

# Classes 660 and 735 Thermal-Magnetic Molded Case Circuit Breakers

## LA, LH and Q4 Circuit Breakers

### Description



LA Circuit Breaker



Q4 Circuit Breakers

400-ampere frame circuit breakers with LA and LH circuit breakers rated 125 through 400 amperes and Q4 circuit breakers rated 250 through 400 amperes with the following features:

- **2- and 3-pole construction**  
These circuit breakers have 2- and 3- pole construction built in a 3-pole module.
- **Push-to-trip**  
Yellow push-to-trip button mechanically trips the circuit breaker.
- **Trip indication**  
The handle moves to the center position when the circuit breaker trips.
- **ON/OFF indication**  
ON/OFF markings are on the face of the circuit breaker along with the international I/O markings.
- **Endurance (switching operations)**  
1,000 full-load operations  
5,000 no-load operations
- **Thermal trip element**  
Thermal trip elements are factory calibrated for 40°C per the UL 489 Standard. Calibration for 50°C is also available without the UL Listing.
- **Magnetic trip element**  
The magnetic trip element on the LA, LH and Q4 circuit breakers is set by a single adjustment on the circuit breaker cover.
- **Mounting**  
All LA, LH and Q4 circuit breakers can be mounted and operated in any position, and are not limited to vertical or horizontal mounting.

*Continued on next page*

### Ampere Interrupting Ratings (AIR)

Catalog Number Prefix		No. of Poles	Continuous Ampere Rating	UL Listed Ampere Interrupting Ratings (AIR) RMS Symmetrical Amperes						DC Volts			Federal Specs. W-C-375B/ GEN	IEC Ultimate Rating 415/240V 50/60 Hz	
Unit-mount	I-LINE®			AC Volts, 50/60 Hz						125	250	500		157-1	947-2
				120	240	277	480Y/ 277	480	600						
LAL	LA	2, 3	125–400	42K	42K	—	30K	30K	22K	10K	10K	—	21a	30K	—
LHL <sup>▲</sup>	LH <sup>▲</sup>	2, 3	125–400	65K	65K	—	35K	35K	25K	10K	10K	—	23a	36K	—
LHL-DC <sup>●</sup>	—	2, 3	—	—	—	—	—	—	—	—	—	20K	—	—	—
Q4L	Q4	2, 3	250–400	25K	25K	—	—	—	—	—	—	—	14b	—	—

<sup>▲</sup> Separate UL ratings available for 240V and 480V grounded B single-phase systems.

<sup>●</sup> UL Listed for 500 Vdc nom. 600 Vdc max. rating. The circuit breakers are suitable only for use with UPS (uninterruptible power supplies) and ungrounded systems.



**SQUARE D**  
GROUPE SCHNEIDER

# Classes 660 and 735 Thermal-Magnetic Molded Case Circuit Breakers

## Description—Continued

### Accessories

Accessory	Field Installable	Factory Installed Only*
Shunt Trip <sup>▲</sup>	LA, LH, Q4	
Undervoltage Trip <sup>▲</sup>	LA, LH, Q4	
1A1B Auxiliary Switches <sup>▲</sup>	LA, LH, Q4	
N.O. or N.C. Bell Alarm <sup>▲●</sup>		LA, LH, Q4
Handle Tie	LA, LH, Q4	
Handle Extension	LA, LH, Q4	
Handle Padlock Attachment	LA, LH, Q4	
Electrical Motor Operator	LA, LH, Q4	
Walking Beam	LA, LH	
Cylinder Lock	LA, LH, Q4	

<sup>▲</sup>UL Listed accessory.

<sup>●</sup>Right pole.

\* For LA and LH top-feed I-LINE<sup>®</sup> circuit breakers (jaws on OFF end) all accessories must be factory installed.

#### ■ I-LINE<sup>®</sup> construction

All LA, LH and Q4 circuit breakers are available in I-LINE<sup>®</sup> plug-on construction.

#### ■ Molded case switches

Automatic molded case switches are available in LH 2- and 3-pole construction. *Molded case switches provide no overcurrent protection.*

#### ■ MAG-GARD<sup>®</sup> circuit breakers

The LA MAG-GARD<sup>®</sup> circuit breakers comply with requirements for *instantaneous trip* circuit breakers.

#### ■ Marine applications

LA and LH 2- and 3-pole circuit breakers are available for use on vessels over 65 feet in length.

