

EP-5111, EP-5112, EP-5212, EP-5261, EP-5311, EP-5422, EP-5442



Specialty Module

GE provides several RSTi-EP specialty modules, which can be used to meet specific needs in your system. Each module has a Module Status LED and each channel has a LED for visual indication of connectivity.

The counter module EP-5111 can read one square-wave signal (1 channel) (for example, from an incremental encoder) with a maximum input frequency of 100 kHz. The 32-bit counter can count up or down within a predetermined range of values.

The digital counter module EP-5112 can read two square-wave signals (2 channels) (for example, from an incremental encoder) with a maximum input frequency of 100 kHz. Depending on the operating mode, both 32-bit counters can count up or down independent of each other in a preset range of values. The counters can be controlled via software by setting the appropriate control word.

The digital counter module EP-5212 can read frequency of one square-wave signal (1 channel) from one or two external sensors with a maximum input frequency of 100 kHz. Frequencies to be counted are applied to channel CH0 and/or channel CH1, the measurement will be started via control word 1 and 2 respectively. Measuring cycles can be defined in μ s. The longer the measuring cycle the more exactly the measurement.

The digital pulse width modulation modules EP-5422 and EP-5442 are used for the control of small motors with current requirements of 0.5 A up to 2 A which can also be used for the control of valve flaps. The switching frequencies are adjustable up to 40 kHz and, in addition to this, the push/pull output levels can be used for motor activation; for example: change of rotation direction. As with all modules of the RSTi-EP system, the characteristics are outstanding – from the modular design and the interchangeable electronics to the removable plug-in terminal strip.

The RSTi-EP station is usually installed on a horizontally positioned DIN rail. Installation on vertically positioned DIN rails is also possible.

Modules should be allowed to de-energize for a minimum 10 seconds after power down, prior to starting any maintenance activity.

Refer to the *RSTi-EP Slice I/O User Manual* (GFK-2958) for additional information.

Refer to the *RSTi-EP Power Supply Reference Guide*, a software utility available on PME V9.00, for detailed power-feed requirements.

Module Features

- Spring style technology for ease of wiring
- DIN rail mounted
- Double-click installation for positive indication of correct installation
- Compatible for 2 and 3 wire connection
- 32-bit counter, 24 V DC
- Counting frequency 100 kHz max (A/B channel, 1/2/4- times sampling or pulse and direction, invertible)
- Gate input (hardware gate, HW gate), reset input, digital output controlled by an internal comparator
- Alarm and diagnostic function with μ s time stamp
- Digitally adjustable input filter to suppress interferences (17 filter frequencies gradually adjustable between 3 Hz and 187 kHz)
- SSI Encoder Interface Serial Communication module
- Digital pulse width modulation modules can control from 0.5A to 2A

GFK-2962B

Ordering Information

Module	Description
EP-5111	1 Channel High Speed Counter, AB 100 kHz 1 DO 24VDC, 0.5A
EP-5112	2 Channel High Speed Counter, AB 100 kHz
EP-5212	2 Channel Frequency Measurement, 100 kHz
EP-5422	2 Channels PWM Output, Positive Logic, 24VDC, 2.0 A
EP-5442	2 Channels PWM Output, Positive Logic, 24VDC, 0.5 A
EP-5261	1 Channel Serial Communications, 232, 422, 485
EP-5311	SSI Encoder, BCD or Gray-Code Format, 5/24 VDC

Specifications

Item	EP-5111	EP-5112	EP-5212
System Data			
Data	Process, parameter, and diagnostic data depend on the network adapter used.		
Interface	RSTi-EP System bus		
System bus transfer rate	48 Mbps		
Galvanic isolation	--	500 V DC between the current paths	
Inputs			
Number of counter inputs	1	2	2
Type	Incremental encoders and other input characteristics for sensor types 1 and 3 are in accordance with EN 61131-2		--
Input filter	Filter time adjustable from 0,01 to 1 ms		Adjustable between 3 Hz and 187 kHz (333 ms and 5 μs)
Low input voltage	< 5 V		
High input voltage	> 11 V		
Max. input current per channel	3.5 mA		
Sensor supply	Yes		
Sensor connection	2-wire and 3-wire		
Reverse polarity protection	Yes		
Module diagnostics	Yes		
Individual channel diagnostics	Yes	Yes	No
Counter width	32 bits		
Maximum input frequency	100 kHz		
Latch, gate, reset input	Yes	--	--
Mode of operation	Pulse and direction / AB mode with 1-, 2-, 4-times sampling	Pulse and direction / AB mode with 1-, 2-, 4-times sampling	Pulse rising edge
Status, alarm, diagnostics			
Status indicator	Yes		
Process alarm	Yes, parametrizable	Yes, parametrizable	--
Diagnostic alarm	Yes	Yes	--
Outputs			
Number	1	--	--
Output Current	0.5 A	--	--
Reverse polarity protection	Yes	--	--
Module diagnosis	Yes	--	--
Individual channel diagnosis	Yes	--	--

For public disclosure

	EP-5111	EP-5112	EP-5212
Supply			
Supply voltage	20.4V – 28.8V		
Current consumption from system current path I_{SYS}	8 mA		
Current consumption from output current path I_{in}	35 mA plus output current for the digital output	35 mA	35 mA plus sensor supply current
General Data			
Operating temperature	-20°C to +60°C (-4 °F to +140 °F)		
Storage temperature	-40°C to +85°C (-40 °F to +185 °F)		
Air humidity (operation/transport)	5% to 95%, noncondensing as per IEC 61131-2		
Width	11.5 mm (0.45 in)		
Depth	76 mm (2.99 in)		
Height	120 mm (4.72 in)		
Weight	83 g (2.93 oz)	72 g (2.54 oz)	83 g (2.93 oz)

EP-5261	
System data	
Data	Process, parameter and diagnostic data depend on the network Adapter used (refer to the table in the section, <i>Order and Arrangement of the Modules</i>)
Interface	RSTi-EP I/O communication bus
System bus transfer rate	48 Mbps
Serial Interface	
Number	1
Type	RS-232, RS-485, RS-422, parameterizable
Transfer rate	300 – 115200 Bps, parameterizable
Supply voltage	5VDC or 24VDC
Current of power supply output	max. 500 mA
Standards RS232	DIN 66020, DIN 66259, EIA-RS232C, CCITT V.24/V.28
Standards RS485/RS422	120 Ω , parameterisable
Short-circuit proof	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Supply	
Supply voltage	20.4V – 28.8V
Current consumption from system current path I_{SYS} ,	8 mA
Current consumption from input current path I_{in}	16 mA + load
General Data	
Weight	92 g (3.25 oz)
For additional general data, refer to the section, <i>General Technical Data for I/O Modules</i> .	