

Signal converter

Signal splitter	SP 2D-2D	HTL, RS422 / HTL, RS422
------------------------	-----------------	--------------------------------



The signal splitter SP 2D-2D is a universal encoder interface (without potential separation) with 2 incremental encoder inputs for level conversion, distribution as well as contactless and bounce-free switching of encoder signals to the HTL or RS422 format.

The module can be easily and conveniently mounted in a cabinet on a standard DIN rail.



Power supply



Input frequency



Output frequency



DIN-rail mounting

Characteristics

- 2 pulse inputs in the format A, B, 0 [HTL] or A, /A, B, /B, 0, /0 [RS422].
- Input frequency up to 250 kHz for asymmetrical signals and up to 1 MHz for symmetrical signals.
- 2 control inputs for HTL / PNP signals [10 ... 30 V DC].
- 2 output channels in the format A, B, 0 [HTL] or A, /A, B, /B, 0, /0 [RS422], separately adjustable for every output.

Benefits

- Lost-free duplication of encoder signals.
- Conversion from TTL into HTL and vice versa possible.
- 2 different synchronous signal outputs for 2 different terminal devices.

Order no.

Signal splitter

8.SP.2D-2D

Scope of delivery
- Signal splitter
- Manual

Signal converter

Signal splitter	SP 2D-2D	HTL, RS422 / HTL, RS422
------------------------	-----------------	--------------------------------

Technical data

Electrical characteristics	
Power supply	12 ... 30 V DC (residual ripple ≤ 10 % at 24 V DC)
Power consumption (no load)	max. 50 mA
Reverse polarity protection of the power supply	yes
Type of connection	screw terminal, 1.5 mm ²
Encoder supply	output voltage 5.2 V DC and 10 ... 28 V DC (approx. 2 V DC lower than input voltage) output current max. 125 mA protective circuit short-circuit proof type of connection screw terminal, 1.5 mm ²
Conformity and standards	EMC guideline 2014/30/EU EN 61000-6-2, EN 61000-6-3, EN 61000-6-4 RoHS guideline 2011/65/EU EN 50581

Mechanical characteristics	
Material	housing plastic
Mounting	35 mm DIN rail (acc. to EN 60715)
Dimensions (W x H x D)	22.5 x 102 x 102 mm [0.89 x 4.02 x 4.02"]
Protection	IP20
Weight	approx. 100 g [3.53 oz]
Working temperature	-20°C ... +60°C [-4°F ... +140°F] non condensing
Storage temperature	-30°C ... +75°C [-22°F ... +167°F] non condensing

Incremental inputs X3, X4	
Number of inputs	2
Level	TTL / RS422 (differential signal > 1 V) or HTL (10 ... 30 V)
Tracks	HTL / TTL symmetrical A, /A, B, /B, 0, /0 HTL asymmetrical A, B, 0
Frequency	TTL symmetrical max. 1 MHz HTL asymmetrical max. 250 kHz
Internal resistance	Ri = 4.7 kOhm

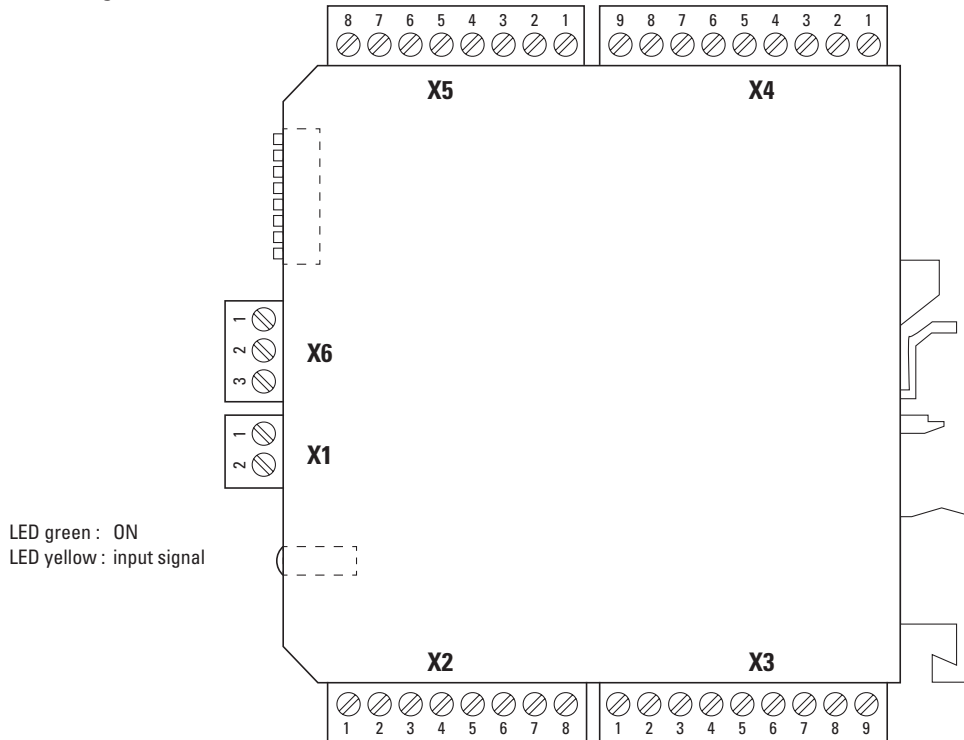
Control inputs X6	
Number	2
Use	contactless & bounce-free signal path switching
Level	HTL, PNP (10 ... 30 V)

Incremental outputs X2, X5	
Number of outputs	2
Level	adjustable for TTL / RS422 or HTL (12 ... 30 V, power supply)
Tracks	A, /A, B, /B, 0, /0
Output current	max. 30 mA (per channel)
Output stage	Push-Pull
Signal propagation time	approx. 600 ns
Protective circuit	short-circuit proof

Signal converter

Signal splitter	SP 2D-2D	HTL, RS422 / HTL, RS422
------------------------	-----------------	--------------------------------

Terminal assignment



Interface	Function	Screw terminal, 2-pin		
Connection X1	Power supply	Signal:	0 V	+V
		Pin:	2	1

Interface	Function	Screw terminal, 3-pin			
Connection X6	Control input	Signal:	Contr. 1	Contr. 2	0 V
		Pin:	1	2	3

Interface	Function	Screw terminal, 9-pin									
Connection X3, X4	Input TTL / HTL	Signal:	0 V	5.2 V _{out}	A	\bar{A}	B	\bar{B}	0	$\bar{0}$	24 V _{out}
		Pin X3:	9	8	7	6	5	4	3	2	1
		Pin X4:	1	2	3	4	5	6	7	8	9

Interface	Function	Screw terminal, 8-pin								
Connection X2, X5	Output TTL / HTL	Signal:	0 V	A	\bar{A}	B	\bar{B}	0	$\bar{0}$	–
		Pin X2:	8	7	6	5	4	3	2	1
		Pin X5:	1	2	3	4	5	6	7	8

- +V : Power supply
- 0 V : Encoder power supply ground GND (0 V)
- V_{in}, V_{out} : Power supply encoder
- Contr. 1 / 2 : Control inputs
- A, \bar{A} : Incremental output channel A (Cosine)
- B, \bar{B} : Incremental output channel B (Sine)
- 0, $\bar{0}$: Reference signal

Signal converter

Signal splitter	SP 2D-2D	HTL, RS422 / HTL, RS422
------------------------	-----------------	--------------------------------

Dimensions

Dimensions in mm [inch]

