

AIRPAX®

LEJ & LEJA Series Hydraulic-Magnetic Circuit Breakers



<i>Introduction</i>	• 133
<i>Configurations</i>	• 134
<i>Delay Curves</i>	• 142
<i>Decision Tables</i>	• 143





AIRPAX® | LEJ & LEJA Series

Hydraulic-Magnetic Circuit Breakers

INTRODUCTION

The LEJ/LEJA series circuit breaker meets the evolving demand for the high performance protection of critical data center and telecommunications applications requiring 240VAC per pole, UL 489 listing in the smallest case size currently available in the marketplace. The LEJ/LEJA platform is based on the highly successful and field proven LEG/LEGA designs while incorporating state-of-the-art arc quenching technologies and offering voltage ratings that are well suited for global applications that require 208VAC through 240VAC ratings for increased power efficiency.

Typical applications include power distribution units (PDUs) used in data center enclosures, telecom AC power supplies and a variety of Industrial applications benefiting from the higher power density. Like the LEG/LEGA product family, the LEJ/LEJA series offers a variety of features including different terminations and actuators to meet most any requirements.

FEATURES

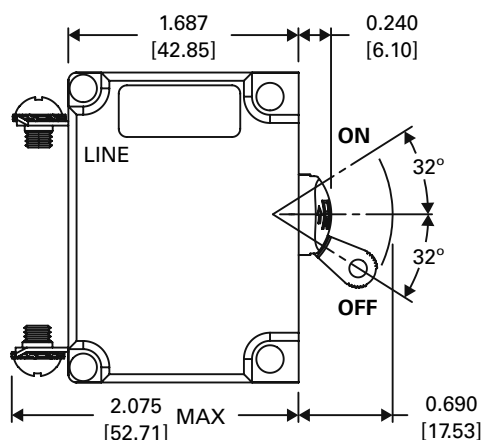
- Up to two poles, 2 amps to 20 amps rated current at 240VAC per pole
- UL 489 listed and TÜV approvals available
- 5000AIC short circuit amperage rating
- Low Depth "A" option provides a 31% lower depth compared to standard LEJ product
- Maintains the high performance characteristics, reliability, panel cut out and mounting dimensions of LEG/LEGA products

SPECIFICATIONS

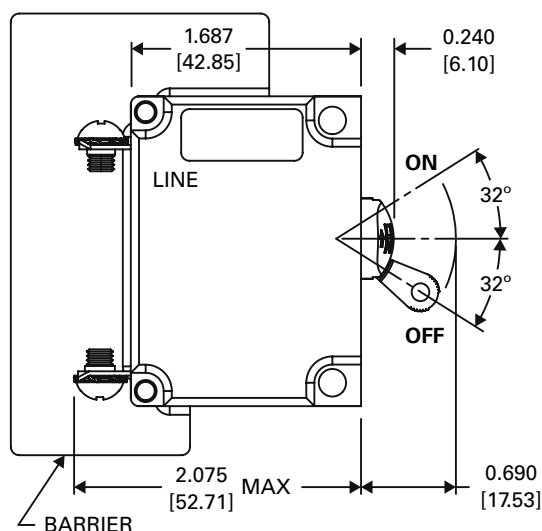
Agency Certification	Rated Amperage	Maximum Voltage	Short Circuit Amperage
UL 489	2 to 20 amps	240 VAC, 50/60 Hz	5000
TÜV (EN60947-2)	2 to 20 amps	240 VAC, 50/60 Hz	5000

CONFIGURATIONS: LEJ TOGGLE HANDLE

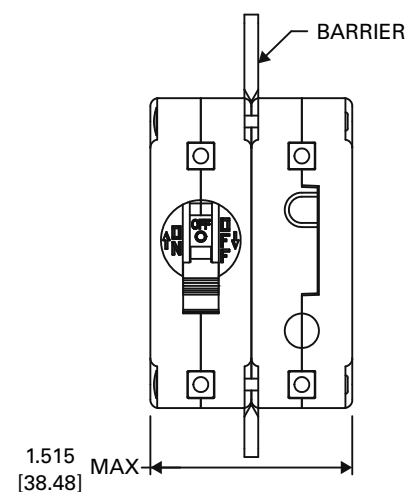
SINGLE POLE



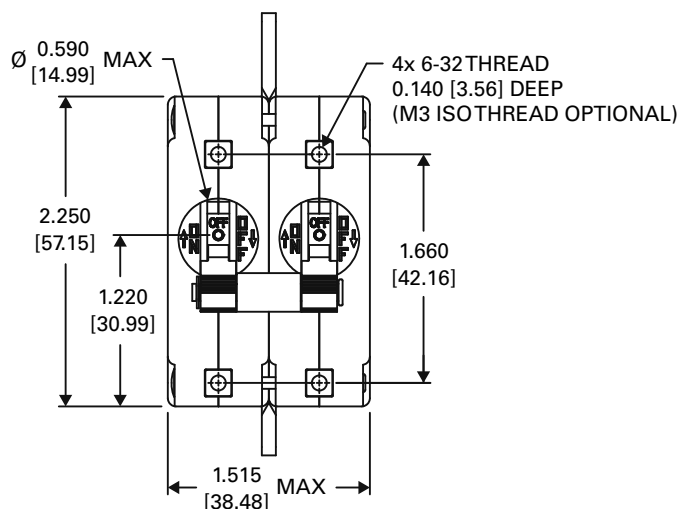
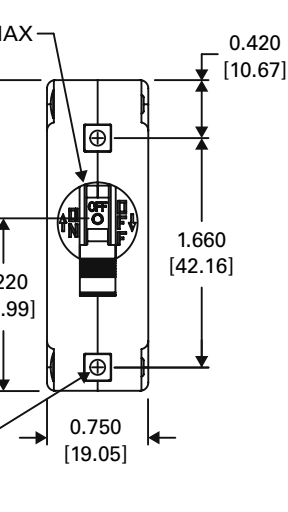
TWO POLE, 2 HANDLE



