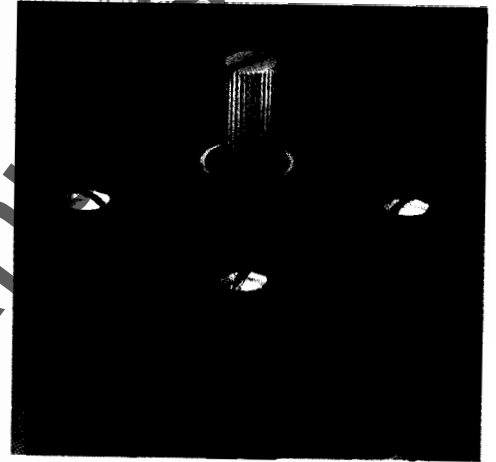


Catalog No. 1506



McGill Limit and Enclosed Switch Catalog



GE Supply

1108 WEST 12th ST.
ERIE, PA 16501
(814) 453-4751
FAX: 814-453-7155

McGILL[®]
ELECTRICAL/ELECTRONICS

McGill limit and enclosed switches— perfect for your demanding applications.

McGill limit and enclosed switches deliver more. Like a wide variety of operating heads, and field adjustability in all operating modes so you can reduce your inventory.

McGill switches offer the convenience of on-the-spot adjustments, with a complete range of circuitry and electrical ratings. Our plug-in and non plug-in switches have identical operating characteristics and are dimensionally interchangeable.

And McGill switches meet NEMA 1, 3, 4, 4X (stainless steel only), 6P(prewired switches only) and 13 standards as noted and are UL listed and CSA certified.

Check out these additional important features of McGill switches!

Experience longer mechanical life and operational reliability due to our front and rear oil impregnated sintered bronze shaft bearings on stainless steel operating shaft.

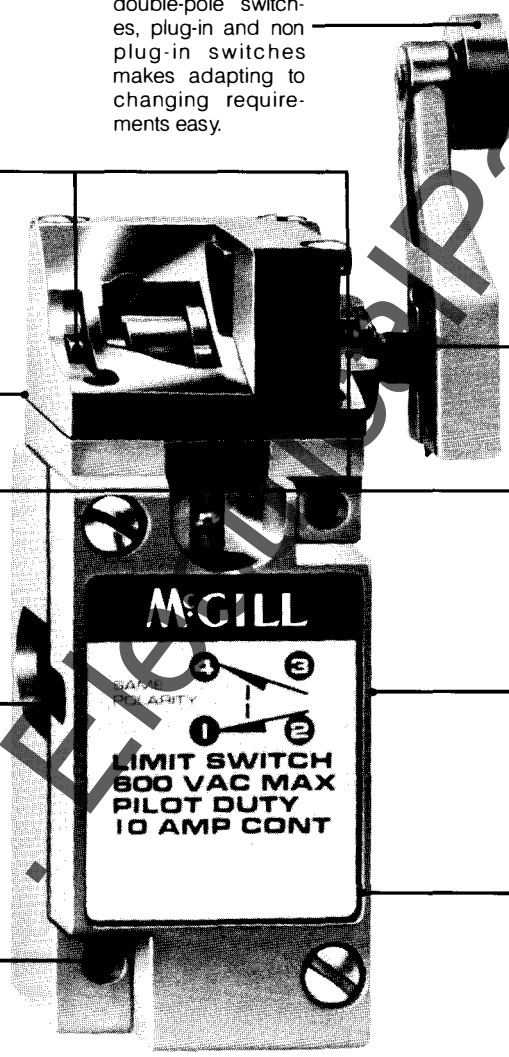
Tracking interchangeability of actuator levers for single and double-pole switches, plug-in and non plug-in switches makes adapting to changing requirements easy.

Boss-and-socket head design for secure head-to-body retention.

All-metal drive train delivers consistent operating characteristics at high temperatures for longer life without need for frequent adjustment other drive trains that use plastic parts require.

Self-lifting pressure plate terminals save wiring time.

Front mounting and interchangeability of single- and double-pole switches, plug-in and non plug-in with one another and with other switch brands.



Built-in "extra" protection with these twin shaft seals.

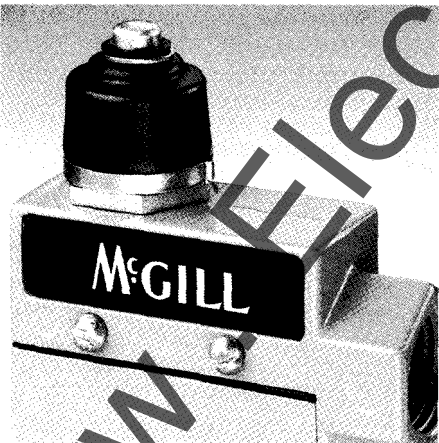
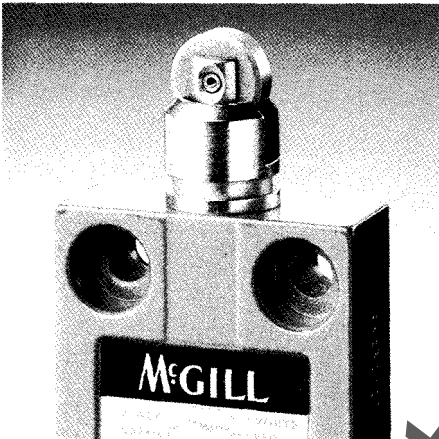
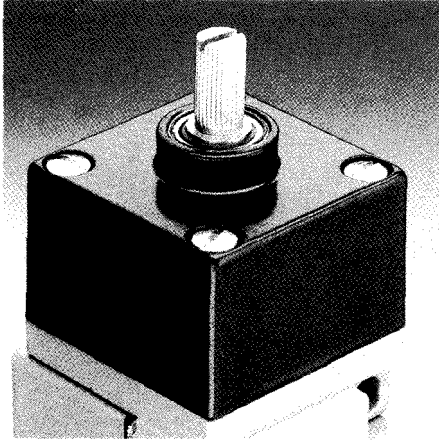
Viton™ shaft and diaphragm seals on side rotary switches for performance in a variety of environments.

Easily identified grounding terminal inside assures compliance with OSHA and other regulatory agencies.

Corrosion-resistant zinc head and body are phosphate treated and epoxy finished for rugged performance.

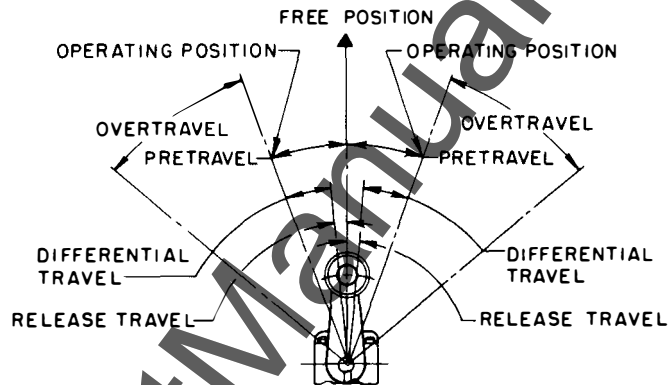
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Enter the world of high performance with McGill limit and enclosed switches.

ROTARY ACTUATION



The characteristics of McGill switches throughout this catalog are chosen as most significant. The sketches indicate how these characteristics are measured for in-line plunger actuation and rotary actuation.

Linear dimensions for in-line actuation are from top of plunger to a reference line—typically the center of the mounting holes. For flange or bottom mounted switches, the reference is the bottom of switch. Rotary actuated and limit switches have characteristics in degrees of angular rotation. Operating characteristics dimensions of these switches with rotary actuators are listed in linear dimensions with the adjustable level in one extreme position.

Differential Travel (D.T.). Plunger or actuator travel from point where contacts "snap-over" to point where they "snap-back."

Free Position (F.P.). Switch plunger/actuator's position with no external force (other than gravity) applied to it.

Full Overtravel Force. Force required to attain full overtravel of actuator.

Operation Position (O.P.). Switch plunger/actuator's position at point contacts snap from normal to operated position. For flexible or adjustable actuators,

O.P. is measured from end of lever or maximum length. See mounting dimension drawings for location of operating position measurement.

Operating Force (O.F.). Amount of force applied to switch plunger/actuator to cause contact "snap-over." For adjustable actuators, force is measured from maximum length position of lever.

Overtravel (O.T.). Travel safely available beyond operating position of plunger or actuator.

Pretravel (P.T.). Distance/angle traveled in moving plunger/actuator from free position to operating position.

Release Force (R.F.). Amount of force still applied to switch plunger or actuator at moment contacts snap from operated position to unoperated position.

Total Travel (T.T.). Distance from actuator free position to overtravel limit position.

Reference Standards

UL and CSA references used in this catalog do not imply specific approval of products. However, our products are designed to meet the safety and performance standards of such agencies. Evaluation of products by these agencies is limited to procedures established to examine switch performance within areas of their interest. Actual application requirements may exceed performance levels investigated by such agencies. We strongly recommend switches be tested to your exact application requirements.

UL (Underwriter's Laboratories, Inc.).

A non-profit organization chartered to establish, maintain and operate laboratories for the examination and testing of devices, systems and materials.

