Molded Case Circuit Breakers

# LD-Frame with 310+ Electronic Trip Unit Technology

# **310+ Circuit Breakers**



## LD-Frame with OPTIM Electronic Trip Unit Technology

## **OPTIM Circuit Breakers**



Notes

- <sup>①</sup> Not available in four-pole configurations.
- <sup>(2)</sup> Frames are the same for thermal-magnetic or 310+ electronic trip units, e.g., LD3600F, HLD3600F, etc.

Series C

# Types LD, HLD and LDC Electronic Circuit Breakers with Interchangeable Trip Units

Order as individual components: breaker frame, trip unit and terminals. See 310+ adjustability specifications on Page V4-T2-286.

#### Types LD, HLD and LDC Electronic Circuit Breakers with Interchangeable 310+ Trip Units Digitrip RMS 310+ Trip Unit Only 1 **Circuit Breaker Frame Only** Ultra High Standard Optional Standard LS LŚI LSG LSIG Interrupting Interrupting Hiah Capacity Interrupting **Adjustable Short** Capacity Current Adiustable Independently 600 Vac Capacity Limiting Short Time Independently Time Pickup with Adjustable Short Maximum 600 Vac Rated Rated 600 Vac Rated Pickup with I<sup>2</sup>t Adjustable Short I<sup>2</sup>t Short Delay Time Pickup and Continuous 35 kAIC at **Time Pickup and** Neutral CT for 65 kAIC at 100 kAIC at Short Delay and Ground Fault Ground Fault Ampere LSG and LSIG 23 480 Vac 480 Vac Protection Protection 480 Vac Ramp Delay Rating Terminal at 40 °C **Catalog Number** Catalog Number Catalog Number Information Three-Pole 600 LD3600F HLD3600F LDC3600F LES3600LS LES3600LSI LES3600LSG LES3600LSIG LGFCT600 See Page V4-T2-284 Four-Pole 4 600 LD4600F HLD4600F LDC4600F LES4600LS LES4600LSI See Page V4-T2-284

*Types LDB, HLDB and LDCB Electronic Circuit Breakers with Non-Interchangeable 310+ Electronic Trip Units Suitable for Reverse Feed* See 310+ adjustability specifications on Page V4-T2-286.

## Circuit Breaker Frame Including Digitrip RMS 310+ Electronic Trip Unit Less Terminals Types LDB, HLDB and LDCB with Digitrip 310+ Non-Interchangeable Trip Units

Factory Assembled Circuit Breaker Consisting of Frame and Trip Unit Less Terminals  ${}^{\textcircled{}}$ 

		Standard LS	Optional LSI	LSG	LSIG		
Maximum Continuous Ampere Rating at 40 °C	Number of Poles	Adjustable Short Time Pickup with I <sup>2</sup> t Short Delay Ramp Catalog Number	Independently Adjustable Short Time Pickup and Delay	Adjustable Short Time Pickup with I <sup>2</sup> t Short Delay and Ground Fault Protection	Independently Adjustable Short Time Pickup and Ground Fault Protection	Neutral CT for LSG and LSIG 23 Catalog Number	Terminal Information
600	3	LDB3600FT33W	LDB3600FT32W	LDB3600FT35W	LDB3600FT36W	LGFCT600	See Page
600	3	HLDB3600FT33W	HLDB3600FT32W	HLDB3600FT35W	HLDB3600FT36W		V4-T2-284
600	3	LDCB3600FT33W	LDCB3600FT32W	LDCB3600FT35W	LDCB3600FT36W		

### 100% Rated Types CLD, CHLD and CLDC Electronic Circuit Breakers with Interchangeable Trip Units

The NEC allows the breaker to be rated at 100% of its frame size in an assembly, provided that 90 °C wire is applied at the 75 °C ampacity. All 100% rated circuit breakers have electronic trip units. Order as individual components: breaker frame, trip unit and terminals. See 310+ adjustability specifications on **Page V4-T2-286**.