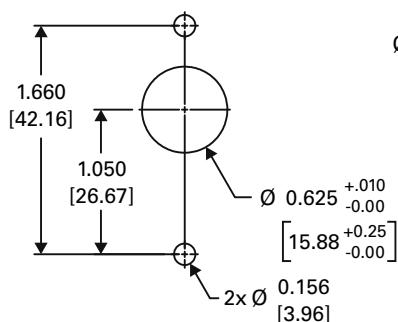
TWO POLE, 1 HANDLE



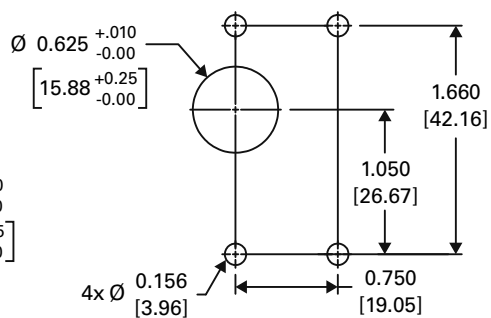
OPTIONAL, HANDLE MAY BE IN POLE 1 INSTEAD OF POLE 2



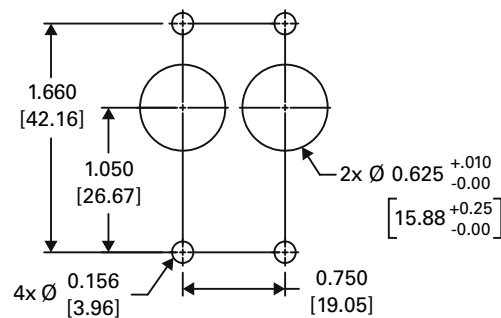
PANEL MOUNT CUTOUT - 1 POLE



PANEL MOUNT CUTOUT - 2 POLE, 1 HANDLE



PANEL MOUNT CUTOUT - 2 POLE, 2 HANDLE

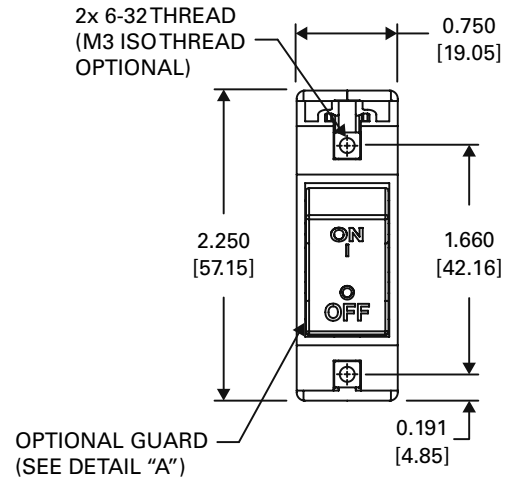
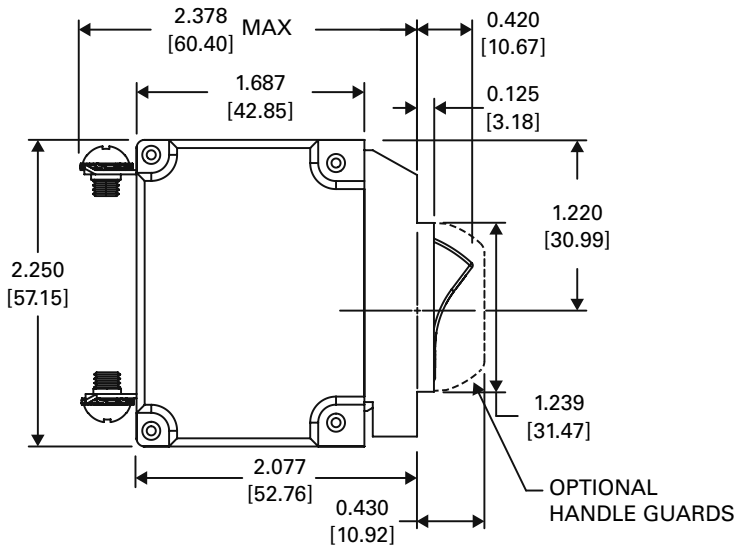


NOTES:

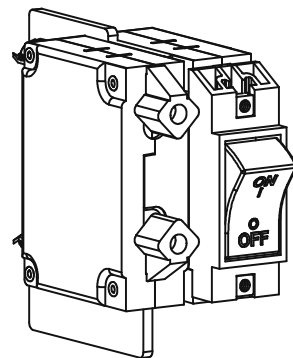
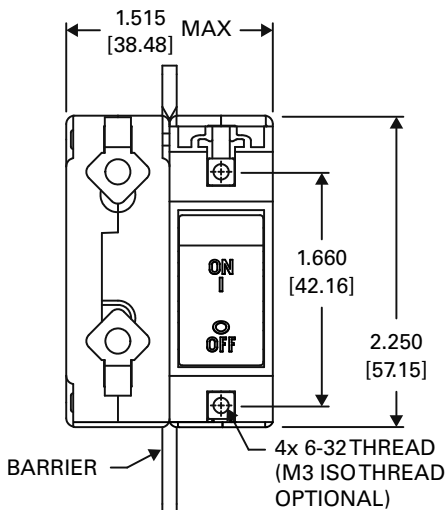
1. All mounting inserts shall be utilized when panel mounting circuit breakers. Panel mounting screws shall have recommended torque applied: 6/32 mounting inserts 6 - 8 inch pounds. M3 mounting inserts 4 - 5 inch pounds.
2. Panel mounting screws shall not extend beyond back of mounting panel more than specified mounting insert depth.
3. Mounting detail tolerance: ± 0.005 [0.13] unless noted.

CONFIGURATIONS: LEJZX ROCKER HANDLE

SINGLE POLE

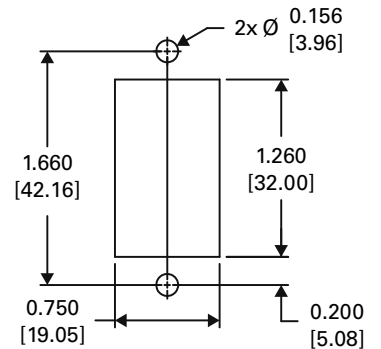


TWO POLE



OPTIONAL, HANDLE MAY BE IN POLE 2 INSTEAD OF POLE 1

PANEL MOUNT CUTOUT - 1 or 2 POLE

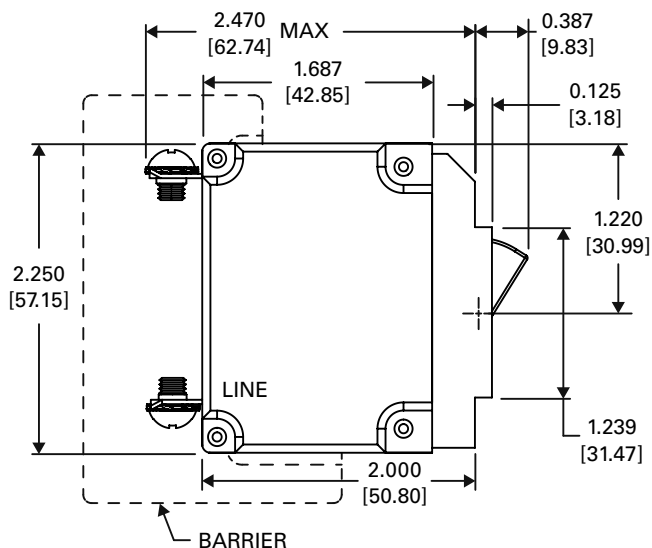


NOTES:

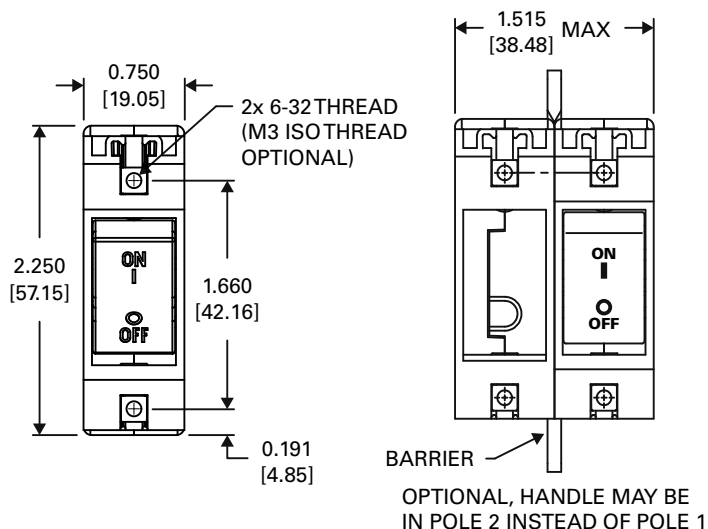
1. All mounting inserts shall be utilized when panel mounting circuit breakers. Panel mounting screws shall have recommended torque applied: 6/32 mounting inserts 6 - 8 inch pounds. M3 mounting inserts 4 - 5 inch pounds.
2. Panel mounting screws shall not extend beyond back of mounting panel more than specified mounting insert depth.
3. Mounting detail tolerance: ± 0.005 [0.13] unless noted.
4. Two pole ZX has standoffs (as shown). It uses 2 panel screws. A higher shock capability (4 panel screws) is available (consult factory).

CONFIGURATIONS: LEJBX ROCKER HANDLE

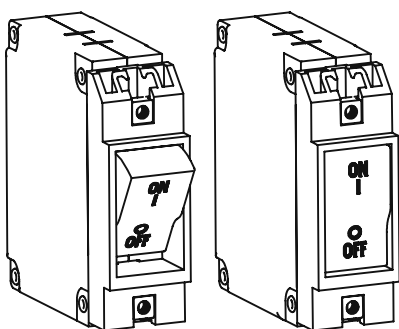
SINGLE POLE



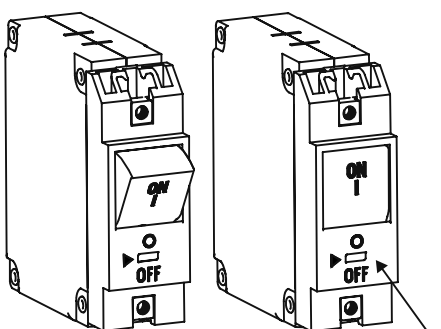
TWO POLE



BX HANDLE WITHOUT GUARD

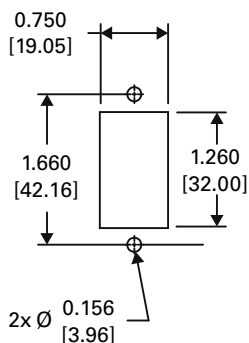


GUARD (LIMITED ACCESS ACTUATE-OFF)

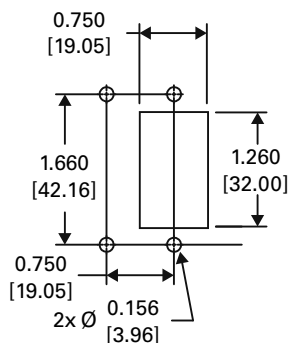


ACCESS TO ACTUATE OFF IS LIMITED
TO A DEVICE SMALLER THAN
0.069 [1.75] x 0.155 [3.94]

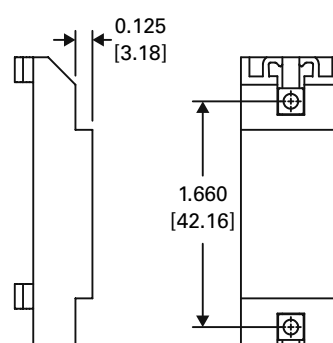
PANEL MOUNT CUTOUT (1 POLE)



PANEL MOUNT CUTOUT (2 POLE)

