

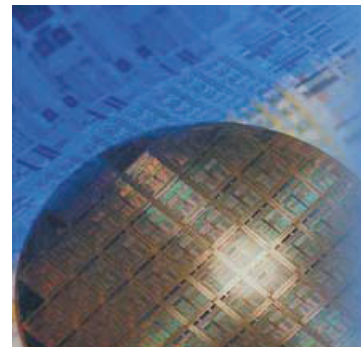


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# IQAN-TOC2 I/O Modules

Electronic Control Systems



ENGINEERING YOUR SUCCESS.

**Application**

The IQAN-TOC2 is a task oriented controller in the IQAN product group. The IQAN-TOC2 replaces valve driver modules and cards for a wide variety of proportional valves or other devices. This unit is designed for ease of setup, weather resistance, and safety.

The IQAN-TOC2 is a general purpose unit that can control two bi-directional valve sections or two cartridge solenoids simultaneously. The IQAN-TOC2 communicates with a variety of input and output devices. It has current mode (current closed-loop) or PWM mode (voltage open-loop) output for proportional valve control. The analog inputs accept signals from joysticks or potentiometers. Two digital inputs can be used to read switches.

**Properties**

**Ease of setup**

The IQAN-TOC2 has a simple mechanical interface for calibration. With a preloaded personality from the factory, setup can be easily performed on the machine using a screwdriver. Adjustments possible include threshold, maximum output and slopes. The IQAN-TOC2 may also be connected to a PC or Palm device and programmed using IQANdevelop software to change the functionality of the controller. This advanced feature allows the IQAN-TOC2 to be used in more demanding applications.

**Weather resistance**

The housing is designed to be rugged, but light and has a sealed, automotive AMP junior-power timer connector. The IQAN-TOC2 has a membrane to prevent condensation inside the housing. This controller is designed for the outdoor environment.

**Safety**

The IQAN-TOC2 is made using selected components and conforms to strict international requirements.

Diagnostics: If an error is detected an LED on the top of the controller flashes a sequence to indicate the nature of the error.

**General**

Weight	0.2 Kg
Operating temperature	-40 to +70 °C
Protection	outdoor use
Voltage supply	9 - 34 Vdc
Current consumption (idle)	60 mA (28 Vdc) 40 mA (14 Vdc)
Data interface	mechanical encoder or RS232 using IQANdevelop
VREF output (28V)	4.9 - 5.1Vdc, 30 mA

**Outputs**

Current / PWM outputs	
Number	2 double
Type current mode	current - closed loop
PWM mode	voltage - open loop
Min. threshold	50 mA
Max. load	3000 mA
Frequency range	25 - 333 Hz
Resolution	1 mA

**Inputs**

Voltage inputs	
Number	2
Signal range	0 - 5 Vdc
Resolution	5 mV
Digital inputs	
Number	2
Signal high	4Vdc - V <sub>BAT</sub>
Signal low	0 - 1Vdc

**Ordering part number**

IQAN-TOC2	5010028
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### Environmental Protection

#### EMI

ISO 11452-2 (immunity vs EM field)  
ISO 14982 (radiated emission)  
ISO 11452-4 (immunity vs injected RF)  
ISO 7637-2,-3 (immunity vs supply transients)

#### ESD

EN 61000-4-2 (external)

#### Mechanical environment

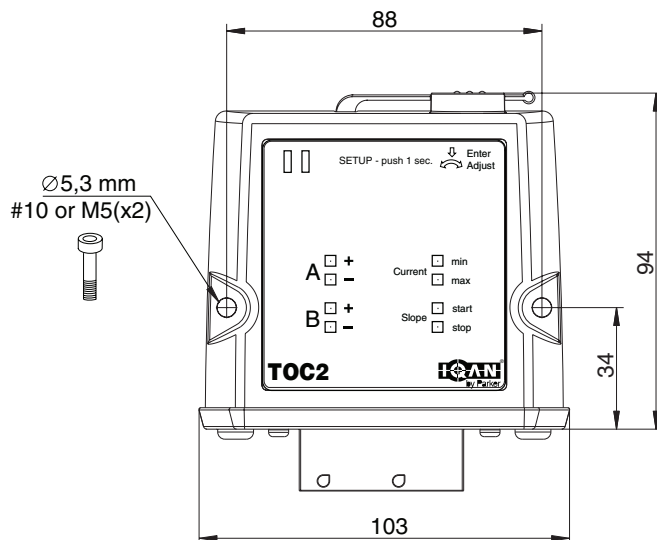
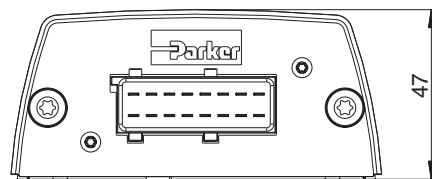
IEC 68-2-64 Fh (random)  
IEC 68-2-29 Eb (bump)

#### Climate environment

IEC 68-2-18 Rb2 (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.**

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parker.czechrepublic@parker.com

**DE – Germany, Kaarst**  
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parker.germany@parker.com

**DK – Denmark, Ballerup**  
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**FI – Finland, Vantaa**  
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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**  
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**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**  
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parker.nl@parker.com

**NO – Norway, Ski**  
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**NZ – New Zealand, Mt Wellington**  
Tel: +64 9 574 1744

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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  
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**SG – Singapore**  
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**SK – Slovakia, Banska Bystrica**  
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parker.slovakia@parker.com

**SL – Slovenia, Novo Mesto**  
Tel: +386 7 337 6650  
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**TH – Thailand, Bangkok**  
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**TR – Turkey, Istanbul**  
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parker.turkey@parker.com

**TW – Taiwan, Taipei**  
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**UA – Ukraine, Kiev**  
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**UK – United Kingdom, Warwick**  
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**US – USA, Cleveland (industrial)**  
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