CSA (Canadian Standards Association). Non-profit, non-governmental association established as a national standardization body for Canada. Included in scope of activities is responsibility for investigating and approving products and materials in the interest of safety.

NEMA (National Electrical Manufacturer's Association). Prepares standards which define product, process or procedure with reference to one or more of following: nomenclature, composition, construction, dimensions, tolerances, safety, operating characteristics, performance, quality, electrical rating, testing and service for which designed. Reference standards available.

Enclosure Types

Enclosures are based in general on broad definitions outlined in NEMA standards. Therefore, it is necessary to ascertain that a particular enclosure will be adequate when exposed to specific conditions that may exist in intended applications. Except as noted, all references to products relative to NEMA enclosures types are based on McGill evaluation only.

Non-Hazardous Locations

- **Type 1** enclosures are intended for indoor use primarily to provide a degree of protection against contact with the enclosed equipment.
- **Type 3** enclosures intended for outdoor use primarily to provide a degree of protection against windblown dust, rain, sleet and external ice formation.
- **Type 4** enclosures are intended for indoor/outdoor use primarily to provide a degree of protection against windblown dust and rain, splashing water and hose-directed water.
- **Type 4X** enclosures are intended for indoor/outdoor use primarily to provide a degree of protection against corrosion, windblown dust and rain, splashing water and hose-directed water.

- **Type 6** enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against the entry of water during occasional temporary submersion at a limited depth.
- **Type 6P** enclosures are intended for indoor/outdoor use primarily to provide a degree of protection against the entry of water during prolonged submersion at a limited depth.
- **Type 12** enclosures are intended for indoor use primarily to provide a degree of protection against dust, falling dirt, and dripping noncorrosive liquids.
- **Type 13** enclosures are intended for indoor use primarily to provide a degree of protection against dust, spraying of water, oil, and noncorrosive coolant.

Hazardous Locations

- **Type 7** enclosures are for indoors in locations classified as Class I, Groups A, B, C, or D by the NEC.
Group A—Acetylene.
Group B—Atmospheres containing hydrogen manufactured gas.
Group C—Atmospheres containing diethyl ether, ethylene or cyclopropane.
Group D—Atmospheres containing gasoline, hexane, butane, naphtha, propane, acetone, toluene or isoprene.
- **Type 9** enclosures are for indoor locations classified as Class II, Groups E, F or G as defined by the NEC.
Group E—Atmospheres containing metal dust.
Group F—Atmospheres containing carbon black, coal dust or coke dust.
Group G—Atmospheres containing flour, starch or grain dust.

1506 Series Rotary Actuated Switches

McGill 1506 Series switches are plug-in body style. Catalog listings consist of the complete plug-in base receptacle. Order levers separately (see page 10). Switches and plungers are factory assembled with:

- shaft of side rotary heads or side plungers facing front of switch (label side)
- head adjusted for both clockwise and counterclockwise operation

- light on indicator versions wire to N.O. circuit
- rollers on side plungers are in horizontal position
- roller on top plungers are parallel to mounting surface.

Wobble actuated switches have flexible levers which may be operated with any movement, except direct pull.

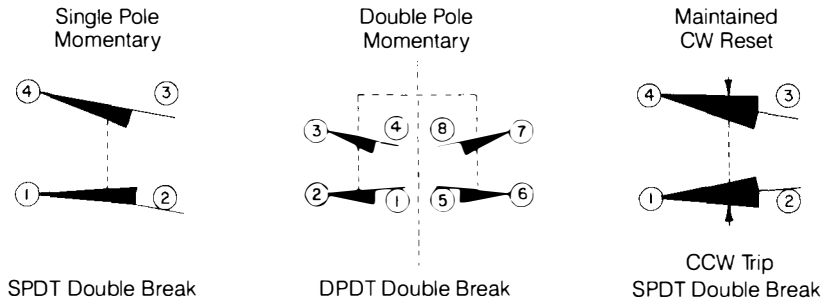
NOTE: electrical ratings are for 10A continuous carry. Circuits on any one pole must be the same polarity. NEMA 1, 3, 4, 6 and 13.



Circuitry	SPDT	SPDT	SPDT	DPDT	DPDT	DPDT
Description	Side Rotary Standard	Side Rotary Standard	Side Rotary Standard	Side Rotary Standard	Side Rotary Standard	Side Rotary Standard
McGill No.	1506-0001	1506-0021	1506-0015	1506-0002	1506-0016	1506-0027
Micro Switch No.	LSA1A	LSA5A	LSA3K	LSA2B	LSA6B	LSA4L
Body Style	Plug-in ½" Conduit	Plug-in (1) ½" Conduit	Non Plug-in ½" Conduit	Plug-in ¾" Conduit	Plug-in ½" Conduit	Non Plug-in ¾" Conduit
120VAC Make	60	60	60	30	30	30
Break	6	6	6	3	3	3
240VAC Make	30	30	30	15	15	15
Break	3	3	3	1.5	1.5	1.5
480VAC Make	15	15	15	7.5	7.5	7.5
Break	1.5	1.5	1.5	0.75	0.75	0.75
600VAC Make	12	12	12	6	6	6
Break	1.2	1.2	1.2	0.6	0.6	0.6
120VDC Make-Inductive	0.25	0.25	0.25	0.25	0.25	0.25
Break-Resistive	0.8	0.8	0.8	0.8	0.8	0.8
240VDC Make	0.15	0.15	0.15	0.15	0.15	0.15
Break	0.4	0.4	0.4	0.4	0.4	0.4
Max. PT	15°	15°	15°	15°	15°	15°
Max. DT	5°	5°	5°	7°	7°	7°
Min. OT	60°	60°	60°	60°	60°	60°
Max. Operating Force	—	—	—	—	—	—
Operating Point	—	—	—	—	—	—
Maximum Op. Torque	0,45NM 4 in.lbs.	0,45NM 4 in.lbs.	0,45NM 4 in.lbs.	0,45NM (3) 4 in.lbs.	0,45NM (3) 4 in.lbs.	0,45NM (3) 4 in.lbs.
Operating Temp. Range	10° to 250°F -12° to 121°C	10° to 250°F -12° to 121°C	10° to 250°F -12° to 121°C	10° to 250°F -12° to 121°C	10° to 250°F 12° to 121°C	10° to 250°F 12° to 121°C

1. 120V. Ind. lite. Use at voltage indicated for light. Wired to N.O. circuit. Upper temperature limit for lighted units is 200°F(93°C).
 2. Total travel approximately 80° max. Maintained contact switch normally used with yoke actuator.
 3. Pole 1 operates CCW; Pole 2 operates CW).

Circuitry



DPDT	SPDT	SPDT	SPDT	SPDT	DPDT	SPDT	SPDT
Side Rotary Standard	Side Rotary Low Differential	Side Rotary Low Differential	Side Rotary Low Torque	Side Rotary Low Diff&Torque	Side Rotary Low Diff&Torque	Top Rotary High Overtravel	Maintained (2)
1506-0025	1506-0017	1506-0018	1506-0024	1506-0020	1506-0029	1506-0030	1506-0028
LSA7L	LSP1A	LSP3K	LSR1A	LSH1A	LSH6B	LSB1A	LSN1A
Non Plug-in ½" Conduit	Plug-in ½" Conduit	Non Plug-in ½" Conduit	Plug-in ½" Conduit	Plug-in ½" Conduit	Plug-in ½" Conduit	Plug-in ½" Conduit	Plug-in ½" Conduit
30	60	60	60	60	30	60	60
3	6	6	6	6	3	6	6
15	30	30	30	30	15	30	30
1.5	3	3	3	3	1.5	3	3
7.5	15	15	15	15	7.5	15	15
0.75	1.5	1.5	1.5	1.5	0.75	1.5	1.5
6	12	12	12	12	6	12	12
0.6	1.2	1.2	1.2	1.2	0.6	1.2	1.2
0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
15°	9°	9°	15°	9°	9°	25°	65°
—	—	—	—	—	—	—	—
7°	3°	3°	5°	3°	3°	10°	40°
—	—	—	—	—	—	—	—
60°	66°	66°	60°	66°	66°	100°	20°
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
0.45NM (3) 4 in.lbs.	0.45NM 4 in.lbs.	0.45NM 4 in.lbs.	0.45NM 1.7 in.lbs.	.19NM 1.7 in.lbs.	.19NM (3) 1.7 in.lbs.	.28NM 2.5 in.lbs.	0.45NM 4 in.lbs.
10° to 250°F -12° to 121°C	10° to 250°F -12° to 121°C	10° to 250°F -12° to 121°C	30° to 250°F -1° to 121°C	30° to 250°F -1° to 121°C	30° to 250°F -1° to 121°C	30° to 250°F -1° to 121°C	30° to 250°F -1° to 121°C

