Limit Switches
E49 Compact Metal

Contents

Overview 1
Model Selection 2
Specifications. 3
Dimensions 3

Cutler-Hammer® E49 Compact Metal Switches by Eaton's electrical business are designed with high mechanical strength for robust environments. The rugged aluminum die cast construction provides reliable, oil-tight, waterproof and dustproof sealing for a variety of applications. Snap action 1N.O./1N.C. contacts provide flexibility in design.

Ratings and Approvals

- UL Listed
- NEMA A600 (AC-15)
- NEMA R300 (DC-13)
- IP67

Unless otherwise noted, the products contained in this document are not designed or intended for use in human safety applications.

Compact Size, Metallic Limit Switches Feature 1N.O./1N.C. Contacts for High Reliability in OEM Sensing Applications

Seven Different Head Designs for Use in a Variety of

Configure to Operate in N.O. or N.C. Contacts

1/2" NPT Conduit Entry

Product Features

- Rigid die cast switch housing
- High mechanical strength
- Oil-tight, waterproof and dustproof construction

For Customer Service in the U.S. call **1-800-356-1243**, in Canada call **1-800-268-3578**.
For Application Assistance in the U.S. and Canada call **1-800-426-9184**.

Model Selection — E49 Compact Metal Limit Switches

Operating Head Type	Specifications					Catalog Numbers
	Travel to Operate Contacts	Travel to Reset Contacts	Total Travel	Force to Operate Contacts (Maximum)	Minimum Return Force	Assembled Unit (Switch Body and Head) 1N.O.-1N.C. Contacts
Roller Lever	20°	12°	50°	2.99 lb	0.50 lb	**E49M11AP1**
Top Push	0.067 in (1.7 mm)	0.04 in (1.0 mm)	—	6.02 lb	2.01 lb	**E49M11BP1**
Top Push Roller	0.067 in (1.7 mm)	0.04 in (1.0 mm)	0.25 in (6.5 mm)	6.02 lb	2.01 lb	**E49M11CP1**
Rod Lever	20°	12°	50°	0.31 lb	0.06 lb	**E49M11DP1**
Adjustable Roller Lever	20°	12°	50°	2.99 lb	0.50 lb	**E49M11UP1**
Wobble	1.10 in (28 mm)	N/A	N/A	0.33 lb	N/A	**E49M11VP1**
Cat Whisker	1.10 in (28 mm)	N/A	N/A	0.064 lb	N/A	**E49M11XM1**

Specifications

Operating Speed	1 mm to 2 m/sec
Operating Frequency	Mechanically: 120 operations/min.; Electronically: 30 operations/min.
Contact Resistance	15 mΩ max. (initial)
Insulation Resistance	100 MΩ min. (at 500V DC)
Dielectric Strength	1,000V AC, 50/60 Hz for 1 minute between non-continuous terminals; 2,200V AC, 50/60 Hz for 1 minute between each terminal and non-current carrying metal part and between each terminal and ground
Temperature Rise	50 degrees max.
Vibration	Malfunction durability: approx. 1,000 m/sec^2 (approx. 100 Gs); Malfunction durability: approx. 300/sec^2 (30 Gs)
Ambient Temperature	Operating: -50 to 80°C
Humidity	95% RH max.
Service Life	Mechanically: 15,000,000 operations/minute; Electronically: 500,000 operations/minute

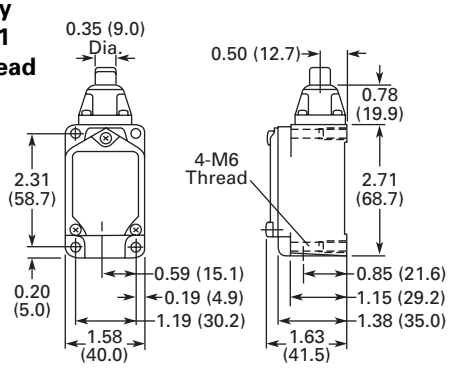
Ratings — Isolated Contacts, No Polarity Restriction

NEMA A600 (AC-15) 50 or 60 Hz					
Rated Voltage	Current			Voltamperes	
	Continuous	Make	Break	Make	Break
24V AC	10A	60A	6.0A	7200 VA	720 VA
120V AC	10A	60A	6.0A	7200 VA	720 VA
240V AC	10A	30A	3.0A	7200 VA	720 VA
480V AC	10A	15A	1.5A	7200 VA	720 VA
600V AC	10A	12A	1.2A	7200 VA	720 VA

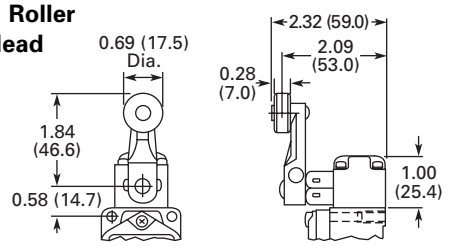
NEMA R300 (DC-13)	
Rated Voltage	Current
24V DC	1.5A
120V DC	0.22A
240V DC	0.11A

Approximate Dimensions in Inches (mm)

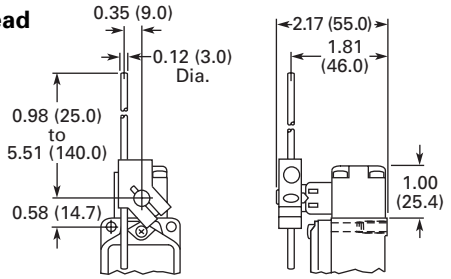
Switch Body with E49BP1 Top Push Head



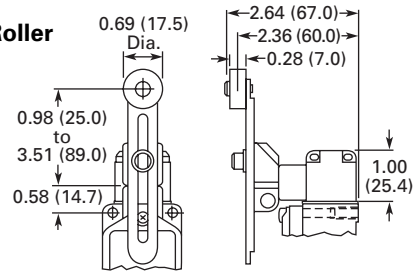
E49AP1 Roller Lever Head



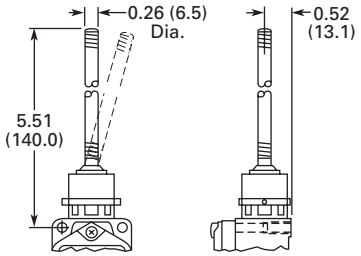
E49DP1 Rod Lever Head



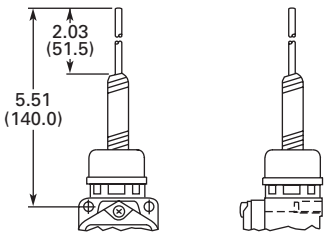
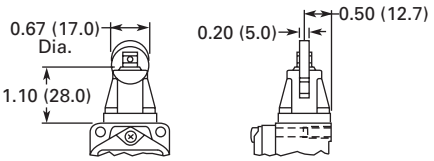
E49UP1 Adjustable Roller Lever Head



E49VP1 Wobble Head



E49XM1 Cat Whisker Head



E49CP1 Top Push Roller Head