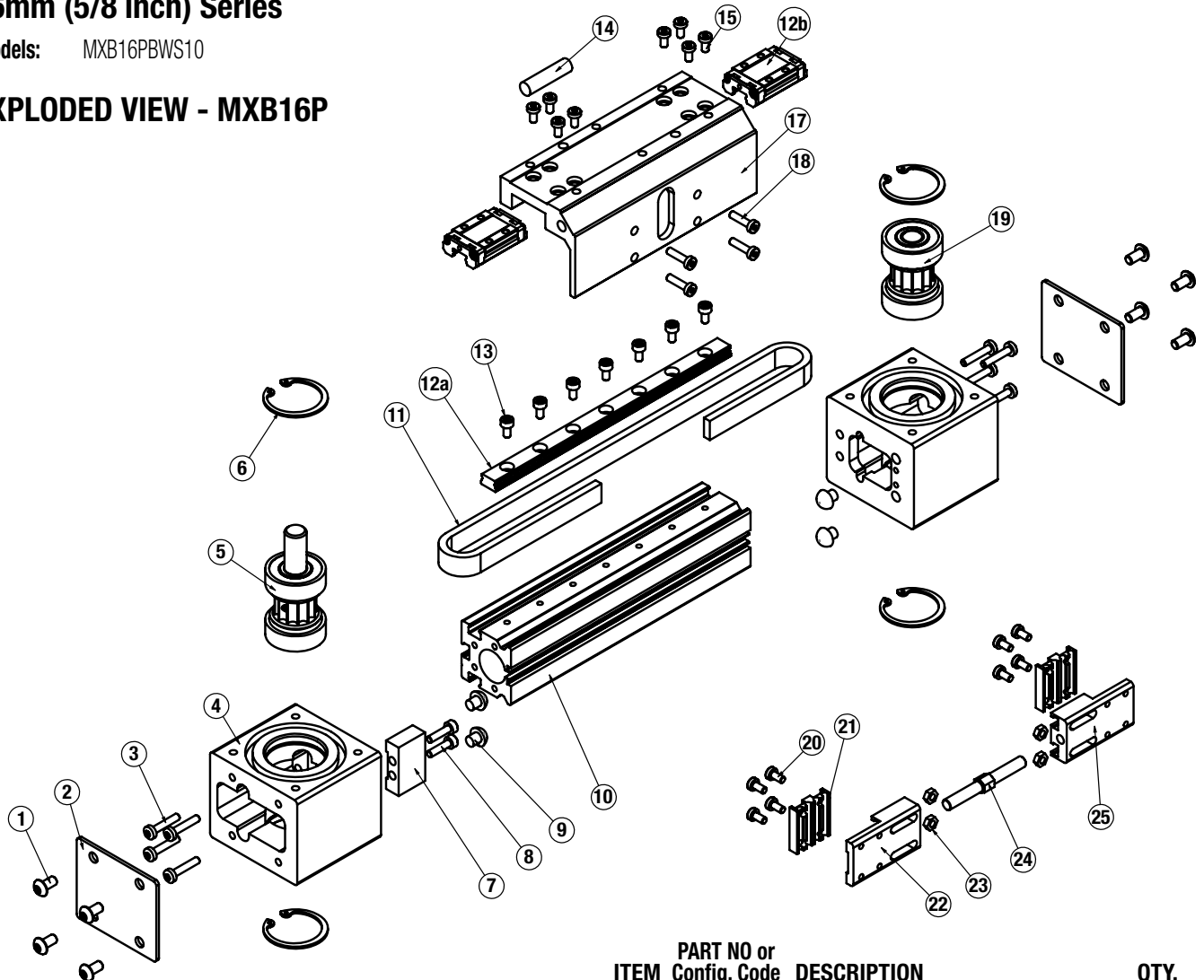


MXB16P Profiled Rail, Belt-Drive Actuators

16mm (5/8 inch) Series

Models: MXB16PBWS10

EXPLODED VIEW - MXB16P



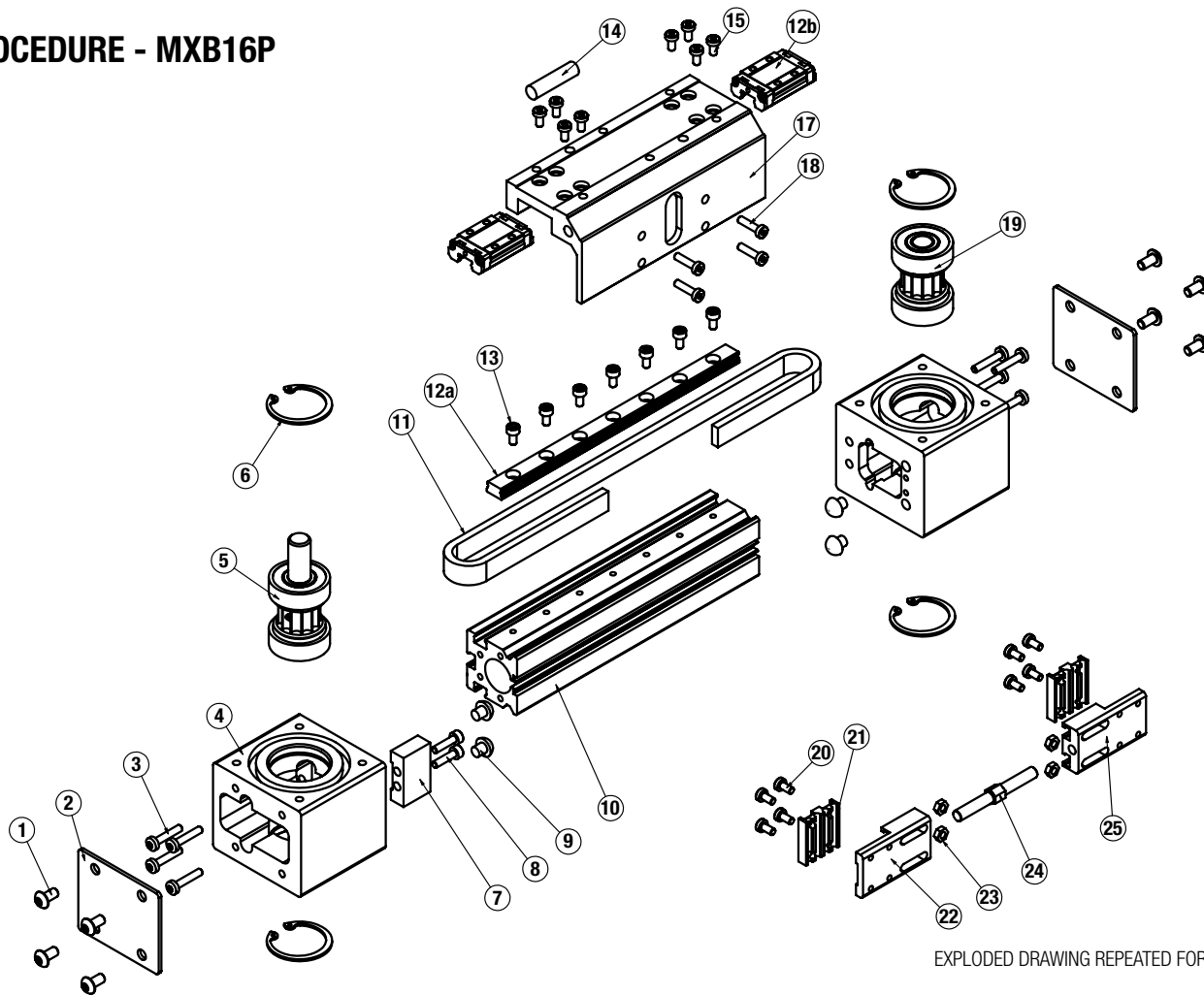
ITEM	PART NO or Config. Code	DESCRIPTION	QTY.
1	0510-1370	Button Head Cap Screws	8
2	8516-1020	End Cover Plate	2
3	8316-1022	Head Screws	8
4	8516-1000	Head	2
5	8516-9025	Drive Pulley Assy. LMI	1
	8516-9026	Drive Pulley Assy. RP	1
	8516-9027	Drive Pulley Assy. RP Dual	1
	8516-9029	Drive Pulley Assy. LMI 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*	RTBMBX16	Replacement Tube (8516-1016)	1
11*	RBMXB16	Belt (8516-1019)	1