1506 Series Rotary Actuated Switches



Circuitry	DPDT	DPDT	DPDT	SPDT	SPDT	SPDT
Description	Center Neutral (3)	Center Neutral (3)	Center Neutral (3)	Plain Top Plungers	Roller Plunger	Roller Side Plunger
McGill No.	1506-0026	1506-0019	1506-0023	1506-0003	1506-0005	1506-0013
Micro Switch No.	LSM2D	LSM6D	LSM7N	LSC1A	LSD1A	LSF1A
Body Style	Plug-in 3/4" Conduit	Plug-in 1/2" Conduit	Non Plug-in 1/2" Conduit	Plug-in 1/2" Conduit	Plug-in 1/2" Conduit	Plug-in 1/2" Conduit
120VAC Make	30	30	30	60	60	60
Break	3	3	3	6	6	6
240VAC Make	15	15	15	30	30	30
Break	1.5	1.5	1.5	3	3	3
480VAC Make	7.5	7.5	7.5	15	15	15
Break	0.75	0.75	0.75	1.5	1.5	1.5
600VAC Make	6	6	6	12	12	12
Break	0.6	0.6	0.6	1.2	1.2	1.2
120VDC Make-Inductive	0.25	0.25	0.25	0.25	0.25	0.25
Break-Resistive	0.8	0.8	0.8	0.8	0.8	0.8
240VDC Make	0.15	0.15	0.15	0.15	0.15	0.15
Break	0.4	0.4	0.4	0.4	0.4	0.4
Max. PT	18°	18°	18°	1,78mm .070-in.	1,78mm .070-in.	2,54mm 100-in.
Max. DT	10°	10°	10°	0,38mm .015-in.	0,38mm .015-in.	0,64mm .025-in.
Min. OT	57°	57°	57°	4,83mm .190-in	4,83mm .190-in	4,83mm .190-in
Max. Operating Force	—	—	—	17,8 Newton 4-lb.	17,8 Newton 4-lb.	26,7 Newton 6-lb.
Operating Point	—	—	—	45,8 ±0,76mm	45,8 ±0,76mm	44,1 ±1,02mm
Maximum Op. Torque	—	—	—	1.805 ±.030-in.	1.805 ±.030-in.	1.735 ±.040-in.
Operating Temp. Range	0,45NM 4 in.lbs.	0,45NM 4 in.lbs.	0,45NM 4 in.lbs.	— —	— —	— —
	30° to 250°F -1° to 121°C	30° to 250°F -1° to 121°C	30° to 250°F -1° to 121°C	10°F to 200°F -12°C to 93°C	10°F to 200°F -12°C to 93°C	10° to 200°F -12°C to 93°C

1. 120V Ind. lte. Use at voltage indicated for light. Wired to N.O. circuit. Upper temperature limit for lighted units is 200°F(93°C)
2. Total travel approximately 80°max. Maintained contact switch normally used with yoke actuator.
3. Pole 1 operates CCW; Pole 2 operates CW).

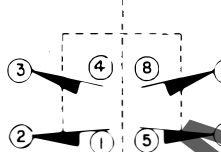
Replacement parts listed on page 12.



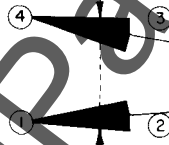
SPDT	SPDT
Wobble (Plastic)	Coil Spring
1506-0009	1506-0031
LSJ1A-7A	LSK1A-8C
Plug-in 1/2" Conduit	Plug-in 1/2" Conduit
60	60
6	6
30	30
3	3
15	15
1.5	1.5
12	12
1.2	1.2
0.25	0.25
0.8	0.8
0.15	0.15
0.4	0.4
25.4mm 1.00-in.	51mm 2.00-in.
—	—
—	—
—	—
2,78 Newton 10-oz.	1,95 Newton 7-oz.
—	—
—	—
—	—
10° to 200°F -12°C to 93°C	10° to 200°F -12°C to 93°C

Circuitry

Double-Pole
Momentary
DPDT Double Break

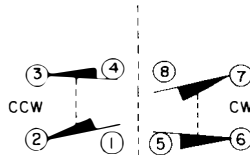


Maintained
CW Reset

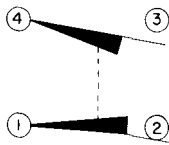


CCW Trip
SPDT Double Break

Center Neutral
SPDT Double Break
Each Direction



Single Pole
Momentary
SPDT Double Break

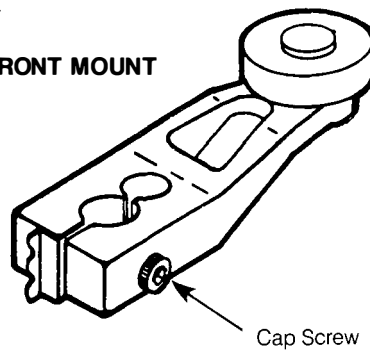


1506 Series Rotary Actuated Switches

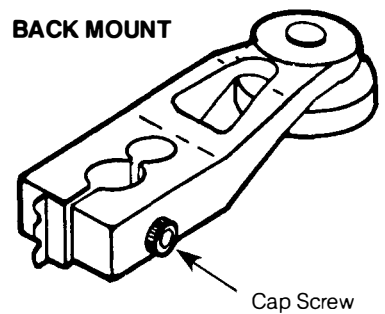
1506 SERIES LEVERS

McGill No.	Micro No.	Type	Radius	Roller Mounts	Dia. (in.)	Width (in.)	Material
1506-9001	LSZ51A	Std. Roller	1.5	Front	0.75	0.25	Nylon
1506-9002	LSZ51B	Std. Roller	1.5	Front	0.75	0.25	Steel
1506-9003	LSZ51C	Std. Roller	1.5	Back	0.75	0.25	Nylon
1506-9004	LSZ51D	Std. Roller	1.5	Back	0.75	0.25	Steel
1506-9057	LSZ53D	Yoke	1.5	Front-Back	0.75	0.25	Steel
1506-9056	LSZ53P	Yoke	1.5	Back-Back	0.75	0.25	Steel
1506-9055	LSZ53	Yoke	1.5	Back	—	—	Less Rollers
1506-9009	LSZ52A	Adj. Rad.	1.5-3.5	Back	0.75	0.25	Nylon
1506-9010	LSZ52B	Adj. Rad.	1.5-3.5	Back	0.75	0.25	Steel
1506-9011	LSZ52C	Adj. Rad.	1.5-3.5	Front	0.75	0.25	Nylon
1506-9012	LSZ52D	Adj. Rad.	1.5-3.5	Front	0.75	0.25	Steel
1506-9013	LSZ54N	Rod	13	—	—	—	Stainless Steel
1506-9014	LSZ61	Flex Loop Cap Screw 6" long from center line of shaft hole to tip of actuator	—	—	—	—	Nylatron

