

Motorized Curtain Track

Powerful



Powerful 4P Type

Powerful 4P
Powerful 4P-HM
Powerful 4P-HL

Powerful 3L Type

Powerful 3L
Powerful 3L-HM
Powerful Little N3L

- Powerful series are a standard motorized system for basic TOSO functional tracks..
- Combined with other parts, Powerful offers a wide variety of fitting solutions.

Powerful

Powerful's Unique Features

Curtain track motors designed for wide applications.

Ranging from light to heavy duty, a combination of a Powerful and an appropriate track can cover almost all draperies.

Optional parts are available for many types of needs: from curved and skylight windows to slope ones.

Motor Specifications

Item		Powerful 3L series						Powerful 4P series						
		Powerful 3L 220 V		Powerful 3L-HM 220 V		Powerful Little N3L 220 V		Powerful 4P 220 V		Powerful 4P-HM 220 V		Powerful 4P-HL 220 V		
Rated power voltage	VAC	220		220		220		220		220		220		
Rated power frequency	Hz	50	60	50	60	50	60	50	60	50	60	50	60	
Rated power current	A	0.4	0.35	0.4	0.35	0.25	0.3	0.4	0.35	0.4	0.35	0.4	0.35	
Power consumption	W	80	75	80	75	60	70	80	75	80	75	80	75	
Operating voltage	VAC	Same as power source		Same as power source		Same as power source		Same as power source		Same as power source		Same as power source		
Operating current	A	Same as power source		Same as power source		Same as power source		Same as power source		Same as power source		Same as power source		
Time rating	min.	5		5		5		5		5		5		
Overheat protection operating temperature	°C	120 10		120 10		120 10		120 10		120 10		120 10		
Internal electric circuit		Built-in Inter rock circuit		Built-in Inter rock circuit		Built-in Inter rock circuit		Auto keep circuit, built-in Inter rock circuit		Auto keep circuit, built-in Inter rock circuit		Auto keep circuit, built-in Inter rock circuit		
Operating switch spec.		Locker switch		Locker switch		Locker switch		3-button momentary contact switch Open: A contact Stop: B contact Close: A contact		3-button momentary contact switch Open: A contact Stop: B contact Close: A contact		3-button momentary contact switch Open: A contact Stop: B contact Close: A contact		
Weight of main unit	kg (lb)	1.8 (4.0)		1.8 (4.0)		1.8 (4.0)		1.8 (4.0)		1.8 (4.0)		1.8 (4.0)		
Operating time	New Delac Rail	sec./m	5	4	—	—	5	4	5	4	—	—	—	—
	Supertrac Rail		5	4	9	7	5	4	5	4	9	7	18	14
	Theatrack Rail		3	2.5	5	4	—	—	3	2.5	5	4	10	8
	CM2000		5	4	—	—	5	4	5	4	—	—	—	—
Maximum curtain weight	New Delac Rail	kg (lb)	30 (66)		—		30 (66)		30 (66)		—		—	
	Supertrac Rail		80 (176)	Sloping		Weight		30 (66)	80 (176)	Sloping		Weight		80 (176)
				0°	80 (176)	0°	80 (176)							
				15°	16 (35)	15°	16 (35)							
				20°	13 (29)	20°	13 (29)							
				30°	10 (22)	30°	10 (22)							
45°	8 (18)	45°	8 (18)											
Theatrack Rail	80 (176)	100 (221)		—		80 (176)		100 (221)		120 (265)				
CM2000	Two-way Draw: 30 (66) One-way Draw: 20 (44)		—		30 (66)		Two-way Draw: 30 (66) One-way Draw: 20 (44)		—		—			
Maximum rail length	New Delac Rail	m (in)	10 (394)		—		10 (394)		10 (394)		—		—	
	Supertrac Rail		20 (787)		10 (394)		20 (787)		20 (787)		10 (394)		10 (394)	
	Theatrack Rail		20 (787)		20 (787)		—		20 (787)		20 (787)		10 (394)	
	CM2000		4 (158)		—		4 (158)		4 (158)		—		—	

*Maximum curtain weight is for a two-way draw.

Applicable Range

Type of curtain track			Supertrac							
Installation pattern			<p>Straight</p>	<p>Curve</p> <p>(Min. 300 mmR/11.8\"R)</p> <p>Single curve</p> <p>(Min. 300 mmR/11.8\"R)</p> <p>Two curves</p> <p>(Natural: 450 mmR/18\", 800 mmR/32\"R ore more) (White: 1500 mmR/59\"R ore more)</p> <p>Overall curve half</p>	<p>Slope window</p> <p>(Max. sloping: 45°)</p>					
Power transmission type			Wire type	Wire type		Wire type				
Powerful 3L Powerful 4P	Maximum curtain weight	kg (lb)	80 (176)	Single curve	Two curves/ Overall curve half	—				
	Maximum rail length	m (in)		20 (787)	10 (394)	10 (394)	—			
Powerful 3L-HM	Maximum curtain weight	kg (lb)	80 (176)	70 (154)	50 (110)	Sloping angle	15°	20°	30°	45°
	Maximum rail length	m (in)				10 (394)	10 (394)	10 (394)	Weight	16 (35)
Powerful 4P-HM	Maximum curtain weight	kg (lb)	80 (176)	70 (154)	50 (110)	Sloping angle	15°	20°	30°	45°
	Maximum rail length	m (in)				10 (394)	10 (394)	10 (394)	Weight	16 (35)
Powerful 4P-HL	Maximum curtain weight	kg (lb)	80 (176)	70 (154)	50 (110)	—				
	Maximum rail length	m (in)				10 (394)	10 (394)	10 (394)	—	
Powerful Little N3L	Maximum curtain weight	kg (lb)	30 (66)	—		—				
	Maximum rail length	m (in)		20 (787)	—		—			

*Maximum curtain weight is for a two-way draw. Maximum curtain weight for the slope window is a one-way draw.