ITEM	PART NO or Config. Code	DESCRIPTION	QTY.
12a*†	NPRMXB16	Replacement Bearing Rail (Specify stroke) add DW for Dual Carrier	A/R
12b*†		add BB for optional Bearing Blocks	
13	4905-1005	Socket Head Cap Screws	A/R
14	8340-1008	Magnet	1
15	8125-1022	Low Head Cap Screws	8
16		Number is not used	
17	8516-1021	Carrier, Metric	1
	8516-1521	Carrier, Inch (US Standard)	1
18	8316-1085	Low Head Cap Screws	4
19	8516-9028	Idle Pulley Assy	1
20	8125-1022	Low Head Cap Screws	8
21	8516-1005	Belt Clamp, Bottom	2
22	8516-1004	Belt Clamp, LH	1
23	0601-2089	Hex Nut	4
24	8525-1006	Turnbuckle	1
25	8516-1003	Belt Clamp, RH	1

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

†▲ NOTE: Units manufactured before 3-20-2015 require replacement of both Bearing Rail (#12a) & Bearing Blocks (#12b)

PROCEDURE - MXB16P



EXPLODED DRAWING REPEATED FOR REFERENCE

GENERAL ACTUATOR DISASSEMBLY

1. Remove End Cover Plates (2). Remove Low Head Cap Screws (18). Position the Carrier (17) away from the Belt Clamps (22, 25) exposing the Turnbuckle (24). Loosen the Turnbuckle (24) removing all belt tension. The Carrier (17) can be removed from the Bearing Blocks (12b) by removing Fasteners (15).
2. Remove the Belt (11) from the Belt Clamps (22, 25) by removing Fasteners (20) and Belt Clamp Bottom (21). The Belt (11) 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, 19) are slip fit into the Head (4), but are bonded in the bore w/ Loctite 641, so it may be necessary to press the Pulley Assemblies (5, 19) out of the Head (4).
4. Remove the Heads (4) from the Tube (10) by removing Fasteners (3).

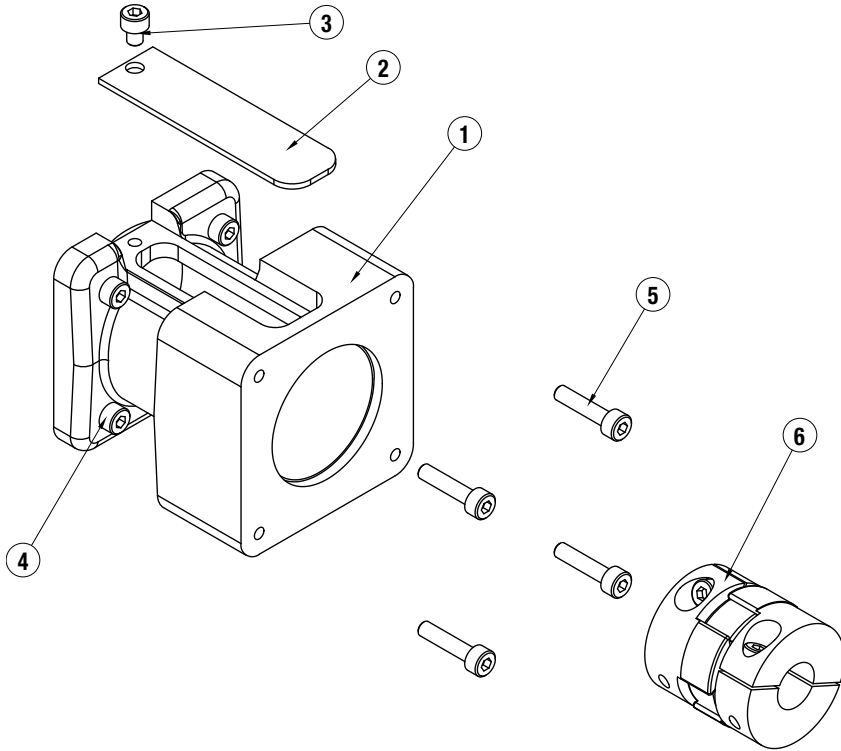
GENERAL ACTUATOR ASSEMBLY

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 Loctite 641 to the OD of the bearings of the Pulley Assemblies (5, 19) and to the ID of the bearing bores of the Head (4). Install the Drive and Idle Pulley/Bearing Assemblies (5, 19) 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).

