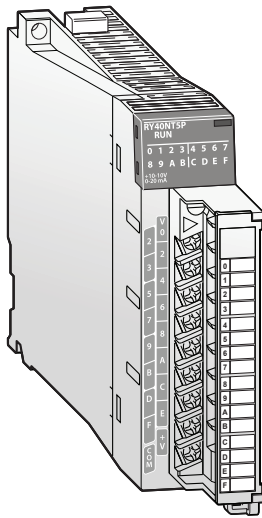


■ Digital (high-speed) output modules



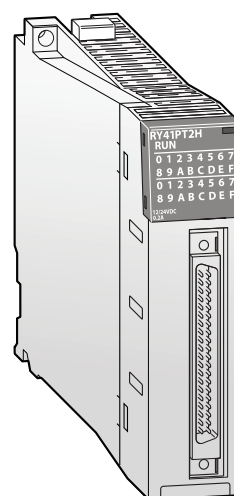
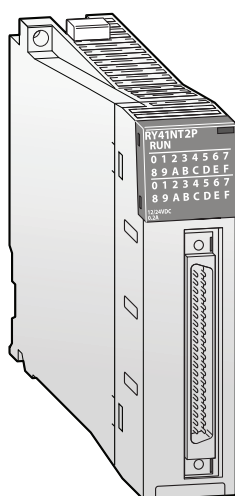
Digital output modules

A variety of digital output modules are available including relay, transistor sink (wired as positive common) and transistor source (wired as negative common). Load voltages include 240 V AC and 5 V to 24 V DC, with various current ratings.

Special features:

- Output modules with relays or transistor outputs
- Overload protection
- Connection of output signals via removable terminal blocks or connectors
- Relay health diagnostics for preventive maintenance
- The output module RY40PT5B (with diagnostic function) offers
 - output short-circuit and disconnection detection
 - interrupt function in case of an error
 - error and event history function.

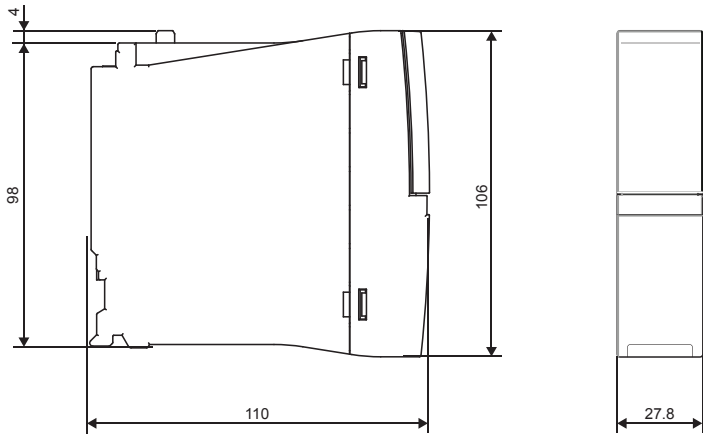
Specifications	RY10R2	RY18R2	RY20S6	RY40NT5P	RY40PT5P	RY40PT5B
Output points	16	8	16	16	16	16
Output type	Relay	Relay	Triac	Transistor (sink)	Transistor (source)	Transistor with diagnostic functions (source)
Common terminal arrangement points	16	8	16	16	16	16
Insulation method	Relay	Relay	Photocoupler	Photocoupler	Photocoupler	Photocoupler
Rated output voltage	24 V DC/240 V AC	24 V DC/240 V AC	100–240 V AC	12–24 V DC	12–24 V DC	24 V DC
Operating voltage range	—	—	—	10.2–28.8 V DC	10.2–28.8 V DC	20.4–28.8 V DC
Min. switching load	5 V DC (1 mA)	5 V DC (1 mA)	24 V AC (100 mA) 100 V AC (25 mA) 240 V AC (25 mA)	—	—	—
Max. switching voltage	125 V DC/ 264 V AC	125 V DC/264 V AC	288 V AC	—	—	—
Max. output current A	2	2	0.6	0.5	0.5	0.5
Output current per group TYP A	8	8	4.8	5	5	5
Inrush current	—	—	—	Current is limited by the overload protection	Current is limited by the overload protection	Current is limited by the overload protection
Leakage current at OFF mA	—	—	≤1.5 (120 V AC), ≤3 (240 V AC)	≤0.1	≤0.1	≤0.3
Response time	OFF → ON	≤10 ms	≤10	≤0.5 ms	≤0.5 ms	≤0.5 ms
	ON → OFF	≤12 ms	≤12	≤1 ms	≤1 ms	≤1.5 ms
Life	Mechanical	Switching 20 million times	Switching 20 million times	—	—	—
	Electrical	Switching 300000 times or more	Switching 100000 times or more	—	—	—
Max. switching frequency	3600 times/h	3600 times/h	—	—	—	—
Surge suppression	—	—	CR absorber	Zener diode	Zener diode	Zener diode
Fuse	—	—	—	—	—	—
Power indicator	All modules possess a RUN LED and one status LED per output (Alternating toggle switch used to display between 32-point LED signals for 64-point type module.)					
Connection terminal	18-point removable terminal block with screws	18-point removable terminal block with screws	18-point removable terminal block with screws	18-point removable terminal block with screws	18-point removable terminal block with screws	18-point removable terminal block with screws
Occupied I/O points	16	16	16	16	16	16
Applicable wire size mm ²	0.3–0.75	0.3–0.75	0.3–0.75	0.3–0.75	0.3–0.75	0.3–0.75
Ext. power supply	Voltage	—	—	12–24 V DC	12–24 V DC	24 V DC
	Current mA	—	—	4 (at 24 V DC)	16 (at 24 V DC)	87 (at 24 V DC)
Internal power consumption (5 V DC) mA	450	430 (all output points ON)	250 (all output points ON)	140	130	190
Weight kg	0.22	0.22	0.40	0.16	0.16	0.24
Dimensions (WxHxD) mm	27.8x106x131	27.4x98x90	27.4x98x112	27.8x106x131	27.8x106x131	27.8x106x131
Order information	Art. no. 279550	308712	308676	279547	279551	301647
Accessories	40-pin connector and ready to use connection cables; spring clamp terminal block for exchange against the standard screw terminal block > refer to chapter 5					