Powerful

Type of curtain track			Supertrac				Theatrac				
Installation pattern			Skylight	Slope skylight	Arch	Straight					
Power transmission type			Wire type		Wire type		Wire type				
Powerful 3L Powerful 4P	Maximum curtain weight	kg (lb)	—		—		80 (176)				
	Maximum rail length	m (in)	—		—		20 (787)				
Powerful 3L-HM	Maximum curtain weight	kg (lb)	55 (121)		—		Overall arch	100 (221)			
	Maximum rail length	m (in)	10 (394)		—		10 (22)				
Powerful 4P-HM	Maximum curtain weight	kg (lb)	55 (121)		Sloping angle	15°	20°	30°	45°	Overall arch	100 (221)
					Weight	34 (75)	15 (33)	9 (20)	7 (15)	10 (22)	
	Maximum rail length	m (in)	10 (394)		10 (394)				6 (236)	20 (787)	
Powerful 4P-HL	Maximum curtain weight	kg (lb)	—		—		—		120 (265)		
	Maximum rail length	m (in)	—		—		—		10 (394)		
Powerful Little N3L	Maximum curtain weight	kg (lb)	—		—		—		—		
	Maximum rail length	m (in)	—		—		—		—		

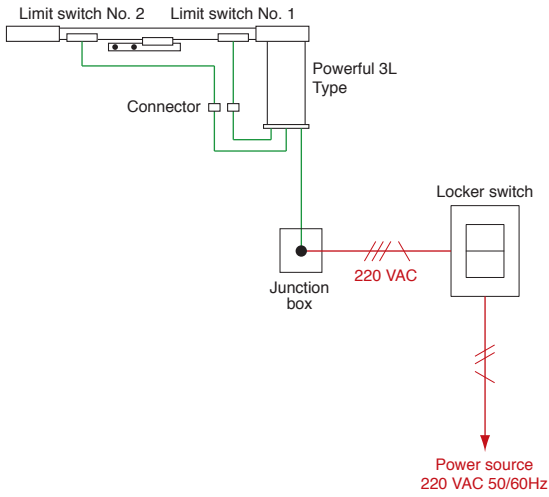
*Maximum curtain weight is for a two-way draw. Maximum curtain weight for the skylight is a one-way draw.

Type of curtain track			New Delac		CM 2000		
Installation pattern			Straight	Straight	Single curve	Two curves	
Power transmission type			Wire type	Kepler cord	Kepler cord	Kepler cord	
Powerful 3L Powerful 4P	Maximum curtain weight	kg (lb)	30 (66)	One-way draw: 20 (44)	One-way draw: 8 (18)	One-way draw: 4 (9)	
	Maximum rail length	m (in)		10 (394)	Two-way draw: 30 (66) One-way draw: 15 (33)	Two-way draw: 10 (22) One-way draw: 5 (11)	Two-way draw: 6 (13) One-way draw: 3 (7)
Powerful 3L-HM	Maximum curtain weight	kg (lb)	—	—	—	—	
	Maximum rail length	m (in)	—	—	—	—	
Powerful 4P-HM	Maximum curtain weight	kg (lb)	—	—	—	—	
	Maximum rail length	m (in)	—	—	—	—	
Powerful 4P-HL	Maximum curtain weight	kg (lb)	—	—	—	—	
	Maximum rail length	m (in)	—	—	—	—	
Powerful Little N3L	Maximum curtain weight	kg (lb)	30 (66)	One-way draw: 20 (44)	One-way draw: 8 (18)	One-way draw: 4 (9)	
	Maximum rail length	m (in)		10 (394)	Two-way draw: 30 (66) One-way draw: 15 (33)	Two-way draw: 10 (22) One-way draw: 5 (11)	Two-way draw: 6 (13) One-way draw: 3 (7)

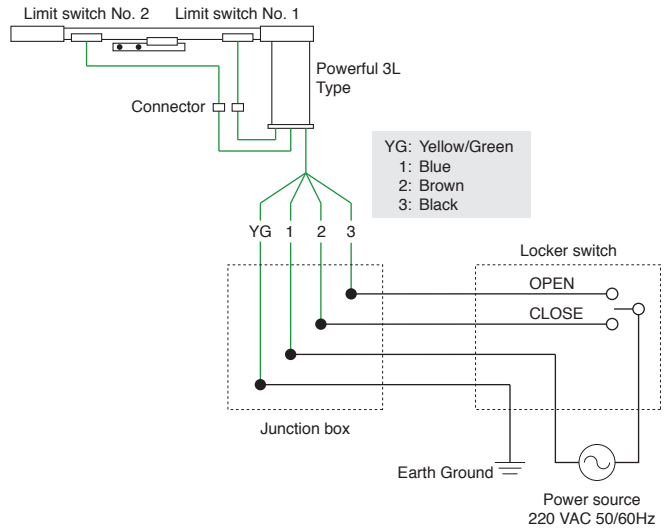
Basic Wiring and Connecting Diagram (Powerful 3L Type)

