use the IQAN proprietary protocol which enables optimal bandwidth usage. The XC4 modules can run classic CAN or CAN-FD with speeds up to 500/2000 kbps. All configuration and firmware updates of the XC4 expansions are controlled and done by the IQAN master.

I/O

The XC4 family can support up to 50 inputs and 36 outputs (see the table).

Timer inputs include a mix of inputs with internal pull-up and pull-down, and are also configurable as digital inputs.

0-5 V analog inputs can be used with sensors supplied by the module VREF, as an external reference or configured as DIN.

The XC41, XC42 and XC43 have COU proportional current outputs with CAM - a Parker Hannifin proprietary solution that uses a combination of high-side and low-side switch with current measurement, enabling fast and accurate closed loop current control.

- No tuning or tweaking CAM regulator circuit guarantees consistent performance on mobile valves
- Precision control with a resolution down to 1 mA, a must when there is a need for controlling precise crane movements
- Zero drift control provides the lowest possible output offset current and drift

Parker Hannifin's zero drift CAM offers initial offset current of less than 5 mA

and almost immeasurable offset current drift over time, temperature and load change.

General

Operating temperature -40 to 85°C
Storage temperature -40 to 105°C
Voltage supply 9 to 32 V

To meet the environment found in mobile machines the XC4 family uses the Molex MX123 high reliability connector system, which is made for harsh environment for high vibration applications.

The enclosure is rated IP65 + IP69K and is a rugged mechanical design, sealed for outdoor use.

Ordering PN	Description
20085181	IQAN-XC41 ¹
20085182	IQAN-XC42 ¹
20085183	IQAN-XC43 ¹
20085184	IQAN-XC44

1) SIL2 certified according to IEC 61508, when controlled by IQAN-MC4xFS. Requires IQANdesign 6.07 or newer.

Capabilities	XC41	XC42	XC43	XC44
Inputs total	18	18	50	50
Voltage inputs: 12-bit, 0 – 5 V	8	8	20	20
Voltage inputs: 12-bit, 0 – 32 V	2	2	2	2
Current-loop inputs: 13-bit, 0 – 20 mA	2	2	4	4
Timer inputs (Freq., PWM, Pulse): 0 – 50 KHz	6	6	6	6
Digital inputs	6	6	18	18
Outputs total	8	16	36	36
COU (HS) ¹ : 100 – 2500 mA high-side	2 x 2	6 x 2	10 x 2	-
PWM outputs: 4 A high-side	4	4	8	8
COU/Digital output (LS) ¹ : 2.5 A low-side	4	12	20	20 ²
Digital outputs: 4 A high-side	-	-	-	5
Digital outputs: 200 mA low-side	-	-	8	8
Network				
CAN	1	1	1	1

1) Denotes pins that are always used in combination with another pin.

2) Only digital outputs

Environmental protection

EMC harmonized standards

XC4x ISO 14982:2009, ISO 13766-1:2018
 XC41, XC42, XC43 ISO 13766-2:2018

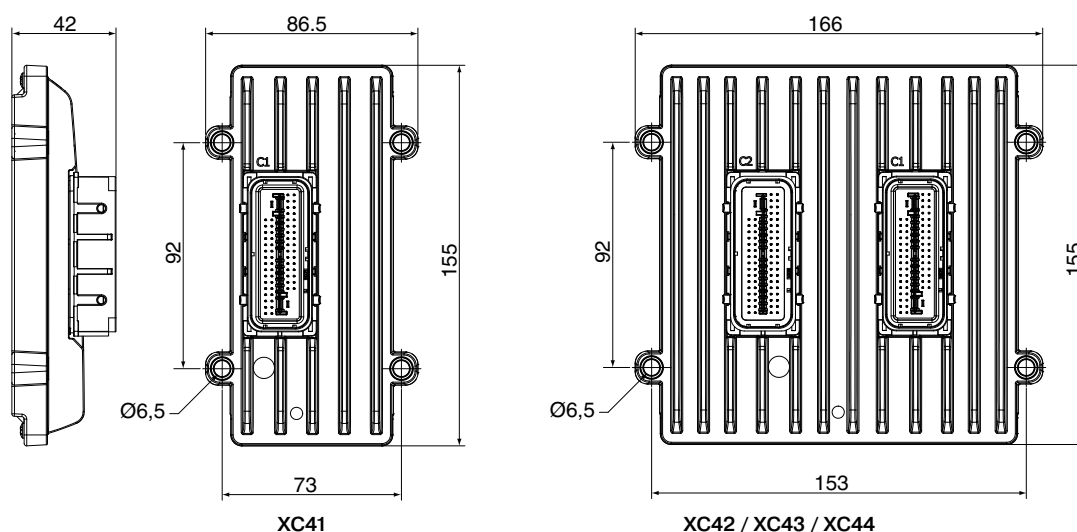
Climate environment

IEC 60529:2001 IP65 (dust, water)
 DIN 40050 Part 9:1993 IP6K9K (steam jet cleaning)
 IEC 60068-2-30:2005 Db (damp heat, cyclic)
 IEC 60068-2-78:2001 Cab (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)

Mechanical environment

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

See the IQAN-MC4x, -XC4x instruction book for further information.



WARNING - USER RESPONSIBILITY

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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Offer of Sale

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

WARNING

This product can expose you to chemicals including CARBON BLACK (AIRBORNE, UNBOUND PARTICLES OF RESPIRABLE SIZE) 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

AT – Austria, St. Florian
Tel: +43 (0)7224 66201

AZ – Azerbaijan, Baku
Tel: +994 50 2233 458

BE/NL/LU – Benelux,
Hendrik Ido Ambacht
Tel: +31 (0)541 585 000

BY – Belarus, Minsk
Tel: +48 (0)22 573 24 00

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Tel: +41 (0)21 821 87 00

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Prague
Tel: +420 284 083 111

DE – Germany, Kaarst
Tel: +49 (0)2131 4016 0

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Tel: +34 902 330 001

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Tel: +358 (0)20 753 2500

FR – France, Contamine s/Arve
Tel: +33 (0)4 50 25 80 25

GR – Greece
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HU – Hungary, Budaörs
Tel: +36 23 885 470

IE – Ireland, Dublin
Tel: +353 (0)1 466 6370

IL – Israel
Tel: +39 02 45 19 21

IT – Italy, Corsico (MI)
Tel: +39 02 45 19 21

KZ – Kazakhstan, Almaty
Tel: +7 7273 561 000

NO – Norway, Asker
Tel: +47 66 75 34 00

PL – Poland, Warsaw
Tel: +48 (0)22 573 24 00

PT – Portugal
Tel: +351 22 999 7360

RO – Romania, Bucharest
Tel: +40 21 252 1382

RU – Russia, Moscow
Tel: +7 495 645-2156

SE – Sweden, Borås
Tel: +46 (0)8 59 79 50 00

SL – Slovenia, Novo Mesto
Tel: +386 7 337 6650

TR – Turkey, Istanbul
Tel: +90 216 4997081

UK – United Kingdom, Warwick
Tel: +44 (0)1926 317 878

ZA – South Africa, Kempton
Park
Tel: +27 (0)11 961 0700

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: +55 080 0727 5374

CL – Chile, Santiago
Tel: +56 22 303 9640

MX – Mexico, Toluca
Tel: +52 72 2275 4200

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EMEA Product Information Centre

Free phone: 00 800 27 27 5374

(from AT, BE, CH, CZ, DE, DK, EE, ES, FI, FR, IE, IL,
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Toll-free number: 1-800-27 27 537

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