

Operators



Contents

<i>Description</i>	<i>Page</i>
Operators	
Product Selection	
Roller Type Operators	95
Rod Type Operators	97
Wobble Type Operators	98
Dimensions	98



Drawings
Online

Operators

Product Description

The Operators presented here are used with Eaton’s E50 Plug-In and 6P+ limit switches, as well as our 10316 rotary type limit switches. A wide variety of styles and sizes are available to provide optimum performance for nearly any application.

Features

- Wide variety of operator types for rotary and wobble style limit switches
- Rollers and rods available in metal and nonmetal contact surfaces

Safety Note



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

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

Roller Type Operators

For rotary head switches: E50 Plug-In, E50 6P+, and 10316.

Note: Only operators with Nylatron rods or rollers should be used with explosion-proof limit switches.

Operators—Roller Type

	Roller Type	Minimum Required Return Torque ①	Approximate Dimensions in Inches (mm)						Catalog Number
			A Lever Length ②	B Roller Diameter	C Roller Width	D	E	F	
E50KL200	Standard Roller (Stainless Steel)								
	Metal	0.62 in-oz	0.88 (22.2)	0.75 (19.0)	0.32 (8.1)	0.31 (7.9)	0.20 (5.1)	0.24 (6.1)	E50KL39
	Metal	0.95 in-oz	1.38 (34.9)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)	E50KL40
	Ball bearing	0.77 in-oz	1.50 (38.1)	0.69 (17.5)	0.25 (6.4)	0.34 (8.6)	0.05 (1.3)	0.11 (2.8)	E50KL531
E50KL355	Nylatron	0.53 in-oz	1.50 (38.1)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)	E50KL200
	Metal	1.10 in-oz	1.50 (38.1)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)	E50KL355
	Nylatron	0.96 in-oz	1.50 (38.1)	0.75 (19.0)	1.00 (25.4)	0.34 (8.6)	0.83 (21.1)	0.83 (21.1)	E50KL377
	Without roller	0.32 in-oz	1.50 (38.1)	—	—	0.34 (8.6)	—	—	E50KL32
	Ball bearing	1.10 in-oz	2.00 (50.8)	0.69 (17.5)	0.25 (6.4)	0.34 (8.6)	0.05 (1.3)	0.11 (2.8)	E50KL552
E50KL377	Nylatron	0.71 in-oz	2.00 (50.8)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)	E50KL546
	Metal	1.50 in-oz	2.00 (50.8)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)	E50KL549
	Nylatron	1.45 in-oz	2.00 (50.8)	0.75 (19.0)	1.00 (25.4)	0.34 (8.6)	0.83 (21.1)	0.83 (21.1)	E50KL572
	Ball bearing	1.50 in-oz	2.50 (63.5)	0.69 (17.5)	0.25 (6.4)	0.34 (8.6)	0.05 (1.3)	0.11 (2.8)	E50KL553
	Nylatron	1.00 in-oz	2.50 (63.5)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)	E50KL547
E50KL554	Metal	2.00 in-oz	2.50 (63.5)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)	E50KL550
	Nylatron	1.80 in-oz	2.50 (63.5)	0.75 (19.0)	1.00 (25.4)	0.34 (8.6)	0.83 (21.1)	0.83 (21.1)	E50KL573
	Nylatron	1.40 in-oz	2.50 (63.5)	1.50 (38.1)	0.28 (7.1)	0.34 (8.6)	0.11 (2.8)	0.17 (4.3)	E50KL575
	Ball bearing	1.80 in-oz	3.00 (76.2)	0.69 (17.5)	0.25 (6.4)	0.34 (8.6)	0.05 (1.3)	0.11 (2.8)	E50KL554
	Nylatron	1.30 in-oz	3.00 (76.2)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)	E50KL548
	Metal	2.50 in-oz	3.00 (76.2)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)	E50KL551
	Nylatron	2.30 in-oz	3.00 (76.2)	0.75 (19.0)	1.00 (25.4)	0.34 (8.6)	0.83 (21.1)	0.83 (21.1)	E50KL574
E50KL580	Nylatron	1.80 in-oz	3.00 (76.2)	1.50 (38.1)	0.28 (7.1)	0.34 (8.6)	0.11 (2.8)	0.17 (4.3)	E50KL576
	Roller On Reverse Side (Stainless Steel)								
	Ball bearing	0.77 in-oz	1.50 (38.1)	0.69 (17.5)	0.25 (6.4)	0.34 (8.6)	0.18 (4.6)	0.24 (6.1)	E50KL580
	Nylatron	0.53 in-oz	1.50 (38.1)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.27 (6.9)	0.31 (7.9)	E50KL310
	Metal	1.10 in-oz	1.50 (38.1)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.27 (6.9)	0.31 (7.9)	E50KL579
E50KL24	Nylatron	0.96 in-oz	1.50 (38.1)	1.50 (38.1)	0.28 (7.1)	0.34 (8.6)	0.23 (5.8)	0.31 (7.9)	E50KL536
	Offset Inboard Roller (Stainless Steel)								
	Nylatron	0.65 in-oz	1.50 (38.1)	0.75 (19.0)	0.32 (8.1)	0.03 (0.8)	—	—	E50KL24
	Metal	1.20 in-oz	1.50 (38.1)	0.75 (19.0)	0.32 (8.1)	0.03 (0.8)	—	—	E50KL25
	Ball bearing	0.90 in-oz	1.50 (38.1)	0.69 (17.5)	0.25 (6.4)	0.04 (1.0)	—	—	E50KL26
E50KL27	Offset Outboard Roller (Stainless Steel)								
	Nylatron	0.65 in-oz	1.50 (38.1)	0.75 (19.0)	0.32 (8.1)	0.03 (0.8)	—	—	E50KL27
	Metal	1.20 in-oz	1.50 (38.1)	0.75 (19.0)	0.32 (8.1)	0.03 (0.8)	—	—	E50KL28
	Ball bearing	0.90 in-oz	1.50 (38.1)	0.69 (17.5)	0.25 (6.4)	0.04 (1.0)	—	—	E50KL29
	Nylatron	1.10 in-oz	1.50 (38.1)	0.75 (19.0)	1.00 (25.4)	—	—	—	E50KL30