Single Operation

Basic Wiring Diagram

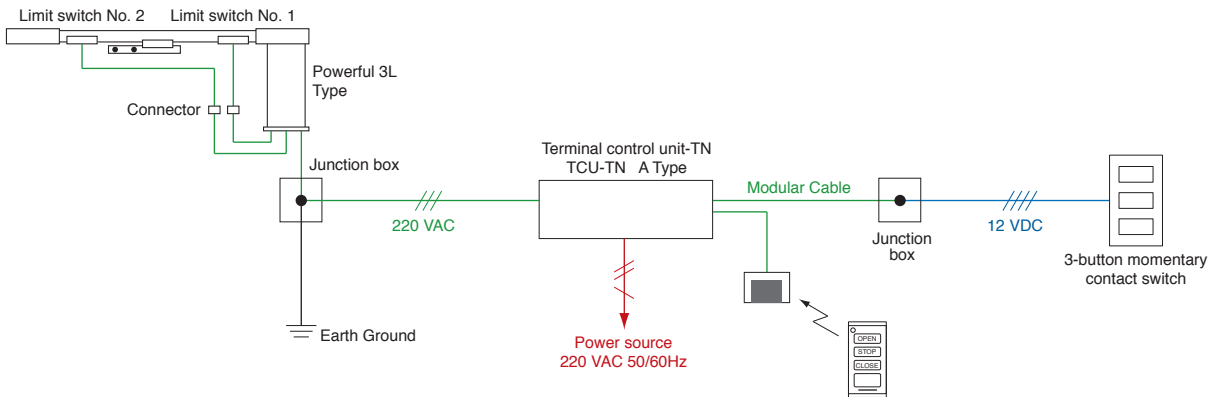


Basic Connecting Diagram

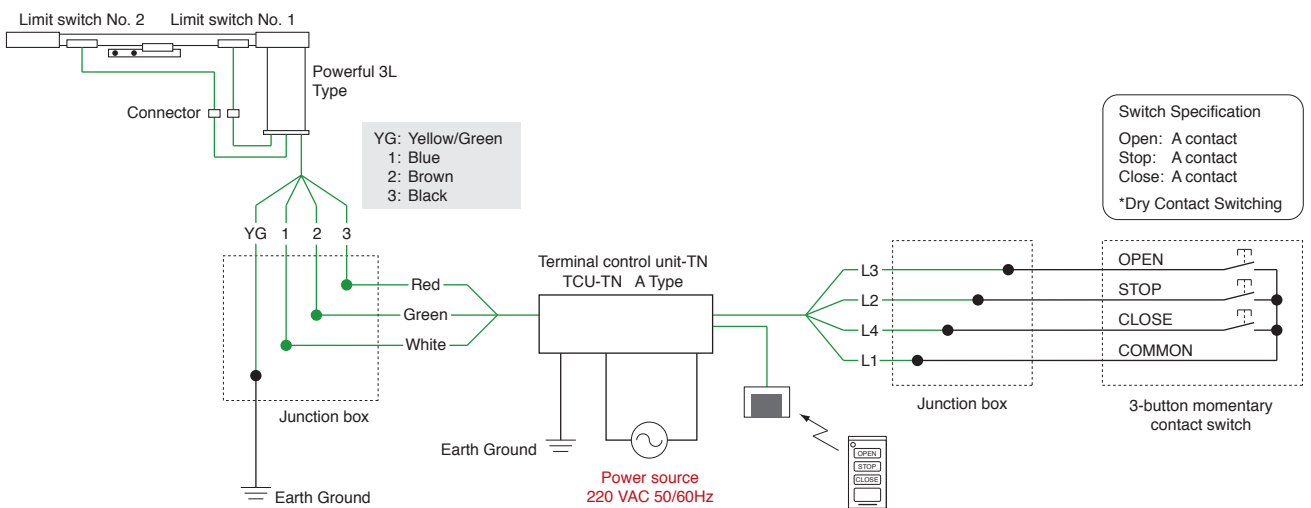


IR Remote Operation

Basic Wiring Diagram

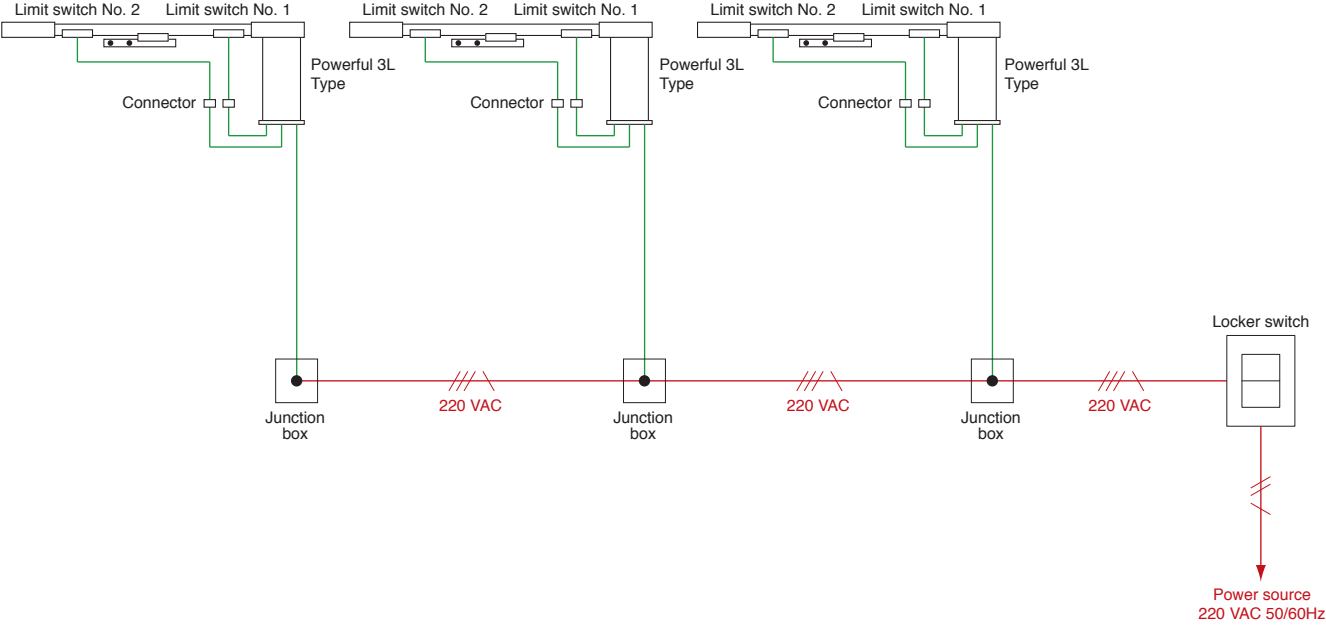


Basic Connecting Diagram

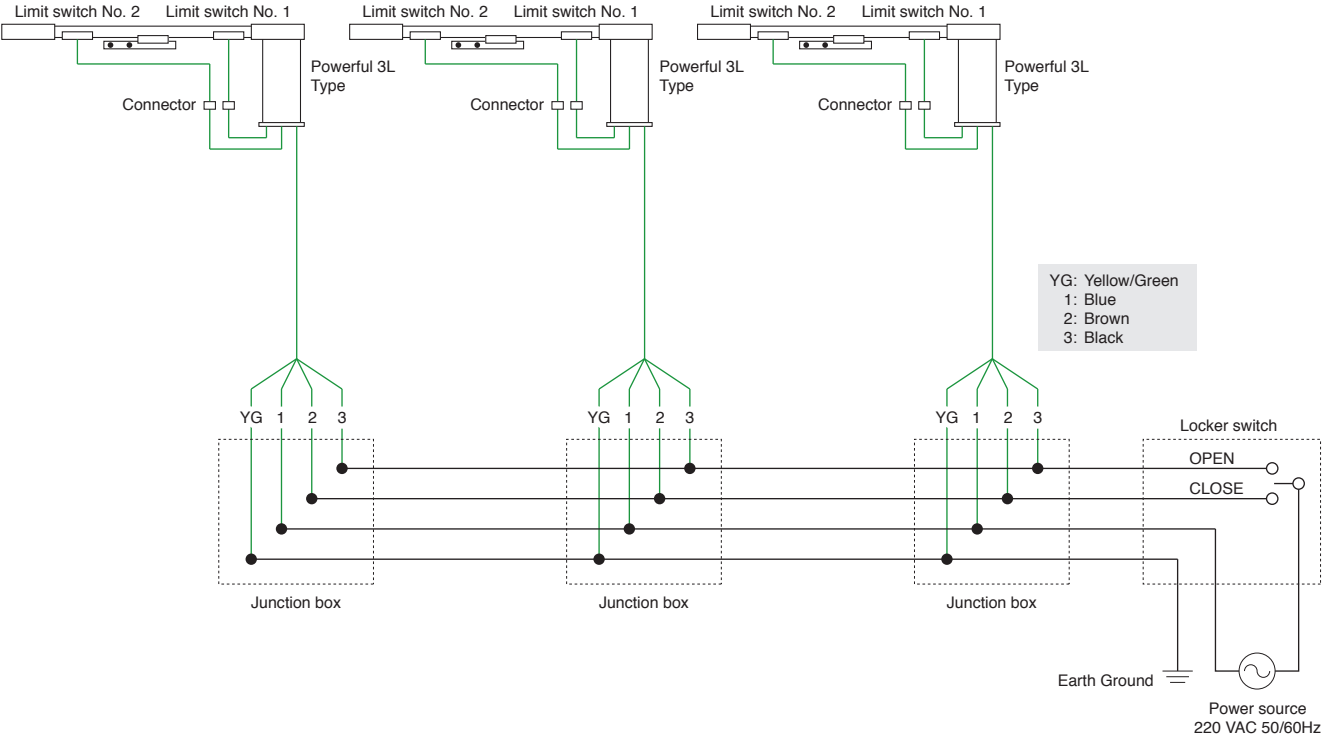