Specifications	RY41PT1P	RY41NT2H*	RY41NT2P	RY41PT2H*	RY42NT2P	RY42PT1P
Output points	32	32	32	32	64	64
Output type	Transistor (source)	Transistor (sink)	Transistor (sink)	Transistor (source)	Transistor (sink)	Transistor (source)
Common terminal arrangement	points	32	32	32	32	32
Insulation method	Photocoupler	Photocoupler	Photocoupler	Photocoupler	Photocoupler	Photocoupler
Rated output voltage	12–24 V DC	5–24 V DC	12–24 V DC	5–24 V DC	12–24 V DC	12–24 V DC
Operating voltage range	10.2–28.8 V DC	4.25–28.8 V DC	10.2–28.8 V DC	4.25–28.8 V DC	10.2–28.8 V DC	10.2–28.8 V DC
Min. switching load	—	—	—	—	—	—
Max. switching voltage	—	—	—	—	—	—
Max. output current	A	0.1	0.2	0.2	0.2	0.1
Output current per group TYP	A	2	2	2	2	2
Inrush current	Current is limited by the overload protection	0.7 A for max. 10 ms	Current is limited by the overload protection	0.7 A for max. 10 ms	Current is limited by the overload protection	Current is limited by the overload protection
Leakage current at OFF	mA	≤0.1	≤0.1	≤0.1	≤0.1	≤0.1
Response time	OFF → ON	≤0.5 ms	≤1 μs	≤0.5 ms	≤1 μs	≤0.5 ms
	ON → OFF	≤1 ms	≤2 μs	≤1 ms	≤2 μs	≤1 ms
Life	Mechanical	—	—	—	—	—
	Electrical	—	—	—	—	—
Max. switching frequency	—	—	—	—	—	—
Surge suppression	Zener diode	Zener diode	Zener diode	Zener diode	Zener diode	Zener diode
Fuse	—	—	—	—	—	—
Power indicator	All modules possess a RUN LED and one status LED per output (Alternating toggle switch used to display between 32-point LED signals for 64-point type module.)					
Connection terminal	40-pin connector	40-pin connector	40-pin connector	40-pin connector	40-pin connector	40-pin connector
Occupied I/O points	32	32	32	32	32	64
Applicable wire size	mm ²	0.088–0.3	0.088–0.3	0.088–0.3	0.088–0.3	0.088–0.3
Ext. power supply	Voltage	12–24 V DC	—	12–24 V DC	—	12–24 V DC
	Current	mA	19 (at 24 V DC)	—	16 (at 24 V DC)	—
Internal power consumption (5 V DC)	mA	190	420	180	410	250
Weight	kg	0.11	0.12	0.11	0.12	0.13
Dimensions (WxHxD)	mm	27.8x110x106	27.8x110x106	27.8x110x106	27.8x110x106	27.8x110x106
Order information	Art. no.	279552	308707	279548	304547	279549
Accessories	40-pin connector and ready to use connection cables; spring clamp terminal block for exchange against the standard screw terminal block > refer to chapter 5					

