



aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



IQAN-TOC8 I/O Modules

Electronic Control Systems



ENGINEERING YOUR SUCCESS.

Application

IQAN-TOC8 is from the same family as the "rugged" generation of expansion modules in the IQAN product group. These modules focus on flexibility, weather resistance and safety.

IQAN-TOC8 is a general purpose controller and communicates with a variety of input and output devices. It connects to a laptop PC and is programmed with IQANdevelop software. No Master module is required. It has proportional current outputs for valve control, digital/PWM outputs for auxiliary functions and analog/digital inputs for signals like pressure, RPM or temperature. The unit has a CAN hub designed to interface with a SAE J1939 network.

Properties

Flexibility

The IQAN-TOC8 has a flexible I/O interface. The same physical pin can be used for different types of I/O. Various types of I/O such as digital and PWM outputs increase the flexibility of the controller. The digital outputs have useful features such as softstart and peak & hold.

Weather resistance

The aluminum housing is designed to be rugged, but light. The IQAN-TOC8 has a membrane to prevent condensation inside the housing. This control is designed for the outdoor environment.

Safety

The unit executes a self-test during start up and cyclic operation. An internal watch dog checks for software errors and will interrupt outputs if errors are detected. Error conditions are displayed by coded flashes of the status LED. All inputs are protected against EMI and voltage transients. Automotive connectors are used that fulfill mobile equipment mechanical and electrical demands.

General

Weight	0.7 Kg
Operating temperature	-40 to +70 °C
Protection	outdoor use
Voltage supply	9 - 34 Vdc
Current consumption (idle)	180 mA (28 Vdc) 170 mA (14 Vdc)
Data interface	RS232 using IQANdevelop
CAN hub	J1939 or other byte-aligned CAN protocol

Outputs

Proportional current outputs	
Number	2 double
Signal range	60 - 1800 mA
Dither frequency	25 - 150 Hz
Dither amplitude	0 - 500 mA
Resolution	0.7 mA
Digital/ PWM (no current feedback) outputs ¹⁾	
Number	6 / 3 double PWM
Type	high side switch
Max load	3 A
PWM frequency	25 - 2000 Hz

Inputs

Voltage/ Frequency inputs ²⁾	
Number	10 / 4
Signal range	0 - 5 Vdc
Resolution	5 mV
Frequency range	2-10000 Hz

1) *The Digital and PWM outputs share the same physical pins. By configuring the channels with IQANdevelop, the user defines the pins as (6) Digital outputs or as (3) double PWM outputs.*

2) *The voltage and frequency inputs share the same physical pins. By configuring the channels with IQANdevelop, the user defines the pins as voltage in or frequency.*

Ordering part number

IQAN-TOC8	5010024
-----------	---------

Environmental Protection

EMI

ISO 11452-2 (immunity vs EM field)
ISO 14982 (radiated emission)
ISO 11452-4 (immunity vs injected RF)
ISO 7637-2 (immunity vs supply transients)

ESD

EN 61000-4-2 (external)

Mechanical environment

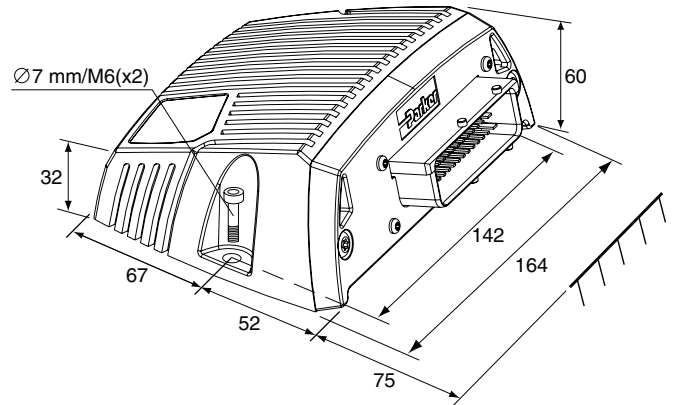
IEC 68-2-64 Fh (random, 10- 250 Hz)
IEC 68-2-27 Es (shock, 11ms)
IEC 68-2-29 Eb (bump, 6ms)

Climate environment

IEC 68-2-18 Rb3 (water)
IEC 68-2-30 Db (var1, damp, cyclic)
IEC 68-2-3 Ca (damp, heat steady state)
IEC 68-2-2 Bb (heat)
IEC 68-2-1 Ab (cold)
IEC 68-2-14 Nb (change of temperature)

Chemical environment

IEC 68-2-52 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".

