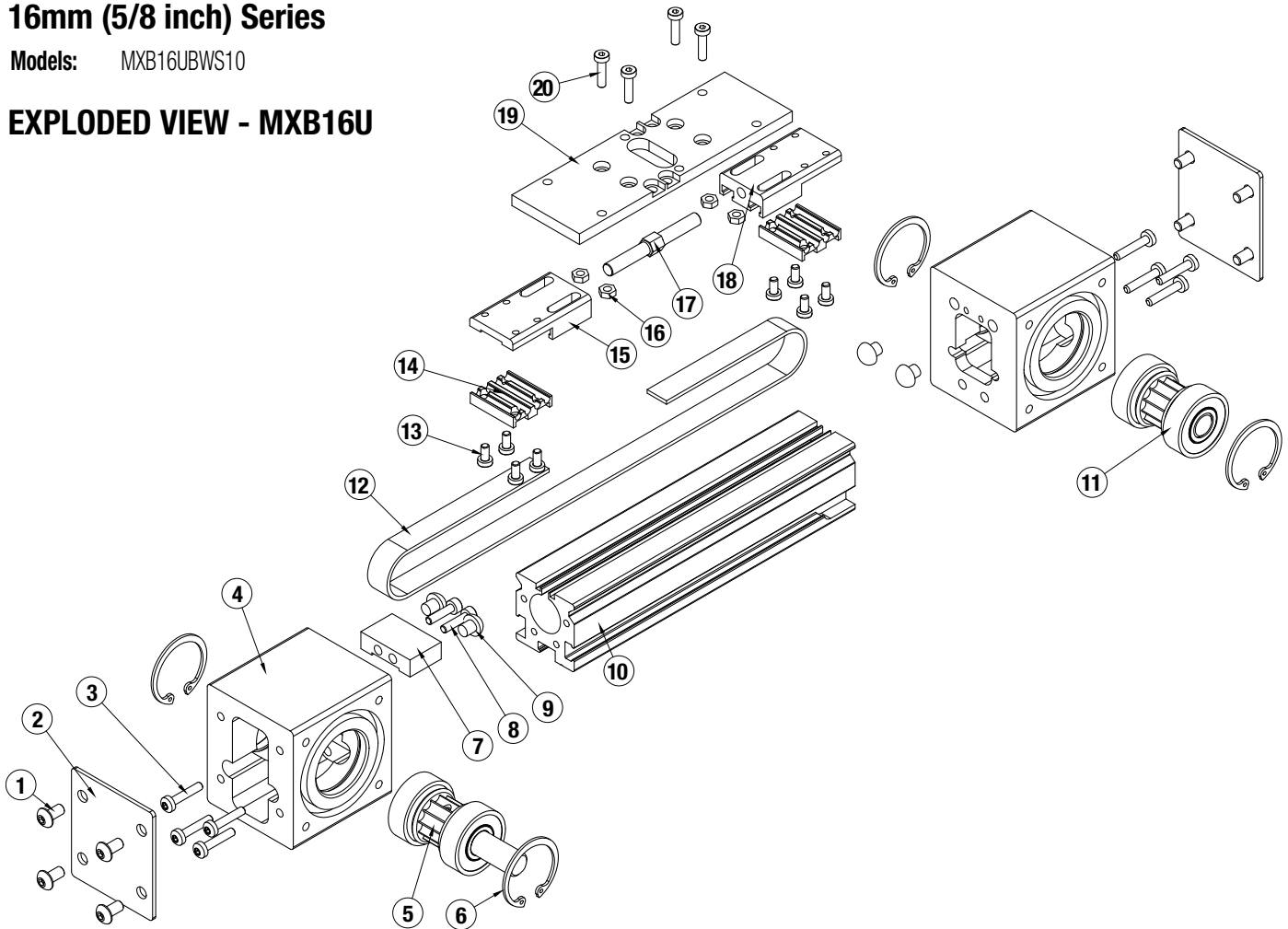


MXB16U Unguided, Belt-Drive Actuators 16mm (5/8 inch) Series

Models: MXB16UBWS10

EXPLODED VIEW - MXB16U

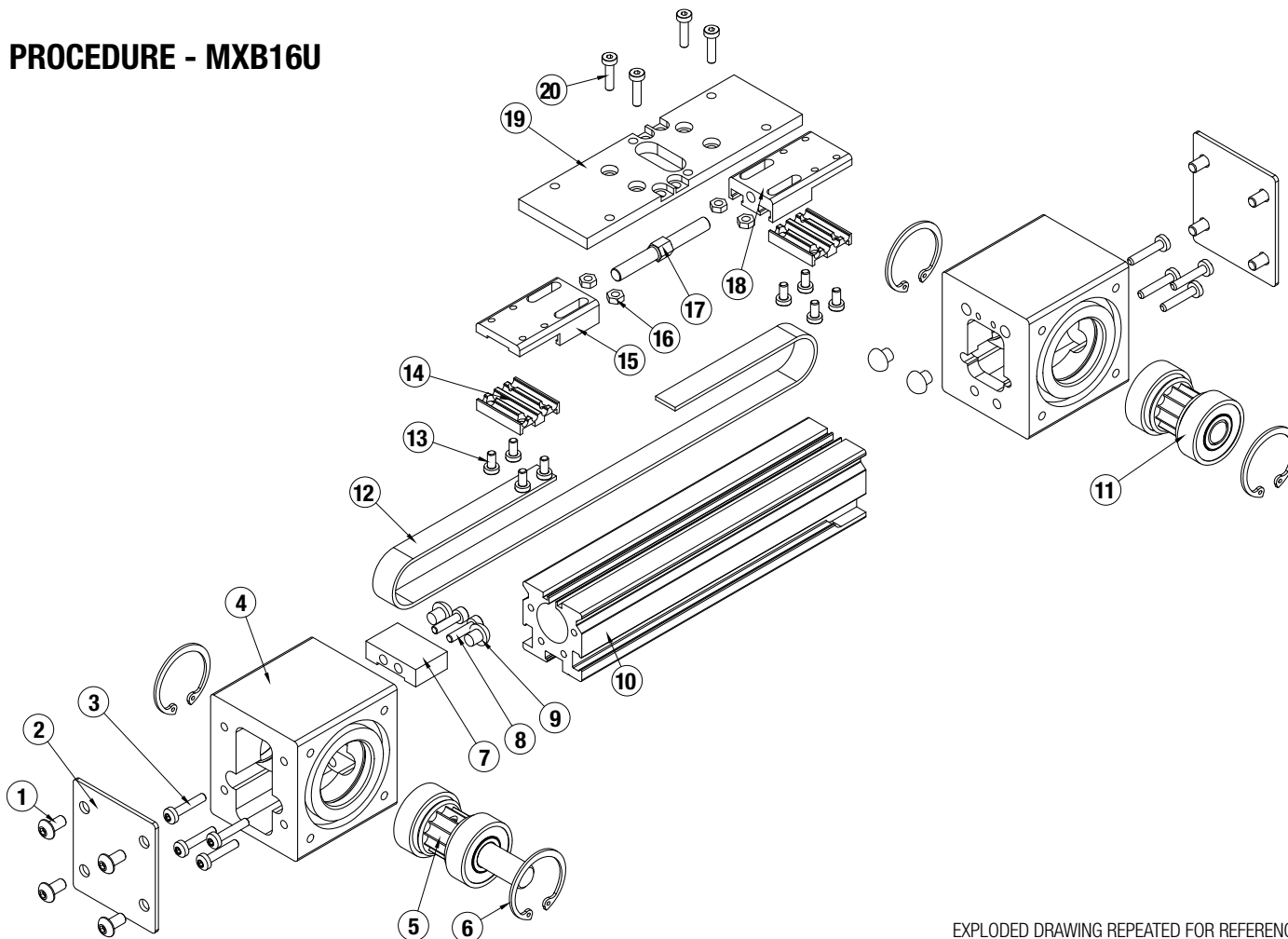


ITEM	PART NO or Config. Code	DESCRIPTION	QTY.
1	0510-1370	Button Head Cap Screw	8
2	8516-1020	End Cover Plate	2
3	8316-1022	Head Screws	8
4	8516-1000	Head	2
5	8516-9025	Drive Pulley Assy, LMI	1
	8516-9026	Drive Pulley Assy, RP	1
	8516-9027	Drive Pulley Assy, RP Dual	1
	8516-9029	Drive Pulley Assy, LMI Dual	1
6	2145-1031	Retaining Ring	4
7	8516-1032	Spacer	1
8	2212-1112	Low Head Cap Screws	2
9	8516-1002	Bumper	4
10*	RTBMXB16	Replacement Tube (8516-1016)	A/R

