

E47 Precision Switches

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E47 Precision Switches

Product Description

E47 Precision Switches from Eaton's electrical sector provide high accuracy switching at an affordable price. A variety of standard features, such as current capacity, operating force, travel characteristics and actuators, lets you custom fit the switch to your application.

The switches are available in their compact basic form, or enclosed in a rugged, metal housing.

Features

- Compact housings are ideal for use where space is restricted
- Precision, snap-action operators provide accurate repeatability of electrical and mechanical operating characteristics
- High current capacity (up to 20A) allows power load switching and motor handling capability
- Enclosed booted versions shield actuators from debris

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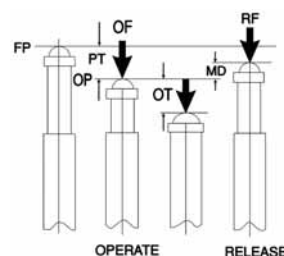
Dimensions **V8-T2-12**



Drawings
Online

Operating Characteristics

Definitions



- OF—Operating Force
- RF—Return Force
- PT—Pre-Travel
- OT—Over-Travel
- MD—Movement Differential
- FP—Free Position
- OP—Operating Position

Standards and Certifications

- UL Recognized
- CSA Certified
- CE
- RoHS

**DANGER**

THIS SENSOR IS NOT A SAFETY DEVICE AND IS NOT INTENDED TO BE USED AS A SAFETY DEVICE. This sensor is designed only to detect and read certain data in an electronic manner and perform no use apart from that, specifically no safety-related use. This sensor product does not include self-checking redundant circuitry, and the failure of this sensor product could cause either an energized or de-energized output condition, which could result in death, serious bodily injury, or property damage.

For the most current information on this product, visit our Web site: www.eaton.com

For Customer Service in the U.S. call 1-877-ETN CARE (386-2273), in Canada call 1-800-268-3578.

For Application Assistance in the U.S. and Canada call 1-800-426-9184.

Product Selection

Basic Switches

E47 Precision Switches—Basic

	Type	Specifications ^①	15A Catalog Number	20A Catalog Number
Pin Plunger 	Pin Plunger			
	Screw terminal	OF max.—12.3 oz (350g) RF max.—4.02 oz (114g) PT max.—0.016 in (0.4 mm)	E47BMS01	E47CMS01
	Solder terminal	OT max.—0.005 in (0.13 mm) MD max.—0.002 in (0.05 mm) OP—0.626 in (15.9 mm)	E47BML01	E47CML01 ^②
Extended Plunger 	Extended Plunger			
	Screw terminal	OF max.—12.3 oz (350g) RF max.—4.02 oz (114g) PT max.—0.016 in (0.4 mm)	E47BMS03	—
	Solder terminal	OT max.—0.063 in (1.6 mm) MD max.—0.002 in (0.05 mm) OP—1.11 in (28.2 mm)	E47BML03	—
Straight Plunger 	Straight Plunger			
	Screw terminal	OF max.—12.3 oz (350g) RF max.—4.02 oz (114g) PT max.—0.016 in (0.4 mm)	E47BMS02	E47CMS02
	Solder terminal	OT max.—0.063 in (1.6 mm) MD max.—0.002 in (0.05 mm) OP—0.846 in (21.5 mm)	E47BML02	E47CML02
Reversed Lever 	Reversed Lever			
	Screw terminal	OF max.—5.29 oz (150g) RF max.—0.49 oz (14g) PT max.—0.16 in (4 mm)	E47BMS21	—
	Solder terminal	OT max.—0.063 in (1.6 mm) MD max.—0.051 in (1.3 mm) FP max.—0.81 in (20.6 mm)	E47BML21	—
	Spade terminal	OP—0.685 in (17.4 mm)	E47BMT21	—
Straight Lever 	Straight Lever			
	Screw terminal	OF max.—2.47 oz (70g) RF min.—0.49 oz (14g) PT max.—0.394 in (10 mm) OT max.—0.220 in (5.6 mm)	E47BMS22	E47CMS22
	Solder terminal	MD max.—0.051 in (1.3 mm) FP max.—1.11 in (28.2 mm) OP—0.748 in (19 mm)	E47BML22	—
Standard Lever 	Standard Lever			
	Screw terminal	OF max.—3.53 oz (100g) RF min.—0.99 oz (28g) PT max.—0.197 in (5.0 mm) OT max.—0.079 in (2.0 mm)	E47BMS20	—
	Solder terminal	MD max.—0.039 in (1.0 mm) FP max.—0.976 in (24.8 mm) OP—0.748 in (19 mm)	E47BML20	—
Extended Straight Plunger 	Extended Straight Plunger			
	Screw terminal	OF max.—12.3 oz (350g) RF max.—4.02 oz (114g) PT max.—0.016 in (0.4 mm)	E47BMS04	E47CMS04
	Screw terminal (with space lugs)	OT max.—0.217 in (5.5 mm) MD max.—0.002 in (0.05 mm) OP—0.858 in (21.8 mm)	E47BMT04	—
	Solder terminal		E47BML04	E47CML04

