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OPRIOENC00

Gateway EtherCAT AlphaRIO

2-ch. Incremental

Encoder Interface ABC + AB

Reduced Data sheet

Version: 1

Date: 02.03.2026

Overview

The Incremental Encoder Interface Module OPRIOENC00 is part of the AlphaRIO family modules. The module allows to connect at the same time up to 2 incremental encoders with A,B lines. The first encoder channel supports also the C (zero) line. RS422 (differential signals), TTL or open collector (single ended signals) are supported. A digital input per channel is available to latch the counter. 5/24V supply to the encoder can be provided.

The module communicates with the central control unit through the EtherCAT system bus. An EtherCAT Bus Coupler Module (OPRIOBCM02) is required to interface the OPRIOENC00 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
OPRIOENC00	Gateway EtherCAT AlphaRIO, 2-ch. Incremental Encoder Interface 1x ABC + 1x AB

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 incremental ABC No.1 channel incremental AB	
Level interface	RS422, TTL, Open collector	
Counter	32 bit (default), 16 bit switchable	
Diagnostic	Open circuit detection, zero detection	
Encoder voltage	5V (default), 24V switchable @ 0.2A	
Frequency	Up to 1Mhz (RS422) Up to 100KHz (TTL) Up to 20KHz (open collector)	
Input	No.2 Latch input 24Vdc	

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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>
OPRIOENC00	[mm]	18	108.5	80

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Reference documents

Full technical data sheet: OPPIOENC00