Simultaneous Operation

Basic Wiring Diagram



Basic Connecting Diagram

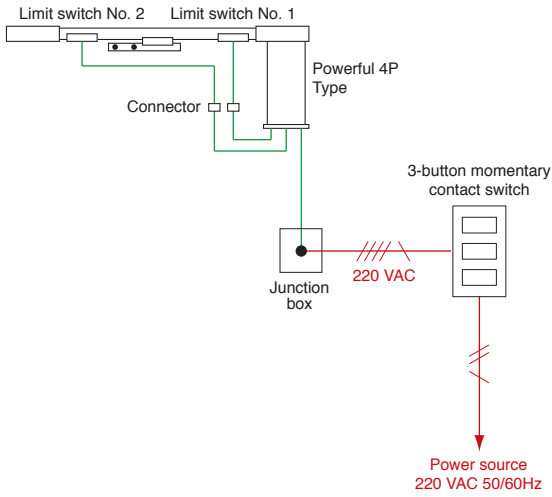


Explanatory notes: — Power supply, — Low voltage control line, — Main body attachment or TOSO standard

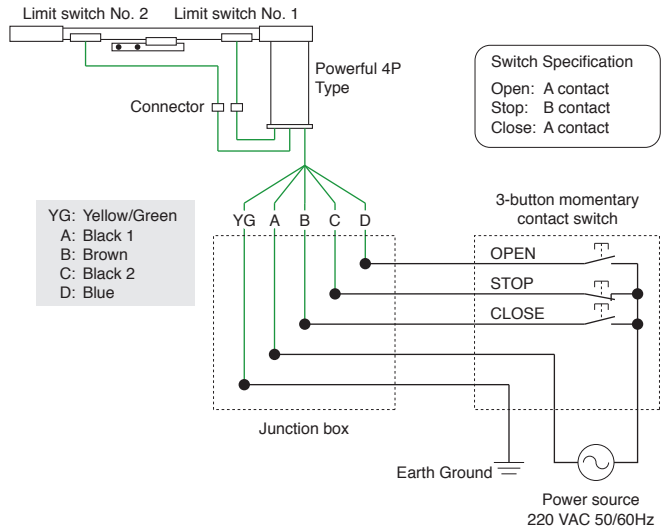
Basic Wiring and Connecting Diagram (Powerful 4P Type)