ITEM	PART NO or Config. Code	DESCRIPTION	QTY.
11	8516-9028	Idle Pulley Assy	A/R
12*	RBMXB16	Belt (8516-1019)	1
13	8125-1022	Low Head Cap Screws	8
14	8516-1005	Belt Clamp, Bottom	2
15	8516-1004	Belt Clamp, LH	1
16	0601-2089	Hex Nut	4
17	8525-1006	Turnbuckle	1
18	8516-1003	Belt Clamp, RH	1
	8516-1041	Carrier, Metric	1
	8516-1042	Carrier, Blank	1
19	8516-1541	Carrier, Inch (US Standard)	1
	8316-1085	Low Head Cap Screws	4

* Specify stroke length when ordering A/R = As Required

PROCEDURE - MXB16U



EXPLODED DRAWING REPEATED FOR REFERENCE

GENERAL ACTUATOR DISASSEMBLY

1. Remove End Cover Plates (2). Remove Low Head Cap Screws (20). Remove Carrier Plate (19) exposing the Belt Clamps (15, 18) and the Turnbuckle (17). Loosen the Turnbuckle (17) removing all belt tension.
2. Remove the Belt (12) from the Belt Clamps (15, 18) by removing Fasteners (13) and Belt Clamp Bottom (14). The Belt (12) can now be removed from the actuator.
3. Remove the Retaining Rings (6) from each of the Heads (4). Note that the Bearing/Pulley Assemblies (5, 11) are slip fit into the Head (4), but are bonded in the bore w/ Retaining Compound (Loctite 641 or equivalent), so it may be necessary to press the Pulley Assemblies (5, 11) out of the Head (4).
4. Remove the Heads (4) from the Tube (10) by removing Fasteners (3).

