EAR-007 & EAR-008 MODELS
ENCODER SIGNAL SPLITTERS

The incremental encoder splitter is a data interface that is designed to address two different motion controllers at same time.

The splitter can manage inputs from TTL/RS422, sine 1Vpp and HTL encoders signals, and deliver these in two selectable outputs HTL or TTL/RS422, giving the possibility to share the signals with two industrial grades of different motion controllers types (drive, display, PLC, etc.).

Moreover, used in conjunction with 11-30V / RS422 data interface encoders, the splitter can then be integrated into very long cables process loop between sensing and motion controllers; thanks to the use of a 11-30V power supply for the encoders, the voltage drops concerns with long cables are solved, and it avoids the use of specific cables needed for long distances.

Features

- Usable with standard incremental encoders
- Supplies power to encoder from 11 V to 30V
- Reduces cabling cost
- Avoids need of encoder redundancy
- Permits to address signal to 2 different motion devices

Applications

- Steel, Paper, Glass, Mills Industries
- Conveyors
- Motor feedback

SPECIFICATIONS

Mechanical

	EAR-007	EAR-008
Housing Material	Polyamid, grey color	
Dimensions (W x H x D)	22.5 x 108 x 114.5mm	
Fixing mode	DIN rail	
Weight	140g	

Electrical

	EAR-007	EAR-008
Splitter power supply +Vin	11-30Vdc ⎓ 250mA (*)	
Encoder power supply	+Vin, 200mA max.	
Max encoder frequency	300kHz	
Encoder input	TTL/RS422 or sine 1Vpp	HTL
Output 1	Selectable: TTL/RS422 or HTL	
Output 2	Selectable: TTL/RS422 or HTL	
Input connection from encoder	Terminal connector	
Outputs connection to controllers	Terminal blocks	

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Environmental & Standards Conformity

Protection (EN 60529)	IP20
Humidity (EN 60068-2-38)	93% @ 65°C for electronics (Housing may show mechanical deformations when cumulating high humidity with high temperature cycles)
Shock (EN60068-2-27)	300m.s^{-2} (during 11 ms)
Vibration (EN60068-2-6)	Amplitude 3.5 mm or acceleration 50 m.s^{-2} (10 … 200 Hz)
Operating temperature	-20°C to +65°C
Storage temperature	-20°C to +70°C
EMC Immunity Test	EN 61000-6-2:2016
EMC Emission Test	EN 61000-6-4:2018
Isolation	500 Veff

Electrical Connections

9 poles connector	
PIN	**SIGNAL**
9	Encoder A
8	Encoder A/
7	Encoder B
6	Encoder B/
5	Encoder Z
4	Encoder Z/
3	Vin
2	0V
1	Shield

Terminal blocks	
PIN	**SIGNAL**
1	Unit power supply Vin : 11-30V
4	Unit power supply : 0V
2	OUT1_Z
3	OUT1_Z/
9	OUT1_A
10	OUT1_A/
11	OUT1_B
12	OUT1_B/
17	Pin 18 & 17 strapped : OUT1 interface = RS422 Pin 18 & 19 strapped : OUT1 interface = HTL
18	
19	
20	Cable Shield
5	Unit power supply Vin : 11-30V (*)
8	Unit power supply : 0V (*)
6	OUT2_Z
7	OUT2_Z/
13	OUT2_A
14	OUT2_A/
15	OUT2_B
16	OUT2_B/
21	Pin 22 & 21 strapped : OUT2 interface = RS422 Pin 22 & 23 strapped : OUT2 interface = HTL
22	
23	
24	Cable Shield