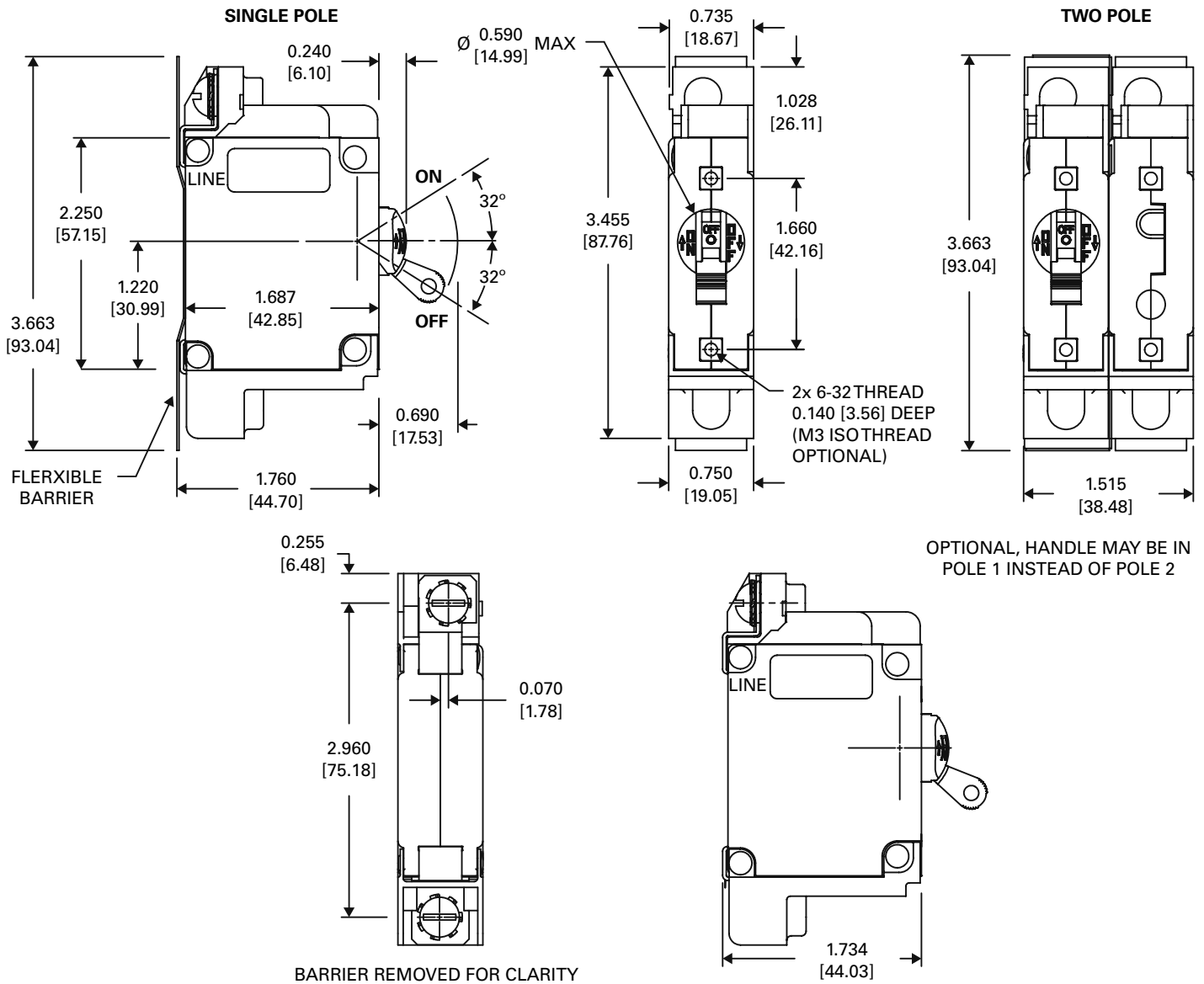


PANEL PLUG (CONSULT FACTORY FOR AVAILABILITY)

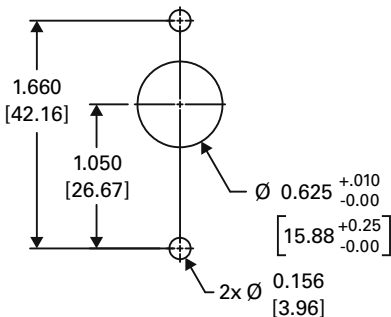


- P/N: 121-710-2450
6-32 THD. (BLACK)
- P/N: 121-710-2451
M3 THD. (BLACK)
- P/N: 121-450-3000
6-32 THD. (BLACK)
- P/N: 121-450-3001
