

When the control card is connected by a communication cable, various kinds of control can be done without a PLC (ZPA function provided).

Major features

- Low noise
- Compact design - light and small
- Since the lock current is less than 3 A, the DC power supply can be smaller.
- If an overload such as locking occurs, the system automatically switches from the normal mode to the low power mode. (If the system is forced to start up, it does not switch to the low power mode.)
- A function for protection against burning of the motor is incorporated.
- Constant speed rotation by closed-loop PWM voltage control.
- The desired speed can be set by a variable resistor.
- Since 2-piece connectors which consist of a fixed piece and a detachable piece for connection are used as connectors for power supply and sensor input/output, wire connection is easy.
- Applicable to all 24 VDC brushless motor models.

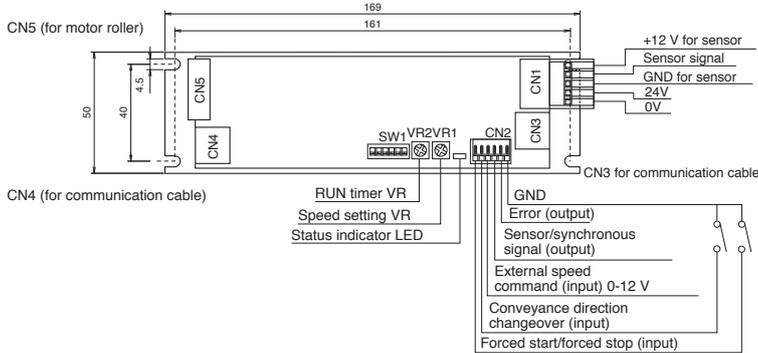
Model	Set-up speed (m/min.)	Operation mode								
		Normal operation					Low power (accum) operation			
		Rated tangential force (N)	Tangential force (N)	No load current (A)	Rated current (A)	Lock current (A)	Tangential force (N)	No load current (A)	Lock current (A)	
48BL3G-[]-[]-C8 Allowable set up speed range: 1.5m to 16m/min.	48BL3G- 6 -[]-C8	6.6	113	225	0.4	1.7	3	51	0.4	0.9
	48BL3G-10-[]-C8	10.0								
	48BL3G-13-[]-C8	13.0								
	48BL3G-16-[]-C8	16.5								
50BL3G-[]-[]-C8 Allowable set up speed range: 1.5m to 17m/min.	50BL3G- 6 -[]-C8	6.8	110	220	0.4	1.7	3	50	0.4	0.9
	50BL3G-10-[]-C8	10.5								
	50BL3G-13-[]-C8	13.5								
	50BL3G-16-[]-C8	17.0								
57BL3G-[]-[]-C8 Allowable set up speed range: 2m to 19m/min.	57BL3G- 6 -[]-C8	7.7	95	190	0.4	1.7	3	43	0.4	0.9
	57BL3G-10-[]-C8	12.0								
	57BL3G-13-[]-C8	15.0								
	57BL3G-16-[]-C8	19.4								
48BL2G-[]-[]-C8 Allowable set up speed range: 5m to 52m/min.	48BL2G- 6 -[]-C8	6.5	43	82	0.4	1.7	3	31	0.4	0.9
	48BL2G-10-[]-C8	10.0								
	48BL2G-13-[]-C8	13.0								
	48BL2G-16-[]-C8	16.5								
	48BL2G-20-[]-C8	20.5								
	48BL2G-30-[]-C8	31.0								
	48BL2G-40-[]-C8	40.5								
48BL2G-55-[]-C8	52.0									
50BL2G-[]-[]-C8 Allowable set up speed range: 6m to 54m/min.	50BL2G- 6 -[]-C8	6.5	42	80	0.4	1.7	3	30	0.4	0.9
	50BL2G-10-[]-C8	10.0								
	50BL2G-13-[]-C8	13.0								
	50BL2G-16-[]-C8	16.5								
	50BL2G-20-[]-C8	21.0								
	50BL2G-30-[]-C8	32.0								
	50BL2G-40-[]-C8	42.0								
50BL2G-55-[]-C8	54.0									
57BL2G-[]-[]-C8 Allowable set up speed range: 7m to 61m/min.	57BL2G- 6 -[]-C8	7.5	36	70	0.4	1.7	3	26	0.4	0.9
	57BL2G-10-[]-C8	12.0								
	57BL2G-13-[]-C8	15.0								
	57BL2G-16-[]-C8	19.5								
	57BL2G-20-[]-C8	24.0								
	57BL2G-30-[]-C8	36.5								
	57BL2G-40-[]-C8	48.0								
57BL2G-55-[]-C8	61.0									
48BL1G-[]-[]-C8 Allowable set up speed range: 30m to 155m/min.	48BL1G-60-[]-C8	63.0	16	30	0.4	1.7	3	12	0.4	0.9
	48BL1G-90-[]-C8	97.0								
	48BL1G-120-[]-C8	125.0								
	48BL1G-150-[]-C8	155.0								
50BL1G-[]-[]-C8 Allowable set up speed range: 30m to 160m/min.	50BL1G-60-[]-C8	65.0	16	30	0.4	1.7	3	12	0.4	0.9
	50BL1G-90-[]-C8	100.0								
	50BL1G-120-[]-C8	130.0								
	50BL1G-150-[]-C8	160.0								
57BL1G-[]-[]-C8 Allowable set up speed range: 30m to 183m/min.	57BL1G-60-[]-C8	74.0	14	25	0.4	1.7	3	10	0.4	0.9
	57BL1G-90-[]-C8	114.0								
	57BL1G-120-[]-C8	148.0								
	57BL1G-150-[]-C8	183.0								