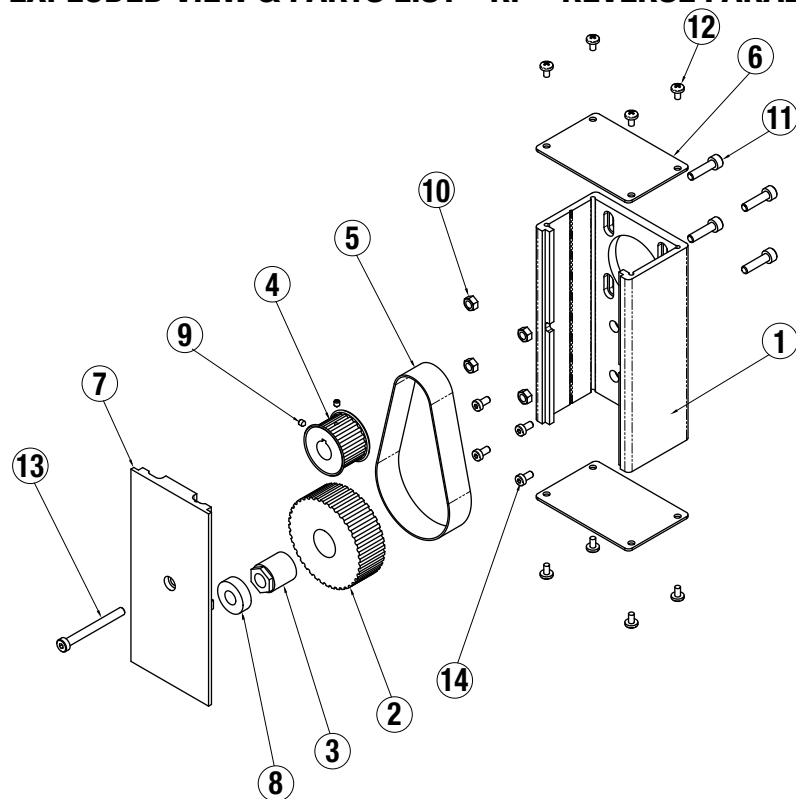
3. Feed the Belt (11) into the Tube (10) from one end of the actuator. Install a Belt Clamp (22, 25) to each end of the Belt (11) with Belt Clamp Bottoms (21) and Fasteners (20). NOTE THAT ONE BELT CLAMP (22) WILL HAVE LEFT HAND THREADS FOR THE TURNBUCKLE (24). Assemble so that Belt Clamp LH (22) is nearest the drive end Head (4). Start the Turnbuckle (24) into each of the Belt Clamps (22, 25). Position Hex Nuts (23) in their respective slots of the Belt Clamps (22, 25).
4. Position Carrier (17) over the Bearing Blocks (12b) and attach with fasteners (15). Position the Carrier (17) over the Belt Clamps (22, 25) and install Fasteners (18) leaving loose at this time.
5. TENSION THE BELT: To measure belt tension, position the edge of the Carrier (17) 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 (11) 2" from the inside edge of the Head (4). Deflect the Belt (11) 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 (24) to achieve this tension, then tighten the Fasteners (18) to secure the Belt Clamps (22, 25) to the Carrier (17).

EXPLODED VIEW & PARTS LIST - LMI - INLINE MOTOR MOUNT



ITEM	PART NO.	DESCRIPTION	MRV21,22,23,24	MOTOR
			MRV21,22,23,24 & GHV205,210	MOTOR & GH
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 - MXB16P

REVERSE PARALLEL DISASSEMBLY INSTRUCTIONS:

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

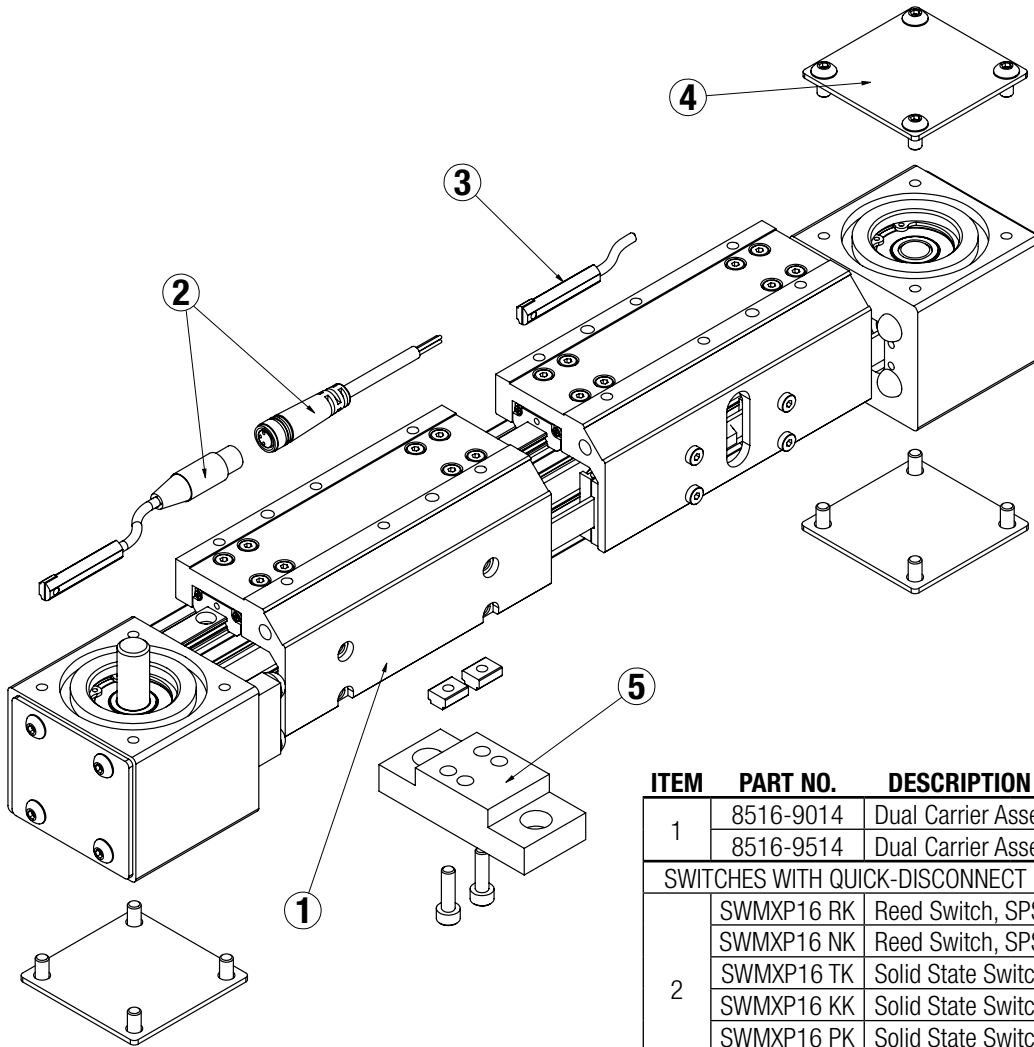
*Apply Loctite #242 to all fasteners upon installation

- Install Housing (1) to the Head (page 1, #4) with Low Head Cap Screws (14).
- Install the Motor to the Housing (1) with Fasteners (11) and Nuts (10). Do not tighten the Fasteners (11) at this time.
- 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)

