

LEJ & LEJA Series

Hydraulic-Magnetic Circuit Breakers



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INTRODUCTION

The LEJ/LEJA series circuit breaker meets the evolving demand for the high performance protection of critical data center and telecommunications applications requiring up to 277VAC 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 277VAC 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
- Up to 10,000AIC 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 per Pole	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
UL489	2 to 20 amps	240 VAC, 50/60 Hz	10000
UL489	2 to 20 amps	277 VAC, 50/60 Hz	10000

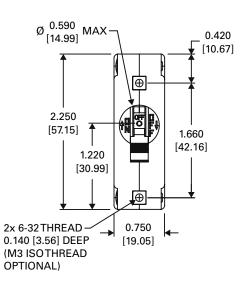
CONFIGURATIONS: LEJ TOGGLE HANDLE

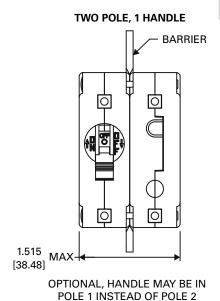
SINGLE POLE 1.687 0.240 [42.85] [6.10] ON LINE OFF

2.075

[52.71]

MAX

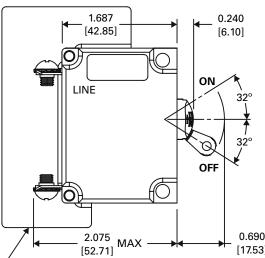


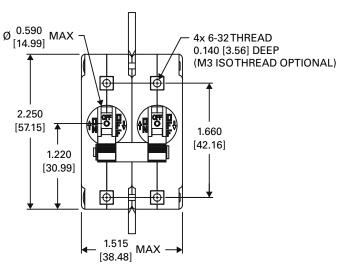


TWO POLE, 2 HANDLE

0.690

[17.53]



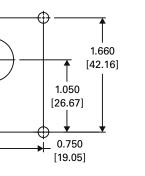


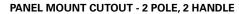
PANEL MOUNT CUTOUT - 1 POLE

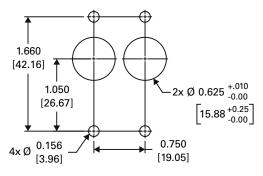
∠ BARRIER

PANEL MOUNT CUTOUT - 2 POLE, 1 HANDLE

[17.53]







NOTES:

1.660

[42.16]

1.050

[26.67]

- 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. 1.
- Panel mounting screws shall not extend beyond back of mounting panel more than specified mounting insert depth.

Ø 0.625 $^{+.010}_{-0.00}$ 15.88 ^{+0.25}_{-0.00}

Mounting detail tolerance: ± 0.005 [0.13] unless noted. 3.

2x Ø 0.156

[3.96]

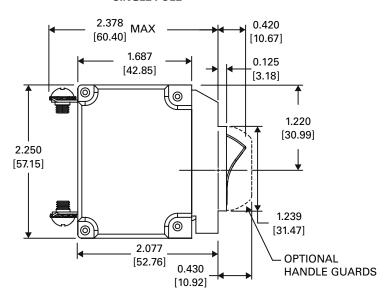
Ø 0.625 ^{+.010}_{-0.00}

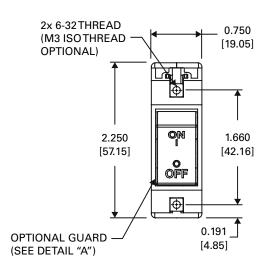
15.88 ^{+0.25}_{-0.00}



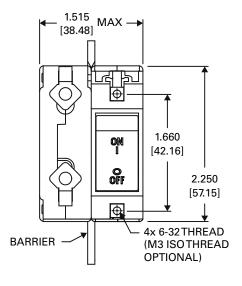
CONFIGURATIONS: LEJZX ROCKER HANDLE

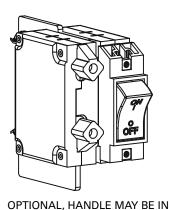
SINGLE POLE



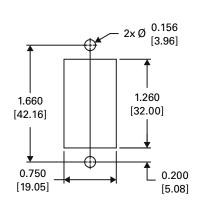


TWO POLE





POLE 2 INSTEAD OF POLE 1



PANEL MOUNT CUTOUT - 1 or 2 POLE

NOTES:

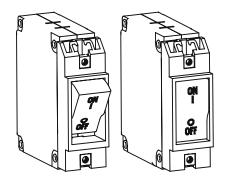
- All mounting inserts shall be utilized when panel mounting circuit breakers. Panel mounting screws shall have recommended torque applied: 6/32 mounting inserts 6 - 8 inch pounds. M3 mounting inserts 4 - 5 inch pounds.
- 2. Panel mounting screws shall not extend beyond back of mounting panel more than 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).

