



**Sensata**  
Technologies



**AIRPAX<sup>®</sup>**

**LEGA Series**

Low-Depth, Hydraulic-Magnetic Circuit Breakers



## **AIRPAX® | LEGA Series**

### Low-Depth, Hydraulic-Magnetic Circuit Breakers

#### **INTRODUCTION**

Developed to meet the evolving demand for low-profile datacenter rack power distribution units, the Airpax™ LEGA series circuit breaker provides a cost effective solution with uncompromising performance and reliability in a low-depth package. The UL-489 Listed product includes TÜV certification to EN60947-2 for global acceptance in UL-60950 and EN60950 ITE applications, a variety of limited access actuator styles and secure screw terminals oriented for ease of assembly and efficient power conductor routing.

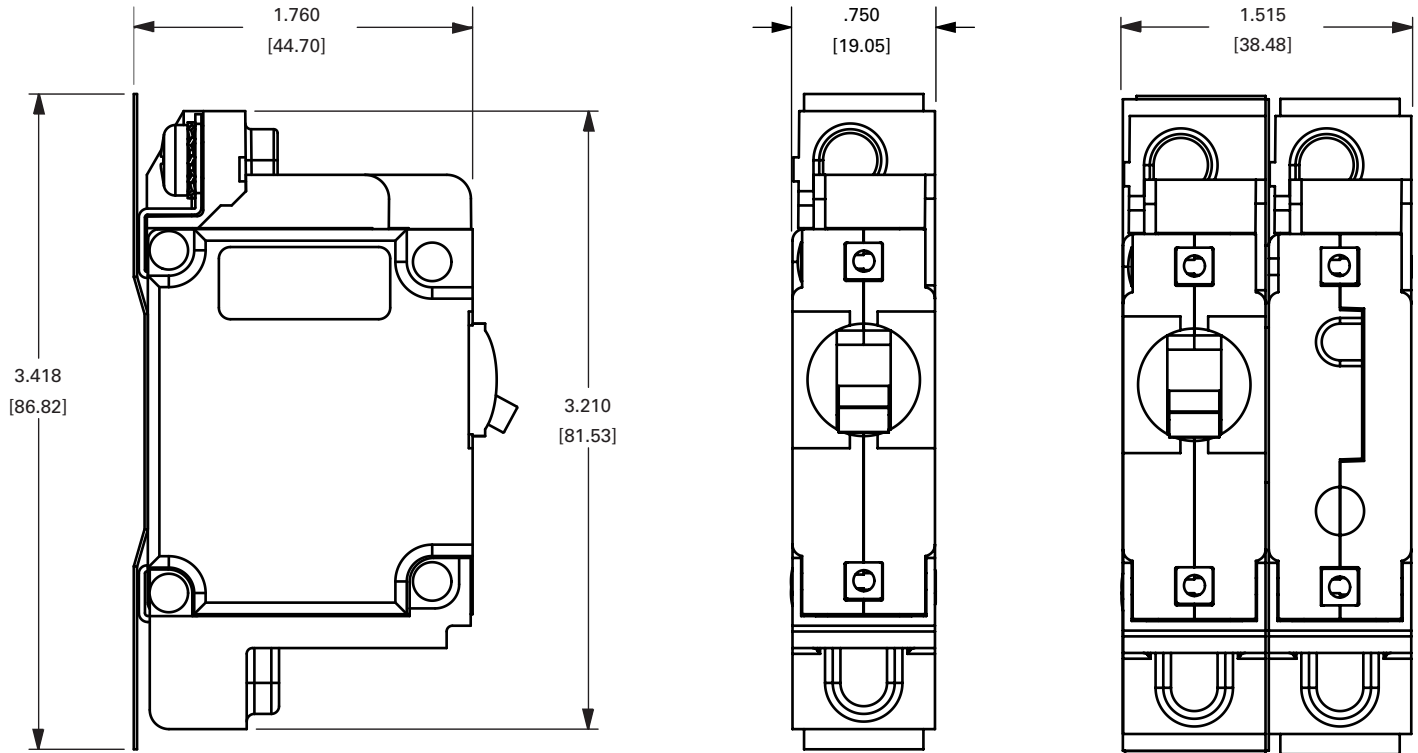
#### **FEATURES**

- Retains proven high performance specifications & reliability of the Airpax™ LEG series
- Low-depth design to minimize PDU intrusion into equipment rack space
- Rear access screw terminals provide secure vibration resistant connection for high reliability applications
- Terminal orientation allows simple power conductor routing and ease of assembly
- Global agency certifications for UL60950 and EN60950 ITE requirements
- Short toggle and flat rocker actuators available for protection against accidental “turn-off”
- Barriers fold-away to allow easier screw access