M3 THD. (BLACK)

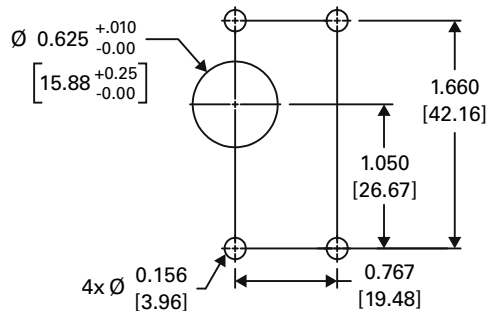
CONFIGURATIONS: LEJA, TOGGLE HANDLE



PANEL MOUNT CUTOUT - 1 POLE



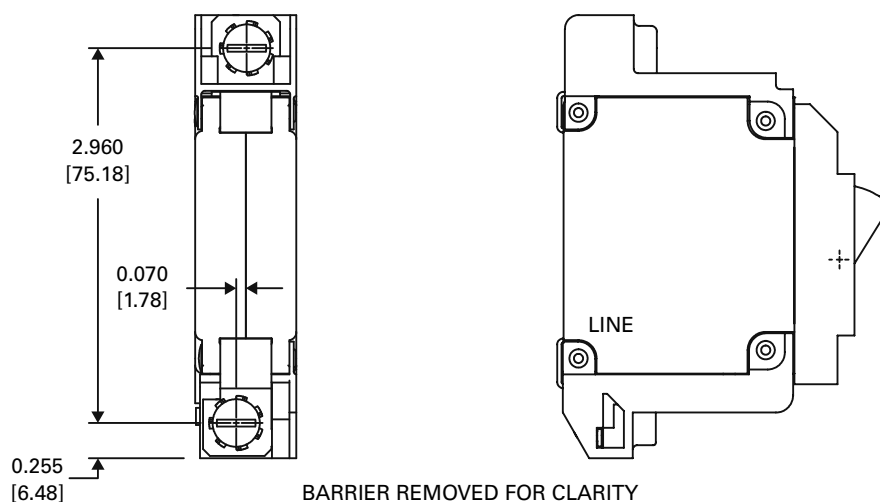
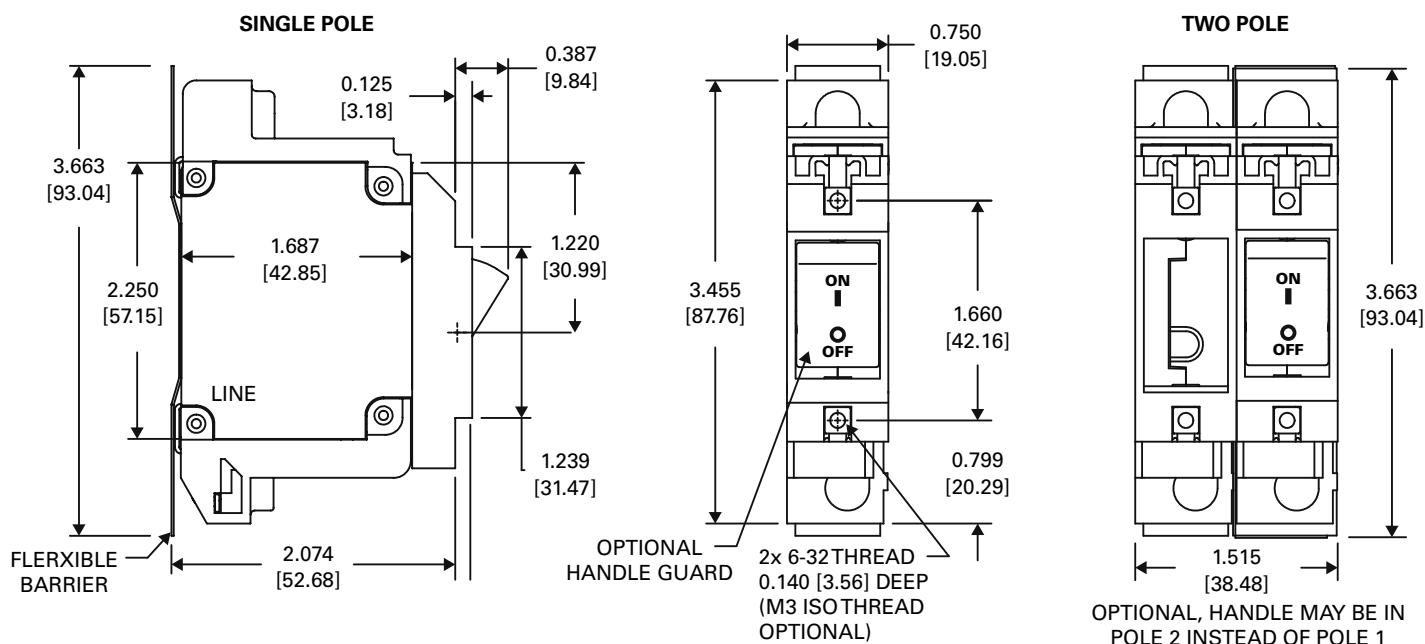
PANEL MOUNT CUTOUT - 2 POLE, 1 HANDLE