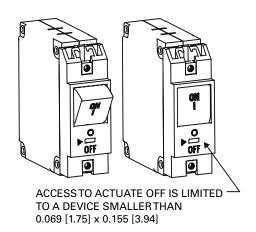
CONFIGURATIONS: LEJBX ROCKER HANDLE

SINGLE POLE TWO POLE 2.470 0.387 MAX 1.515 MAX → [62.74] [9.83] [38.48] 1.687 0.125 0.750 [42.85] [3.18] [19.05] 2x 6-32THREAD (M3 ISOTHREAD (⊚ OPTIONAL) Φ Φł \oplus 1.220 [30.99] 2.250 ON 2.250 [57.15] 1.660 [57.15] [42.16] OFF LINE \oplus \oplus (@ 1.239 \oplus [31.47] 2.000 0.191 **BARRIER** [4.85] [50.80] OPTIONAL, HANDLE MAY BE **BARRIER** IN POLE 2 INSTEAD OF POLE 1

BX HANDLE WITHOUT GUARD





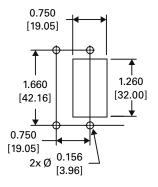


PANEL MOUNT CUTOUT (1 POLE)

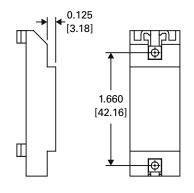
0.750 [19.05] 1.660 [42.16] 1.260 [32.00]

1.660 [42.16] 1.260 [32.00] 2x Ø 0.156 [3.96]

PANEL MOUNT CUTOUT (2 POLE)



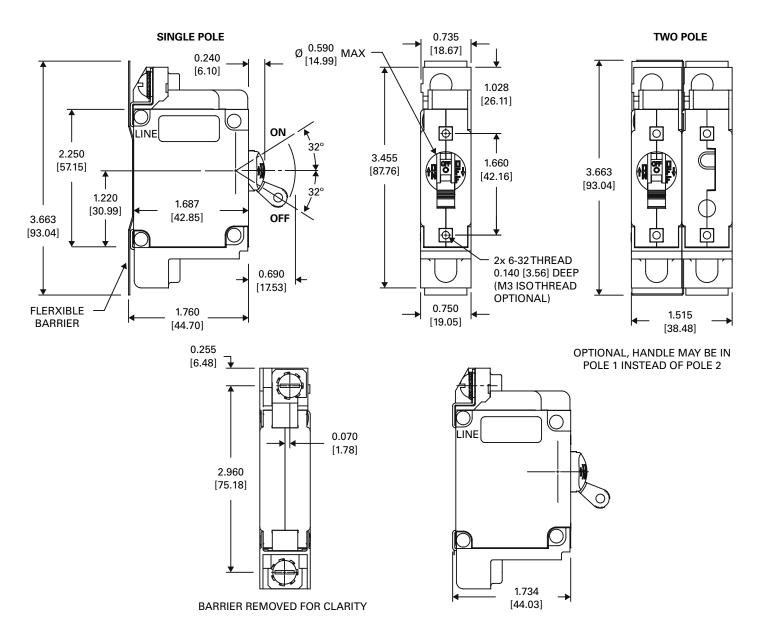
PANEL PLUG (CONSULT FACTORY FOR AVAILABILITY)



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)



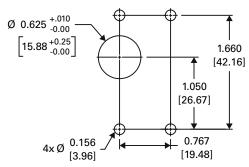
CONFIGURATIONS: LEJA, TOGGLE HANDLE



PANEL MOUNT CUTOUT - 1 POLE

0.650 [42.16] 1.050 [26.67] Ø 0.625 +.010 -0.00 [15.88 +0.25] 2x Ø 0.156 [3.96]