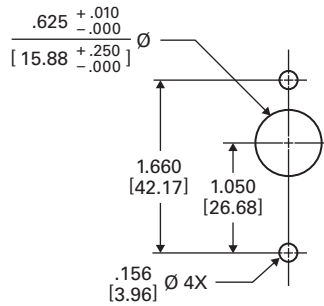
#### **SPECIFICATIONS**

Agency Certification	Rated Amperage	Maximum Voltage	Short Circuit Amperage	Phase
UL-489	1.00A - 30.0A	120vac, 50/60Hz	5,000A	1
UL-489	1.00A - 30.0A	120/240vac, 50/60Hz	5,000A	1
UL-489	1.00A - 50.0A	80vdc	5,000A	—
TÜV (EN60947-2) lcs	1.00A - 30.0A	250vac, 50/60Hz	3,000A	1
TÜV TUV (EN60947-2) lcs	1.00A - 50.0A	80vdc	3,000A	—
TÜV (EN60947-2) lcs	1.00A - 30.0A	240/415vac, 50/60Hz	3,000A	1 & 3

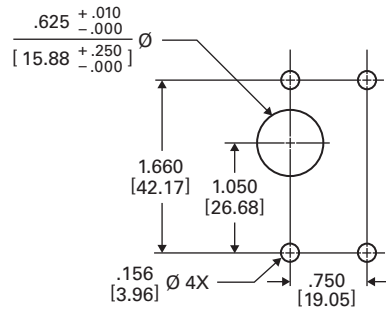




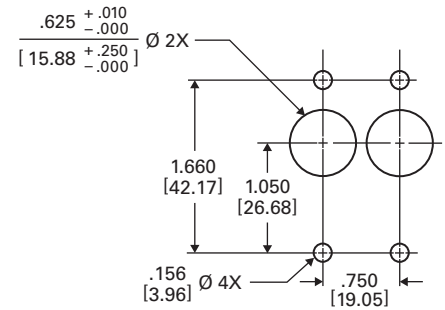
• Single Pole, Toggle Handle



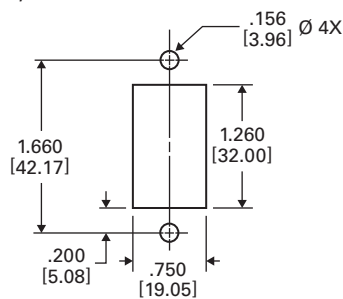
• Two Pole, Single Toggle Handle



• Two Pole, Two Toggle Handles



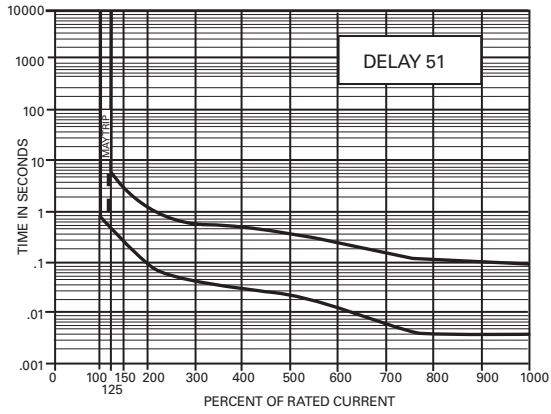
• Single Pole, Rocker Handle



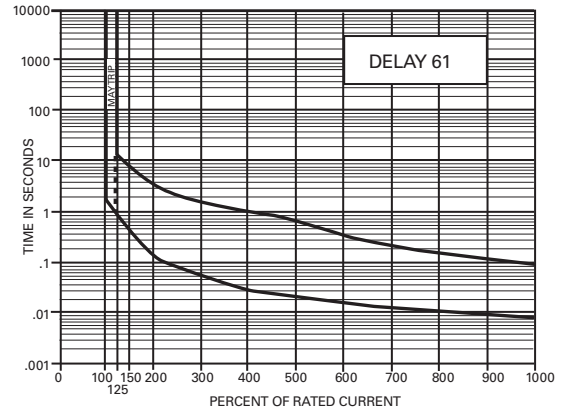
Panel Mounting Detail: Tolerance for Mtg. ± .005 [13] unless noted.

