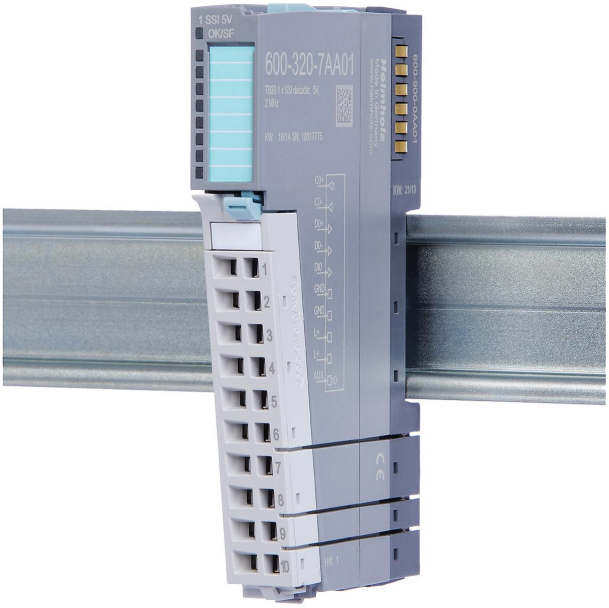
600-320-7AA01



SSI encoder interface

- Accommodates an absolute encoder as per RS-422
- Supports 13 to 31 data bits
- Single-turn and multi-turn
- Encoder value normalization (the encoder value will only contain position-relevant bits)
- Direction indicator display
- Direction reversal
- Internal Gray-binary conversion
- Supports transmission rates of up to 2 MHz
- Encoder value parity check
- Re-transmission
- Digital 24 V input
- "Latch function" for freezing the current encoder value
- Comparator function with loadable reference values, configurable depending on the direction of rotation
- 24 V encoder supply

Info

Synchronous Serial Interface is a standard that makes it possible to obtain absolute position data for a linear or angular position sensor. In terms of hardware, the module's SSI is implemented as a point-to-point connection as defined in the RS-422 standard. Moreover, in order to avoid ground loops, opto-isolators are used to achieve full electrical isolation.Excellent noise immunity is ensured by the fact that the clock and data signals are sent through twisted pair cables using synchronous and symmetric transmission. The result is high reliability and robustness, making the module ideal for use in industrial environments.The TB20 SSI encoder interface makes it possible to connect an SSI encoder with a transmission rate of up to 2 MHz. And, since the number of data bits is also adjustable, the module provides utmost flexibility in terms of supported encoder resolutions.Data values can be in binary code or reflected binary code (Gray code), and can be normalized so as to ensure that only position-relevant bits will be transmitted.In addition, a parity bit can be optionally evaluated in order to check data integrity. Also, special bits can be transmitted, which are used by some sensors to perform tasks such as signaling error states to the master.A digital 24 V input can be configured as a latch function in order to retain the encoder value when specific external events occur.Moreover, two configurable comparators make it easy to quickly detect positions in the PLC program.In addition to the encoder value, all relevant encoder interface status information is available in the PLC input image table. Note: Individual modules cannot be combined with the IO systems of other manufacturers.

Technical data

General information	
Order number	600-320-7AA01
Article name	1 x SSI encoder interface
Scope of delivery	1 x SSI encoder interface
Dimensions (DxWxH)	110 x 14 x 73 mm
Weight	Approx. 75 g
Power dissipation	Max. 1.0 W
Input characteristic curve	Type 2, EN 61131-2
Short-circuit protection	Electronic
Parameter configuration length	10 bytes
Hot-swap capable	Yes
1SI Features	
Number of SSI decoders	1
Supported data bits	13 ... 31 bits
Parity	None, even, odd
Internal Gray-binary conversion	Configurable
Direction detection	Yes
Direction reversal	Configurable
Encoder value normalization	Configurable
Encoder value latch function	Can be triggered with a 24 V digital input
Power supplied to encoder by module	24 V DC, 100 mA, fused
Diagnoses	Wire break/frame error, 24 V encoder supply, Configuration error
Current draw	
External	Max. 20 mA + load on 24 V encoder supply (max. 100 mA)
Internal	Max. 130 mA
Output current	
Rated value	500 mA
Leakage current	Max. 0.5 mA
Ambient conditions	
Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-20 °C ... +80 °C
Relative air humidity	95 % r H without condensation
Protection rating	IP 20
Certifications	CE, UL
UL	
Surrounding Air Temperature	0 °C ... +60°C
Pollution degree	2
CE	
Noise immunity	DIN EN 61000-6-2 "EMC Immunity"
Interference emission	DIN EN 61000-6-4 "EMC Emission"
Vibration and shock resistance	DIN EN 60068-2-6:2008 „Vibration", DIN EN 60068-2-27:2010 „Shock"