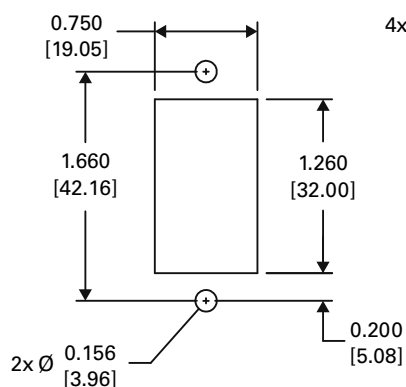
NOTES:

1. All mounting inserts shall be utilized when panel mounting circuit breakers. Panel mounting screws shall have recommended torque applied: 6/32 mounting inserts 6 - 8 inch pounds. M3 mounting inserts 4 - 5 inch pounds. Panel mounting screws shall not extend beyond back of mounting panel more than specified mounting insert depth.
2. Mounting detail tolerance: ± 0.005 [0.13] unless noted.
- 3.

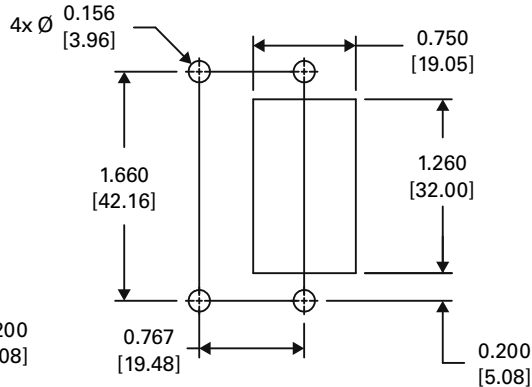
CONFIGURATIONS: LEJXA ROCKER HANDLE



PANEL MOUNT CUTOUT - 1 POLE



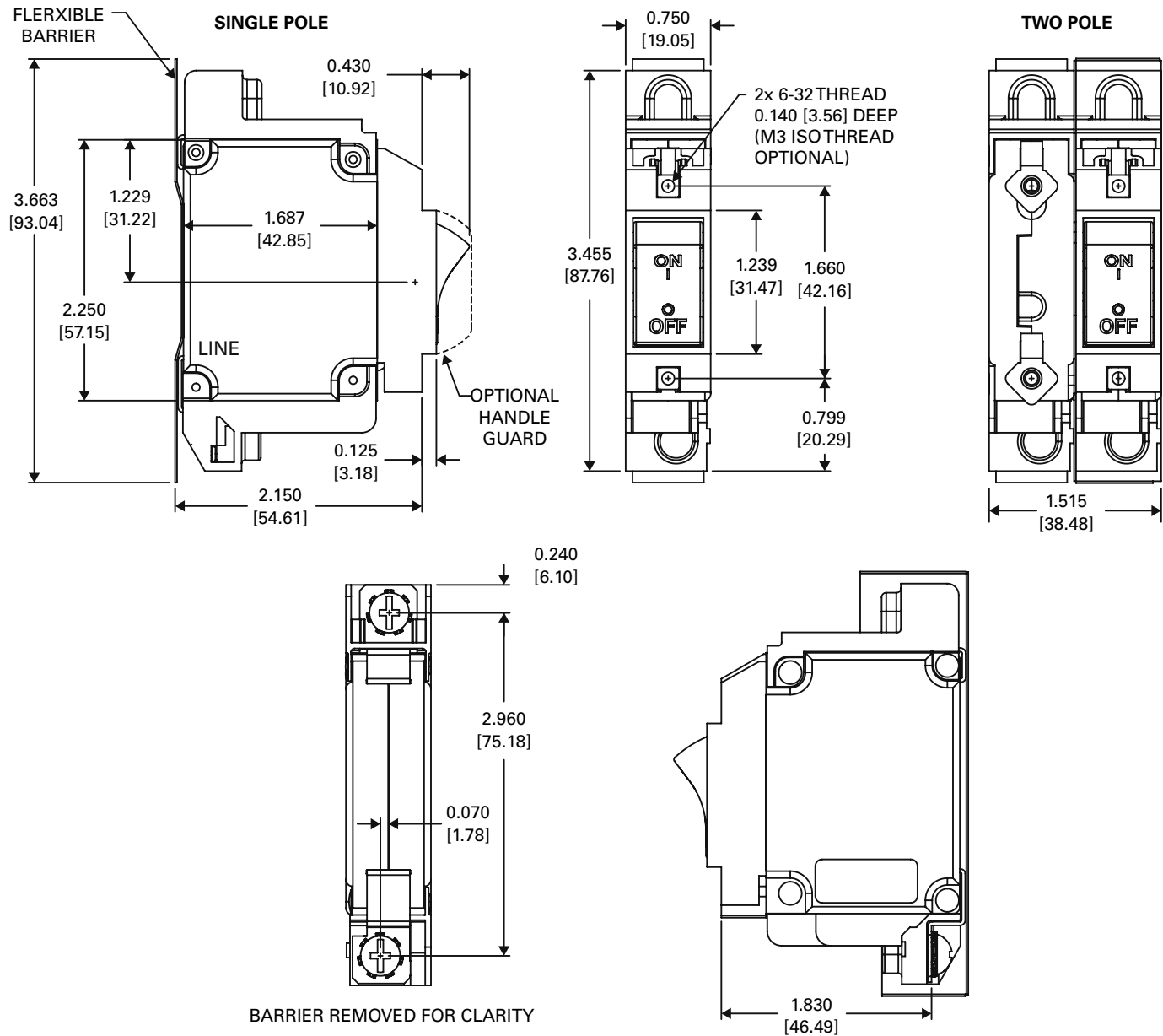
PANEL MOUNT CUTOUT - 2 POLE



NOTES:

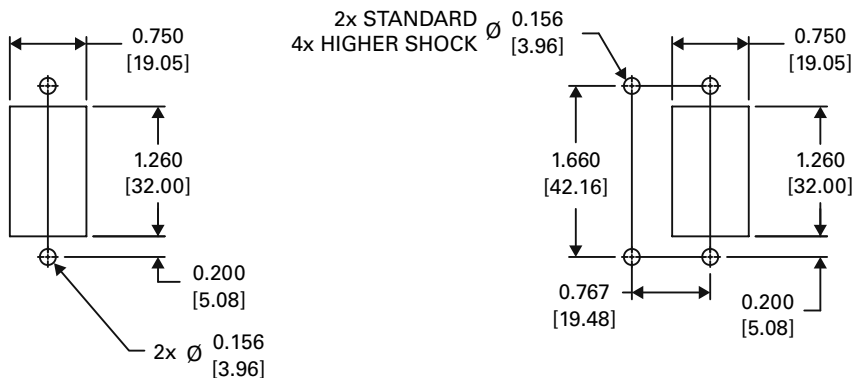
1. All mounting inserts shall be utilized when panel mounting circuit breakers. Panel mounting screws shall have recommended torque applied: 6/32 mounting inserts 6 - 8 inch pounds. M3 mounting inserts 4 - 5 inch pounds. Panel mounting screws shall not extend beyond back of mounting panel more than specified mounting insert depth.
2. Mounting detail tolerance: ± 0.005 [0.13] unless noted.
- 3.

CONFIGURATIONS: LEJZXA, ROCKER HANDLE



PANEL MOUNT CUTOUT - 1 POLE

PANEL MOUNT CUTOUT - 2 POLE

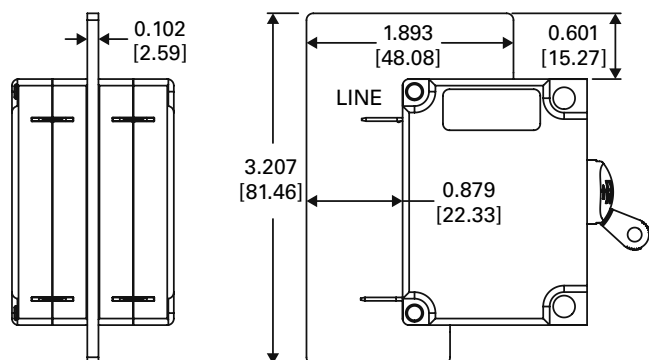


NOTES:

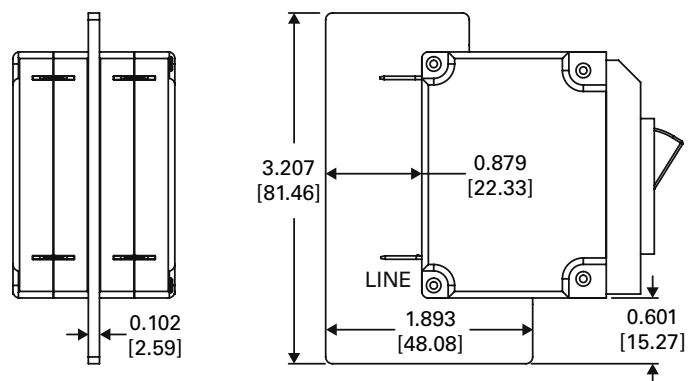
1. All mounting inserts shall be utilized when panel mounting circuit breakers. Panel mounting screws shall have recommended torque applied: 6/32 mounting inserts 6 - 8 inch pounds. M3 mounting inserts 4 - 5 inch pounds. Panel mounting screws shall not extend beyond back of mounting panel more than specified mounting insert depth.
2. Mounting detail tolerance: ± 0.005 [0.13] unless noted.
- 3.