1N=0.102kgf

Control Card C-8N

General Specifications

Supply voltage	24 VDC±10%
Standby voltage	Approx. 1.2 W
Max. number of control cards	30 (50 m or less)
Rated current	1.8 A



SW1

Function	ON	OFF
1 Conveyance direction changeover	CW	CCW
2 Mode changeover	Train Mode	Single Mode
3 Downstream end setting	Enabled	Disabled
4 Forced start/forced stop	Forced Start	Forced Stop
5 Output signal	Synchronous operation	Sensor signal
6		

Notes: CW, CCW: as seen from the lead wire side.
Default settings: all OFF

Connectors

REF No	No	Description	Function
CN1	1	+12 V output	
	2	Self sensor signal input	
	3	GND	
	4	+24 V input	
	5	0 V input	
	CN2	1	Forced start/forced stop (input)
2		Conveyance direction changeover (input)	Input to change the conveyance direction externally. When the input circuit is: Open: normal conveyance direction (motor roller CCW rotation) Closed: reverse conveyance direction (motor roller CW rotation) (CW, CCW as seen from the lead wire side) The direction cannot be changed if the "reverse conveyance direction" is already selected by the control card or switch 1 of SW1 (SW1-1).
3		External speed command (input)	The conveyance speed can be varied by input voltage. This command signal is enabled when analog voltage is applied with VR1 (speed setting VR) at its lowest position (max. CCW position). The speed can be changed for the whole line composed of control cards connected by communication cables. Voltage range: 0-12 V Input impedance: 10 kilo-ohms or more
4		Sensor /Synchronous operation (output*)	ON when: the self-sensor detects an object to be conveyed or the servo is on (synchronous operation is started when this output is connected with the input for forced start). Either option is selected by switch 5 of SW1 (SW1-5).
5		Error output *	OFF when an error occurs (open collector output)
6		GND	GND for input and output signals
CN3		Upstream (downstream) communication cable	To be connected with CN4 of the adjacent control card
CN4		Downstream (upstream) communication cable	To be connected with CN3 of the adjacent control card
CN5		Motor connector	To be connected with the motor

Output

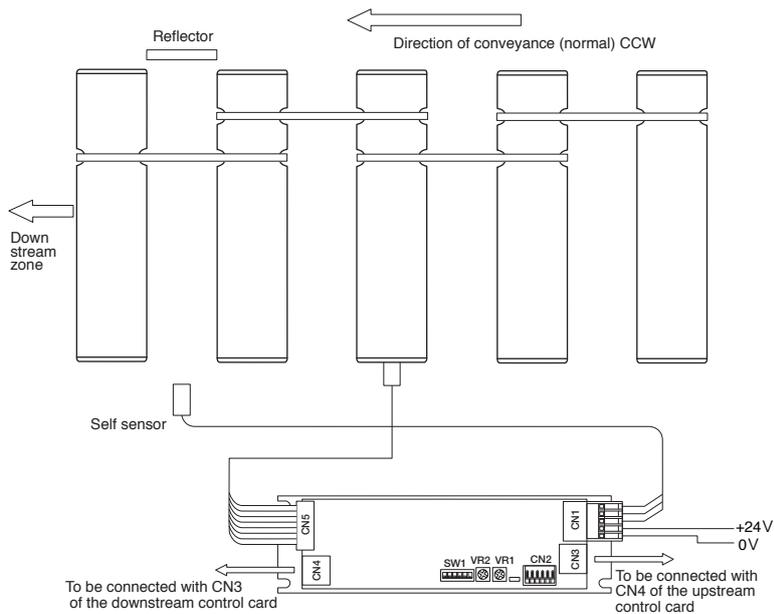
Maximum applied voltage	30 V
Saturation voltage for ON	Max. 0.8 V
Allowable current	Max. 20 mA.