#### 100% Rated Types CLD, CHLD and CLDC Electronic Circuit Breakers with 310+ Interchangeable Trip Units

Circuit Breaker Frame Only			Digitrip RMS 310+ Trip Unit Only						
Maximum Continuous Ampere Rating at 40 °C	Standard Interrupting Capacity 600 Vac Rated 35 kAIC at 480 Vac Catalog Number	High Interrupting Capacity 600 Vac Rated 65 kAIC at 480 Vac	Ultra High Interrupting Capacity Current Limiting 600 Vac Rated 100 kAIC at 480 Vac	Standard LS Adjustable Short Time Pickup with I <sup>2</sup> t Short Delay Ramp	Optional LSI Independently Adjustable Short Time Pickup and Delay	LSG Adjustable Short Time Pickup with I <sup>2</sup> t Short Delay and Ground Fault Protection	LSIG Independently Adjustable Short Time Pickup and Ground Fault Protection	Neutral CT for LSG and LSIG ® Catalog Number	Terminal Information
Three-Pole									
600	CLD3600F	CHLD3600F	CLDC3600F	LES3600LS	LES3600LSI	LES3600LSG	LES3600LSIG	LGFCT600	See <b>Page</b> V4-T2-284

Notes

For AC use only.

<sup>(2)</sup> Required for four-wire systems if neutral protection is desired.

Included with LSG and LSIG trip units.

④ Neutral is in right pole.

# **Technical Data and Specifications**

## UL 489 Interrupting Capacity Ratings ①

Circuit		Interrupting Capacity (kA rms Symmetrical Amperes)									
Breaker	Number	Volts AC	(50/60 Hz)	Volts DC	Volts DC						
Туре	of Poles	240	277	480	600	125	<b>250</b> <sup>(2)</sup> <sup>(3)</sup>				
LDB	2, 3	65	_	35	25	_	22				
LD	2, 3, 4	65	_	35	25	_	22				
CLD (4)	2, 3, 4	65	_	35	25	_	—				
HLD, HLDB	2, 3, 4	100	_	65	35	_	25				
CHLD (4)	2, 3, 4	100	_	65	35	_	_				
LDC, LDCB 🖻	2, 3, 4	200	_	100	50	_	30				
CLDC 46	2, 3, 4	200	—	100	50	—	—				

# IEC 947-2 Interrupting Capacity Ratings ①

# Interrupting Capacity (kA Symmetrical Amperes)

Circuit		Volts A	Volts AC (50/60 Hz)							
Breaker	Number	240		415		690   Icu Ics   20 10   20 10   20 10   20 10   25 13   35 18	<b>250</b> 23			
Туре	of Poles	I <sub>cu</sub>	I <sub>cs</sub>	I <sub>cu</sub>	I <sub>cs</sub>	I <sub>cu</sub>	I <sub>cs</sub>	I <sub>cu</sub>	I <sub>cs</sub>	
LDB	2, 3	85	85	45	45	20	10	20	10	
LD	2, 3, 4	85	85	45	45	20	10	20	10	
CLD (4)	2, 3, 4	85	85	45	45	20	10	_		
HLD, HLDB	2, 3, 4	100	100	70	70	25	13	20	10	
CHLD ④	2, 3, 4	100	100	70	70	25	13	_	_	
LDC, LDCB	2, 3, 4	200	100	100	75	35	18	20	10	
CLDC ④	2, 3, 4	200	100	100	75	35	18	_	_	

## **UL 489 Current Limiting Data**

Frame	Circuit	lp (kA)	I <sup>2</sup> T (10 <sup>6</sup> A <sup>2</sup> S)
LDC	240 V/200 kA	64.80	6.80
LDC	480 V/100 kA	66.90	9.33
LDC	600 V/50 kA	54.30	8.92

#### Notes

① Utilization Category A circuit breakers.

<sup>(2)</sup> L/R = 8 milliseconds minimum.

 $^{(3)}$  Two-pole circuit breaker or two poles of three-pole circuit breaker. Incorporating thermal-magnetic trip unit only.

④ 100% rated breakers.

<sup>©</sup> Current limiting.

2.4