Notes

^① OF = Operating Force; RF = Return Force; PT = Pre-Travel; OT = Over-Travel; MD = Movement Differential; FP = Free Position; OP = Operating Position.

^② Contact Eaton's Sensor Applications Department at 1-800-426-9184 for approval status.

E47 Precision Switches—Basic, continued

	Type	Specifications ^①	15A Catalog Number	20A Catalog Number
	Roller Plunger			
	Screw terminal	OF max.—12.3 oz (350g) RF max.—4.02 oz (114g) PT max.—0.016 in (0.4 mm) OT max.—0.14 in (3.6 mm) MD max.—0.002 in (0.05 mm) OP—1.315 in (33.4 mm)	E47BMS10	E47CMS10
	Solder terminal		E47BML10	—
	Cross Roller Plunger			
	Screw terminal	OF max.—12.3 oz (350g) RF max.—4.02 oz (114g) PT max.—0.016 in (0.4 mm) OT max.—0.14 in (3.6 mm) MD max.—0.002 in (0.05 mm) OP—1.315 in (33.4 mm)	E47BMS11	E47CMS11
	Solder terminal		E47BML11	—
	Reversed Roller Lever			
	Screw terminal	OF max.—5.29 oz (150g) RF max.—0.49 oz (14g) PT max.—0.16 in (4 mm) OT max.—0.063 in (1.6 mm) MD max.—0.051 in (1.3 mm) FP max.—1.252 in (31.8 mm) OP—1.126 in (28.6 mm)	E47BMS41	—
	Solder terminal		E47BML41	—
	Extended Roller Lever			
	Screw terminal	OF max.—5.64 oz (160g) RF min.—0.78 oz (22g) PT max.—0.28 in (7.1 mm) OT max.—0.16 in (4 mm) MD max.—0.04 in (1.02 mm) FP max.—1.437 in (36.5 mm) OP—1.189 in (30.2 mm)	E47BMS42	E47CMS42
	Solder terminal		E47BML42	—
	Roller Lever			
	Screw terminal	OF max.—5.64 oz (160g) RF min.—1.48 oz (42g) PT max.—0.106 in (2.7 mm) OT max.—0.094 in (2.4 mm) MD max.—0.02 in (0.5 mm) FP max.—1.28 in (32.5 mm) OP—1.189 in (30.2 mm)	E47BMS30	E47CMS30
	Solder terminal		E47BML30	—
	Spade terminal		E47BMT30	E47CMT30
	One-Way Roller			
	Screw terminal	OF max.—5.64 oz (160g) RF min.—1.48 oz (42g) PT max.—0.106 in (2.7 mm) OT max.—0.094 in (2.4 mm) MD max.—0.02 in (0.5 mm) FP—1.717 in (43.6 mm) OP—1.697 in (43.1 mm)	E47BMS31	—
	Solder terminal		E47BML31	—
	Integral Leaf			
	Screw terminal	OF max.—0.35 oz (10g) RF min.—0.106 oz (3.0g) PT max.—0.787 in (20.0 mm) OT max.—0.22 in (5.6 mm) MD max.—0.118 in (3.0 mm) OP—0.748 in (19.0 mm)	E47BMS23	E47CMS23
	Solder terminal		E47BML23	—