Dimensions, see [Page 98](#).







Notes

① **Caution:** When selecting lever, the minimum required return torque of lever should not exceed minimum return force available in operating head as given in operating head specifications.

② Length from the operating shaft axis to the roller axis (or to the tip for non-roller operators).

Note: Only operators with Nylatron rods or rollers should be used with explosion-proof limit switches.

Operators—Roller Type, continued

	Roller Type	Minimum Required Return Torque ^①	Catalog Number
E50KL532 	Bantam Lever		
	Metal	0.45 in-oz	E50KL532
E50KL340 	Precision Adjustment		
	Nylatron	0.65 in-oz	E50KL340
	Metal	1.20 in-oz	E50KL465
	Ball bearing	0.90 in-oz	E50KL535
E50KL201 	Adjustable Roller (Stainless Steel)		
	Ball bearing	2.50 in-oz ^②	E50KL539
	Nylatron	1.90 in-oz ^②	E50KL201
			E50KL201SPL ^③
E50KL537 	Metal	3.40 in-oz ^②	E50KL538
	Nylatron	1.90 in-oz ^②	E50KL599
	Nylatron	3.10 in-oz ^②	E50KL537
	Large Nylatron	4.50 in-oz ^②	E50KL598
	Without roller	1.20 in-oz ^②	E50KL31
	Nylatron	2.50 in-oz ^②	E50KL443
E50KL545 	Fork Lever—Both Rollers on One Side		
	Ball bearing	—	E50KL545
	Nylatron	—	E50KL204
	Metal	—	E50KL544
	Nylatron	—	E50KL543
E50KL542 	Fork Lever—One Roller Outside, One Inside		
	Ball bearing	—	E50KL542
	Nylatron	—	E50KL203
	Metal	—	E50KL541
Dimensions, see Page 98.			

Notes

^① **Caution:** When selecting lever, the minimum required return torque of lever should not exceed minimum return force available in operating head as given in operating head specifications.