## DELAY CURVES

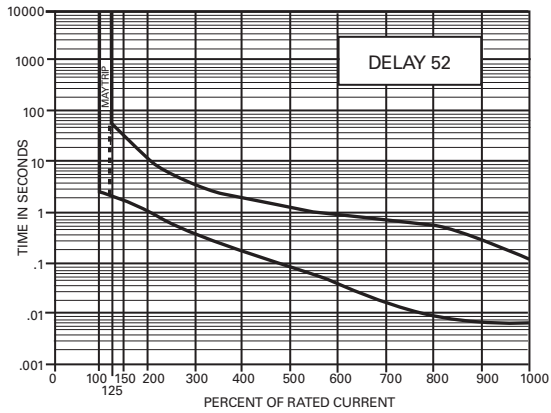
### • DC Short Delay



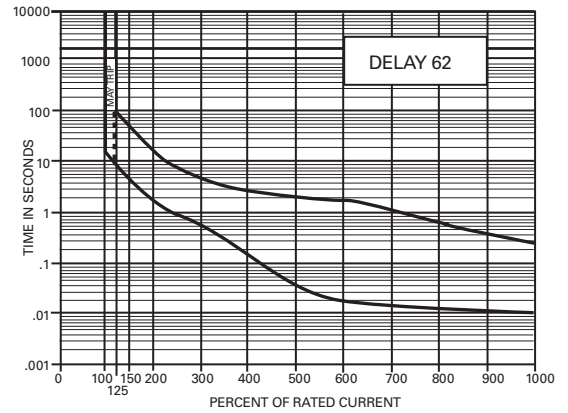
### • 50/60Hz Short Delay



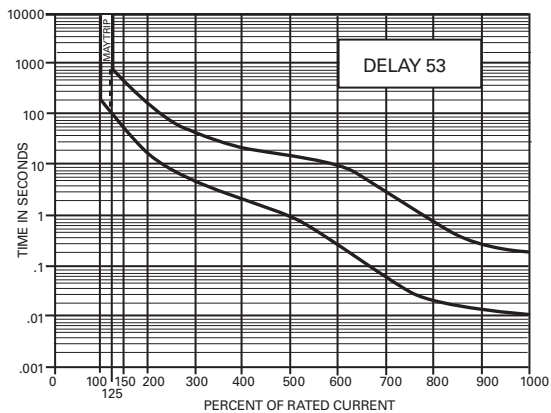
### • DC Medium Delay



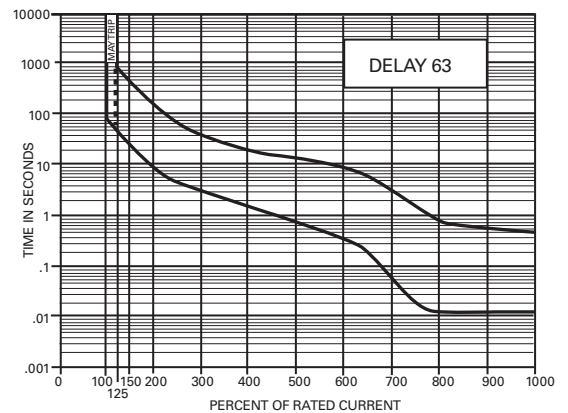
### • 50/60Hz Medium Delay



### • DC Long Delay (Motor Start)



### • 50/60Hz Long Delay (Motor Start)



## INTERNAL CONFIGURATION - SERIES TRIP

The most popular configuration for hydraulic-magnetic circuit breakers is the series trip, where the sensing coil and contacts are in series with the load being protected. The handle position conveniently indicates circuit status. In addition to providing conventional over-current protection, it's simultaneously used as an ON-OFF switch.