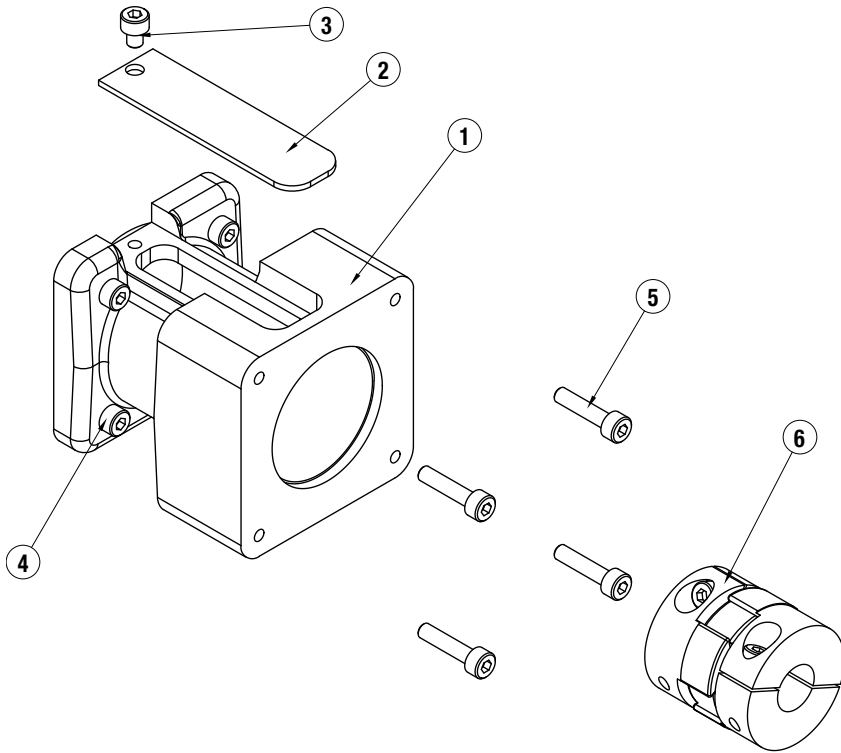
GENERAL ACTUATOR ASSEMBLY

1. Install the Drive and Idle Heads (4) to the Tube (10). Note that the Bumper Spacer (7) installs onto the Drive End Head (4).
2. Install one Retaining Ring (6) into each Head (4). Apply a light coating of Retaining Compound (Loctite 641 or equivalent) to the outside diameter of the bearings of the Pulley Assemblies (5, 11) and to the inside diameter of the bearing bores of the Head (4). Install the Drive

and Idle Pulley/Bearing Assemblies (5, 11) into the Heads (4). NOTE THAT ORIENTATION OF THE DRIVE SHAFT IS DETERMINED BY THIS ASSEMBLY STEP. Install the remaining Retaining Ring (6) into each Head (4).

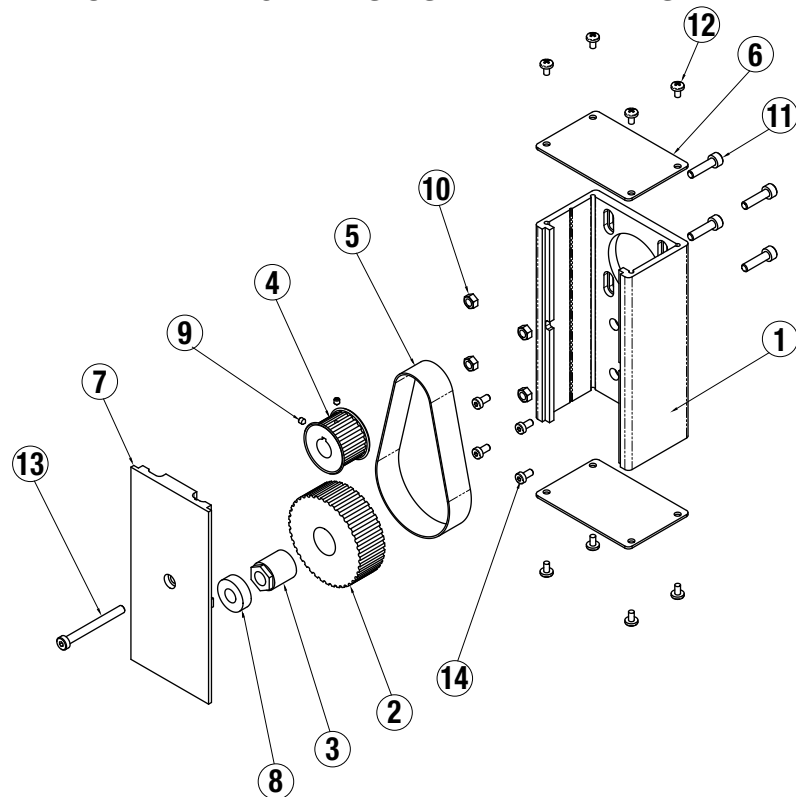
3. Feed the Belt (12) into the Tube (10) from one end of the actuator. Install a Belt Clamp (15, 18) to each end of the Belt (12) with Belt Clamp Bottoms (14) and Fasteners (13). Note that one Belt Clamp (15) will have left hand threads for the Turnbuckle (17). Assemble so that Belt Clamp LH (15) is nearest the drive end Head (4). Start the Turnbuckle (17) into each of the Belt Clamps (15, 18). Position Hex Nuts (16) in their respective slots of the Belt Clamps (15, 18).
4. Position Carrier Plate (19) over the Belt Clamps (15, 18) and install Fasteners (20), leaving loose at this time.
5. TENSION THE BELT: To measure belt tension, position the edge of the Carrier Plate (19) that is nearest the Head (4) 6" from the inside edge of the Head (4) (either end of the actuator). Locate a force gage on the Belt (12) 2" from the inside edge of the Head (4). Support the tube side of the Carrier Plate (19) so that it is rigid to the Tube (10). Deflect the Belt (12) 1/4" [6 mm] in either direction. The force gage should read between 8 and 12 lbs. [35.6 - 53.4N]
6. Adjust the Turnbuckle (17) to achieve this tension, then tighten the Fasteners (20) to secure the Belt Clamps (15, 18) to the Carrier Plate (19).