FRONT MOUNT

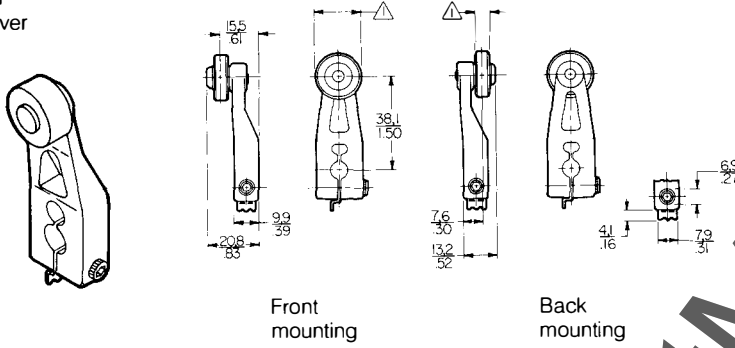


BACK MOUNT

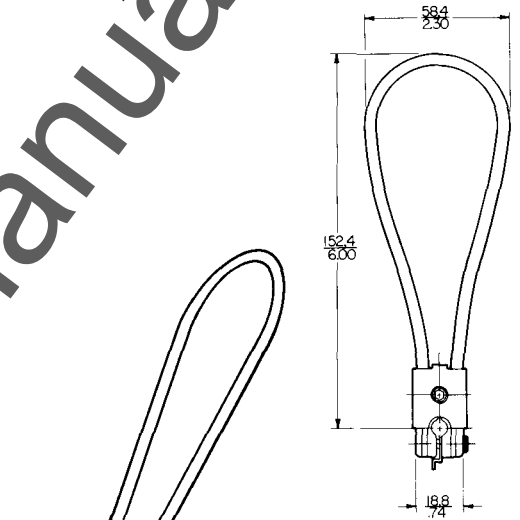


1506 SERIES LEVERS

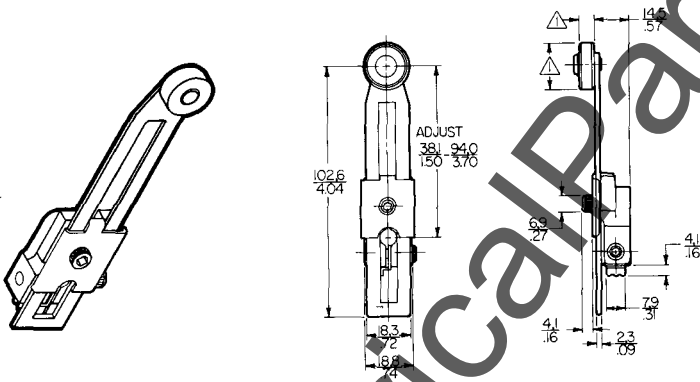
Standard Roller Lever



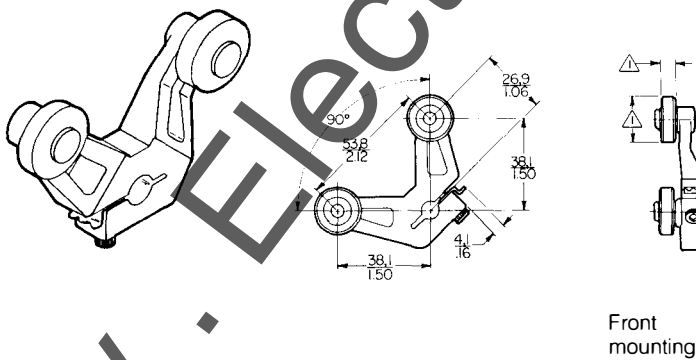
Flexible Loop



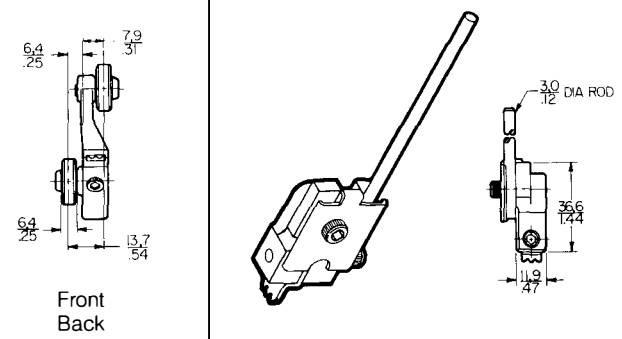
Adjustable Radius



Yoke



Rod



1506 Series Rotary Actuated Switches

REPLACEMENT PARTS NOTE: Complete units consist of columns 1 and 2, or columns 2, 3 and 4.

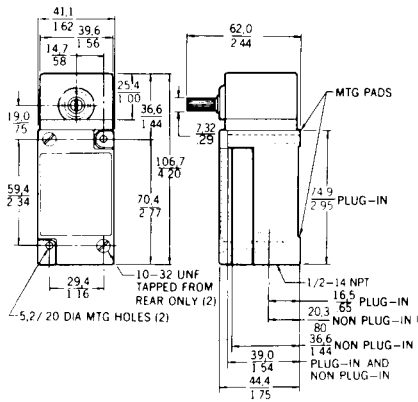
		1	2	3	4
	Catalog No.	Complete Less Base	Base Only	Operating Head Only	Contact Block Only
	1506-0001	1506-9035	1506-9032	1506-9015	1506-9027
	1506-0002	1506-9036	1506-9033	1506-9015	1506-9029
	1506-0003	1506-9048	1506-9032	1506-9019	1506-9027
	1506-0005	1506-9041	1506-9032	1506-9019	1506-9027
	1506-0009	1506-9053	1506-9032	1506-9054(1)	1506-9027
	1506-0013	1506-9051	1506-9032	1506-9023	1506-9027
	1506-0015	—	—	1506-9015	1506-9028
	1506-0016	1506-9037	1506-9034	1506-9015	1506-9029
	1506-0017	1506-9038	1506-9032	1506-9016	1506-9027
	1506-0018	—	—	1506-9016	1506-9028
	1506-0019	1506-9039	1506-9034	1506-9017	1506-9030
	1506-0020	1506-9040	1506-9032	1506-9018	1506-9027
	1506-0021	1506-9042	1506-9032	1506-9015	1506-9027
	1506-0023	—	—	1506-9017	1506-9059
	1506-0024	1506-9050	1506-9032	1506-9020	1506-9027
	1506-0025	—	—	1506-9015	1506-9031
	1506-0026	1506-9060	1506-9033	1506-9017	1506-9030
	1506-0027	—	—	1506-9015	1506-9031
	1506-0028	1506-9049	1506-9032	1506-9022	1506-9027
	1506-0029	1506-9052	1506-9034	1506-9018	1506-9029
	1506-0030	1506-9047	1506-9032	1506-9024	1506-9027
	1506-0031	1506-9046	1506-9032	1506-9025(1)	1506-9027

ADDITIONAL PARTS		McGill No.	MicroSwitch No.	
	Delrin Rod	1506-9044	LSZ4009	
	Coil Sprint	1506-9045	LSZ4014	
	Adjusting Tool Kit(2)	1506-9043	LSZ4005	

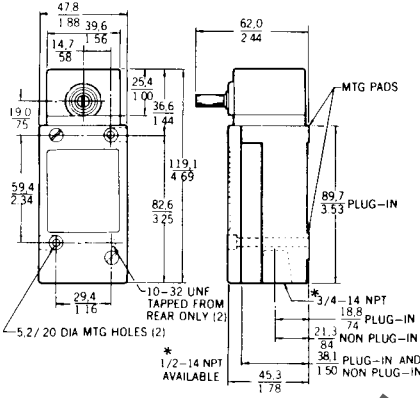
1. Includes actuator.
2. For readjustment of switches as necessary when heads/contact blocks are replaced.

MOUNTING DIMENSIONS

SIDE ROTARY

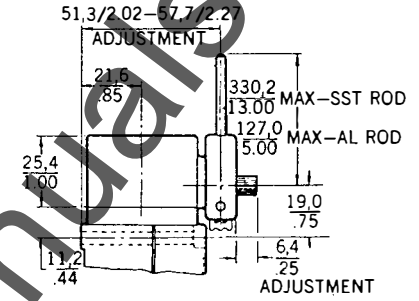


Single-pole



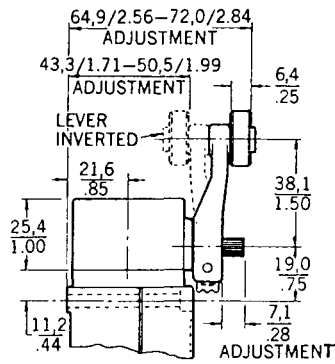
Double-pole

ROD TYPE LEVER

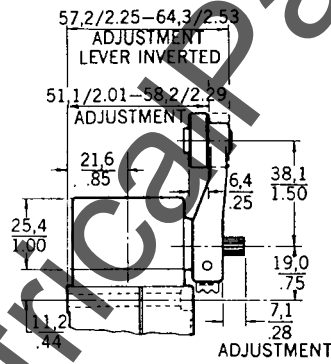


1506-9013

ROLLER TYPE LEVERS

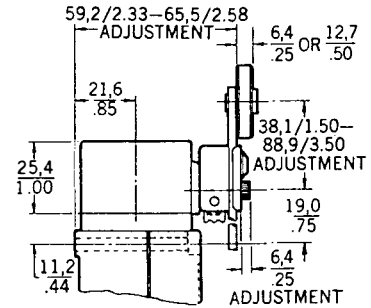


Front mounted roller



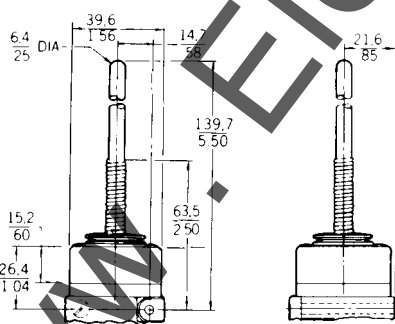
Back mounted roller

ADJUSTABLE RADIUS TYPE LEVER

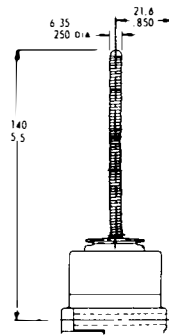


1506-9009 1506-9010 1506-9011 1506-9012

WOBBLE LEVERS

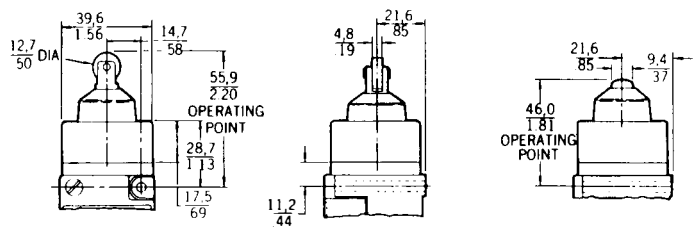


Plastic



Coil spring

TOP PLUNGERS



Single-pole and double-pole

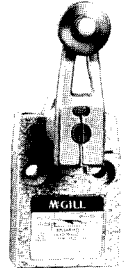
1505 Series Miniature Pre-Wired Enclosed Switches





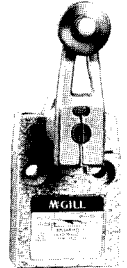
McGill 1505 Series miniature switches are pre-wired at the factory with industrial quality cable (SJTO). They eliminate the need to wire at the switch, making them ideal for use in limited access areas. Gang mount to build multi-plunger switch .63" between plunger.

Cable electrical connection and switch

terminals are encapsulated in an epoxy compound. An elastomer seal between the plunger and switch housing, plus mounting screw holes with continuous walls, keep liquids from entering the switch cavity. The seal boot offered on the McGill 1505-0200 model prevents contaminants from impeding plunger movement.