^② Applies when lever is extended to the maximum dimension.








^③ High-grade stainless steel.

Rod Type Operators

For rotary head switches: E50 Plug-In, E50 6P+, and 10316.

Note: Only operators with Nylatron rods or rollers should be used with explosion-proof limit switches.

Operators—Rod Type

	Rod Type	Minimum Required Return Torque ^①	Catalog Number
Nylon/Metal 	Adjustable Rod		
	Nylon	0.40 in-oz ^②	E50KL399
Metal/Steel 	Metal	0.92 in-oz ^②	E50KL202
	Stainless steel	7.00 in-oz ^②	E50KL220
	Bendable steel	5.00 in-oz ^②	E50KL226
	Clamps for Adjustable Rods (Rod not included)		
	—	—	E50KL35
	—	—	E50KL36
	—	—	E50KL41
Nylon/Steel 	Spring Rod		
	Nylon	3.50 in-oz	E50KL556
	Stainless steel	2.80 in-oz	E50KL421
Nylon Covered Wire 	Adjustable Wire		
Nylon covered wire	1.50 in-oz ^②	E50KL533	
Nylatron 	Adjustable Wide Roller Lever		
Nylatron	4.50 in-oz ^②	E50KL37	
Nylatron 	Nylatron Loop		
Nylatron	0.40 in-oz	E50KL142	
Zinc-Plated Steel 	Zinc-plated steel		
Zinc-plated steel	0.53 in-oz	E50KL33	

Dimensions, see Page 100.

Notes




- ^① **Caution:** When selecting lever, the minimum required return torque of lever should not exceed minimum return force available in operating head as given in operating head specifications.
- ^② Applies when lever is extended to the maximum dimension.

Wobble Type Operators

For E50DW1 and E50DWZ Operator Heads on E50 Plug-In and E50 6P+ Switches.

Note: Only operators with Nylatron rods or rollers should be used with explosion-proof limit switches.

Operators—Wobble Type

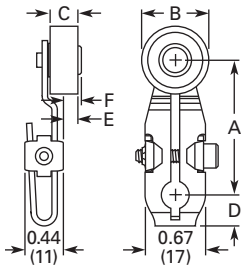
Wobble Type	Catalog Number
E50KW2 	E50KW2
E50KW3 	E50KW3
E50KW4 	E50KW4

Dimensions, see Page 100.

Dimensions

Approximate Dimensions in Inches (mm)

Roller Type Operators



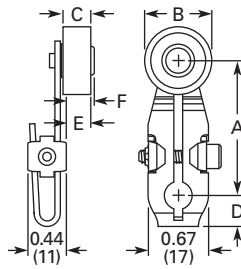
Standard Roller

Catalog Number	A Lever Length ^①	B Roller Diameter	C Roller Width	D	E	F
E50KL39	0.88 (22.2)	0.75 (19.0)	0.32 (8.1)	0.31 (7.9)	0.20 (5.1)	0.24 (6.1)
E50KL40	1.38 (34.9)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)
E50KL531	1.50 (38.1)	0.69 (17.5)	0.25 (6.4)	0.34 (8.6)	0.05 (1.3)	0.11 (2.8)
E50KL200	1.50 (38.1)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)
E50KL355	1.50 (38.1)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)
E50KL377	1.50 (38.1)	0.75 (19.0)	1.00 (25.4)	0.34 (8.6)	0.83 (21.1)	0.83 (21.1)
E50KL32	1.50 (38.1)	—	—	0.34 (8.6)	—	—
E50KL552	2.00 (50.8)	0.69 (17.5)	0.25 (6.4)	0.34 (8.6)	0.05 (1.3)	0.11 (2.8)
E50KL546	2.00 (50.8)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)
E50KL549	2.00 (50.8)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)
E50KL572	2.00 (50.8)	0.75 (19.0)	1.00 (25.4)	0.34 (8.6)	0.83 (21.1)	0.83 (21.1)
E50KL553	2.50 (63.5)	0.69 (17.5)	0.25 (6.4)	0.34 (8.6)	0.05 (1.3)	0.11 (2.8)
E50KL547	2.50 (63.5)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)
E50KL550	2.50 (63.5)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)
E50KL573	2.50 (63.5)	0.75 (19.0)	1.00 (25.4)	0.34 (8.6)	0.83 (21.1)	0.83 (21.1)
E50KL575	2.50 (63.5)	1.50 (38.1)	0.28 (7.1)	0.34 (8.6)	0.11 (2.8)	0.17 (4.3)
E50KL554	3.00 (76.2)	0.69 (17.5)	0.25 (6.4)	0.34 (8.6)	0.05 (1.3)	0.11 (2.8)
E50KL548	3.00 (76.2)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)
E50KL551	3.00 (76.2)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.13 (3.3)	0.17 (4.3)
E50KL574	3.00 (76.2)	0.75 (19.0)	1.00 (25.4)	0.34 (8.6)	0.83 (21.1)	0.83 (21.1)
E50KL576	3.00 (76.2)	1.50 (38.1)	0.28 (7.1)	0.34 (8.6)	0.11 (2.8)	0.17 (4.3)