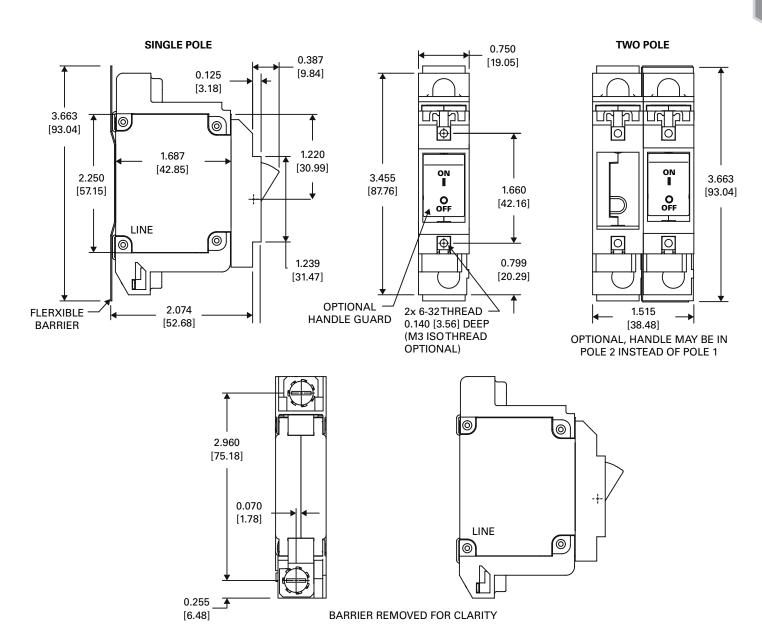
PANEL MOUNT CUTOUT - 2 POLE, 1 HANDLE



NOTES:

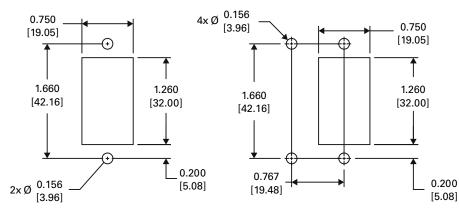
- All mounting inserts shall be utilized when panel mounting circuit breakers. Panel mounting screws shall have recommended torque applied: 6/32 mounting inserts 6 - 8 inch pounds. M3 mounting inserts 4 - 5 inch pounds.
- Panel mounting screws shall not extend beyond back of mounting panel more than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

CONFIGURATIONS: LEJBXA ROCKER HANDLE



PANEL MOUNT CUTOUT - 1 POLE

PANEL MOUNT CUTOUT - 2 POLE



NOTES:

2.

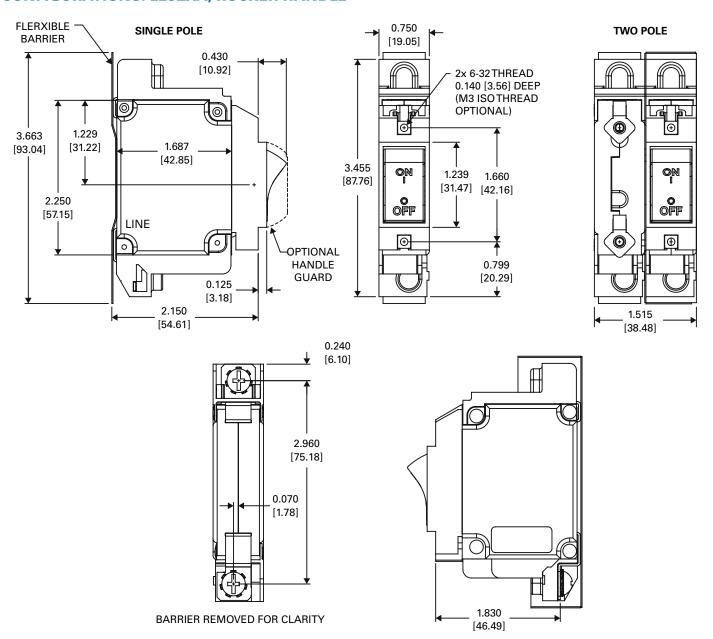
- All mounting inserts shall be utilized when panel mounting circuit breakers. Panel mounting screws shall have recommended torque applied: 6/32 mounting inserts 6 8 inch pounds.
- M3 mounting inserts 4 5 inch pounds.

