



VIA MAESTRI DEL
LAVORO,30
(ZONA INDUSTRIALE)
56021 CASCINA (PI)
ITALY

CAPITALE SOCIALE
100.000,00 €

C.F. E P.I. 01252870504



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<http://www.isacsrl.it/>

Gateway EtherCAT AlphaRIO

1-ch. Absolute

Encoder Interface SSI

Reduced Data sheet

Version: 1

Date: 02.03.2026



All that technology can do

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Overview

The Gateway EtherCAT OPRIOENC01 is part of the AlphaRIO family modules. The gateway allows to connect an absolute encoder with SSI interface. The encoder is powered via the SSI interface. The interface circuit generates a pulse for reading the encoder and makes the incoming data stream available to the controller as a data word in the process data.

The gateway communicates with the central control unit through the EtherCAT system bus. An EtherCAT Bus Coupler Module (OPRIOBCM02) is required to interface the OPRIOENC01 module to the EtherCAT network. The OPRIOBCM02 connects all the I/O modules of the AlphaRIO family to the right side of the box.





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Part Number

Code

Code	Description
OPRIOENC01	Gateway EtherCAT AlphaRIO, 1-ch. Absolute Encoder Interface SSI

Product status

Item	Value
Status	In production
In production from:	Jan 2023

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Technical data summary

Power requirements		
Input Power	7Vdc [powered by OPRIOBCM02 through the internal bus]	
BUS Power Consumption	150mA max @ 7Vdc	
Bus Interface		
Protocol	E-BUS	
Connection	Internal bus connector	
Environment		
Operating temperature	0 ... 50 °C	
Storage Temperature	-10 ... 70 °C [The environment during transportation and storage must be dry and free from dust]	
Humidity	Up to 90% without condensation	
Overall Dimension	Approx. 108.5mm (H) x 23mm (W) x 80mm (D)	
Weight	110 gr.	
Protection Class	IP20	
EMC	Compliant to EN 61000-6-2, EN 61000-6-4	
Mounting	Standard 35mm DIN rail	
Hardware Diagnostics		
BUS Status	Green LED	
Error	Red LED	



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COM status	Green LEDs	
Software Diagnostic		
GND	Earth connection presence	
Temperature	High temperature detection	
Firmware	Upgradeable with flash technology via EtherCAT® fieldbus (FOE)	
Encoder Interfaces		
Ports	No.1 channel SSI interface	
Level interface	RS422	
Counter	32 bits	
Coding	Grey and Binary	
Diagnostic	Open circuit detection	
Encoder voltage	5V (default), 24V switchable @ 0.2A	
Frequency	Depending from cable length: 2 MHz up to 10mt 1 MHz up to 50mt, 200 KHz up to 100mt	

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Certifications

Certification	Description
CE	EU Declaration of Conformity: EMC Directive 2014/30/UE Standards used: EN 61000-6-2:2019 EN 61000-6-4:2019
RoHS	Declaration of Conformity: RoHS Directive 2011/65/EU
Origin	Italy
CRA	Yes (pending)

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Layout and dimension

<i>P/n</i>	<i>Unit</i>	<i>Width</i>	<i>Height</i>	<i>Depth</i>
OPRIOENC01	[mm]	18	108.5	80

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Reference documents

Full technical data sheet: OPPIOENC01