Note

^① Length from the operating shaft axis to the roller axis (or to the tip for non-roller operators).

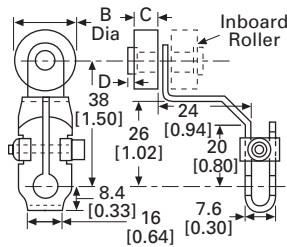
Approximate Dimensions in Inches (mm)



Roller on Reverse Side

Catalog Number	A Lever Length ①	B Roller Diameter	C Roller Width	D	E	F
E50KL580	1.50 (38.1)	0.69 (17.5)	0.25 (6.4)	0.34 (8.6)	0.18 (4.6)	0.24 (6.1)
E50KL310	1.50 (38.1)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.27 (6.9)	0.31 (7.9)
E50KL579	1.50 (38.1)	0.75 (19.0)	0.32 (8.1)	0.34 (8.6)	0.27 (6.9)	0.31 (7.9)
E50KL536	1.50 (38.1)	1.50 (38.1)	0.28 (7.1)	0.34 (8.6)	0.23 (5.8)	0.31 (7.9)

Approximate Dimensions in mm [in]

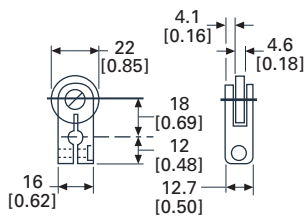


Offset Roller

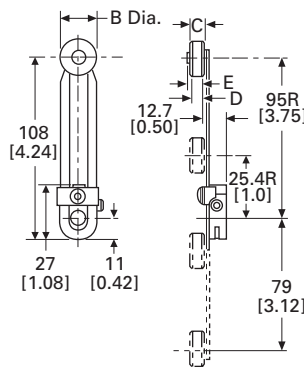
Catalog Number	A Lever Length ①	B Roller Diameter	C Roller Width	D
Inboard				
E50KL24	1.50 (38.1)	0.75 (19.0)	0.32 (8.1)	0.03 (0.8)
E50KL25	1.50 (38.1)	0.75 (19.0)	0.32 (8.1)	0.03 (0.8)
E50KL26	1.50 (38.1)	0.69 (17.5)	0.25 (6.4)	0.04 (1.0)
Outboard				
E50KL27	1.50 (38.1)	0.75 (19.0)	0.32 (8.1)	0.03 (0.8)
E50KL28	1.50 (38.1)	0.75 (19.0)	0.32 (8.1)	0.03 (0.8)
E50KL29	1.50 (38.1)	0.69 (17.5)	0.25 (6.4)	0.04 (1.0)
E50KL30	1.50 (38.1)	0.75 (19.0)	1.00 (25.4)	—

Approximate Dimensions in mm [in]