(*) PIN1 and PIN5 internally connected
(*) PIN4 and PIN8 internally connected

17 - 18 - 19 - 20
9 - 10 - 11 - 12
1 - 2 - 3 - 4

5 - 6 - 7 - 8
13 - 14 - 15 - 16
21 - 22 - 23 - 24

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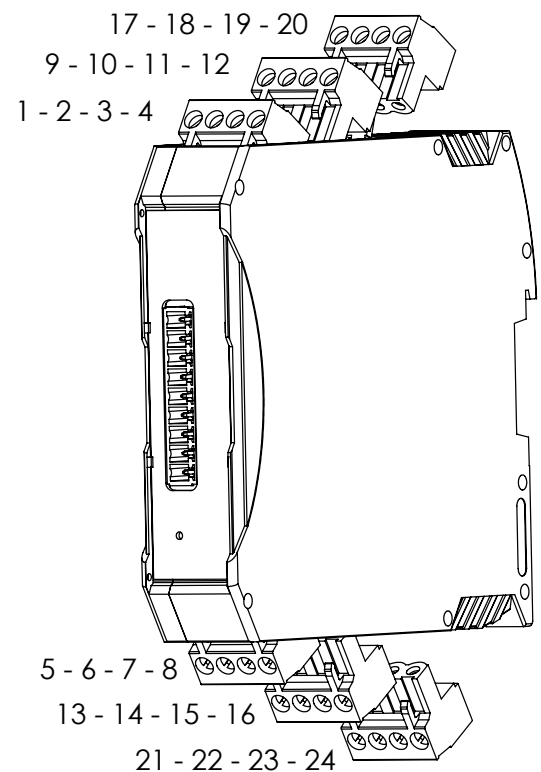
⬤ DIMENSIONS

Dimensions are in millimeters

22,5

108

114,5
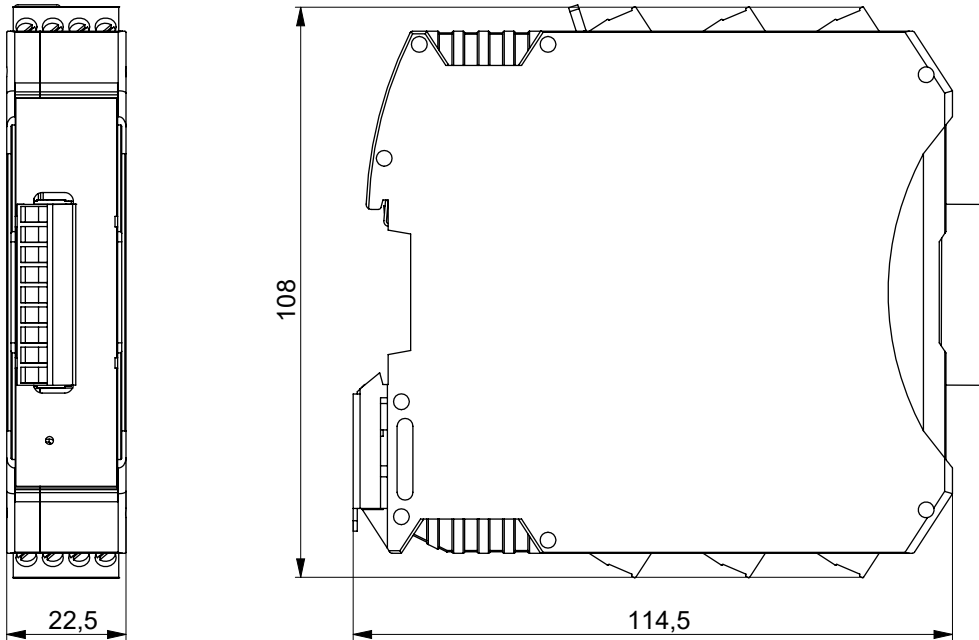
⬤ INSTALLATION

1. Clip the splitter on the DIN rail.
2. Check the power supply is switched off and make the terminal blocks electrical connections per wiring table printed on the product.
3. Check or configure the jumpers' positions.
4. Power on the devices.

Industrial Motion Control

Power Supply 24 Vdc

OUT1

EAR-007, EAR-008 Splitter

Industrial Motion Control

OUT2

Encoder

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