BARRIER OPTIONS FOR MULTI-POLE UNITS

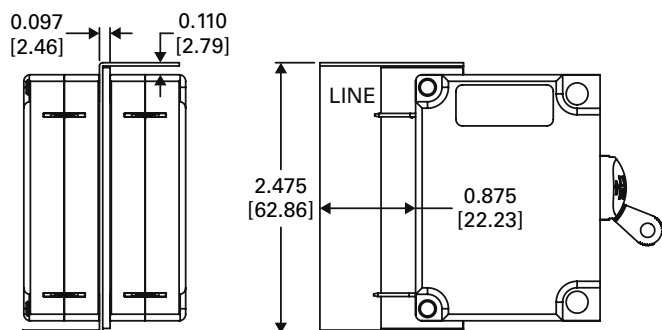
STANDARD BARRIER - TOGGLE HANDLE



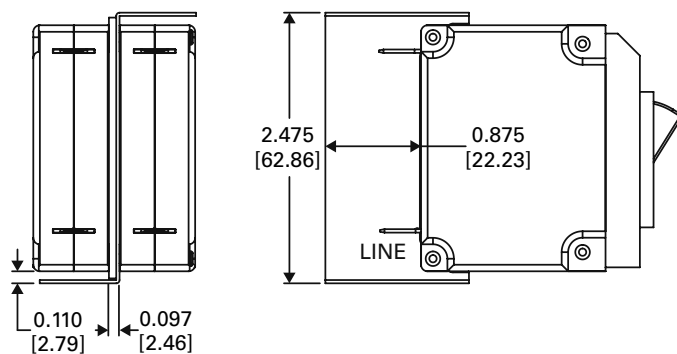
STANDARD BARRIER - ZX & BX HANDLE



OPTIONAL (-Z) BARRIER - TOGGLE HANDLE

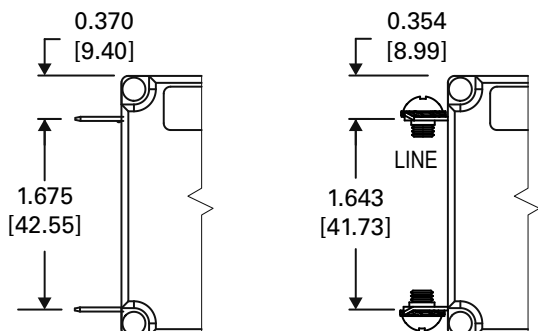


OPTIONAL (-Z) BARRIER - ZX & BX HANDLE

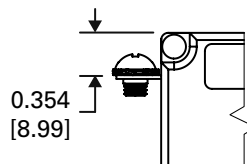


TERMINAL OPTIONS

STANDARD - QUICK CONNECT & SCREW TERMINALS



OPTIONAL - FLAT BUS CONNECT SCREW TERMINAL



NOTES:

1. Terminals:

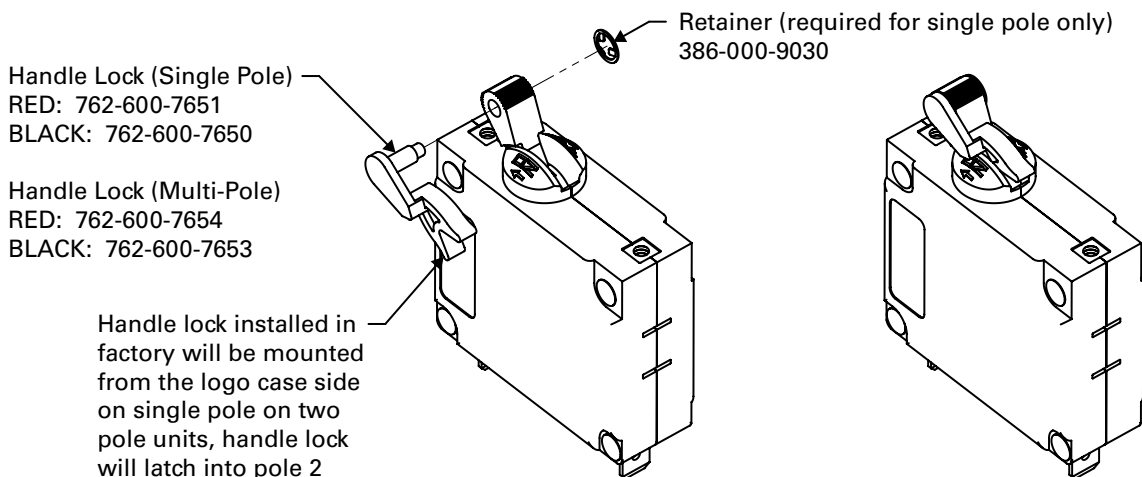
Quick Connect = 0.250 [6.35] wide x 0.031 [0.79] thick

Screw = 10-32 or M5 x 0.8

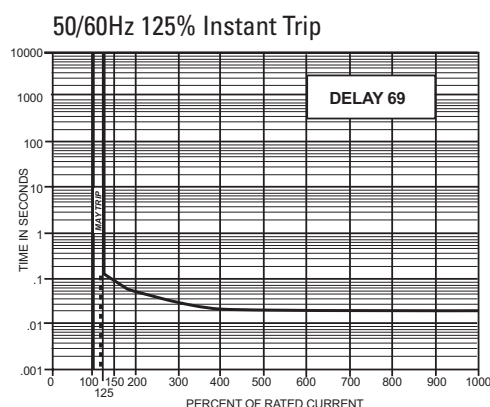
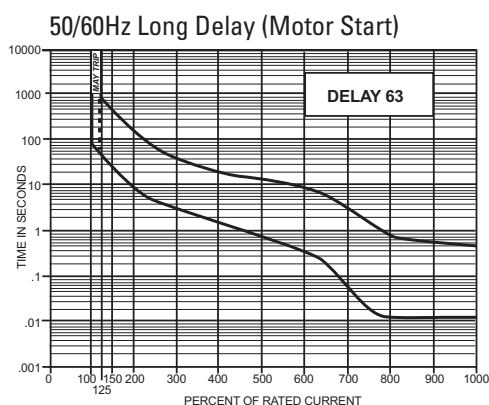
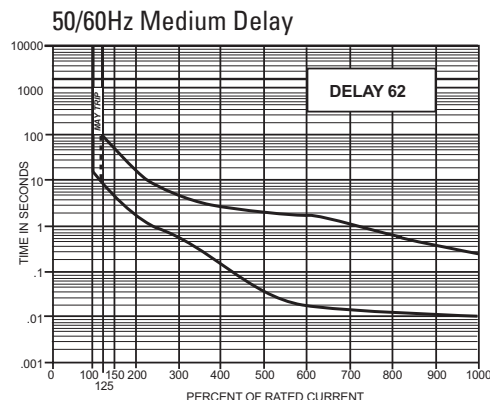
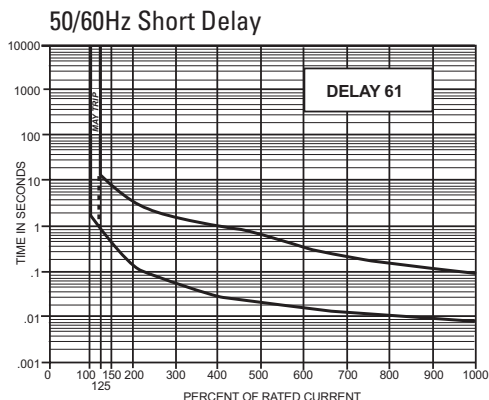
TÜV approval with screw terminals include external tooth lockwashers

OPTIONAL HANDLE LOCK FOR TOGGLE HANDLE

A handle lock option is available to prevent accidental actuation of the handle. The handle lock may be used in the ON or OFF position. This option is available pre-assembled or separately. Consult factory for ordering information.