Single Operation

Basic Wiring Diagram

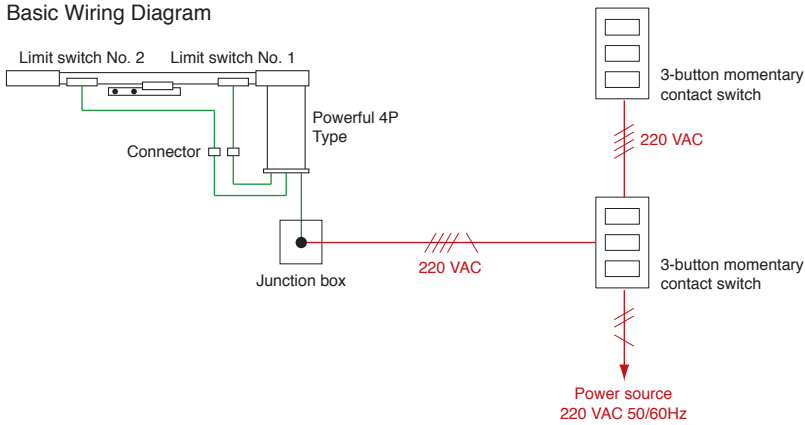


Basic Connecting Diagram

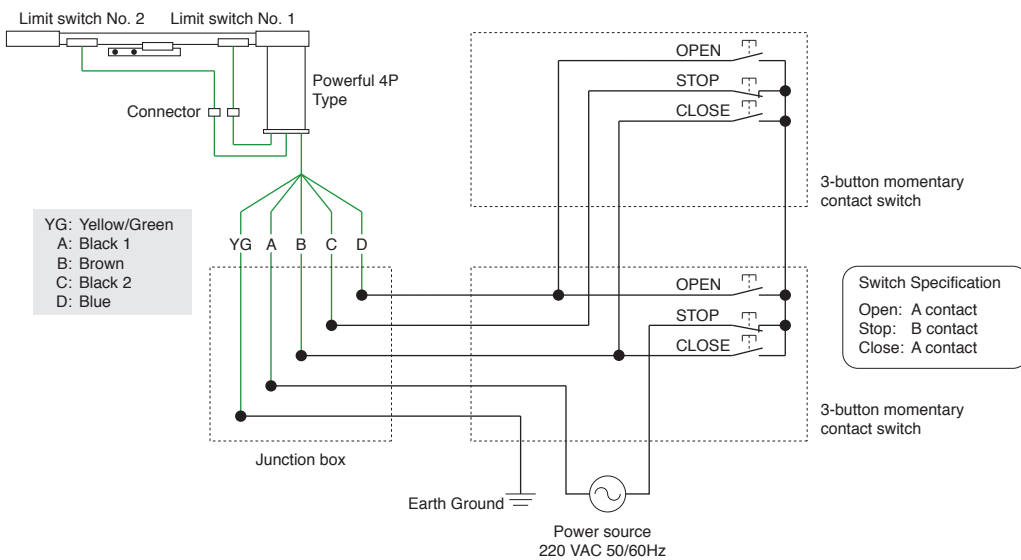


Operation from Two Locations

Basic Wiring Diagram

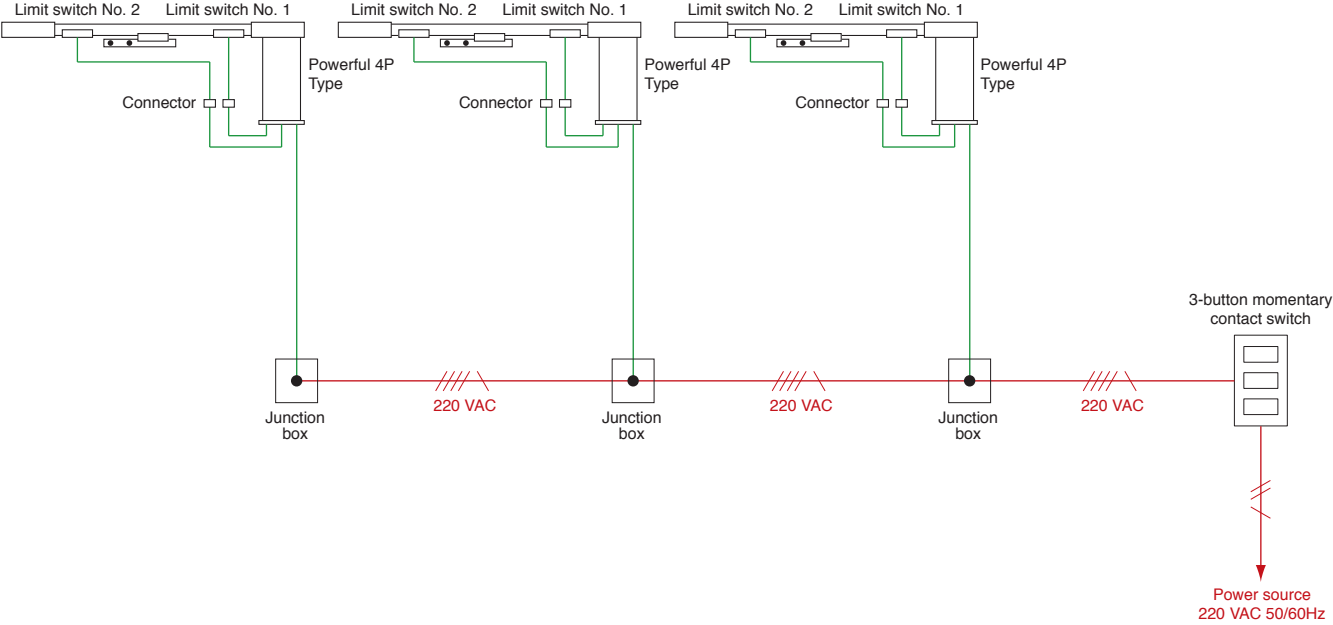


Basic Connecting Diagram

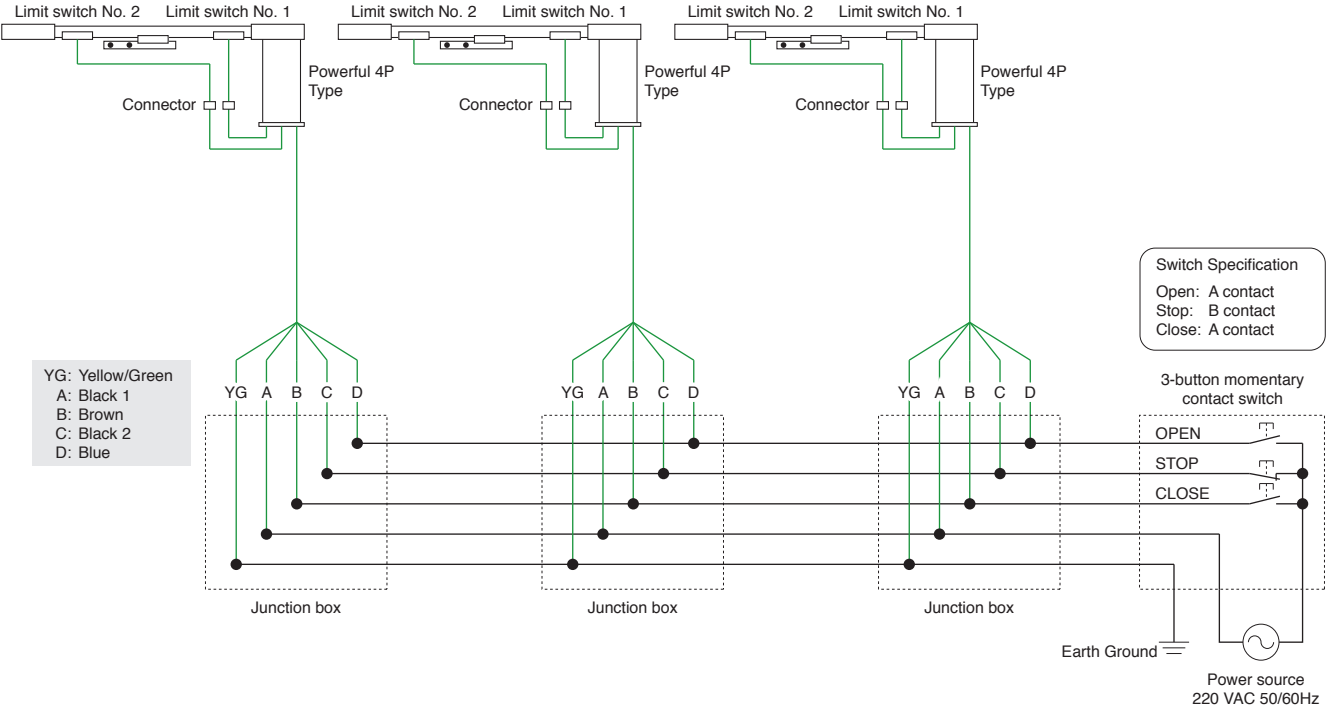


Simultaneous Operation

Basic Wiring Diagram



Basic Connecting Diagram



Explanatory notes: — Power supply, — Low voltage control line, — Main body attachment or TOSO standard

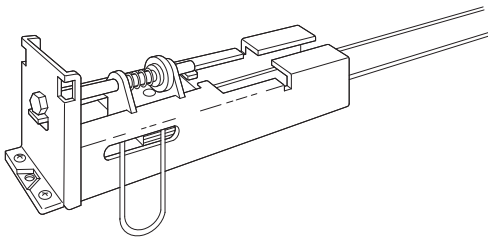
Method of Assembly

