Ordering

In the FD through RD frames, you may order molded case circuit breakers three basic ways:

- As separately ordered frames, trip units and lugs
- As frame, trip unit and lugs ordered as one catalog number and shipped unassembled or assembled
- As Frame and Trip Unit shipped assembled and with the trip unit made non-removable, in compliance with UL 489 requirements that to be reverse fed the circuit breaker must not have an interchangeable trip unit.

These two options are described in the following:

Components Ordered Separately

To get the components for a 3-pole, 400 Amp standard interrupting circuit breaker, you would order the frame (JD63F400), the trip unit (JD63T400) and six lugs (TA2J6500). This option is normally useful only if you stock and use large volumes of product and wish to reduce your inventory cost. You may stock, for example, a smaller number of frames (JD63F400) and a variety of trip units (JD63T300, JD63T350, etc.) and assemble breakers as you need them.

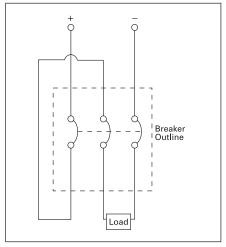
Frame, Trip Unit and Lugs Ordered Together

If you order the catalog number JD63B400, you will receive a frame, a trip unit and 6 lugs in separate packages. By suffixing this number with "L" (e.g. JD63B400L), you will receive frame, trip unit and lugs assembled in one container. Pursuant to UL 489, a product ordered thus will have the markings "LINE" and "LOAD", and may not be "reverse fed" (with power flowing from the "OFF" end of the breaker toward the "ON" end).

Non-Interchangeable Trip Breakers

If you place an "X" after the frame size designator (e.g. JXD63B400), you will receive a frame and trip unit assembled, with the trip unit made non-removable. If you suffix an "L" to this catalog number (e.g. JXD63B400L), you will receive the breaker, non-removable trip unit and lugs assembled. Unless you anticipate a specific need to change the breaker's ampere rating in the future, this is the preferred ordering method, as the products are assembled to Siemens' specifications in our factories. These breakers are suitable for use reverse fed according to UL 489, since the trip unit is not removable.

The smaller frames (QJ, ED and below) do not have removable trip units, and consequently are shipped only as assembled products. To add lugs, see the ordering instructions on each product's catalog page.

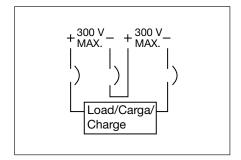


500V DC Wiring Configuration

Connecting Breakers for DC Application

Most Siemens thermal magnetic trip MCCBs are applicable on direct current (dc) systems. Generally, for 250 V dc systems a two pole breaker is used, with one pole on each leg of the supply circuit. For three pole breakers applied on 500 V undergrounded DC systems, it is important to connect the power supply "zig-zag" through the breaker as shown in the figure below. This assures that the Voltage between phases on the breaker terminals is uniformly distributed.

See below for an alternative connection diagram. For a list of Sentron breakers with the DC ratings, please refer to pages 7-11 to 7-16.



VL Molded Case Circuit Breakers

Catalog Numbering System Selection/Application Interrupting Class N — Normal H — High Very High C — Trip Unit Only Frame Family D — Type DG L — Type LG P — Type PG — Type FG M — Type MG Type JG N — Type NG **Breaker Type** E — Global DG, FG Frame Only R — Molded Case Switch 600 Y/347 V (DG, FG, LG-frame) Global interchangeable (UL, Molded Case Switch IEC, CE, CSA, NOM[®], CCC[®]) - Trip Unit Only 240V rated JG frame, - Thermal Magnetic, standard 40°C ambient, 600VAC 25kA, UL/CSA Non-interchangeable only K — Global, Non-interchangeable (LG frame) (DG, FG, LG-frame) 100% rated, Non-interchangeable Motor Circuit Protector (DG, LG-frame) - Motor Circuit Protector - Global Non-interchangeable (DG, FG Only) - 100% rated, Non-interchangeable **Number of Poles** 2, 3 Trip Unit - Frame only, without trip unit S - Molded Case Switch — Thermal Magnetic, standard 40° C ambient A — Electronic w/ LCD, LSI or 3P (neutral protected) В L — Magnetic Only, Motor Circuit Protector - Low G — Electronic w/ LCD, LSIG, 3P/4W (selectable residual or instantaneous range return type ground fault protection) J — Magnetic Only, Motor Circuit Protector - Low K — Electronic with LCD, LSI and GF alarm only, 3P/4W instantaneous range (LG-frame) (selectable residual or return type ground fault alarm) Magnetic Only, Motor Circuit Protector - Standard Electronic LI or 3P (neutral protected) instantaneous range Electronic LSI or 3P (neutral protected) Magnetic Only, Motor Circuit Protector - Standard V — Electronic, LSIG or 3P/4W, residual ground fault protection instantaneous range (LG-frame) W — Electronic, LIG or 3P/4W, residual ground fault protection H — Magnetic Only, Motor Circuit Protector - High instantaneous range Continuous Current Rating For DG use 050, 060, 070, 080, 090, 100, 110, 125, 150 For FG use 100, 110, 125, 150, 175, 200, 225, 250 For JG use 250, 300, 350, 400 For LG use 400, 500, 600 For MG use 600, 700, 800 For NG use 800, 900, 100 (1000A), 120 (1200A) For PG use 120 (1200A), 140 (1400A), 160 (1600A) **Terminations** B — Load End Standard (cu/al) Lugs L — Line & Load Standard (cu/al) Lugs X — No Lugs (use only if accessory suffixes are to follow) Accessories **Auxiliary and Alarm Switch Combinations** Description 1 Alarm (includes 1NO & 1NC switch with a 2 Aux./1 Alarm Base, for frames DG to LG) Note: A1 and A3 include 1NO and 1NC switch for 2 Aux (1NO & 1NC switch with a 3 Aux. Base, for frames DG to LG) alarm purposes, only one of these switches may АЗ 2 Aux + 1 Alarm (2NO & 2NC switches with a 2 Aux./1 Alarm Base, for frames DG to LG)