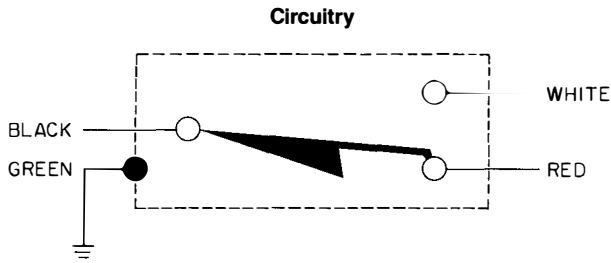
You also have a complete range of actuators to choose from, including plain plungers, roller plungers, side rotary. Any of our levers can be used with the side rotary 1505-0150 switch. All our switches comply to NEMA 1 and 3 enclosure standards, and are UL listed and CSA certified.



						
Circuitry	SPDT(1)	SPDT(1)	SPDT(1)	SPDT(1)	SPDT(1)	SPDT(1)
Description	Plunger	Boot Sealed Plunger	Roller Plunger	Roller Plunger	Cross Roller Plunger	Side Rotary(2)
McGill No.	1505-0001	1505-0200	1505-0050	1505-0051	1505-0100	1505-0150
Micro Switch No.	914CE1-3	914CE18-3	914CE2-3	914CE24-3	914CE3-3	914CE16-3
NEMA	1,3	1,3,4,12,13	1,3	1,3,4,12,13	1,3	1,3,4,12,13
120VAC Make	7.5	7.5	7.5	7.5	7.5	7.5
Break	1.2	1.2	1.2	1.2	1.2	1.2
240VAC(ind.) Make	1.2	1.2	1.2	1.2	1.2	1.2
Break	0.2	0.2	0.2	0.2	0.2	0.2
240VAC(res.) Make	5	5	5	5	5	5
Break	5	5	5	5	5	5
28VDC Make-Res.	3	3	3	3	3	3
Break-Res.	3	3	3	3	3	3
Max. PT	1,8mm 0.071 in.	1,8mm 0.071 in.	1,8mm 0.071 in.	1,8mm 0.071 in.	1,8mm 0.071 in.	30° —
Max. DT	0,1mm 0.004 in.	0,1mm 0.004 in.	0,1mm 0.004 in.	0,1mm 0.004 in.	0,1mm 0.004 in.	3° —
Min. OT	3,0mm 0.118 in.	3,0mm 0.118 in.	3,0mm 0.118 in.	3,0mm 0.118 in.	3,0mm 0.118 in.	40° —
Max. Operating Force	12,2mm 2.75 in.	22,3mm 5 in.	12,2mm 2.75 in.	22,3mm 5 in.	12,2mm 2.75 in.	0,34NM 3 in.lbs.
Operating Temp. Range	35° to 160°F 2° to 71°C	10° to 200°F -12° to 93°C	10° to 200°F -12° to 93°C	10° to 200°F -12° to 93°C	10° to 200°F -12° to 93°C	10° to 200°F -12° to 93°C

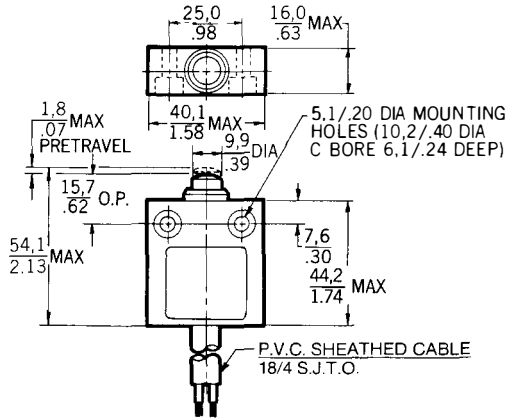
1. UL Rating: 5A, 1/10 HP, 125 or 250VAC. All cable lengths 3 ft. (0.91m).

2. Switch operates on clockwise and counterclockwise rotation of lever shaft. Use same levers as 1506 Series.

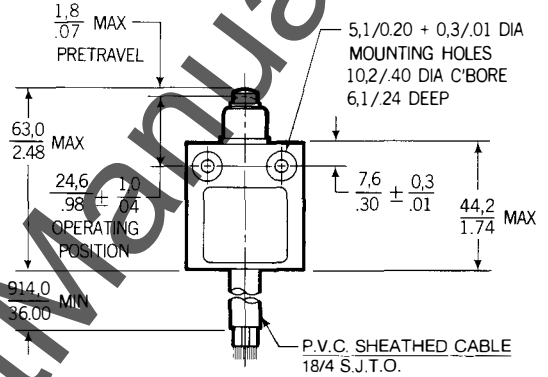


MOUNTING DIMENSIONS

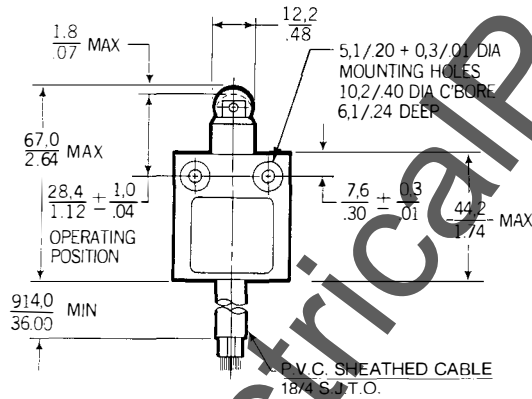
PLUNGER



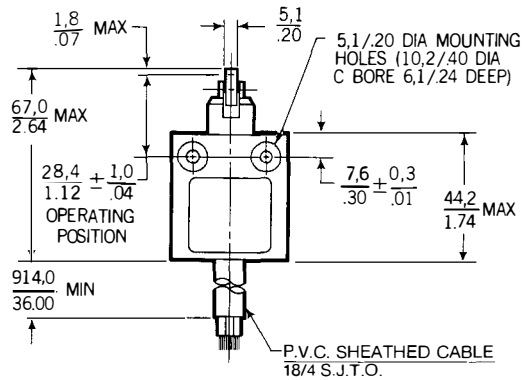
PLUNGER (WITH SEAL BOOT)



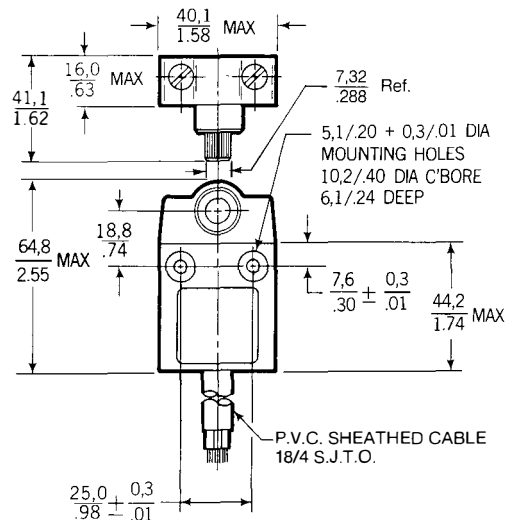
ROLLER PLUNGER



CROSS ROLLER PLUNGER



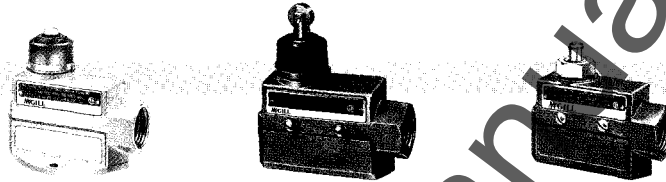
SIDE ROTARY



NOTE: All McGill switches shown in these drawings are 1.74-in. (44.2mm) high, 1.58-in. (40.1mm) wide and .63-in. (16.0mm) deep, excluding actuators.

1502 Series Compact Enclosed Switches

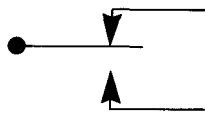
McGill 1502 Series side and flange mounted switches are available with or without actuator seal boots. They have combination insulator/seal cemented inside the bottom enclosure. Lead washers are used to seal the mounting holes on side mount switches. All side mounts are installed with #6 screws. Removal of the bottom enclosure exposes the terminals for easy wiring. They are UL listed and CSA certified. NEMA 1 Rated



