

Intelligent Control Card

The control card for DC brushless motor power roller is dedicated designed for automatic transmission system, offering smooth, quiet, and highly effective control application. The card's characteristics are :

1. Built-in ZPA (Zero Pressure Accumulation), Master / Slave control logic or external PLC control. Their respective functions are :

- ZPA : include Accumulation, Singulation (SING), Train (SLUG), Back to back, Lost Box Detection, Jam Timer, and Run-Hold Timer applications.
- Master / Slave : In case of ascending or descending, master and slave control cards are both used to produce larger torque. To start or stop the motor is purely controlled by the master control card which is connected directly with the slave control card via I/O port.

2. Up to 24 switches for:

- Controlling motor speed (16 speed selection)
- Changing direction (CW/CCW)
- Soft starting / stopping timer setting
- Controlling the accuracy of photoeye's input/output
- Controlling each signal's input/output (NPN/PNP)

3. With 100mA driving force, 4 sets of NPN or PNP output signal are capable of directly driving external relay or PLC.

4. Protection Functions

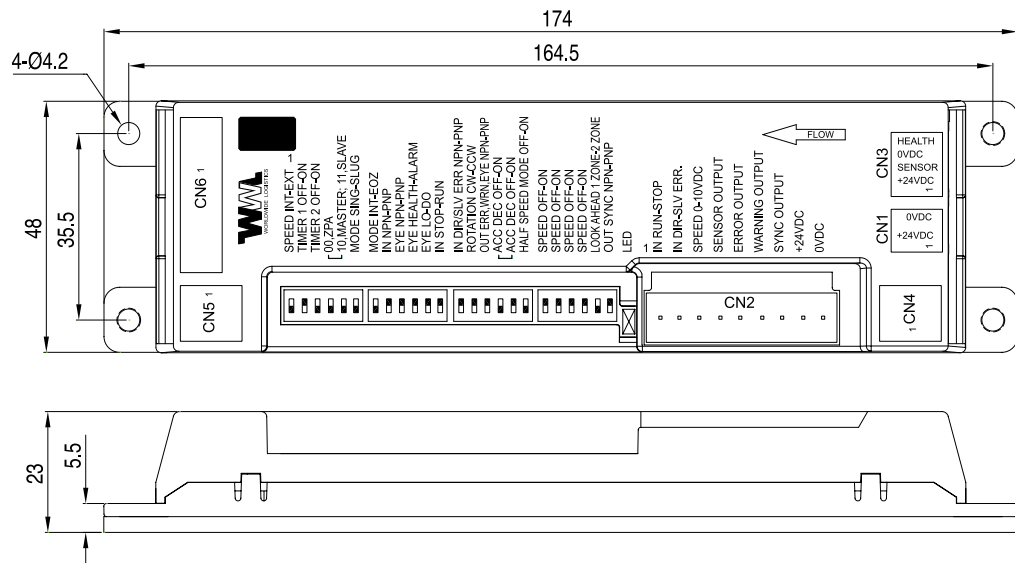
- Card over-temperature, under-voltage, over-current and short circuit protection, built in anti-reversed diode.
- Motor anti-lock and over-heating protection.
- Protection for output and photoeye short circuit.
- LED Warning : can flash LED light to indicate different abnormalities.

5. RoHS Compliant.



Control Card Dimension

(Unit : mm)



Control Card Specification

Power Voltage	24VDC \pm 10%	
Static Current	70mA	
Peak Current	20A within 1mS	
Starting Current	4A	
Operational Functions	<p>a. With 100mA driving force, 4 sets of NPN or PNP output signals are able to drive external computer, Relay, PLC or Remote I/O etc.</p> <p>b. Control motor speed either by using internal switch for 16 speed selection, or by using external DC 0 ~ 10V voltage</p> <p>c. Speed up or slow down setting (0.2 ~ 15 seconds)</p> <p>d. The polarity of input signal can be PNP or NPN, using DIP switch to select</p>	
LED Display	Display green light when power on, and flash LED light for 7 kinds of abnormalities.	
Power Protection	<p>a. Built-in resettable fuse</p> <p>b. Built-in anti-reversed Connection</p>	
Thermal Protection	<p>a. When the temperature of control card is above 75°C, the motor will shut down and will restart automatically when it cool down to 70°C.</p> <p>b. Motor will shut down when the temperature is above 100°C; below 95°C will operated at half speed; below 90°C will operated at full speed.</p>	
Braking System	Electromagnetic Braking (Note 1)	
Mechanical braking (Note 2)	Braking Start	200mS after stop signal is applied
	Braking Current	Motor is running within 100mS after motor started, the current is 250mA. When over 100mS, the current will decrease to 125mA.
Environment conditions	Temperature	0°C ~ 40°C (32°F ~ 104°F)
	Humidity	< 90%RH (non-condensing)
	Vibration	< 0.5 G

Note 1 : Electromagnetic brake : use the reverse torque produced by the current of back EMF to brake.

Note 2 : The mechanical braking feature is built-in at R48DB model, which can eliminate load inertia and enable precise stopping.

※ Customized specifications are welcome, please contact us for details.

※ Specifications are subject to change without prior notice.

16 Speed Selection By Control Card

DIP switch settings				External voltage input (V \pm 0.2)	Power roller type					
					R48DA-018		R48DA-060 R48DB-060 R48DH-060		R48DH-100	
SW4-1	SW4-2	SW4-3	SW4-4		Velocity		Velocity		Velocity	
				m / min \pm 3%	ft / min \pm 3%	m / min \pm 3%	ft / min \pm 3%	m / min \pm 3%	ft / min \pm 3%	
OFF	OFF	OFF	OFF	0.00 - 2.45	0.0	0.0	0.0	0.0	0.0	0.0
OFF	OFF	OFF	ON	2.55 - 2.95	5.7	18.7	20.0	65.6	45.7	150.0
OFF	OFF	ON	OFF	3.05 - 3.45	6.4	21.0	22.5	73.8	49.0	160.7
OFF	OFF	ON	ON	3.55 - 3.95	7.1	23.4	25.0	82.0	52.2	171.4
OFF	ON	OFF	OFF	4.05 - 4.45	7.8	25.7	27.5	90.2	55.5	182.1
OFF	ON	OFF	ON	4.55 - 4.95	8.6	28.1	30.0	98.4	58.8	192.9
OFF	ON	ON	OFF	5.05 - 5.45	9.3	30.4	32.5	106.6	62.1	203.6
OFF	ON	ON	ON	5.55 - 5.95	10.0	32.8	35.0	114.8	65.4	214.6
ON	OFF	OFF	OFF	6.05 - 6.45	10.7	35.1	37.5	123.0	68.6	225.0
ON	OFF	OFF	ON	6.55 - 6.95	11.4	37.4	40.0	131.2	71.8	235.7
ON	OFF	ON	OFF	7.05 - 7.45	12.8	42.1	45.0	147.6	75.1	246.4
ON	OFF	ON	ON	7.55 - 7.95	13.6	44.5	47.5	155.8	78.4	257.1
ON	ON	OFF	OFF	8.05 - 8.45	14.3	46.8	50.0	164.0	81.7	267.9
ON	ON	OFF	ON	8.55 - 8.95	15.0	49.2	52.5	172.2	84.9	278.6
ON	ON	ON	OFF	9.05 - 9.45	15.7	51.5	55.0	180.4	88.2	289.3
ON	ON	ON	ON	9.55 - 9.95	17.1	56.2	60.0	196.9	91.4	300.0