EXPLODED VIEW & PARTS LIST - LMI - INLINE MOTOR MOUNT



ITEM	PART NO.	DESCRIPTION	MOTOR	MOTOR
			MRV21,22,23,24	MRV21,22,23,24 & GHV205,210
1	8516-1035	Motor Spacer	1	
	8516-1038	Motor Spacer		1
2	1112-1032	Cover	1	1
3	1124-1159	Socket Head Cap Screw	1	1
4	0602-1027	Socket Head Cap Screw	4	4
	0602-1029	Socket Head Cap Screw	4	
5	0604-1028	Socket Head Cap Screw		4
	3600-9253	Coupler	1	1

EXPLODED VIEW & PARTS LIST - RP - REVERSE PARALLEL MOTOR MOUNT



ITEM	PART NO.	DESCRIPTION	MOTOR
1	8516-1033	Housing	MRV21,22,23,24
2	8516-1034	Pulley	
3	0515-1181	Trantorque	
4	3415-1438	Pulley	
5	2120-1028	Belt	
6	0601-1602	End Cap	
7	8516-1031	Cover	
8	0910-1386	Bearing	
9	0610-1190	Set Screw	
10	0603-2089	Nut	
11	2212-1098	Socket Head Cap Screws	
12	0601-1625	Screws	
13	3420-1640	Socket Head Cap Screw	
14	8325-1027	Low Head Cap Screws	

PROCEDURE - MXB16U

REVERSE PARALLEL DISASSEMBLY INSTRUCTIONS:

1. Remove End Caps (6). Release tension on Belt (5) by breaking loose the Motor Fasteners (11).
2. Remove RP Cover (7).
3. Remove both Drive Pulley (4) and Driven Pulley (2) from their respective shafts. The Belt (5) will come off with the Pulleys (2, 4).
4. Remove the Housing (1) from the Head (page 1, #4) by removing Fasteners (11).

Pulley (2, 4) to its shaft with Trantorque (3). Use a torque wrench to apply appropriate torque. 1/2" hex on Trantorque (3) apply 75 lbs. (8.5 N-m).

4. Verify that there is clearance between the inside of the Housing (1) and each Pulley (2, 4). Verify that the Pulleys (2, 4) are aligned to each other.
5. Position the Cover (7) in mating slot of the Housing (1) and install the Fastener (13) to hold in place. Take care not to overtighten. If the Cover (7) is deflected it can interfere with the moving parts.
6. Tension the Belt (5) by pulling the motor away from the Drive Shaft Assembly (page 1 #5) with the appropriate force in the chart below. Tighten the Motor Fasteners (11) while this force is applied to the motor.

REVERSE PARALLEL ASSEMBLY INSTRUCTIONS:

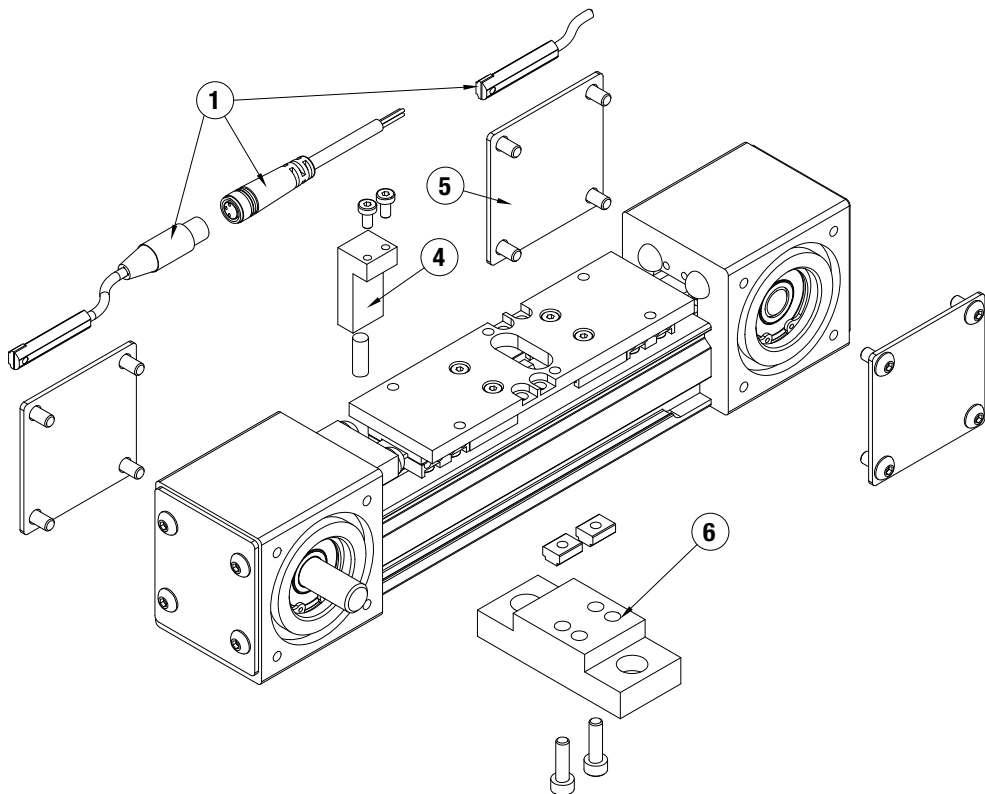
*Apply Loctite #242 to all fasteners upon installation

1. Install Housing (1) to the Head (page 1, #4) with Low Head Cap Screws (14).
2. Install the Motor to the Housing (1) with Fasteners (11) and Nuts (10). Do not tighten the Fasteners (11) at this time.
3. Locate the Belt (5) over the Pulleys (2, 4) and slide the Drive (4) and Driven (2) Pulleys over their respective shafts. Tighten each

Motor Frame	Tension Force
MRV23	20 lbs (89 N)

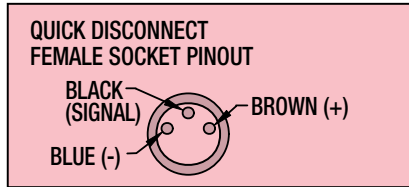
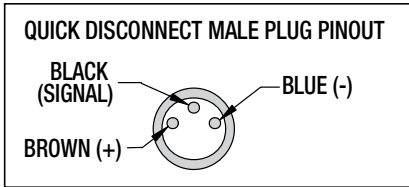
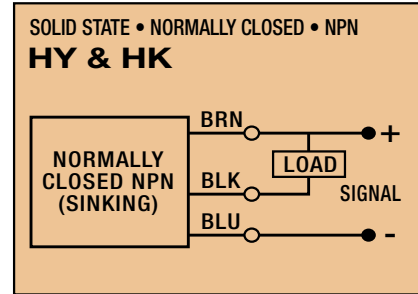
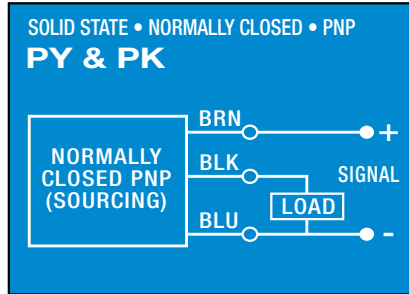
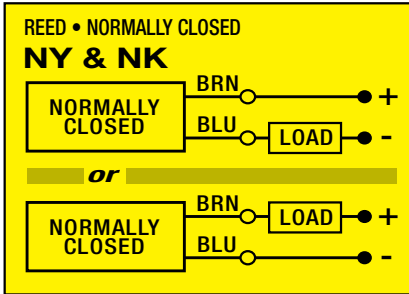
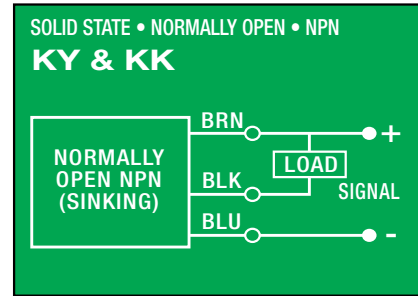
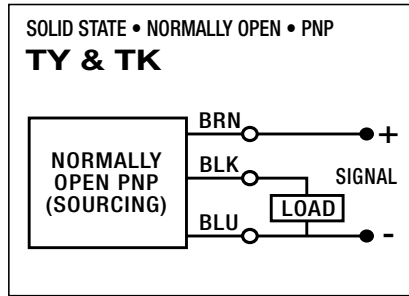
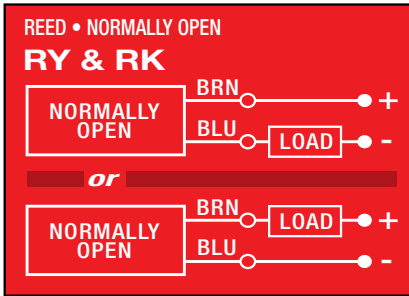
7. Install both End Caps (6) with the Screws (12) to finalize assembly.