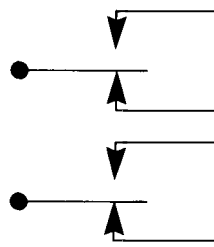
Circuitry	SPDT	SPDT	DPDT	SPDT	SPDT	SPDT(1)
Description	Straight Plunger	Straight Plunger	Straight Plunger	Straight Plunger	Straight Plunger	Roller Plunger
McGill No.	1502-0100	1502-0101	1504-0100	1502-0150	1502-0151	1502-0300
Micro Switch No.	BZE6-2RN	BZV6-2RN	DTE6-2RN	BZE6-2RQ	BZV6-2RQ	BZE6-2RN80
Seal Boot	Yes	Yes	Yes	No	No	Yes
Mounting	Side	Flange	Side	Side	Flange	Side
UL/CSA Rating	L74	L74	L59	L74	L74	L74
125VAC	1/8 HP, 15A	1/8 HP, 15A	10A	1/8 HP, 15A	1/8 HP, 15A	1/8 HP, 15A
250VAC	1/4 HP, 15A	1/4 HP, 15A	10A	1/4 HP, 15A	1/4 HP, 15A	1/4 HP, 15A
480VAC	15A	15A	—	15A	15A	15A
600VAC	2A	2A	—	2A	2A	2A
125VDC	1/2A	1/2A	0.3A	1/2A	1/2A	1/2A
250VDC	1/4A	1/4A	0.15A	1/4A	1/4A	1/4A
Max. PT(mm)	1,98	1,98	2,80	0,38	0,38	1,98
(in.)	0,078	0,078	0,11	0,015	0,015	0,078
Max. DT(mm)	0,05	0,05	1,53	0,05	0,05	0,05
(in.)	0,002	0,002	0,06	0,002	0,002	0,002
Min. OT(mm)	5,56	5,56	3,17	5,56	5,56	5,55
(in.)	0,219	0,219	0,125	0,219	0,219	0,219
Max. Operating Force(N)	2,50-6,67	2,50-6,67	7,23-16,4	2,50-3,62	2,50-3,62	2,50-6,68
(oz.)	9-24	9-24	26-59	9-13	9-13	9-24
OP(mm)	43,66 ± 0,76	69,09 ± 1,52	46 ± 0,76	38,1 ± 0,76	63,5 ± 1,14	56,7 ± 1,14
(in.)	1,719 ± .030	2,720 ± .060	1,812 ± .030	1,5 ± .030	2,5 ± .045	2,232 ± .045
Operating Temp. Range	-25° to 160°F	-25° to 160°F	-25° to 160°F	-25° to 160°F	-25° to 160°F	-25° to 160°F
	-32° to 71°C	-32° to 71°C	-32° to 71°C	-32° to 71°C	-32° to 71°C	-32° to 71°C

1. Roller parallel to long axis of switch.
2. Roller perpendicular to long axis of switch.
3. Field Adjustable 360° horizontally and 225° vertically.
4. Field Adjustable 360° horizontally in 45° increments, and 225° vertically.
5. Field Adjustable 360° horizontally and 180° vertically.
6. Field Adjustable 360° horizontally in 45° increments, and 250° vertically.
7. Field Adjustable 360° horizontally and 180° vertically. Has 1.5" (38,1mm) button.
8. Operates from any direction except pull.

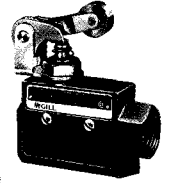
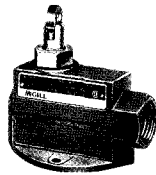
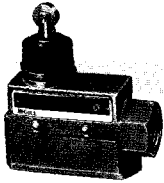
Circuitry



Single-Pole
Double Throw

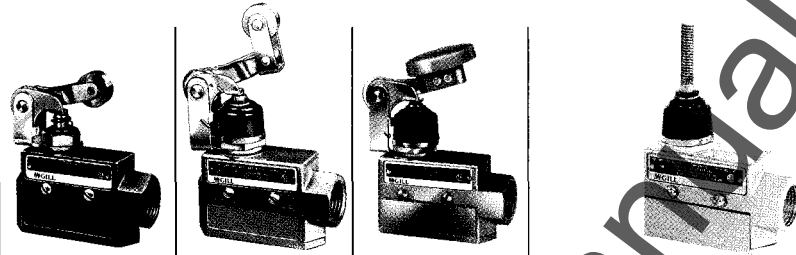



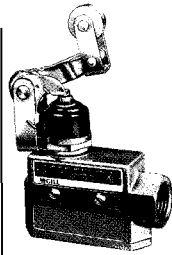

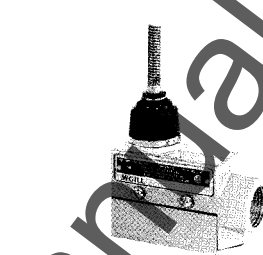
Double-Pole
Double Throw



SPDT(1)	SPDT(1)	SPDT(2)	SPDT(2)	SPDT(3)	SPDT(3)	DPDT(3)	SPDT(4)
Roller Plunger	Roller Plunger	Roller Plunger	Roller Plunger	Roller Lever	Roller Lever	Roller Lever	Roller Lever
1502-0350	1502-0351	1502-0365	1502-0366	1502-0700	1502-0701	1504-0700	1502-0750
BZE6-2RQ8	BZV6-2RQ8	BZE6-2RQ81	BZV6-2RQ81	BZE6-2RN2	BZV6-2RN2	DTE6-2RN2	BZE6-2RQ2
No Side L74 1/8 HP, 15A 1/4 HP, 15A 15A 2A 1/2A 1/4A	No Flange L74 1/8 HP, 15A 1/4 HP, 15A 15A 2A 1/2A 1/4A	No Side L74 1/8 HP, 15A 1/4 HP, 15A 15A 2A 1/2A 1/4A	No Flange L74 1/8 HP, 15A 1/4 HP, 15A 15A 2A 1/2A 1/4A	Yes Side L74 1/8 HP 1/4 HP, 15A 15A 2A 1/2A 1/4A	Yes Flange L74 1/8 HP 1/4 HP, 15A 15A 2A 1/2A 1/4A	Yes Side L59 10A 10A — — 0.3A 0.15A	No Side L74 1/8 HP 1/4 HP, 15A 15A 2A 1/2A 1/4A
0,38 0,015 0,05 0,002 3,55 0,14 2,50-3,62 9-13 49,6 ± 1,14 1,953 ± .045 -25° to 160°F -32° to 71°C	0,38 0,015 0,05 0,002 3,55 0,14 2,50-3,62 9-13 75 ± 1,52 2,953 ± .060 -25° to 160°F -32° to 71°C	0,38 0,015 0,05 0,002 3,55 0,14 2,50-3,62 9-13 49,6 ± 1,14 1,953 ± .045 -25° to 160°F -32° to 71°C	0,38 0,015 0,05 0,002 3,55 0,14 2,50-3,62 9-13 75 ± 1,52 2,953 ± .060 -25° to 160°F -32° to 71°C	4,78 0,188 0,15 0,006 5,56 0,219 2,78-5,57 10-20 — — -25° to 160°F -32° to 71°C	4,78 0,188 0,15 0,006 5,56 0,219 2,78-5,57 10-20 — — -25° to 160°F -32° to 71°C	6,76 0,266 4,19 0,165 5,56 0,219 2,78-8,35 10-30 — — -25° to 160°F -32° to 71°C	4,78 0,188 0,15 0,006 5,56 0,219 2,78-5,01 10-18 — — -25° to 160°F -32° to 71°C

1502 Series Compact Enclosed Switches



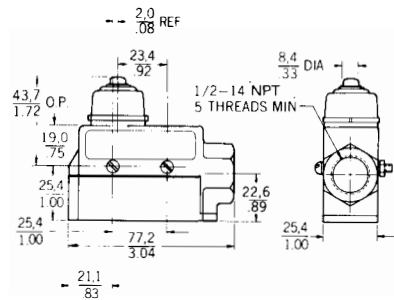
					
Circuitry	SPDT(4)	SPDT(5)	SPDT(7)	SPDT(8)	SPDT(8)
Description	Roller Lever	One-way Roller Lever	Manual	Coil Spring	Coil Spring
McGill No.	1502-0751	1502-0800	1502-0600	1502-0500	1502-0501
Micro Switch No.	BZV6-2RQ2	BZE6-2RN28	BZE6-2RN4	BZE6-2RN18	BZV6-2RN18
Seal Boot	No	Yes	Yes	Yes	Yes
Mounting	Flange	Side	Side	Side	Flange
UL/CSA Rating	L74	L74	L74	L74	L74
125VAC	1/8 HP	1/8 HP	1/8 HP	1/8 HP	1/8 HP
250VAC	1/4 HP, 15A	1/4 HP, 15A	1/4 HP, 15A	1/4 HP, 15A	1/4 HP, 15A
480VAC	15A	15A	15A	15A	15A
600VAC	2A	2A	2A	2A	2A
125VDC	1/2A	1/2A	1/2A	1/2A	1/2A
250VDC	1/4A	1/4A	1/4A	1/4A	1/4A
Max. PT(mm)	4,78	5,95	4,78	15°	15°
(in.)	0.188	0.234	0.118	—	—
Max. DT(mm)	0,15	0,15	0,15	—	—
(in.)	0.006	0.006	0.006	—	—
Min. OT(mm)	5,56	5,56	5,56	—	—
(in.)	0.219	0.219	0.219	—	—
Max. Operating Force(N)	2,78-5,01	2,22-5,57	2,78-5,57	1,95	1,95
(oz.)	10-18	8-20	10-20	7	7
OP(mm)	—	—	—	—	—
(in.)	—	—	—	—	—
Operating Temp. Range	-25° to 160°F -32° to 71°C	-25° to 160°F -32° to 71°C	-25° to 160°F -32° to 71°C	-25° to 160°F -32° to 71°C	-25° to 160°F -32° to 71°C

1. Roller parallel to long axis of switch.
2. Roller perpendicular to long axis of switch.
3. Field Adjustable 360° horizontally and 225° vertically.
4. Field Adjustable 360° horizontally in 45° increments, and 225° vertically.
5. Field Adjustable 360° horizontally and 180° vertically.
6. Field Adjustable 360° horizontally in 45° increments, and 250° vertically.
7. Field Adjustable 360° horizontally and 180° vertically. Has 1.5" (38, 1mm) button.
8. Operates from any direction except pull.

