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Sensing and Control  
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### Sensing and Control

Honeywell Inc.

11 West Spring Street

Freeport, IL 61032

# Limit and Enclosed Switches

## Miniature Pre-Wired Enclosed Switches

914CE Series

### FEATURES

- 1 Miniature size
- 1 Wide selection of actuators
- 1 Precision characteristics
- 1 Zinc die cast housing
- 1 Optional mounting bracket
- 1 Fluorocarbon seal available
- 1 Preleaded or connector versions
- Temperature range 35° to 160°F (2° to 71°C)
- UL Recognized, file #E41859
- CSA Certified, file #LR15775
- CE Certified
- Low temp. versions available (-40 °C & °F)

NOTE: Bushing seal shown refers to "K" roller plunger and cross-roller plunger listings only.

Factory pre-wiring with industrial quality cable (type SJTO) allows for miniaturization of the connection and eliminates the need to wire at the switch. This allows the 9 14CE to be used in limited access areas.

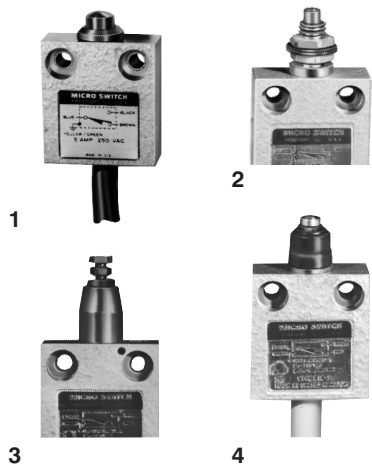
The cable electrical connection and basic switch terminals are encapsulated in an epoxy compound. An elastomer seal between the plunger and switch housing, plus mounting screw holes with continuous walls, keep liquids from entering the switch cavity. The seal boot offered on the 9 14CE16 and 9 14CE20 prevents contaminants from impeding plunger movement.

A full range of actuators is available, including plain plungers, roller plungers, side rotary, multi-directional wire, and manual. Any of the LS or HDLS limit switch levers may be used with the side rotary 9 14CE16. Pages A37 & A39.

914CE's may be specified with 3-foot (0,9 m), 6-foot ( 1,83 m), or 9-foot (2,74 m) cable.

A 90° steel bracket (Catalog Listing 933PA) is available for mounting a switch in various planes relative to the mounting surface. See page A92.

### PLUNGER ACTUATED SWITCHES



For rapid response – off the shelf service, all **bold face** listings are normally stocked items.

### ELECTRICAL RATING

Circuitry	Load	Amps	
		Make	Break
<p>Single-pole Double-throw</p>	A 240 VAC, ind. 240 VAC, res. 28 VDC, res. 28 VDC, ind. UL/CSA: 5 amps, 1/10 Hp, 125 or 250 VAC	1.2 5 3 3	0.2 5 3 3
	B 1 amp res., 0.5 amp ind., 30 VDC UL Rating: 1 amp, 125 VAC		
	C UL/CSA Rating 3 amp, 125 or 250 VAC		

Limit/Enclosed

### CABLE TERMINATION



Side Exit

### GANG MOUNT TO BUILD MULTIPLE-PLUNGER SWITCH

.63 in. ( 16mm) between plungers.