### PERCENTAGE OF RATED CURRENT VS TRIP TIME IN SECONDS AT +25°C (VERTICAL MOUNT)

Delay	100%	125%	150%	200%	400%	600%	800%	1000%
51	No Trip	.500 to 6.5	.300 to 3.0	.100 to 1.2	.031 to .500	.011 to .25	.004 to .1	.004 to .08
52	No Trip	2 to 60	1.8 to 30	1 to 10	.15 to 2.0	.04 to 1	.008 to .5	.006 to .1
53	No Trip	80 to 700	40 to 400	15 to 150	2 to 20	.23 to 9	.018 to .55	.012 to .2
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	.02 to 2	.015 to .8	.01 to .25
63	No Trip	50 to 700	30 to 400	10 to 150	1.5 to 20	.4 to 10	.013 to .85	.013 to .5

### INRUSH PULSE TOLERANCE

Delay	Pulse Tolerance
61, 62, 63	10 times rated current (approx)
61F, 62F, 63F	12 times rated current (approx)

### INRUSH PULSE TOLERANCE

The table above provides a comparison of inrush pulse tolerance with and without the inertial delay feature 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	
	DC (ohms)	AC, 50/60Hz (ohms)
	51, 52, 53	61, 62, 63
0.200	36.6	34.2
1.00	1.38	1.47
2.00	0.31	0.25
5.00	0.053	0.051
10.0	0.016	0.013
20.0	0.006	0.005
30.0	0.0027	0.0026
50.0	0.0019	—

*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%, 21-50 amperes ± 50%. Consult factory for special values and for coil impedance of delays not shown.*



1. Type & Handle			
Step 1a		Step 1b	
<b>LEG</b>	One handle per unit	<b>A</b>	Standard toggle & mounting, Low depth construction
<b>LEGH</b>	One handle per pole	<b>ZXA*</b>	ZX rocker with integral mounting, Low depth construction
<b>LMG</b>	One handle per unit, mid-trip	<b>BXA*</b>	BX flat rocker with integral mounting, Low depth construction
<b>LMGH</b>	One handle per pole, mid-trip	<i>** All types are UL-489 Listed</i> <i>* Rockers can not have option "H", a handle per pole (for example LEGHZXA or LMGBXA is incorrect)</i>	

2. Poles & Terminals	
<b>6</b>	Single Pole, Screw Terminals
<b>66</b>	Two Pole, Screw Terminals

3. Internal Configuration	
<b>1</b>	Series

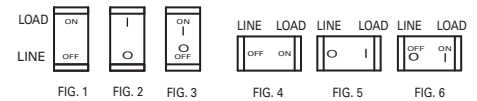
4. Frequency & Delay			
Step 4a		Step 4b	
<b>SW</b>	Switch only		Standard
<b>51</b>	DC short delay	<b>F</b>	Inertial wheel
<b>52</b>	DC medium delay	<i>All delays can add an optional inertial wheel by adding an "F" to the end of the code.</i>  <i>Example: 61 becomes 61F</i>	
<b>53</b>	DC long delay		
<b>61</b>	50/60Hz short delay		
<b>62</b>	50/60Hz medium delay		
<b>63</b>	50/60Hz long delay (motor start)		

5. Rated Current		
<b>1.0</b>	1 amp	<i>Ratings over 30 amps only available with DC delay characteristics</i>
<b>5.0</b>	5 amp	
<b>7.5</b>	7.5 amp	
<b>10.0</b>	10 amp	<i>Other ratings available upon request</i>
<b>12.5</b>	12.5 amp	
<b>15.0</b>	15 amp	
<b>16.0</b>	16 amp	
<b>20.0</b>	20 amp	
<b>25.0</b>	25 amp	
<b>30.0</b>	30 amp	
<b>40.0</b>	40 amp***	
<b>50.0</b>	50 amp***	

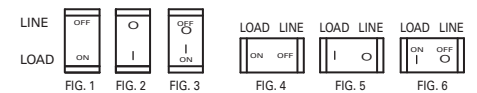
6. Additional Options	
	Standard hardware, no options required
<b>A</b>	Metric thread mounting inserts and terminal hardware
<b>G</b>	Hand guard (available for ZX & BX versions only)
<b>M</b>	Handle in opposite pole (2-pole only)
<b>Q</b>	APG/UPG style "fat" toggle actuator
<b>X</b>	Handle guard with no actuation feature (BX only, no mid-trip)