Note

^① OF = Operating Force; RF = Return Force; PT = Pre-Travel; OT = Over-Travel; MD = Movement Differential; FP = Free Position; OP = Operating Position.

E47 Precision Switches—Basic, continued

Type	Specifications ^①	15A Catalog Number	20A Catalog Number
Adjustable Roller	Adjustable Roller		
	Screw terminal	OF max.—17.64 oz (500g) RF min.—6.0 oz (170g) PT max.—0.197 in (5.0 mm) OT max.—0.5 in (12.7 mm)	E47BMS40 —
	Solder terminal	MD max.—0.087 in (2.2 mm) FP max.—1.752 in (44.5 mm) OP—1.591 in (40.4 mm)	E47BML40 —
Extended Adjustable Roller	Extended Adjustable Roller		
	Screw terminal	OF max.—21.16 oz (600g) RF min.—10.58 oz (300g) PT max.—0.118 in (3.0 mm) OT max.—0.236 in (6.0 mm)	E47BMS43 —
	Solder terminal	MD max.—0.079 in (2.0 mm) FP max.—1.614 in (41 mm) OP—1.591 in (40.4 mm)	E47BML43 —

Enclosed Switches

E47 Precision Switches—Enclosed

Specifications ^①	Catalog Number	Specifications ^①	Catalog Number
Plunger Actuator	Plunger Actuator	Booted Roller Lever	Booted Roller Lever
	OF max.—8.82–12.3 oz (250–350g) RF min.—4.02 oz (114g) PT max.—0.016 in (0.4 mm) OT max.—0.217 in (5.5 mm) MD max.—0.002 in (0.05 mm) OP—1.504 in (38.2 mm)	E47BLS05	OF max.—22.57 oz (640g) RF min.—8.11 oz (230g) PT max.—0.197 in (5.0 mm) OT max.—0.236 in (6.0 mm) MD max.—0.016 in (0.4 mm)
	E47CLS05 ^{②③}		E47BLS33
Booted Plunger	Booted Plunger	Roller Plunger	Roller Plunger
	OF max.—28.22 oz (800g) RF min.—8.46 oz (240g) PT max.—0.079 in (2.0 mm) OT max.—0.197 in (5.0 mm) MD max.—0.004 in (0.1 mm) OP—1.803 in (45.8 mm)	E47BLS06	OF max.—8.82–12.3 oz (250–350g) RF min.—4.02 oz (114g) PT max.—0.02 in (0.5 mm) OT max.—0.142 in (3.6 mm) MD max.—0.002 in (0.05 mm) OP—1.957 in (49.7 mm)
	E47CLS06 ^{②③}		E47BLS07
Roller Lever	Roller Lever	Booted Roller Plunger	Booted Roller Plunger
	OF max.—20.1 oz (570g) RF min.—6.0 oz (170g) PT max.—0.157 in (4.0 mm) OT max.—0.236 in (6.0 mm) MD max.—0.016 in (0.4 mm)	E47BLS32	OF max.—17.64 oz (500g) RF min.—3.53 oz (100g) PT max.—0.039 in (1.0 mm) OT max.—0.138 in (3.5 mm) MD max.—0.005 in (0.12 mm) OP—1.957 in (49.7 mm)
	E47CLS32 ^{②③}		E47BLS08
			E47BLS12 ^④

Notes

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- ^② Contact Eaton's Sensor Applications Department at 1-800-426-9184 for approval status.
- ^③ 20 ampere version.
- ^④ Cross roller unit.