#### ■ Mining applications

LA 2- and 3-pole circuit breakers are available.

#### ■ DC applications

LAL and LHL 125–400 ampere circuit breakers are suitable for use on 125 and 250 Vdc systems.

LHL-DC 3-pole 250–400 ampere circuit breakers are suitable only for use with uninterruptible power supplies and ungrounded systems rated 500 Vdc nominal, 600 Vdc maximum.

See AIR table on page 1 for ratings.

#### ■ Ratings

AIR – See table on page 1.

#### ■ Standards/Files

Circuit breakers

UL 489/E10027

CSA C22.2 No 5.1/LR7551

IEC 157-1

Molded Case Switches

UL1087/E33117

CSA C22.2 No. 5.2/LR32390

MAG-GARD<sup>®</sup> UL Recognized Component

UL 489/E10027

CSA C22.2 No. 5.1/LR32390

Marine circuit breakers

UL489/E85161

#### ■ Rerating

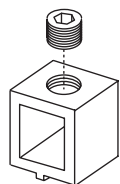
Circuit breakers can be rerated for:

- Ambient temperatures below 25°C or above 40°C
- DC magnetic trip level
- 400 Hz applications

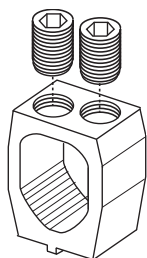
For more information see application guide SD361R1, "Determining Current Carrying Capacity in Special Applications."

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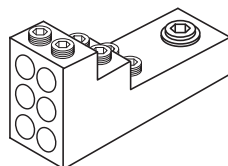
## Terminations



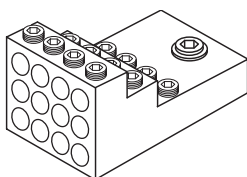
AL400LA  
CU400LA



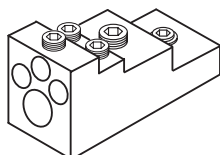
AL400LH7



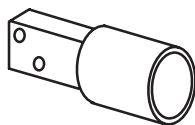
PDC6LA20



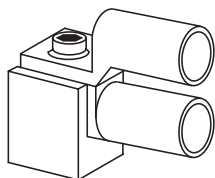
PDC12LA4



PDC4LA250



CVC400LA5



VC400LA3

Circuit breakers and molded case switches are provided with mechanical lugs for copper or aluminum conductors. Optional lugs are also available.

### ■ Reverse connection

All LA, LH and Q4 circuit breakers are UL Listed, CSA Certified and IEC Rated for reverse connection without restrictions.

## Mechanical Lug Kit Information

Kit Catalog Number (One lug per kit)	Circuit Breaker Application		Conductor Size and Type (one wire per lug) AWG/kcmil (mm <sup>2</sup> )
	Circuit Breaker	Standard Ampere Rating	
AL400LA	LA, LH, Q4	125–400	(1) #1–600 (50–300) Al/Cu (2) #1–250 (50–120) Al/Cu
CU400LA	LA, LH, Q4	125–400	(1) #1–600 (50–300) Cu (2) #1–250 (50–120) Cu
AL400LH7 (optional)	LA, LH, Q4	125–400	350–750 (185–400) Al/Cu

## Power Distribution Lugs

Kit Catalog Number (One lug per kit)	Circuit Breaker Applications	Conductor Size and Type AWG/kcmil (mm <sup>2</sup> )
PDC6LA20*	LA, LH, Q4	(6) #12–#2/0 (2.5–70) Cu
PDC12LA4*	LA, LH, Q4	(12) #14–#4 (2.5–25) Cu
PDC4LA250*	LA, LH, Q4	(3) #14–#2 (2.5–35) Cu (1) #2–250 (35–120) Cu