Bottom Exit

### ORDER GUIDE

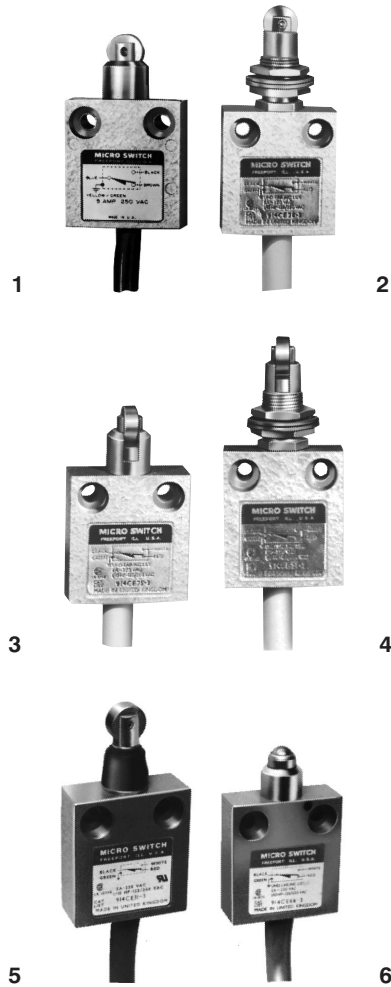
Description (Bottom exit cable unless otherwise noted)	Catalog Listing*	NEMA	Elec. Rating	O.F. max. N lbs.	P.T. max. mm in.	O.T. min. mm in.	D.T. max. mm in.
Plunger <sup>1</sup>	<b>914CE1-3</b>	1,3	A	12,2 2.75	1,8 .071	3,0 .118	0,1 .004
Plunger <sup>1</sup> Gold Contacts	914CE1-3G	1,3	B	12,2 2.75	1,8 .071	3,0 .118	0,1 .004
Plunger <sup>1</sup> (Side exit cable)	<b>914CE1-3A</b>	1,3	A	12,2 2.75	1,8 .071	3,0 .118	0,1 .004
Bushing mount Plunger <sup>2</sup>	914CE27-3	1,3	A	12,2 2.75	1,8 .071	3,0 .118	0,1 .004
Adjustable Plunger <sup>3</sup>	<b>914CE19-3</b>	1,3,4 12,13	A	22,2 5	1,8 .071	3,0 .118	0,1 .004
Boot sealed Plunger <sup>4</sup>	<b>914CE18-3</b>	1,3,4 12,13	A	22,3 5	1,8 .071	3,0 .118	0,1 .004
Side exit cable	914CE18-3A	1,3,4 12,13	A	22,3 5	1,8 .071	3,0 .118	0,1 .004
Fluorocarbon Seals	914CE18-3V						

N J Newtons  
 \* These listings have 0,9 1m (3 ft.) cable. To order 1,80m (6 ft.) cable, change the - 3 to - 6. To order 2,74m (9 ft.) cable, change the - 3 to - 9.  
 Characteristics: O.F. – Operating Force; P.T. – Pretravel; O.T. – Overtravel; D.T. – Differential Travel.

## Miniature Pre-Wired Enclosed Switches

### ROLLER PLUNGER ACTUATED SWITCHES

### ORDER GUIDE



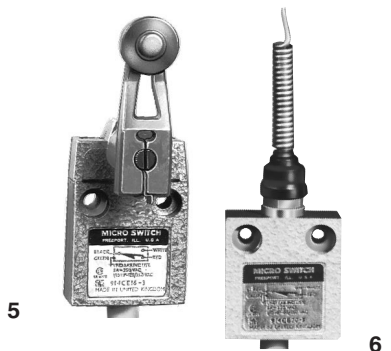
**NOTE:**  
Switches held depressed for extended periods of time at temperature extremes may experience retarded plunger return upon deactuation. Where such a condition exists in the application, contact the 800 number.

