



RN748A

Motor Driver, DC/Position Proportional Converter

The RN748A is a signal converter that receives a 4–20mA input signal from a controller and outputs a relay contact signal to drive a control motor with a built-in 135Ω feedback potentiometer for position proportioning operation. By setting the center of rotation angle and the proportional band, a split operation can be performed.



ACTUATORS

Specifications

Input	Input (IN)	Input type	4–20mA _{dc}	
		Sampling cycle	100ms	
		Indication accuracy	±0.1% FS ±1 digit	
		Input impedance	100Ω max.	
		Digital input	Input type	Dry contact or open collector
			Allowable ON contact resistance	250Ω max.
	Allowable OFF contact resistance		100kΩ min.	
	Allowable ON residual voltage	1.0V max.		
	Terminal current (ON)	Approx. 7.5mA (in case of short circuit). Approx. 5.0mA (in case of contact resistance 250Ω).		
	Minimum hold time	200ms or more		
	Motor feedback potentiometer input	Allowable resistance	100 to 2500Ω	
Detection of line break		Displays "AL07."		
Output	Motor drive relay output	Contact rating	250Vac, 8A (resistive load)	
		Life	120,000 operations min.	
		Min. switching specifications	24V _{dc} , 40mA	
	Event relay outputs (1 to 3)	Contact rating	250Vac/30V _{dc} , 2A (resistive load)	
		Life	100,000 operations min.	
		Min. switching specifications	5V _{dc} , 40mA (reference value)	
Setting	Center of rotation angle	0.0 to 100.0%		
	Proportional band	0.1 to 999.9%		
	Dead zone	0.5 to 25.0%		
	Event for motor opening	High limit event:	-199.9 to +999.9%	
Low limit event:		-199.9 to +999.9%		
General	Operating conditions	Ambient temperature	0 to 50°C (gang-mounted: 0 to 40°C)	
		Ambient humidity	10 to 90% RH (no condensation allowed)	
		Power	100 to 240Vac 50/60Hz	
	Power consumption	12VA max.		
	Mass	Approx. 250g (with the dedicated mounting bracket)		
Standards compliance	EN61010-1, EN61326-1			

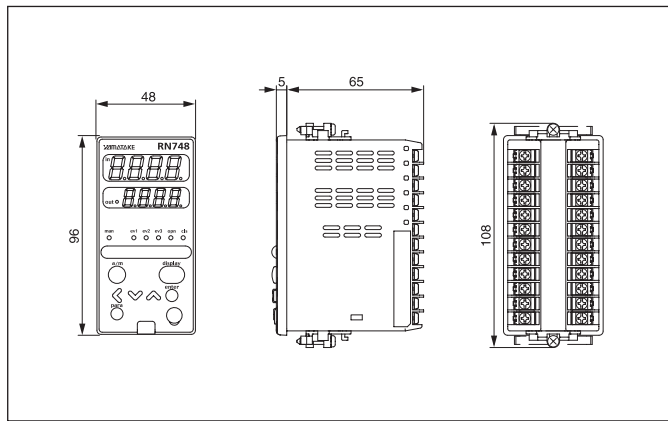
Selection Guide I II Example: RN748A0000

Segment	Model No. selection	Description
I	Basic No.	RN748A00 Motor Driver, DC/Position Proportional Converter
	Options	00 None
II		D0 With inspection data
		Y0 With traceability certification

Accessories (sold separately)

Model No.	Description
81409654-001	Mounting bracket (accessory)
81446915-001	Hard cover
81446912-001	Terminal cover

Dimensions (Unit: mm)



Setting example for the center of rotation and proportional band

1. Center of rotation angle: 50% (12mA)
Proportional band: 100% (16mA)

2. Center of rotation angle: 25% (8mA)
Proportional band: 50% (8mA)

3. Center of rotation angle: 75% (16mA)
Proportional band: 50% (8mA)

Definition:

— : Direct action (Motor opening direction on input increase)

- - - : Reverse action (Motor closing direction on input increase)