* High-speed module

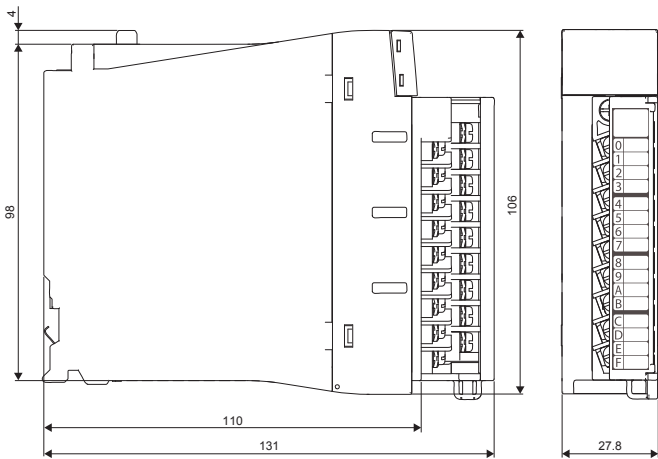
■ Safety function module and safety CPU



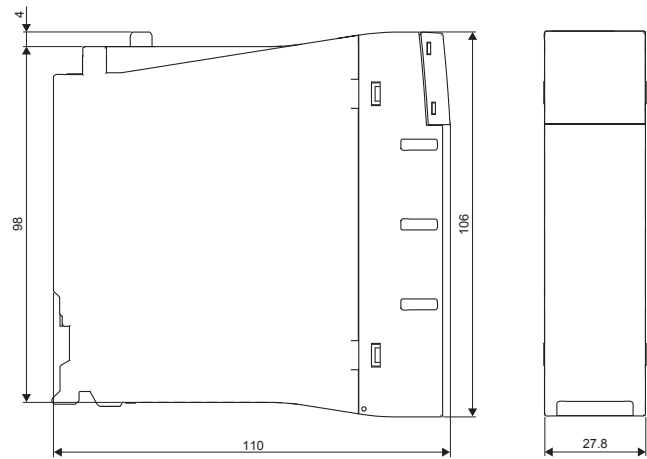
Unit: mm

■ I/O modules, blank cover module special function modules

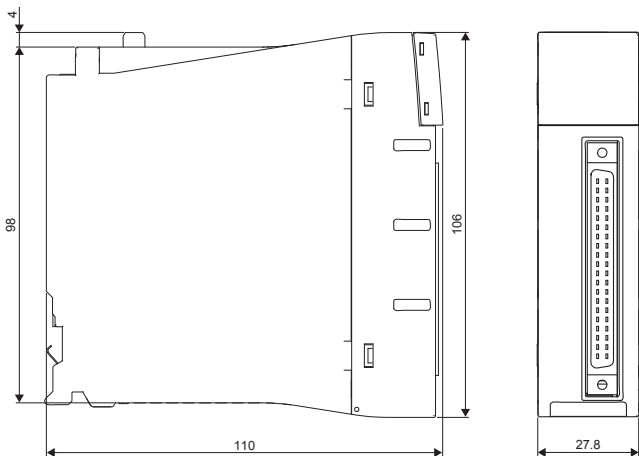
18-point screw terminal block



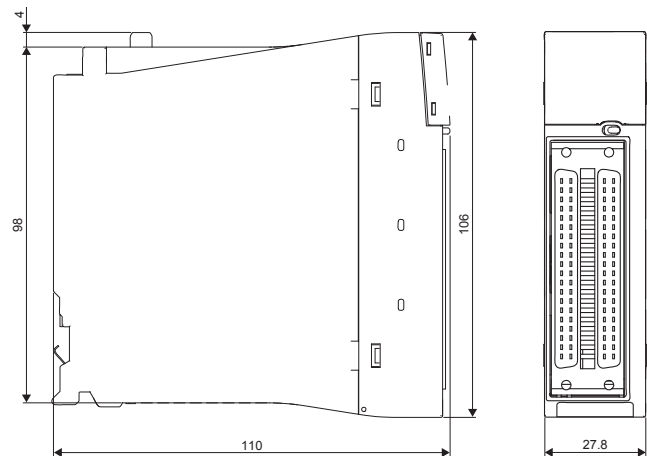
Blank cover module



40-pin connector, 32 points module



40-pin connector, 64 points module



Unit: mm