 M3 mounting inserts 4 5 inch pounds.

 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.

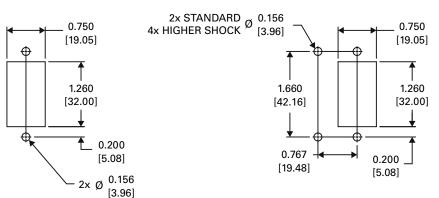


CONFIGURATIONS: LEJZXA, ROCKER HANDLE



PANEL MOUNT CUTOUT - 1 POLE

PANEL MOUNT CUTOUT - 2 POLE



NOTES:

- 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 po
- Panel mounting screws shall not extend beyond back of mounting panel more than specified mounting insert depth.
- Mounting detail tolerance:
 ± 0.005 [0.13] unless noted.

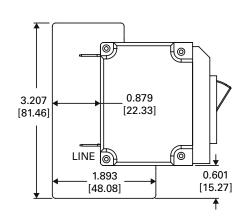
BARRIER OPTIONS FOR MULTI-POLE UNITS

STANDARD BARRIER - TOGGLE HANDLE

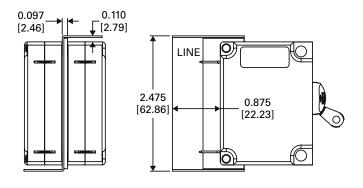
0.102 [2.59] 1.893 0.601 [48.08] [15.27] LINE 0.879 [22.33] [22.33]

STANDARD BARRIER - ZX & BX HANDLE

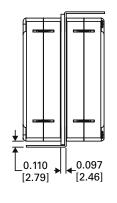


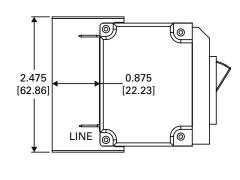


OPTIONAL (-Z) BARRIER - TOGGLE HANDLE



OPTIONAL (-Z) BARRIER - ZX & BX HANDLE

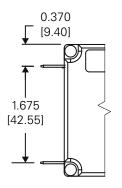


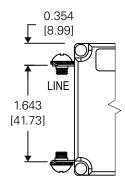




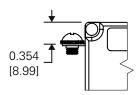
TERMINAL OPTIONS

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

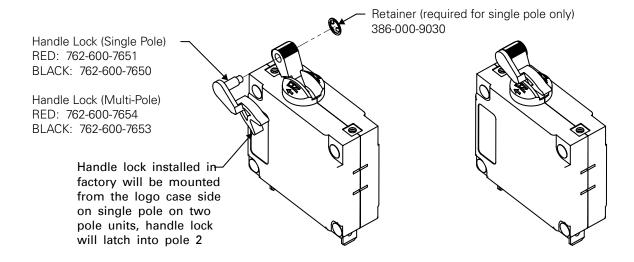
Screw = $10-32 \text{ or M5} \times 0.8$

TÜV approval with screw terminals include external tooth lockwashers

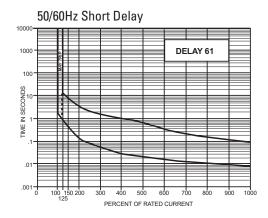
2. 10000 AIC available only with screw terminals

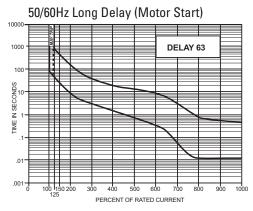
OPTIONAL HANDLE LOCK FOR TOGGLE HANDLE

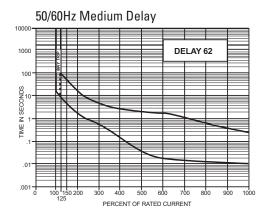
A handle lock option is available to prevent accidental actuation of the handle. The handle lock may be used in the ON or OFF position. This option is available pre-assembled or seperately. Consult factory for ordering information.

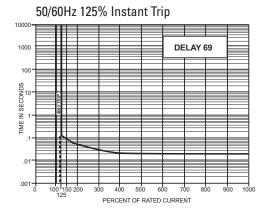


DELAY CURVES









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.