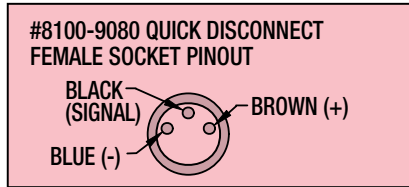
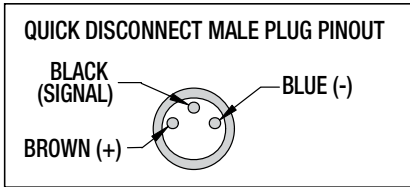
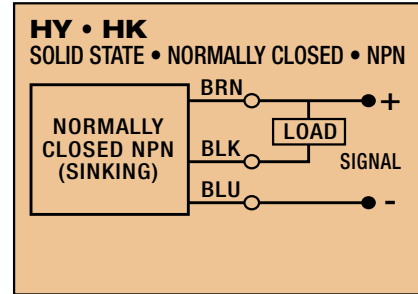
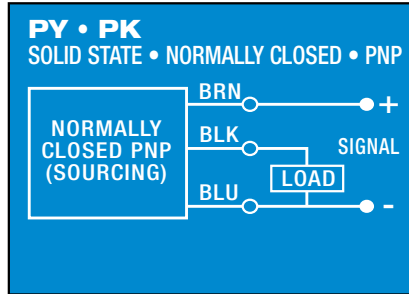
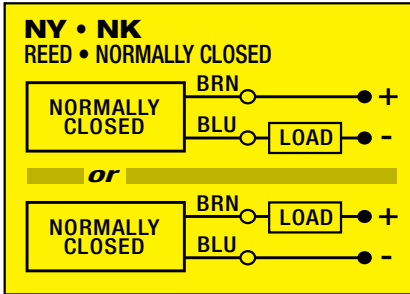
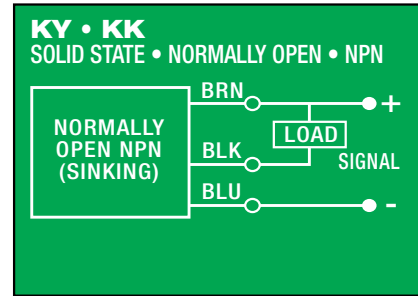
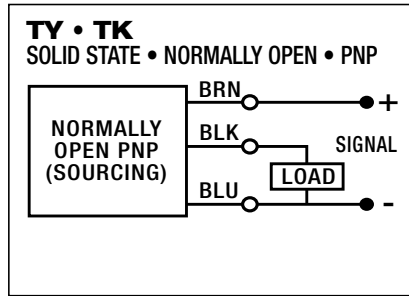
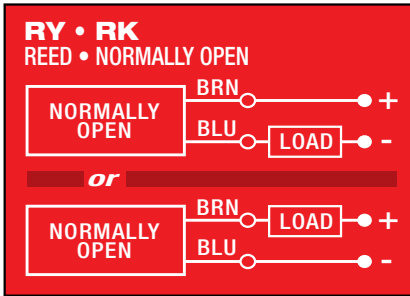
- Install both End Caps (6) with the Screws (12) to finalize assembly.

EXPLODED VIEW & PARTS LIST - OPTIONS

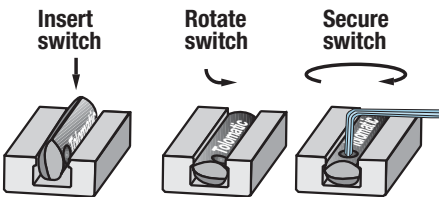


ITEM	PART NO.	DESCRIPTION
1	8516-9014	Dual Carrier Assembly, metric
	8516-9514	Dual Carrier Assembly, inch (US Standard)
SWITCHES WITH QUICK-DISCONNECT COUPLERS		
2	SWMXP16 RK	Reed Switch, SPST Normally Open
	SWMXP16 NK	Reed Switch, SPST Normally Closed
	SWMXP16 TK	Solid State Switch, PNP (Sourcing) Normally Open
	SWMXP16 KK	Solid State Switch, NPN (Sinking) Normally Open
	SWMXP16 PK	Solid State Switch, PNP (Sourcing) Normally Closed
	SWMXP16 HK	Solid State Switch, NPN (Sinking) Normally Closed
NOTE: Includes retained hardware & female connector for quick-disconnect		
SWITCHES WITHOUT QUICK-DISCONNECT COUPLERS		
3	SWMXP16 RY	Reed Switch, SPST Normally Open
	SWMXP16 NY	Reed Switch, SPST Normally Closed
	SWMXP16 TY	Solid State Switch, PNP (Sourcing) Normally Open
	SWMXP16 KY	Solid State Switch, NPN (Sinking) Normally Open
	SWMXP16 PY	Solid State Switch, PNP (Sourcing) Normally Closed
	SWMXP16 HY	Solid State Switch, NPN (Sinking) Normally Closed
4	8516-9008	Side Cover Plate Assembly
	8516-1029	Cover Plate
	0510-1370	Button Head Cap Screw
5	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)

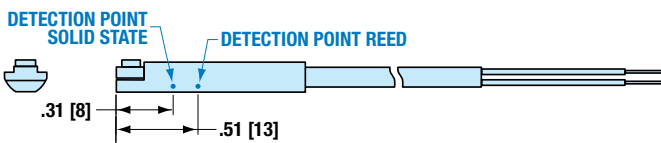


SWITCH INSTALLATION AND REPLACEMENT



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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