For trouble-free assembling, please follow the steps below.

When assembling tracks after fitting them on the site (e.g. when joining two tracks), be sure to install those two tracks after taking ① and Step ②.

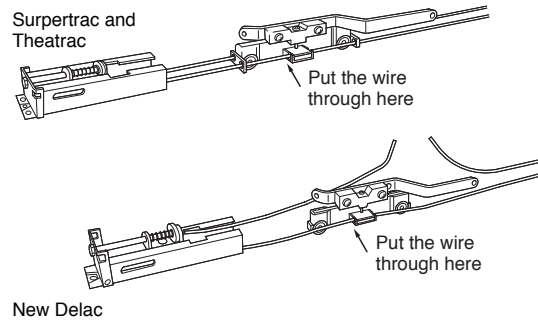
When viewed from room the side, the motor should come on the right.
Put the Limit Switch on the front (room) side of a track.

- ① Put the wire through the Adjuster.

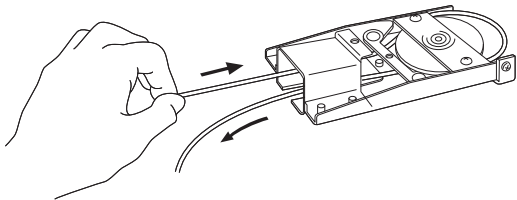


Wire length: (finished length + 300 mm/12") x 2

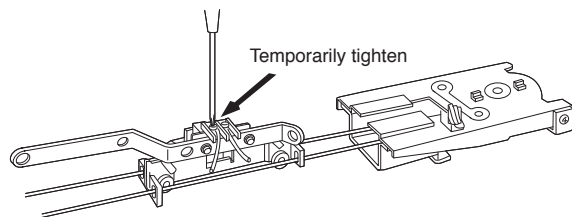