DELAY CURVES



PERCENTAGE OF RATED CURRENT VS TRIP TIME IN SECONDS

Delay	100%	125%	150%	200%	400%	600%	800%	1000%
61	No Trip	.700 to 12	.35 to 7.0	.130 to 3.0	.030 to 1	.015 to .3	.01 to .15	.008 to .1
62	No Trip	10 to 120	6 to 60	2 to 20	.2 to 3.0	.015 to 2	.015 to .8	.01 to .25
63	No Trip	50 to 700	30 to 400	10 to 150	1.5 to 20	.015 to 10	.013 to .85	.013 to .5
69	No Trip	0.120 max	0.100 max	0.050 max	0.022 max	0.017 max	0.017 max	0.017 max

INRUSH PULSE TOLERANCE

Delay	Pulse Tolerance
61, 62, 63	10 times rated current (approx)

The table above provides a comparison of inrush pulse tolerance for each of the 50/60Hz delays. Pulse tolerance is defined as a single pulse of half sine wave peak current amplitude of 8 milliseconds duration that will not trip the circuit breaker. Consult Sensata Technologies for further assistance.

TYPICAL RESISTANCE / IMPEDANCE

Current Ratings (Amps)	Impedance	DCR and Impedance based on 100% rated current applied and stabilized for a minimum of one hour. Tolerance .05-2.5 amperes $\pm 20\%$; 2.6-20 amperes $\pm 25\%$. Consult factory for special values and for coil impedance of delays not shown.
	AC, 50/60Hz (ohms)	
	61, 62, 63, 69	
2.00	0.29	
5.00	0.051	
10.0	0.016	
20.0	0.006	

DECISION TABLES

1. Type & Handle			
Step 1a		Step 1b (optional)	
Step 1c (optional)			
LEJ	One Handle per Unit, UL 489 Listed, CSA, TÜV*		Standard toggle & mounting (no entry, proceed to step 1c)
LEJH	One Handle per Pole, UL 489 Listed, CSA, TÜV*	BX	BX flat rocker with integral mounting
		ZX	ZX rocker with integral mounting
LUJ	One Handle per Unit, UL 489 Listed	* TÜV approval (EN60947-2) requires "T" added to end of part number "ZX" & "BX" versions are single handle construction only. 2-pole units handle may be located on either pole, other than standard handle locations shown. Units must be ordered as non descript part numbers.	
LUJH	One Handle per Pole, UL 489 Listed		

2. Poles & Terminals	
1	Single Pole, Quick Connect Terminals
11	Two Poles, Quick Connect Terminals
6	Single Pole, Screw Terminals
66	Two Poles, Screw Terminals

3. Internal Configuration	
1	Series

4. Frequency & Delay	
61	50/60Hz Short Delay
62	50/60Hz Medium Delay
63	50/60Hz Long Delay (Motor Start)
69	50/60Hz 125% Instant Trip

5. Rated Current	
Use three numbers in build (2.00 or 15.0 or 20.0) Required value between 2.00 amps minimum and 20.0 amps maximum, full integers only (specials available upon request)	

6. Additional Options	
	Standard hardware, no options required
A	Metric thread mounting inserts and terminal hardware
G	Handle guard w/ limited access (available for ZX & BX versions only)
M	Handle in opposite pole (2-pole only)
Z	Optional "Z" barrier (not available on "A" low depth)

8. Approvals	
T	TÜV approved Certified to EN60947-2 Includes the CE mark

LEJBXA 66-1-62-20.0-AG-M6-T

7. Handle Colors, Indicators & Markings

Toggle Handle

Unmarked	Marked ON - OFF I - O	Handle Color	Unmarked	Marked ON - OFF I - O	Handle Color	Unmarked	Marked ON - OFF I - O	Handle Color	Unmarked	Marked ON - OFF I - O	Handle Color
- 00	- 01	Black	- 10	- 11	Yellow	- 20	- 21	Red	- 30	- 31	Blue
- 40	- 41	Green	- 60	- 61	Orange	- 90	- 91	White			

ZX Rocker Handle (Two-Color Rocker, Marking Detail "A")

Vertical Mount ON - OFF (fig 1)	Vertical Mount I - O (fig 2)	Vertical Mount ON - OFF I - O (fig 3)	Horizontal Mount ON - OFF (fig 4)	Horizontal Mount I - O (fig 5)	Horizontal Mount ON - OFF I - O (fig 6)	Handle Color	Indicating Color	Marking Color	Indicates
- F1	- F2	- F3	- F4	- F5	- F6	Black	White	White	OFF
- G1	- G2	- G3	- G4	- G5	- G6	Black	Red	White	OFF

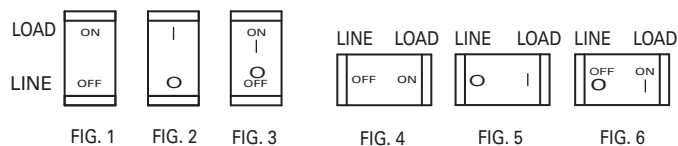
BX Rocker Handle (Two-Color Rocker, Marking Detail "A")

Vertical Mount ON - OFF (fig 1)	Vertical Mount I - O (fig 2)	Vertical Mount ON - OFF I - O (fig 3)	Horizontal Mount ON - OFF (fig 4)	Horizontal Mount I - O (fig 5)	Horizontal Mount ON - OFF I - O (fig 6)	Handle Color	Indicating Color	Marking Color	Indicates
—	- M2	- M3	—	—	- M6	Black	White	White	OFF
—	- N2	- N3	—	—	- N6	Black	Red	Red	OFF

For BX: Bezel of BX is black. BX markings are same color as indicating color. Consult factory for other marking options.

For ZX: Black, red, blue and green handles have white marking. White, yellow and orange handles have black marking.

Note, these are just a few of the options/orientations/colors available, please consult the factory for additional information.



MARKING DETAIL "A"

NOTE: "ON" actuates towards the "up" and "right" direction