Description** (Bottom exit cable unless otherwise noted.)	Catalog Listing	NEMA	Elec. Rating	O.F. max. N lbs.	P.T. max. mm in.	O.T. min. mm in.	D.T. max. mm in.
Roller Plunger <sup>1</sup>	914CE2-3	1,3	A	12,2 2.75	1,8 .071	3,0 .118	0,1 .004
	914CE2-3K	1,3,4,6 6P,12,13	A	22,3 5	1,8 .071	3,0 .118	0,1 .004
	914CE2-3C	1,3	A SPDADB	17,8 4	1,8 .071	3,0 .118	0,51 .020
Roller Plunger <sup>1</sup> Gold Contacts	914CE2-3G	1,3	B	12,2 2.75	1,8 .071	3,0 .118	0,1 .004
Roller Plunger <sup>1</sup> (Side exit cable)	914CE2-3A	1,3	A	12,2 2.75	1,8 .071	3,0 .118	0,1 .004
	914CE2-3AK	1,3,4,6 6P,12,13	A	22,3 5	1,8 .071	3,0 .118	0,1 .004
Bushing Mount Roller Plunger <sup>2</sup>	914CE28-3	1,3	A	12,2 2.75	1,8 .071	3,0 .118	0,1 .004
Cross Roller Plunger <sup>3</sup>	914CE3-3	1,3	A	12,2 2.75	1,8 .071	3,0 .118	0,1 .004
	914CE3-3K	1,3,4,6 6P,12,13	A	22,3 5	1,8 .071	3,0 .118	0,1 .004
Cross Roller Plunger <sup>3</sup> Gold Contacts	914CE3-3G	1,3	B	12,2 2.75	1,8 .071	3,0 .118	0,1 .004
Cross Roller Plunger <sup>3</sup> (Side exit cable).	914CE3-3A	1,3	A	12,2 2.75	1,8 .071	3,0 .118	0,1 .004
	914CE3-3AK	1,3,4,6 6P,12,13	A	22,3 5	1,8 .071	3,0 .118	0,1 .004
Bushing Mount Cross-Roller Plunger <sup>4</sup>	914CE29-3	1,3	A	12,2 2.75	1,8 .071	3,0 .118	0,1 .004
Boot Sealed Roller Plunger <sup>5</sup> Fluorocarbon Seals	914CE31-3	1,3,4,6 6P,12,13	A	22,3 5	1,8 .071	3,0 .118	0,1 .004
	914CE31-3V						
Boot Sealed Cross Roller Plunger	914CE55-3	1,3,4,6 6P,12,13	A	22,3 5	1,8 .071	3,0 .118	0,1 .004
Ball Bearing <sup>6</sup>	914CE66-3	1,3	A	12,2 2.75	1,8 .071	3,0 .118	0,1 .004

### SIDE ROTARY AND WOBBLE ACTUATED SWITCHES

### ORDER GUIDE

Lever not included on side rotary versions. Any LS or HDLS lever may be used. See pages A37 to A39.



Description (Bottom exit)	Catalog Listing	NEMA	Elec. Rating	O.F. max.	P.T. max.	O.T. min.	D.T. max.
Side*** rotary <sup>5</sup>	914CE16-3	1,3,4,6 6P,12,13	A	0,34 Nm 3 in. lbs.	30°	40°	3°
Side rotary <sup>5</sup> Side exit cable	914CE16-3A	1,3,4,6 6P,12,13	A	0,34 Nm 3 in. lbs.	30°	40°	3°
Multidirectional spring wire wobble actuator <sup>6</sup>	914CE20-3	1,3,4,6 6P,12,13	A	0,56 N 2 oz.	—	—	—
	9PA86-CE	Replacement Actuator					

N = Newtons

\* These listings have 0,91m (3 ft.) cable. To order 1,83m (6 ft.) cable, change the -3 to -6. For other cable lengths, contact the 800 number.

\*\* Snap release not recommended on these devices.

\*\*\* Switch operates on clockwise and counterclockwise rotation of the lever shaft.

Characteristics: O.F. - Operate Force; P.T. - Pretravel; O.T. - Overtravel; D.T. - Differential Travel

## Miniature Pre-Wired Enclosed Switches

MANUALLY OPERATED SWITCHES



### ORDER GUIDE

Description (Bottom exit cable)	Catalog Listing*	NEMA	Elec. Rating	O.F. max. N lbs.	P.T. max. mm in.	O.T. min. mm in.	D.T. max. mm in.
.94 in. (23,9mm) dia. button	914CE22-3	1,3	A	8,9 2	1,8 .071	3,0 .118	0,1 .004

N = Newtons

\*These listings have 0,91m (3 ft.) cable. To order 1,83m (6 ft.) cable, change the -3 to -6. For other cable lengths, contact the 800 number.