Parker Worldwide

AE – UAE, Abu Dhabi
Tel: +971 2 67 88 587
parker.me@parker.com

AR – Argentina, Buenos Aires
Tel: +54 3327 44 4129

AT – Austria, Wiener Neustadt
Tel: +43 (0)2622 23501-0
parker.austria@parker.com

AT – Eastern Eur.,
Wiener Neustadt
Tel: +43 (0)2622 23501 970
parker.easteurope@parker.com

AU – Australia, Castle Hill
Tel: +61 (0)2-9634 7777

AZ – Azerbaijan, Baku
Tel: +994 50 2233 458
parker.azerbaijan@parker.com

BE/LX – Belgium, Nivelles
Tel: +32 (0)67 280 900
parker.belgium@parker.com

BR – Brazil, Cachoeirinha RS
Tel: +55 51 3470 9144

BY – Belarus, Minsk
Tel: +375 17 209 9399
parker.belarus@parker.com

CA – Canada, Milton, Ontario
Tel: +1 905 693 3000

CH – Switzerland, Etoy
Tel: +41 (0) 21 821 02 30
parker.switzerland@parker.com

CN – China, Shanghai
Tel: +86 21 5031 2525

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 33 00 01
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, Athens
Tel: +30 210 933 6450
parker.greece@parker.com

HK – Hong Kong
Tel: +852 2428 8008

HU – Hungary, Budapest
Tel: +36 1 220 4155
parker.hungary@parker.com

IE – Ireland, Dublin
Tel: +353 (0)1 466 6370
parker.ireland@parker.com

IN – India, Mumbai
Tel: +91 22 6513 7081-85

IT – Italy, Corsico (MI)
Tel: +39 02 45 19 21
parker.italy@parker.com

JP – Japan, Fujisawa
Tel: +(81) 4 6635 3050

KR – South Korea, Seoul
Tel: +82 2 559 0400

KZ – Kazakhstan, Almaty
Tel: +7 7272 505 800
parker.easteurope@parker.com

LV – Latvia, Riga
Tel: +371 6 745 2601
parker.latvia@parker.com

MX – Mexico, Apodaca
Tel: +52 81 8156 6000

MY – Malaysia, Subang Jaya
Tel: +60 3 5638 1476

NL – The Netherlands,
Oldenzaal
Tel: +31 (0)541 585 000
parker.nl@parker.com

NO – Norway, Ski
Tel: +47 64 91 10 00
parker.norway@parker.com

NZ – New Zealand, Mt Wellington
Tel: +64 9 574 1744

PL – Poland, Warsaw
Tel: +48 (0)22 573 24 00
parker.poland@parker.com

PT – Portugal, Leca da Palmeira
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, Spånga
Tel: +46 (0)8 59 79 50 00
parker.sweden@parker.com

SG – Singapore
Tel: +65 6887 6300

SK – Slovakia, Banska Bystrica
Tel: +421 484 162 252
parker.slovakia@parker.com

SL – Slovenia, Novo Mesto
Tel: +386 7 337 6650
parker.slovenia@parker.com

TH – Thailand, Bangkok
Tel: +662 717 8140

TR – Turkey, Merter/Istanbul
Tel: +90 212 482 91 06 or 07
parker.turkey@parker.com

TW – Taiwan, Taipei
Tel: +886 2 2298 8987

UA – Ukraine, Kiev
Tel: +380 44 494 2731
parker.ukraine@parker.com

UK – United Kingdom,
Warwick
Tel: +44 (0)1926 317 878
parker.uk@parker.com

US – USA, Cleveland
(industrial)
Tel: +1 216 896 3000

US – USA, Lincolnshire
(mobile)
Tel: +1 847 821 1500

VE – Venezuela, Caracas
Tel: +58 212 238 5422

ZA – South Africa,
Kempton Park
Tel: +27 (0)11 961 0700
parker.southafrica@parker.com

European Product Information Centre
Free phone: 00 800 27 27 5374
(from AT, BE, CH, CZ, DE, EE, EI, ES, FI,
FR, IT, LI, PT, SE, SK, UK)

US Product Information Center
Free phone: 1-800-272-7537

www.parker.com