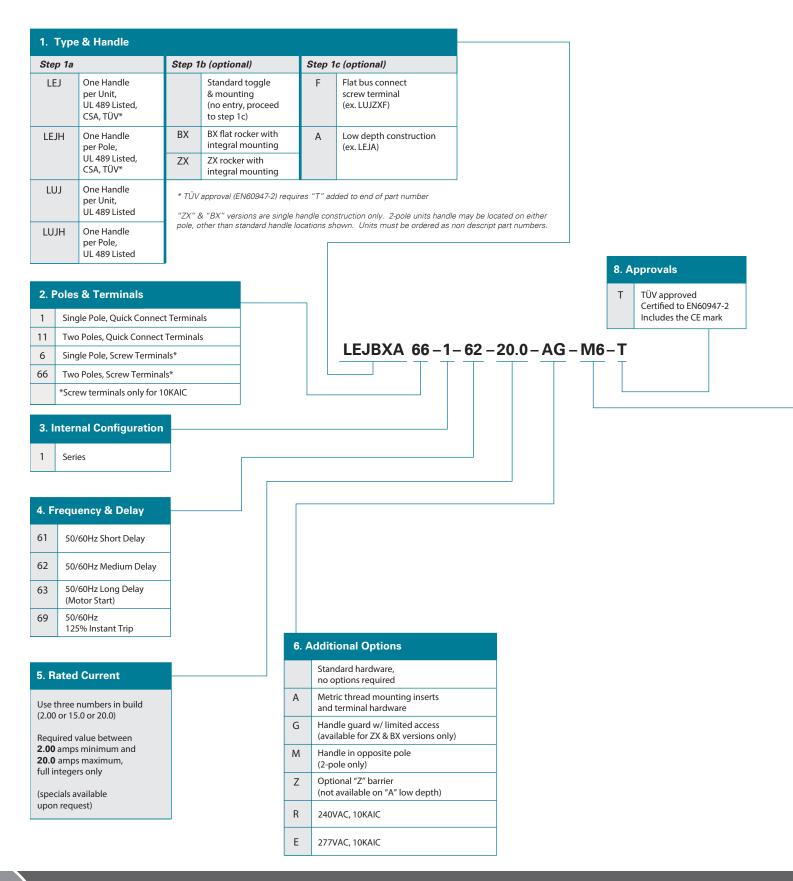
TYPICAL RESISTANCE / IMPEDANCE

Current	Impedance	DCR and I
Ratings	AC, 50/60Hz (ohms)	
(Amps)	61, 62, 63, 69	100% rate stabilized
2.00	0.29	hour. Tole
5.00	0.051	Consult fa
10.0	0.016	values an of delays
20.0	0.006	

DCR and Impedance based on 100% rated current applied and stabilized for a minimum of one hour. Tolerance .05-2.5 amperes ± 20%: 2.6 -20 amperes ± 25%. Consult factory for special values and for coil impedance of delays not shown.



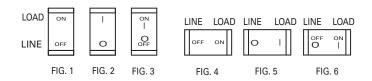
DECISION TABLES



7. Handle	Colors, Inc	licators &	Markings								
Toggle Hai	ndle										
Unmarked	Marked ON - OFF I - O	Handle Color	Unmarked	Marked ON - OFF I - O	Handle Color	Unmarke	d 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	o-Color Roci	ker, Marking Det	tail "A")							
Vertical Mou ON - OFF (fig 1)		cal Mount I - O fig 2)	Vertical Mount ON - OFF I - O (fig 3)	Horizontal Moun ON - OFF (fig 4)	1-	tal Mount - O g 5)	Horizontal Mount ON - OFF I - O (fig 6)	Handle Color	Indicating Color	Marking Color	Indicates
- F1	-	F2	- F3	- F4	- 1	F5	- F 6	Black	White	White	OFF
- G1	-	G2	- G 3	- G4	- (G5	- G 6	Black	Red	White	OFF
BX Rocker	Handle (Two	o-Color Roci	ker, Marking De	tail "A")							
Vertical Mou ON - OFF (fig 1)		cal Mount I - O fig 2)	Vertical Mount ON - OFF I - O (fig 3)	Horizontal Moun ON - OFF (fig 4)	1-	tal Mount - O g 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

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