Characteristics: O.F. – Operate Force; P.T. – Pretravel; O.T. – Overtravel; D.T. – Differential Travel

### MINIATURE ENCLOSED SWITCHES WITH CONNECTORS

#### ORDER GUIDE WITH AC STYLE CONNECTORS

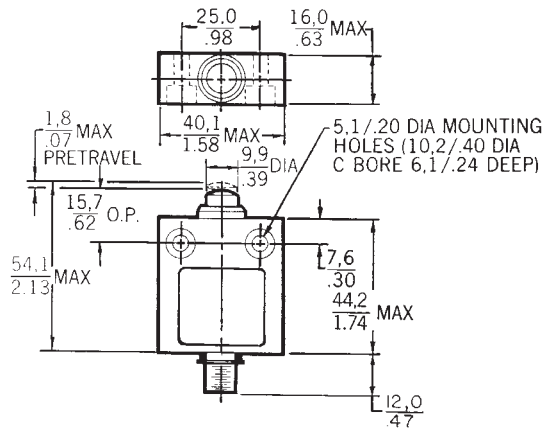
Description	Connector Exit	Catalog Listing	NEMA	Elec. Rating	O.F. max. N lbs.	P.T. max. mm in.	O.T. min. mm in.	D.T. max. mm in.
Plunger	Bottom	914CE1-Q1	1, 3	C	12,2 2.75	1,8 .071	3,0 .118	0,1 .004
Boot sealed plunger	Bottom	914CE18-Q1	1, 3, 4, 6	C	22,3 5	1,8 .071	3,0 .118	0,1 .004
	Side	914CE18-AQ1	12, 13					
Roller plunger	Bottom	914CE2-Q1	1, 3	C	12,2 2.75	1,8 .071	3,0 .118	0,1 .004
	Bottom	914CE2-KQ1	1, 3, 4, 6, 12, 13					
Cross roller plunger	Bottom	914CE3-Q1	1, 3	C	12,2 2.75	1,8 .071	3,0 .118	0,1 .004
	Bottom	914CE3-KQ1	1, 3, 4, 6, 12, 13					
Side rotary (w/o lever)	Bottom	914CE16-Q1	1, 3, 4, 6	C	0,34 Nm 3 in. lb.	30°	40°	3°
	Side	914CE16-AQ1	12, 13					
Bushing mount Roller plunger	Bottom	914CE28-Q1	1, 3	C	12,2 2.75	1,8 .071	3,0 .118	0,1 .004



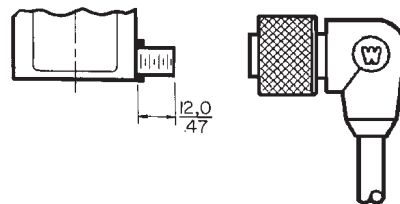
Limit/Enclosed

For DC style connectors, delete the "1" at the end of the catalog listing. Example: 914CE1-Q1 (AC); 914CE1-Q (DC).

### MOUNTING DIMENSIONS PLAIN PLUNGER/RECEPTACLE



Bottom Exit Connector



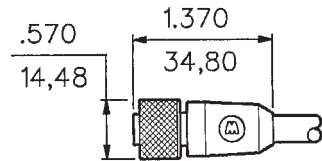
Side Exit Connector

## Miniature pre-wired enclosed switches

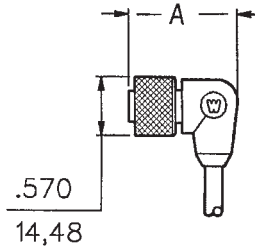
### QUICK-CONNECT CABLES

914CE switches mate with the quick-connect cables listed below. The cable has PVC sheathing and #22 AWG leadwires.