* If an inductive load such as a relay is connected, a free-wheel diode should be provided between the power supply and output in order to prevent breakdown due to overvoltage.

Protective functions

Type of protection	How protection works	Notes	
Overload protection	Activated if a current above 1.8 A (rating) flows for 6 sec.	LOW POWER mode LED (red) flashing No alarming	Recovery after 10 sec. of operation
Motor overheat protection	Activated if the motor temperature exceeds 95°C	Operation stop LED (red) double flashing Alarming	Automatic recovery
Conveyance error (1)	Activated if a downstream sensor does not turn on after the self sensor remains on for 9.5 sec.	Operation stop LED (red) flashing Alarming	Reset by turning OFF the self sensor
Conveyance error (2)	Activated if the self sensor does not turn on 10 sec. after the upstream sensor turns on.	Operation stop No alarming	
Smoke/fire protection	Fuse for motor power short-circuit protection		
Control power supply short-circuit protection	Built-in PTC thermistor		

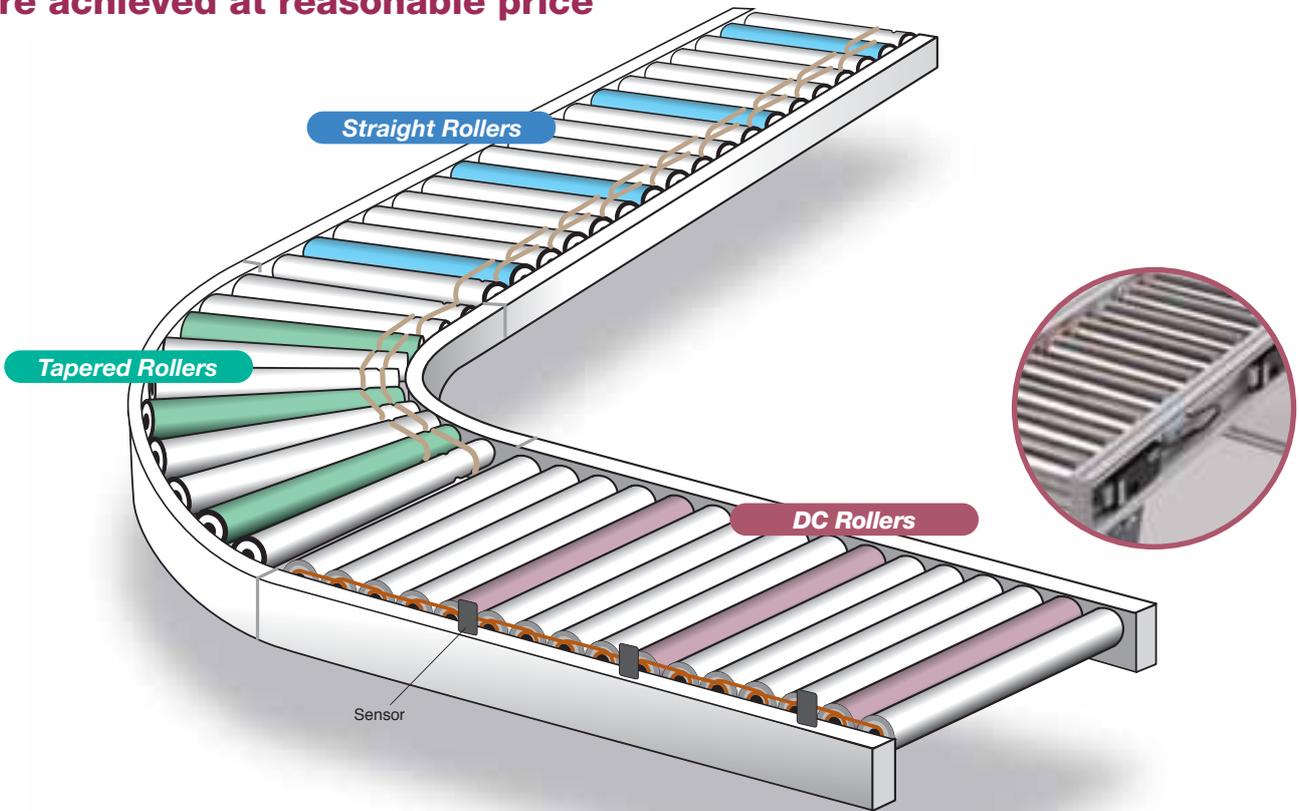
Connection Diagram



Control Card C-8N with Communication Cable



Further energy-saving and lower noise
are achieved at reasonable price



ZPA Zero-Pressure Accumulation Conveyor
Used in combination with sensors

