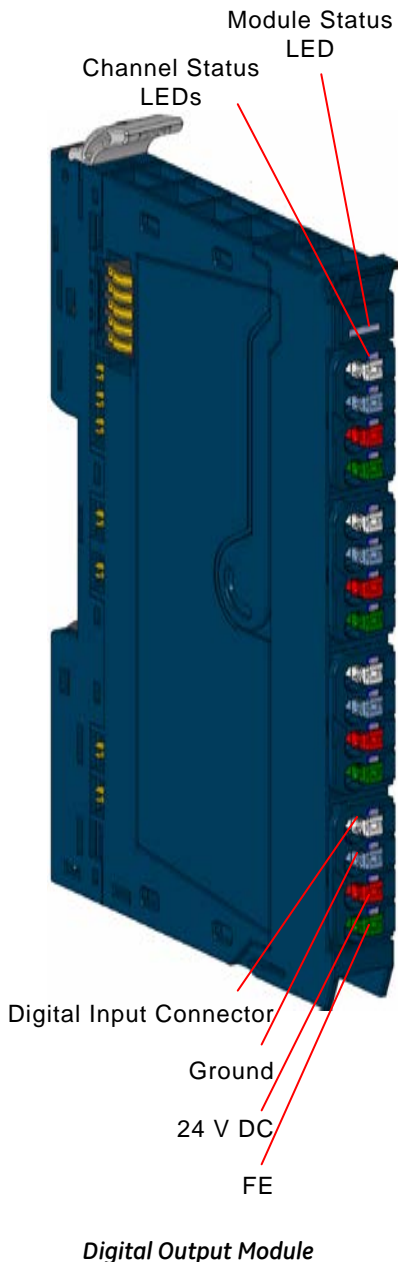


Digital Output Modules

EP-2214, EP-2614, EP-2634, EP-2218, EP-225F

Relay Output Module EP-2714

Solid-state Relay Output Module EP-2814



GE provides a range of RSTi-EP digital output modules with 4, 8 or 16 outputs, which are primarily used for the incorporation of decentralized actuators.

All outputs are designed for DC-13 discrete outputs according to DIN EN 60947-5-1 and IEC 61131-2 specifications. Frequencies of up to 1 kHz are possible except for relay and SSR output modules. Protection of the outputs ensures maximum system safety (Relay and SSR modules do not support short circuit protection). This consists of an automatic restart following a short-circuit.

The digital relay output module EP-2714 can control up to 4 discrete outputs, each with a maximum of 6 A. Each connector features a potential-free changeover contact. The relay coils are supplied with power from the output current path (I_{OUT}).

The solid-state relay output module EP-2814 uses four semiconductor switches to control up to 4 discrete outputs, each with a maximum of 0.5 A at 255 V AC. The switching characteristics of the semiconductor switch have it as being closed when the voltage crosses zero and open when the current crosses zero. Each connector features a potential-free NO (Normally Open) contact.

The wiring connectors on each module are color coded for ease of wiring. Refer to the section, *Field Wiring* for additional information.

Each module features a type plate, which includes identification information, the key technical specifications, and a block diagram. In addition, a QR code allows for direct online access to the associated documentation. The software for reading the QR code must support inverted QR codes.

Markers are available as accessories for labelling equipment. Each I/O module can be labelled using the markers to ensure clear identification when replacing individual modules or electronic units.

A green *Module Status* LED indicates there is communication on the system bus. Additionally, there are Yellow LEDs for each input to indicate when it is active. Refer to the section, *LEDs* for additional information.

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

Modules should to 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 Module 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

- Positive Logic
- EP-2634 also supports Negative Logic
- *Spring style* technology for ease of wiring
- DIN rail mounted
- Double-click installation for positive indication of correct installation
- Up to 16 outputs
- Compatible with type-1 and type-3 sensor inputs
- Supports hot insertion and extraction

GFK-2959B

Ordering Information

Module	Description
EP-2214	Digital Output, 4 Points, Positive Logic 24VDC, 0.5A, 2,3, or 4 Wire
EP-2218	Digital Output, 8 Points, Positive Logic, 24VDC, 0.5A, 2 Wire
EP-2614	Digital Output, 4 Points, Positive Logic 24VDC, 2.0A, 2,3, or 4 Wire
EP-225F	Digital Output, 16 Points, Positive Logic, 24VDC, 0.5A, 1 Wire
EP-2634	Digital Output, 4 Points, Positive/Negative Logic 24VDC, 2.0A, 2,3, or 4 Wire
EP-2714	Digital Relay Output, 4 Points, Positive Logic, 24 - 220 VDC/VAC, 6A, 2 Wire
EP-2814	Digital Output, 4 Points, Positive Logic, 230 VAC, 1A

Specifications

	EP-2214	EP-2614	EP-2634	EP-2218	EP-225F
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				
Outputs					
Number	4	4	4	8	16
Type	P-Logic		Switchable P- or N-Logic	P-Logic	
Type of load	ohmic, inductive, lamp load				
Response time	low » high max. 100 µs; high » low max. 250 µs				
Max. output current					
per channel	0.5 A	2 A	2 A	0.5 A	0.5 A
per module	2 A	8 A	8 A	4 A	8 A
Breaking energy (inductive)	150 mJ per channel				
Switching frequency					
Resistive load (min. 47 Ω)	1 kHz				
Inductive load (DC 13)	0.2 Hz without free-wheeling diode 1 kHz with suitable free-wheeling diode				
Lamp load (12 W)	1 kHz				
Actuator connection	2-wire, 3-wire, 3-wire + FE			2-wire	1-wire
Actuator supply	max. 2 A per plug, total max. 8 A			--	--
Short-circuit-proof	Yes				
Protective circuit	Constant current with thermal switch-off and automatic restart				
Response time of the current limiting circuit	< 100 µs				
Module diagnostics	Yes				
Individual channel diagnostics	No				
Reactionless	Yes	--	Yes	Yes	Yes
Can be used with EP-19xx	Yes	Yes	Yes	--	--

For public disclosure

	EP-2214	EP-2614	EP-2634	EP-2218	EP-225F
Supply					
Supply voltage	20.4V – 28.8V				
Current consumption from system current path I _{sys}	8 mA				
Current consumption from output current path I _{out}	20 mA + load	25 mA + load	20 mA + load	35 mA + load	25 mA + load
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	86 g (3.03 oz)	86 g (3.03 oz)	86 g (3.03 oz)	86 g (3.03 oz)	83 g (2.93 oz)

	EP-2714	EP-2814
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	
Outputs		
Number	4	
Type	Relay from - C	SSR / triac
Material for power and data contacts	Ni-Au, 3 µm	--
Switching characteristic	--	Closing when the voltage crosses zero, Opening when the current crosses zero
Response time	20 ms	10 ms
Minimum switching current	--	50 mA per channel
Maximum switching current	--	1 A per channel
	--	4 A per module
Max. output current	5 A at 60°C (140 °F) / 6 A at 55°C (131 °F) per channel	--
	20 A at 60°C (140 °F) / 24 A at 55°C (131 °F) per module	--
Holding current	--	25 mA
Switching frequency	max. 5 Hz	up to 20 Hz
Short-circuit-proof	No	
Defined trip behaviour of the prescribed external fuse	--	1 A super quick-acting
Protective circuit	External fusing with 6 A prescribed	--
Service life with AC-15 load and 1-A switching current	> 300.000 switching cycles	--
Max. switching voltage	255 V AC, UL: 277 V AC, DC corresponding to the derating curve	255 V AC, UL: 277 AC
Reactionless	Yes	