### MOUNTING DIMENSIONS



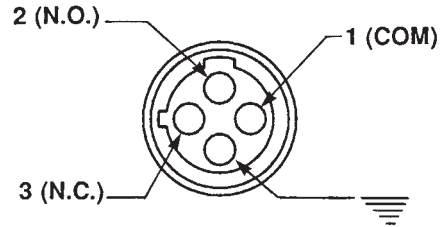
**Straight Style Connector**



**Right Angle (90°) Style Connector**

Dimension "A"  
DC Style – 1.050 (26,7)

### AC Style Pin Configuration (male receptacle)



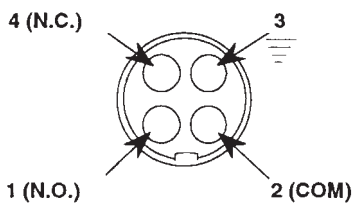
**Pin Layout**

**No Cable Available For AC Style Connectors**

### DC STYLE CABLES

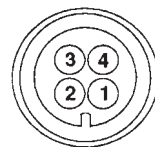
Connector Style	Cable Length	Catalog Listing
Straight	2 M	804000A09M020
	5 M	804000A09M050
Right angle (90°)	2 M	804001A09M020
	5 M	804001A09M050

### DC Style Pin Configuration (male receptacle)



**Pin Layout**

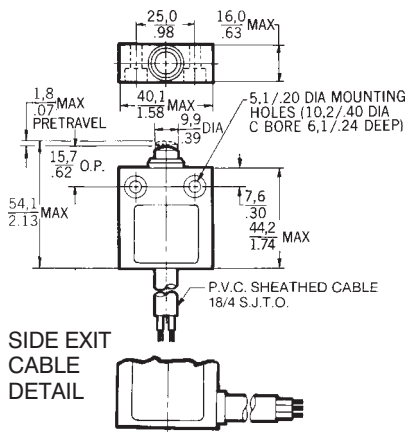
### DC Style Pin Configuration (cable plug) (Face view of female connector)



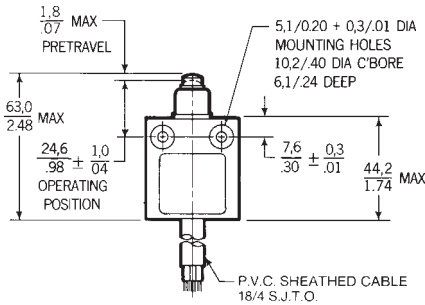
- Pin #1 = Brown leadwire/Normally opened
- Pin #2 = White leadwire/Common
- Pin #3 = Blue leadwire/Ground
- Pin #4 = Black leadwire/Normally closed

## Mounting Dimensions

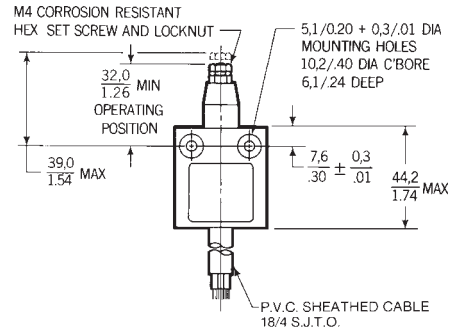
### PLUNGER/CABLE



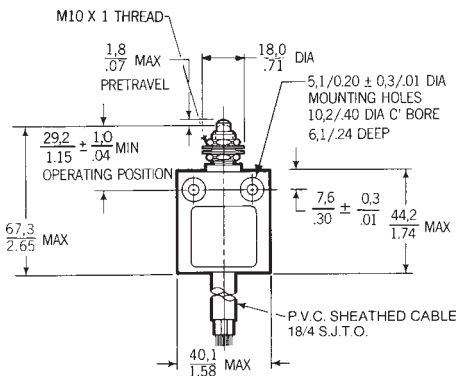
### PLUNGER (With seal boot)