8. Approvals	
<b>T</b>	TÜV approved Certified to EN60947-2 Includes the CE mark

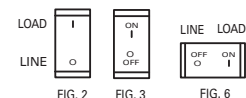
**LEGBXA 66 - 1 - 62 - 20.0 - AG - M6 - T**



MARKING DETAIL "A"



MARKING DETAIL "B"



MARKING DETAIL "C"

## 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 (Single-Color Rocker)

### Marking Detail A

Unmarked	Vertical Mount ON - OFF <i>(fig 1)</i>	Vertical Mount I - O <i>(fig 2)</i>	Vertical Mount ON - OFF I - O <i>(fig 3)</i>	Horizontal Mount ON - OFF <i>(fig 4)</i>	Horizontal Mount I - O <i>(fig 5)</i>	Horizontal Mount ON - OFF I - O <i>(fig 6)</i>	Handle Color	Indicating Color	Marking Color	Indicates
- 00	- 01	- 02	- 03	- 04	- 05	- 06	Black	—	White	—
- 20	- 21	- 22	- 23	- 24	- 25	- 26	Red	—	White	—
- 40	- 41	- 42	- 43	- 44	- 45	- 46	Gray	—	Black	—
- 50	- 51	- 52	- 53	- 54	- 55	- 56	Orange	—	Black	—
- 90	- 91	- 92	- 93	- 94	- 95	- 96	White	—	Black	—

### ZX Rocker Handle (Two-Color Rocker)

### Marking Detail A & B

Unmarked	Vertical Mount ON - OFF <i>(fig 1)</i>	Vertical Mount I - O <i>(fig 2)</i>	Vertical Mount ON - OFF I - O <i>(fig 3)</i>	Horizontal Mount ON - OFF <i>(fig 4)</i>	Horizontal Mount I - O <i>(fig 5)</i>	Horizontal Mount ON - OFF I - O <i>(fig 6)</i>	Handle Color	Indicating Color	Marking Color	Indicates
- A0	- A1	- A2	- A3	- A4	- A5	- A6	Black	White	White	ON
- B0	- B1	- B2	- B3	- B4	- B5	- B6	Black	Red	White	ON
- C0	- C1	- C2	- C3	- C4	- C5	- C6	Black	Green	White	ON
- F0	- F1	- F2	- F3	- F4	- F5	- F6	Black	White	White	OFF
- G0	- G1	- G2	- G3	- G4	- G5	- G6	Black	Red	White	OFF
- H0	- H1	- H2	- H3	- H4	- H5	- H6	Black	Green	White	OFF
- J0	- J1	- J2	- J3	- J4	- J5	- J6	Black	White	White	ON
- K0	- K1	- K2	- K3	- K4	- K5	- K6	Black	Red	White	ON
- L0	- L1	- L2	- L3	- L4	- L5	- L6	Black	Green	White	ON

### BX Rocker Handle (Two-Color Rocker)

### Marking Detail C

Unmarked	Vertical Mount ON - OFF <i>(fig 1)</i>	Vertical Mount I - O <i>(fig 2)</i>	Vertical Mount ON - OFF I - O <i>(fig 3)</i>	Horizontal Mount ON - OFF <i>(fig 4)</i>	Horizontal Mount I - O <i>(fig 5)</i>	Horizontal Mount ON - OFF I - O <i>(fig 6)</i>	Handle Color	Indicating Color	Marking Color	Indicates
- M0	—	- M2	- M3	—	—	- M6	Black	White	White	OFF
- N0	—	- N2	- N3	—	—	- N6	Black	Red	Red	OFF
- P0	—	- P2	- P3	—	—	- P6	Black	Green	Green	OFF
- R0	—	- R2	- R3	—	—	- R6	Black	Yellow	Yellow	OFF

Bezel of BX is black. Consult factory for other marking options.  
Black, red, blue and green handles have white marking. White, yellow and orange handles have black marking.

## BUSINESS CENTERS

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