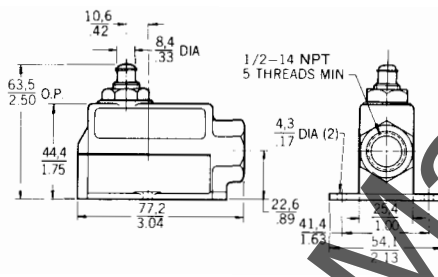
1502 Series Compact Enclosed Switches

MOUNTING DIMENSIONS

STRAIGHT PLUNGER

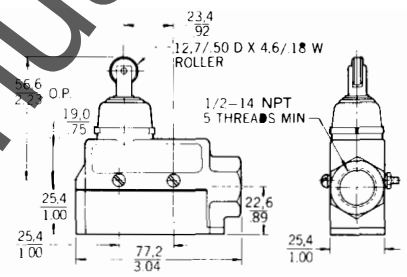


Side mount
with seal boot



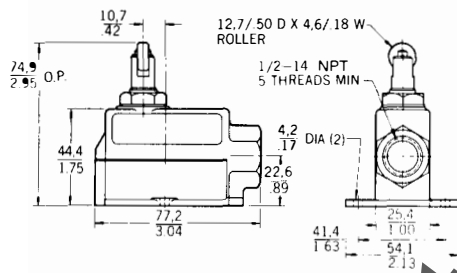
Flange mount
without seal boot

ROLLER PLUNGER



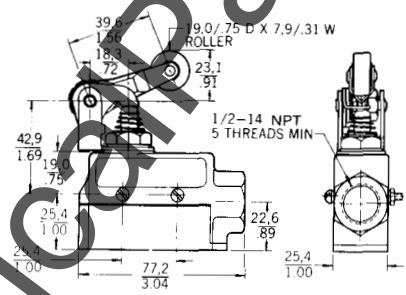
Side mount
with seal boot

CROSS ROLLER PLUNGER

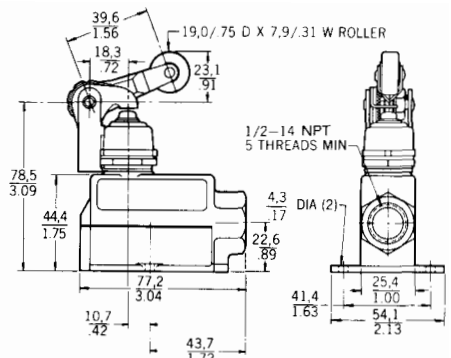


Flange mount
without seal boot

ROLLER LEVER

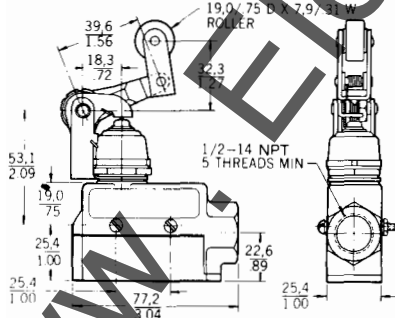


Side mount
without seal boot



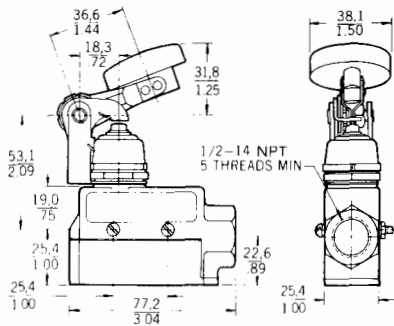
Flange mount
with seal boot

ONE-WAY ROLLER LEVER



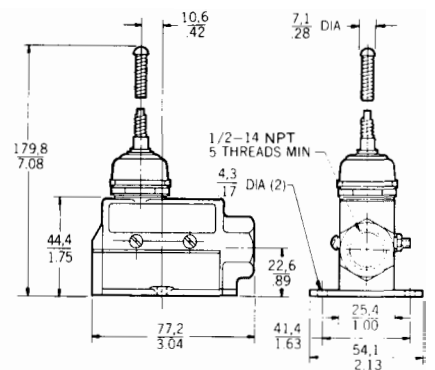
Side mount
with seal boot

MANUAL



Side mount
with seal boot

COIL SPRING



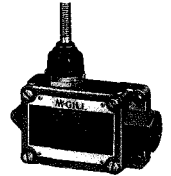
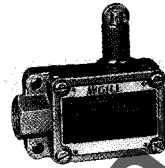
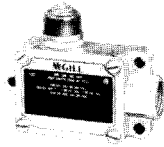
Flange mount
with seal boot

1503 Series High Capacity Enclosed Switches

McGill 1503 Series switches feature an elastomer boot on the sealed actuator and cover seal on all types to protect the actuating mechanism and internal components from contaminants. The cover plate is removed for easy wiring and replacement without need to demount the switch. A sealed gasket between the cover plate

and enclosure provides extra protection. The actuator position is designated "right" or "left" when looking at the nameplate. All our switches are UL listed and CSA certified and meet NEMA enclosure standards 1, 3*, 4*, and 13*.

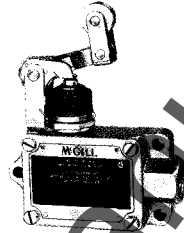
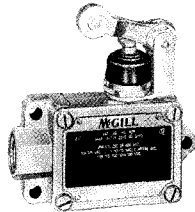
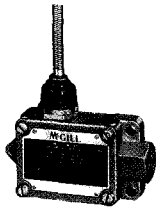
*Except 1503-0350 and 1503-0352



Circuitry	SPDT	SPDT	SPDT(1)	SPDT(1)	SPDT(1)	SPDT(1)	SPDT(2)
Description	Straight Plunger	Straight Plunger	Roller Plunger	Roller Plunger	Roller Plunger	Roller Plunger	Flexible Rod
McGill No.	1503-0100	1503-0102	1503-0350	1503-0352	1503-0300	1503-0302	1503-0500
Micro Switch No.	BAF1-2RN-RH	BAF1-2RN-LH	BAF1-2RQ9-RH	BAF1-2RQ9-LH	BAF1-2RQN8-RH	BAF1-2RQN8-LH	BAF1-2RN18-RH
Seal Boot	Yes	Yes	No	No	No	No	Yes
Actuator Position	Right	Left	Right	Left	Right	Left	Right
UL/CSA Rating	L23	L23	L23	L23	L23	L23	L23
125VAC	20A, 1HP	20A, 1HP	20A, 1HP	20A, 1HP	20A, 1HP	20A, 1HP	20A, 1HP
250VAC	20A, 2HP	20A, 2HP	20A, 2HP	20A, 2HP	20A, 2HP	20A, 2HP	20A, 2HP
480VAC	20A	20A	20A	20A	20A	20A	20A
125VDC	1/2A	1/2A	1/2A	1/2A	1/2A	1/2A	1/2A
Lamp Load at 125VAC	10A	10A	10A	10A	10A	10A	10A
250VDC	1/4A	1/4A	1/4A	1/4A	1/4A	1/4A	1/4A
Max. PT(mm)	2,39	2,39	2,39	2,39	3,18	3,18	15°
(in.)	0,094	0,094	0,094	0,094	0,125	0,125	—
Max. DT(mm)	0,26	0,26	0,25	0,25	0,19	0,19	—
(in.)	0,01	0,01	0,01	0,01	0,0075	0,0075	—
Min. OT(mm)	5,56	5,56	3,96	3,96	4,75	4,75	—
(in.)	0,219	0,219	0,156	0,156	0,187	0,187	—
Max. Operating Force(N)	11,2	11,2	11,1	11,1	35,6	35,6	—
(lbs.)	2,5	2,5	2,5	2,5	8	8	—
OP(mm)	53,19 ± 0,76	53,19 ± 0,76	64,69	64,69	64,69	64,69	—
(in.)	2,094 ± .030	2,094 ± .030	2,547	2,547	2,547	2,547	—

1. Field adjustable 360° horizontally. Has O-ring actuator seal. (Only 0300 and 0302).
2. Operates any direction except direct pull.
3. Field adjustable 360° horizontally and 225° vertically.
4. Field adjustable 360° horizontally and 180° vertically.