- ② Put the Master Roller Left on the front side wire and insert it into the track while leaving the wire loose. Then insert the Adjuster and fix it in place.



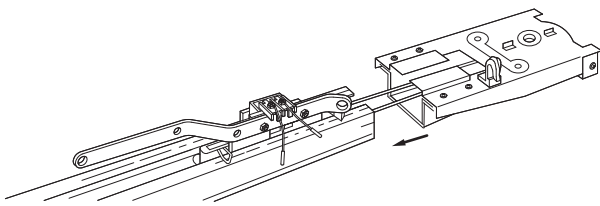
- ③ Put the wire through the Pulley Set.



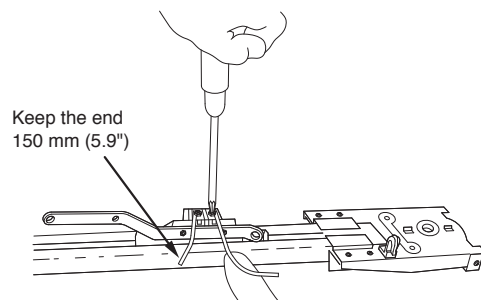
- ④ Put one end of the wire from the Adjuster and the other end from the Pulley Set on the Master Roller Right. Then, tighten the setscrew temporarily.



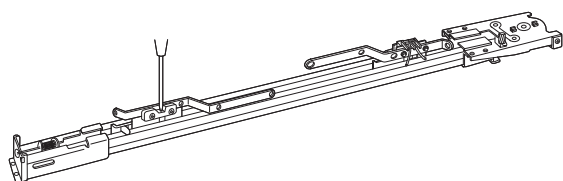
- ⑤ Insert the Master Roller Right in the track, and fix the Pulley Set.