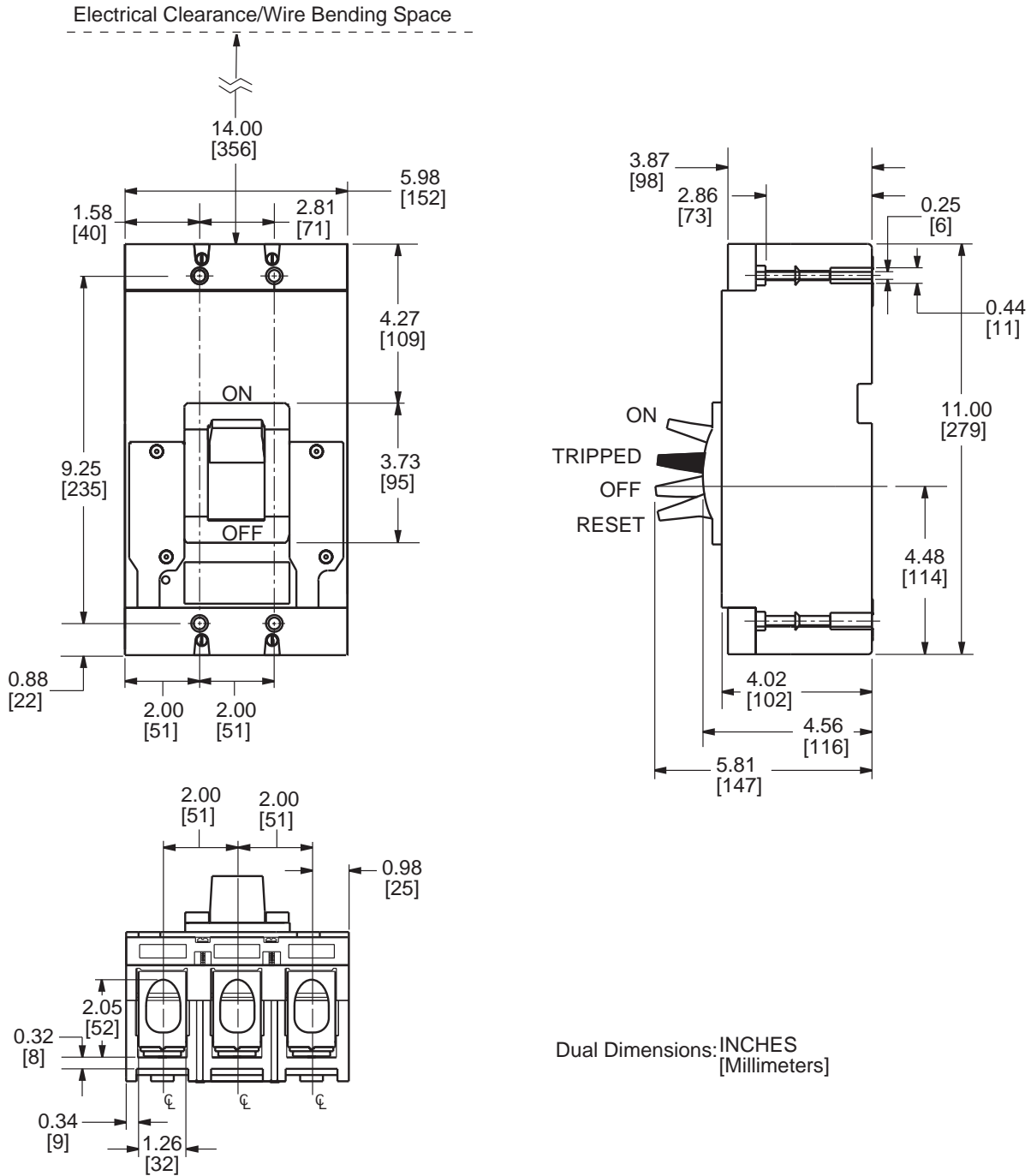
\*For use in UL580 Industrial Control applications only. Must be used on the OFF end only when the OFF end is the load end.

## Crimp Lugs


Kit Catalog Number	Circuit Breaker Applications	Conductor Size and Type AWG/kcmil (mm <sup>2</sup> )
VC400LA35 (Two Lugs Per Kit)	LA, LH, Q4	250–350 (120–185) Al/Cu
VC400LA3 (Two Lugs Per Kit)	LA, LH, Q4	#4–300 (25–150) Al/Cu
VC400LA5 (One Lug Per Kit)	LA, LH, Q4	#2/0–500 (70–240) Al/Cu
VC400LA7 (One Lug Per Kit)	LA, LH, Q4	500–750 (240–400) Al 500 (240) Cu
CVC400LA3 (Two Lugs Per Kit)	LA, LH, Q4	#2/0–300 (70–150) Cu
CVC400LA5 (One Lug Per Kit)	LA, LH, Q4	250–500 (120–240) Cu

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## Dimensions



LA1046A.1

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Order No. 0660HO9601