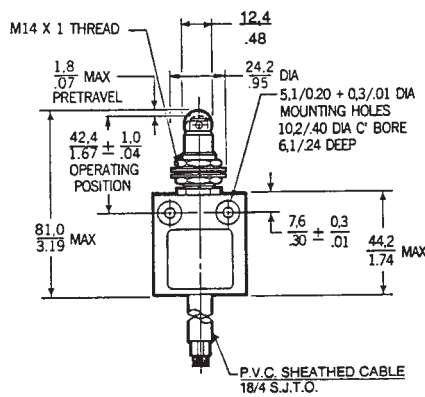
### ADJUSTABLE PLUNGER



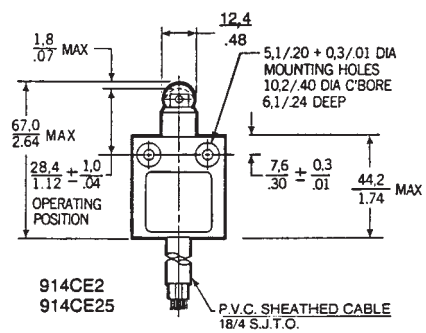
### PLUNGER (Bushing mount)



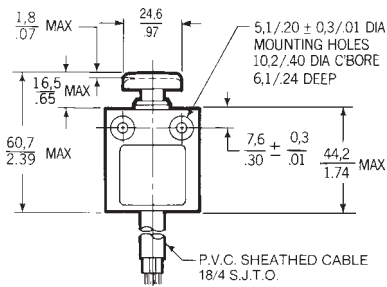
### ROLLER PLUNGER (Bushing mount)