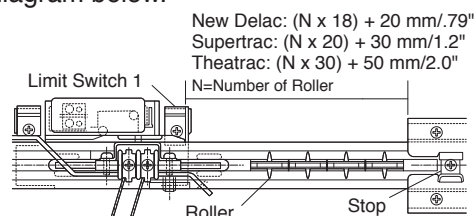
- ⑥ Loosen the setscrew on the right side of the Master Roller Right, and fix the wire between the plate and the body. Do the same with the setscrew on the left side.



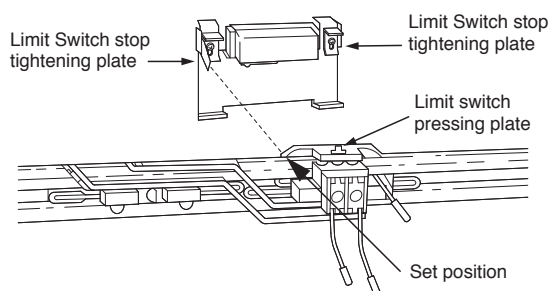
- ⑦ Move the Master Rollers—Right and Left—to both ends of the track and fix the setscrew of the Master Roller Left.



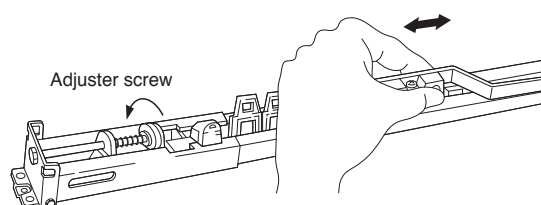
- ⑧ Insert the same number of rollers both to the left and to the right ends and fix the ends with the End Stop. Then, move the Master Roller Right from the edge of the Pulley Set to the place where a drapery stack-off comes. Set the Limit Switch 1 (OPEN-STOP) as shown in the diagram below.



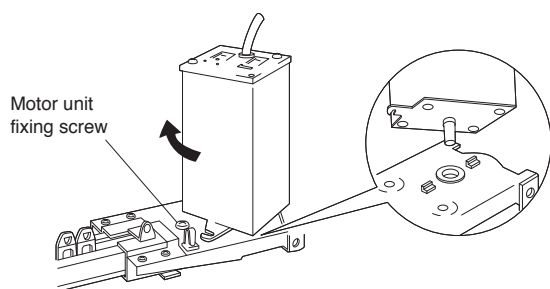
- ⑨ With the Master Roller Left and Right closed, set the Limit Switch 2 (CLOSE-STOP) on the set position.



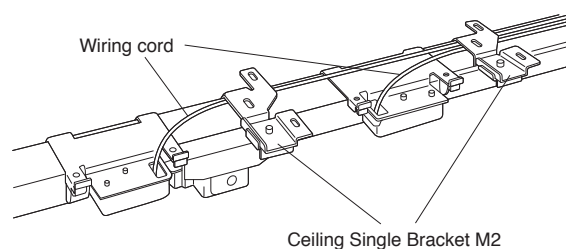
- ⑩ Turn the adjuster screw in the direction of the arrow, and give tension.



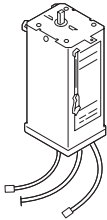
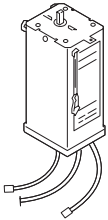
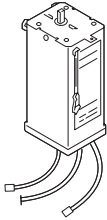
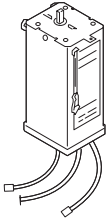
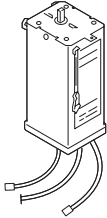
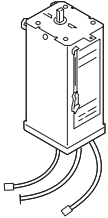
- ⑪ Fix the Powerful body after fitting its shaft into a Pulley hole. And hook the chain of the motor to the Pulley Set.



- ⑫ Put the cord from the motor to the Limit Switch beneath the brackets.



Powerful Series

Product Name	Product Code	Product Name	Product Code
<p>Powerful 3L</p>  <p>*Power cord length 0.6 m (24") (W 80 mm x H 170 mm x D 70 mm) (W 3.2" x H 6.7" x D 2.8")</p>	00510060	<p>Powerful 4P</p>  <p>*Power cord length 0.6 m (24") (W 80 mm x H 170 mm x D 70 mm) (W 3.2" x H 6.7" x D 2.8")</p>	00510208
<p>Powerful 3L-HM</p>  <p>*Power cord length 0.6 m (24") (W 80 mm x H 170 mm x D 70 mm) (W 3.2" x H 6.7" x D 2.8")</p>	00510233	<p>Powerful 4P-HM</p>  <p>*Power cord length 0.6 m (24") (W 80 mm x H 170 mm x D 70 mm) (W 3.2" x H 6.7" x D 2.8")</p>	00510232
<p>Powerful Little N3L</p>  <p>*Power cord length 0.6 m (24") (W 80 mm x H 170 mm x D 70 mm) (W 3.2" x H 6.7" x D 2.8")</p>	00510300	<p>Powerful 4P-HL</p>  <p>*Power cord length 0.6 m (24") (W 80 mm x H 170 mm x D 70 mm) (W 3.2" x H 6.7" x D 2.8")</p>	00510290