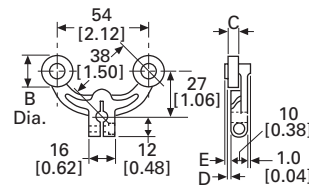
Bantam Lever



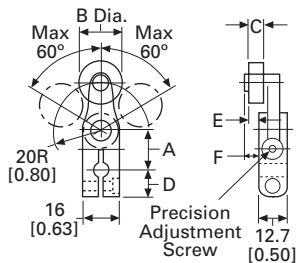
Adjustable Roller ③



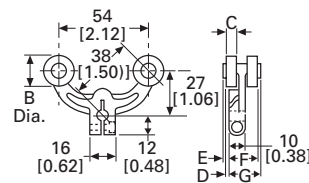
Fork Lever—Both Rollers on One Side



Precision Adjustment ②



Fork Lever—One Roller Outside, One Inside



Notes

- ① Length from the operating shaft axis to the roller axis (or to the tip for non-roller operators).
- ② Maximum length dimension between operating shaft axis to the roller axis for comparison. Precision adjustable to lesser dimensions.
- ③ By reassembling lever, minimum length can be reduced another 12.7 mm (0.5 in).

46.8

Limit Switches

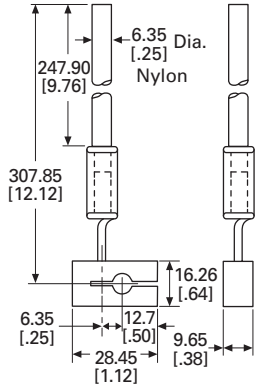
Operators

Approximate Dimensions in Inches [mm]

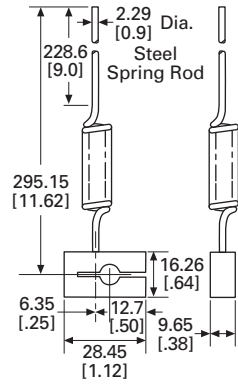
46

Rod Type Operators

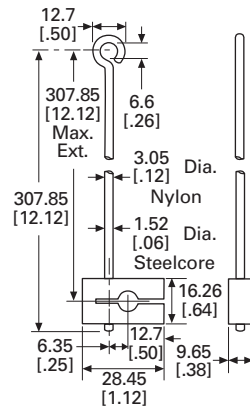
Spring Rod—E50KL556



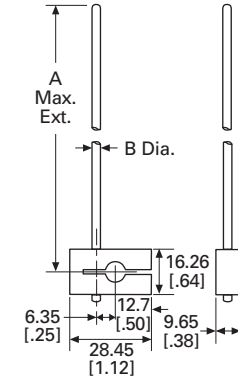
Spring Rod—E50KL421



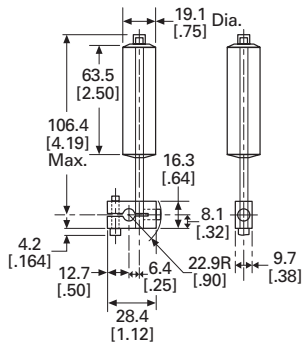
Adjustable Wire



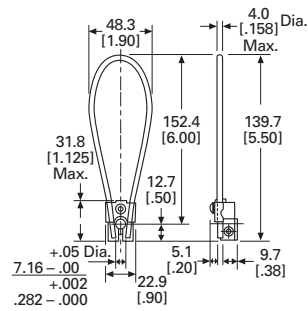
Adjustable Rod



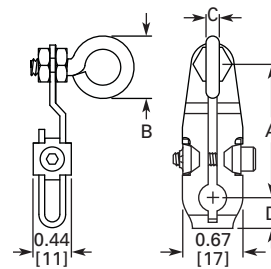
Adjustable Wide Roller Lever



Nylatron Loop—E50KL142

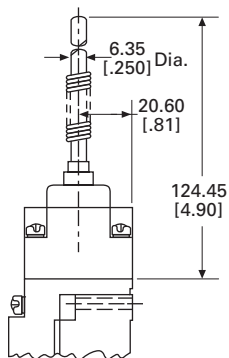


E50KL33

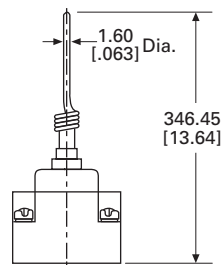


Wobble Type Operators

Nylon Rod



Stainless Steel Rod



Coil Spring