2 Aux + 2 Alarm (2NO & 2NC switches with a 2 Aux./2 Alarm Base, for frames MG to PG)

 4 Aux (2NO & 2NC switches with a 4 Aux. Base, for frames MG to PG) A4

Shunt Trips

RB — 24 VDC RM — 48-60 VAC RC — 48-60 VDC RN - 110-127 VAC RD — 110-127 VDC RS - 208-277 VAC RF - 250 VDC RV - 380-600 VAC

Under Voltage Releases

UN — 110-127 VAC UA — 12 VDC UB — 24 VDC UP — 208 VAC $\mathrm{UC}-48\,\mathrm{VDC}$ UR - 220-250 VAC UD - 110-127 VDC US — 277 VAC UT - 380-415 VAC UE — 220-250 VDC UG - 60 VDC UU - 440-480 VAC UK - 24 VAC

be used as there is only one space for an alarm.

LCD = Liquid Crystal Display

LI = Long Delay & Instantaneous trip functions

LSI = Long Delay, Short Delay, & Instantaneous trip functions

LSIG = Long Delay, Short Delay, Instantaneous, & Ground Fault trip functions

GF = Ground Fault

3P = 3-pole

4W = 4-wire

Select Frames

7

CIRCUIT BREAKERS

Type HNXD	304	Black Label	
Non-Interchangeable Trip (Assembled Circuit Breaker Without Lugs)			
Continuous Current Rating	2-Pole 600V AC/250V DC	3-Pole 600V AC/500V DC	
@ 40°C	Catalog Number	Catalog Number	
900	For 2-pole application	HNXD63B900	
1000	use outside poles of	HNXD63B100	
1200	3-pole circuit breaker	HNXD63B120	

Type HND6@

туре пироч	4)		Diack Labei	
Interchangeable Trip				
Continuous Current Rating @ 40°C	Complete Breaker Unassembled with Lugs	Frame Only	Trip Unit Only	
	Catalog Number	Catalog Number	Catalog Number	

2-Pole 600V AC, 250V DC2

800	
900	
1000	For 2-pole application use outside poles of 3-pole circuit breaker
1200	

3-Pole 600V AC, 500V DC3

800	HND63B800	HND63F120	MD63T800
900	HND63B900		ND63T900
1000	HND63B100	HINDOSF120	ND63T100
1200	HND63B120		ND63T120

Type CND6^①

Fuseless Current Limiting

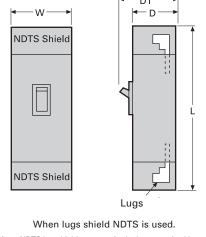
Red Label

Non-Interchangeable Trip (Assembled Circuit Breaker)			
Continuous Current Rating	2-Pole	3-Pole	
@ 40°C	Catalog Number	Catalog Number	
900	For 2-pole application,	CND63B900■	
1000	3-nole circuit breaker	CND63B100	
1200		CND63B120	

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight (lbs.)	
ND6, HND6, NXD6, HNXD6, CND6 Assembled Breaker (less terminals)			
2	1	53	
3	1	61.5	
ND6, HND6 Frame Only			
2	1 42.25		
3	1 46		
ND6, HND6 Trip Unit Only			
2	1	4.5	
3	1	6.5	

NXD63B120



Note: NDTS lug shields are required when oversized lugs TA4P8500 or TA4N8500 are used. The kits include the NDTS shield.

Dimensions (in inches)

Breaker Type	w	L	D	D1
ND6, NXD6, HND6, HNXD6, CND6, SND6, SHND6, and SCND6	9	16	6	8.25
with NDTS lug shield	9	24	6	8.25

For inches / millimeters conversion, see Application Data section.

- Built to order. Allow 2–3 weeks for delivery.
- ①HNXD6 and CND6 circuit breakers are UL Listed for reverse connection applications.
 ②2-pole units available in 3-pole width only.
- ® When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems only.
- HACR rated.