EXPLODED VIEW & PARTS LIST - OPTIONS

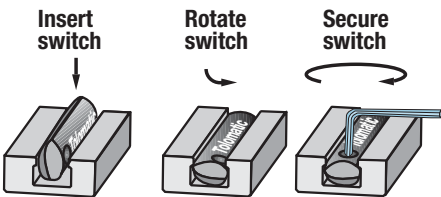


PART NO. or		DESCRIPTION	
ITEM	CONFIG. CODE		
SWITCHES			
WITH QUICK-DISCONNECT			
1	SWMXB16U	RK Reed Switch, SPST Normally Open	
	SWMXB16U	NK Reed Switch, SPST Normally Closed	
	SWMXB16U	TK Solid State Switch, PNP (Sourcing) Normally Open	
	SWMXB16U	KK Solid State Switch, NPN (Sinking) Normally Open	
	SWMXB16U	PK Solid State Switch, PNP (Sourcing) Normally Closed	
	SWMXB16U	HK Solid State Switch, NPN (Sinking) Normally Closed	
	WITH FLYING LEADS		
	SWMXB16U	RY Reed Switch, SPST Normally Open	
	SWMXB16U	NY Reed Switch, SPST Normally Closed	
	SWMXB16U	TY Solid State Switch, PNP (Sourcing) Normally Open	
	SWMXB16U	KY Solid State Switch, NPN (Sinking) Normally Open	
	SWMXB16U	PY Solid State Switch, PNP (Sourcing) Normally Closed	
SWMXB16U	HY Solid State Switch, NPN (Sinking) Normally Closed		
4	8516-9024	Magnet Kit	
	8516-1043	Magnet Block	
	8116-1076	Low Head Cap Screws	
	8116-1058	Magnet	
5	8516-9008	Side Cover Plate Assembly	
	8516-1029	Cover Plate	
	0510-1370	Button Head Cap Screw	
6	8516-9030	Mounting Plate Kit	
	8516-1070	Mounting Plate	
	8316-1050	T-Nut	
	0604-1028	Socket Head Cap Screw	

SWITCH WIRING DIAGRAMS AND LABEL COLOR CODING (CE and RoHS Compliant)

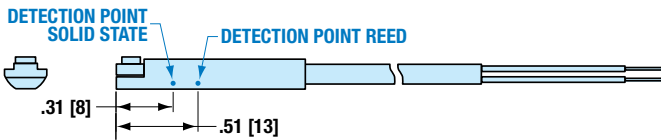


SWITCH INSTALLATION AND REPLACEMENT



Place switch in side groove on tube at desired location with "Tolomatic" facing outward. While applying light pressure to the switch, rotate the switch halfway into the groove. Maintaining light pressure, rotate the switch in the opposite direction until the switch is fully inside the groove with "Tolomatic" visible. Re-position the switch to the exact location and lock it securely into place by tightening the screw on the switch.

SWITCH DETECTION POINT



Dimensions in inches [brackets indicate dimensions in millimeters]



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