1503 Series High Capacity Enclosed Switches



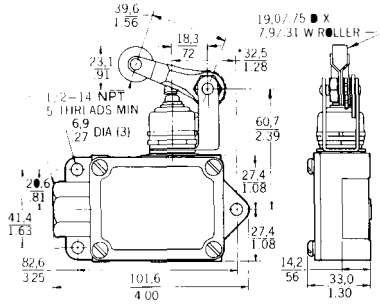
Circuitry	SPDT(2)	SPDT(3)	SPDT(3)	SPDT(4)	SPDT(4)	SPDT(4)	SPDT(4)(5)
Description	Flexible Rod	Roller Lever	Roller Lever	One-way Roller	One-way Roller	Manual	Manual
McGill No.	1503-0502	1503-0700	1503-0702	1503-0800	1503-0802	1503-0600	1503-0602
Micro Switch No.	BAF1-2RN18-LH	BAF1-2RN2-RH	BAF1-2RN2-LH	BAF1-2RN28-RH	BAF1-2RN28-LH	BAF1-2RN4-RH	BAF1-2RN4-LH
Seal Boot	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Actuator Position	Left	Right	Left	Right	Left	Right	Left
UL/CSA Rating	L23	L23	L23	L23	L23	L23	L23
125VAC	20A, 1HP	20A, 1HP	20A, 1HP	20A, 1HP	20A, 1HP	20A, 1HP	20A, 1HP
250VAC	20A, 2HP	20A, 2HP	20A, 2HP	20A, 2HP	20A, 2HP	20A, 2HP	20A, 2HP
480VAC	20A	20A	20A	20A	20A	20A	20A
125VDC	1/2A	1/2A	1/2A	1/2A	1/2A	1/2A	1/2A
Lamp Load at 125VAC	10A	10A	10A	10A	10A	10A	10A
250VDC	1/4A	1/4A	1/4A	1/4A	1/4A	1/4A	1/4A
Max. PT(mm)	15°	5,56	5,56	5,56	5,56	—	—
(in.)	—	0,219	0,219	0,219	0,219	—	—
Max. DT(mm)	—	0,51	0,51	0,51	0,51	—	—
(in.)	—	0,02	0,02	0,02	0,02	—	—
Min. OT(mm)	—	6,35	6,35	6,35	6,35	—	—
(in.)	—	0,25	0,25	0,25	0,25	—	—
Max. Operating Force(N)	—	8,90	8,90	8,90	8,90	8,90	8,90
(lbs.)	—	2	2	2	2	2	2
OP(mm)	—	—	—	—	—	—	—
(in.)	—	—	—	—	—	—	—

1. Field adjustable 360° horizontally. Has O-ring actuator seal.
2. Operates any direction, except direct pull.
3. Field adjustable 360° horizontally and 225° vertically.
4. Field adjustable 360° horizontally and 180° vertically.
5. Has 1.5" button diameter.

1503 Series High Capacity Enclosed Switches

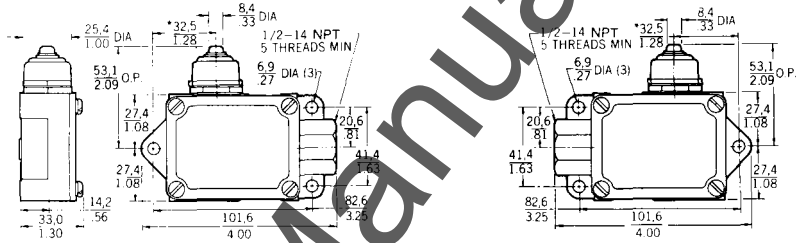
MOUNTING DIMENSIONS

ROLLER LEVER (with seal boot)



Right-hand

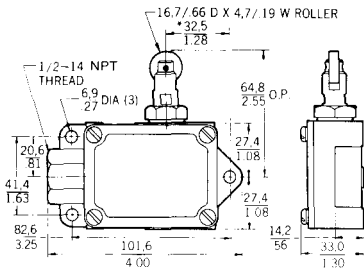
PLUNGER (with seal boot)



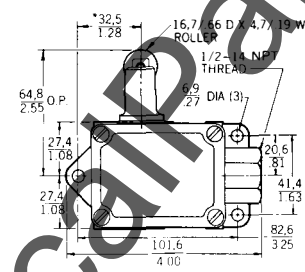
Left-hand

Right-hand

ROLLER PLUNGER (without seal boot)

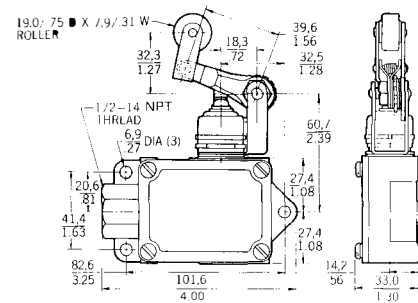


Right-hand



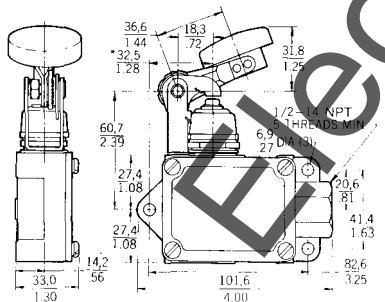
Left-hand

ONE-WAY ROLLER LEVER (with seal boot)



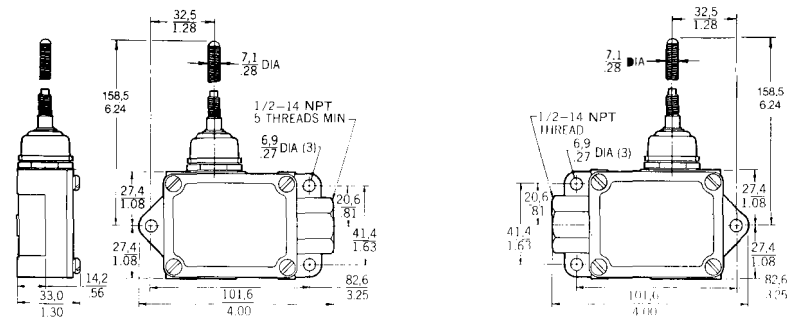
Right-hand

MANUAL (with seal boot)



Left-hand

COIL SPRING (with seal boot)



Left-hand

Right-hand

REPLACEMENT PARTS—1502 SERIES

Catalog No.	Bottom Enclosure	Seal Boot	Basic Packet	Actuator	Switch Unit
1502-0100	1502-9014	1502-9024	1502-9009(1)	—	1502-9037
1502-0101	1502-9015	1502-9024	—	—	1502-9037
1502-0150	1502-9014	—	1502-9008	—	1502-9035
1502-0151	1502-9015	—	1502-9008	—	1502-9035
1502-0300	1502-9014	1502-9024	—	—	1502-9034
1502-0350	1502-9014	—	—	—	1502-9038
1502-0351	1502-9015	—	—	—	1502-9038
1502-0365	1502-9014	—	1502-9013	—	1502-9039
1502-0366	1502-9015	—	1502-9013	—	1502-9039
1502-0500	1502-9014	1502-9024	—	1502-9020	1502-9031
1502-0501	1502-9015	1502-9024	—	—	1502-9031
1502-0600	1502-9014	1502-9024	1502-9012(1)	1502-9018	1502-9033
1502-0700	1502-9014	1502-9024	1502-9012(1)	1502-9017	1502-9033
1502-0701	—	—	—	—	—
1502-0750	1502-9014	—	1502-9010	1502-9016	1502-9036
1502-0751	1502-9015	—	—	1502-9016	1502-9036
1502-0800	1502-9014	1502-9024	1502-9012	1502-9019(1)	1502-9033
1504-0100	1502-9014	1502-9024	1502-9009	—	1502-9040
1504-0700	1502-9014	1502-9024	—	1502-9017(1)	1502-9040

NOTE: Bottom enclosure includes bottom half of enclosure, insulator seal and two screws. Seal boot includes elastomer plunger seal, retaining hardware. Basic packet includes mounting hardware, seal boot where applicable.

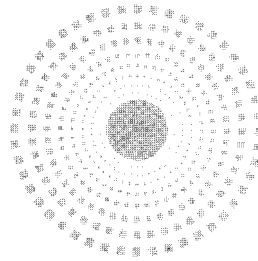
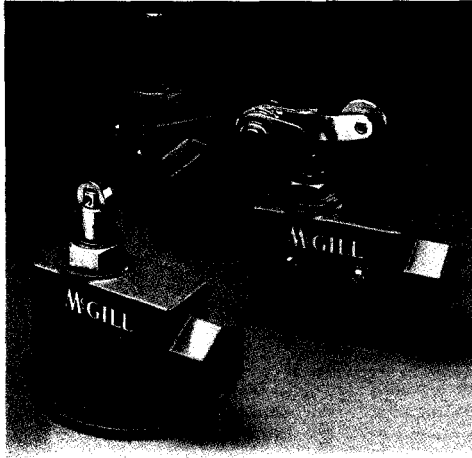
1. Includes seal boot.

REPLACEMENT PARTS—1503 SERIES

NOTE: Basic Packets include mounting hardware, an insulator and cover seal.

Catalog No.	Basic Packet	Actuator	Switch Unit
1503-0300	1502-9011	1502-9023	1502-9032
1503-0350	1502-9011	1502-9022	1502-9032
1503-0500	1502-9011	(2)1502-9020	1502-9032
1503-0600	1502-9011	(2)1502-9018	1502-9032
1503-0700	1502-9011	(2)1502-9017	1502-9032
1503-0800	1502-9011	(2)1502-9019	1502-9032
1503-0100	1502-9011	(2)1502-9021	1502-9032

1. Includes seal boot.
2. Includes basic packet.



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McGill Manufacturing Company, Inc., Electrical Division, Valparaiso, Indiana 46383.

Phone (219) 465-2200
Fax (219) 465-2456

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