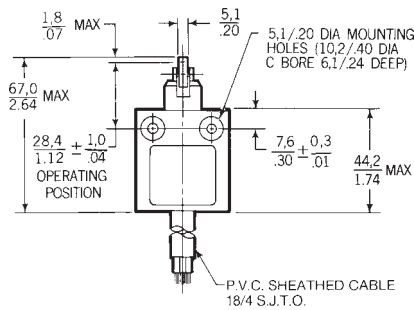
### ROLLER PLUNGER



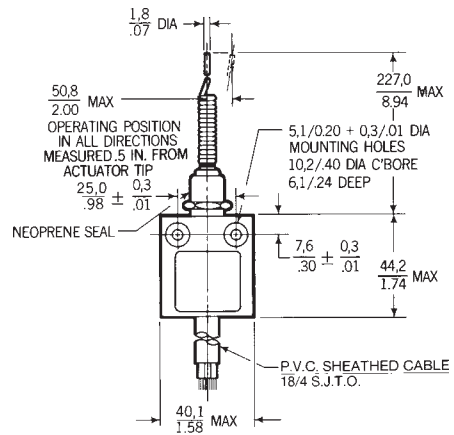
### MANUAL OPERATOR



### CROSS ROLLER PLUNGER



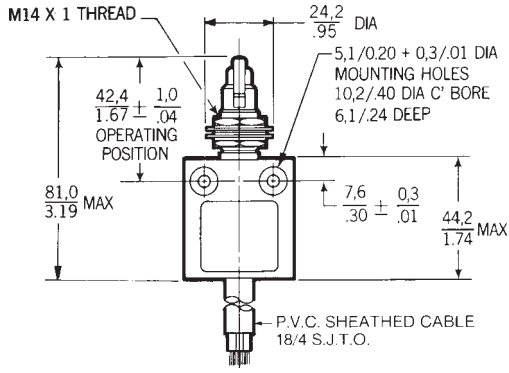
### MULTIDIRECTIONAL WIRE



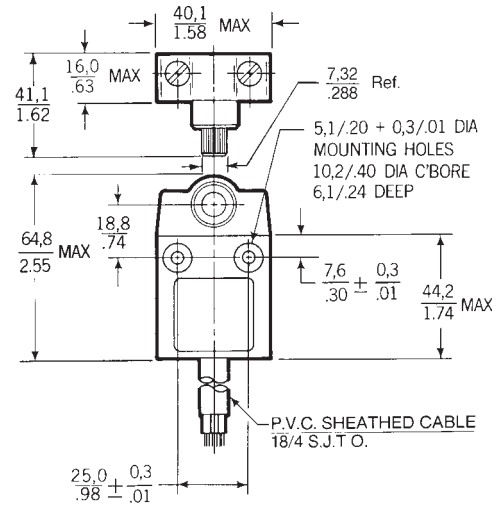
Limit/Enclosed

## Mounting Dimensions

### CROSS ROLLER PLUNGER (Bushing mount)

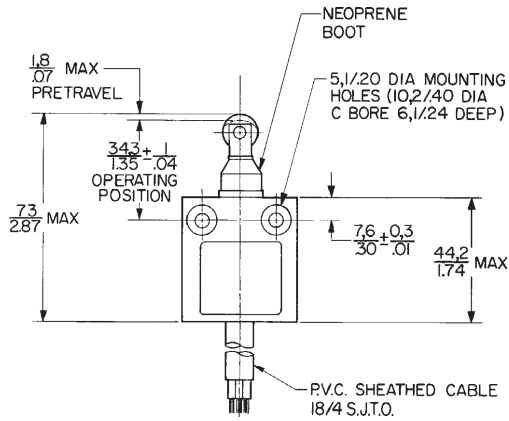


### SIDE ROTARY\*



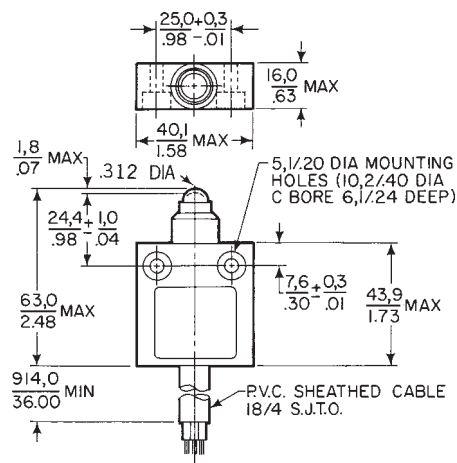
\* Any LS or HDLS limit switch lever can be used with this switch.

### BOOT SEALED ROLLER PLUNGER

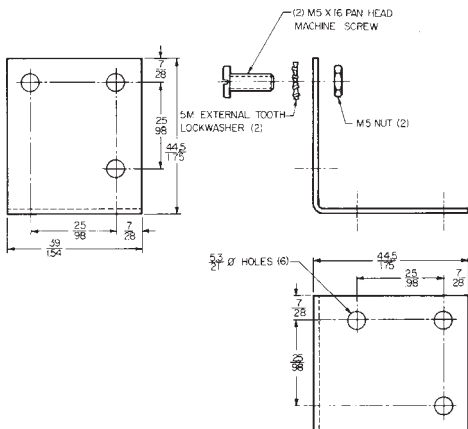


MOUNTS THRU .517/13,13 DIA. HOLE IN PANEL .165/4,19 MAX. THICK

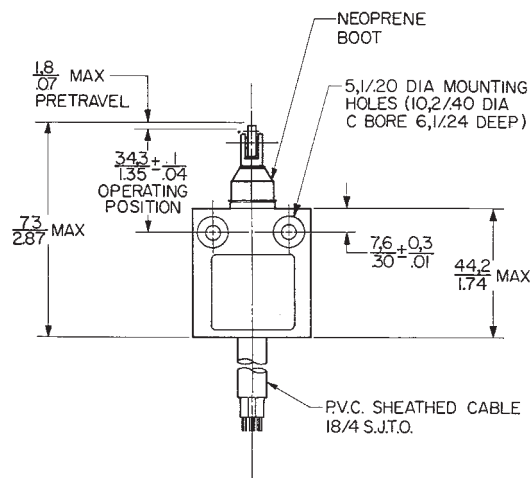
### BALL BEARING



### MOUNTING BRACKET 933PA1



### BOOT SEALED CROSS ROLLER PLUNGER



Key: 0,0 = mm  
0.00 = inches