

UL 508 non-fused rotary disconnect switches — 16 to 80 A

Eaton UL 508 load break disconnect switches allow safe control and safe disconnection of any motor application or to isolate a circuit within the panel.

These disconnect switches are compact and offer a wide variety of accessories like 4th poles, Auxiliary contacts, door mounting and 6/8-Pole kits.

Features

- Suitable for motor disconnect
- DIN-Rail or panel mount
- Door mount option
- Disconnect switches are front, right side or direct handle operable
- Finger-safe

Agency information

- UL 508, Guide NLRV, File E155129
- CSA C22.2 No. 14, File 257020
- Conforms with IEC 60947-3

Online resources

Visit Eaton.com/bussmannseries for:

- CAD drawings
- Instruction sheets
- UL information



Disconnect switches

Related Bussmann series products

Fuse blocks

- Modular Class H(K), J and RK fuse blocks up to 600 A
- Modular Class H(K), J and RK power distribution fuse blocks up to 400 A
- Modular, finger-safe CH Class CC and J, and UL supplemental and IEC 10x38mm DIN-Rail holders up to 60 A
- Finger-safe Optima Class CC, UL supplemental and IEC 10x38mm DIN-Rail/panel mount holders up to 30 A
- Finger-safe Optima™ Class CC, UL supplemental and IEC 10x38mm DIN-Rail/panel mount protection modules up to 30 A

IEC specifications

RD16-3-508



RD16-3-508 with 6-pole conversion kit



Catalog no.		RD16-3-508	RD25-3-508	RD40-3-508	RD63-3-508	RD80-3-508
Thermal current I_n at 40°C (A)		16	25	40	63	80
Rated insulation voltage U_i (V)		800	800	800	800	800
Rated impulse withstand voltage U_{imp} (kV)		8	8	8	8	8
Rated operation currents I_e (A)						
Load duty category	Rated voltage	A/B ¹	A/B ¹	A/B ¹	A/B ¹	A/B ¹
	AC-22 A/ AC-22 B	16/16	25/25	40/40	63/63	80/80
500	AC-23A/ AC-23 B	16/16	25/25	25/25	63/63	63/63
	AC-21 A/ AC-21 B	16/16	25/25	40/40	63/63	80/80
690	AC-22 A/ AC-22 B	16/16	25/25	32/40	40/63	63/80
	AC-23A/ AC-23 B	16/16	25/25	25/25	40/40	40/40
Operational power in AC-23 (kW)						
400 Vac without prebreak AC ^{1,2}		7.5	11	18.5	30	37
500 Vac without prebreak AC ^{1,2}		7.5	11	15	30	37
690 Vac without prebreak AC ^{1,2}		7.5	15	18.5	30	37
Overload capacity (U_e 415 Vac)						
Rated short-time withstand current 0.3 s. ICW (kA RMS) ³		2.5	2.5	2.5	3	3
Rated short-time making capacity I_{cm} (kA peak) ³		6	6	6	9	9
Fuse protected short-circuit withstand (kA RMS prospective)						
Prospective short-circuit current (kA RMS) ³		50	50	50	50	50
Associated fuse rating (A) ³		16	25	40	63	80
Connection						
Minimum Cu cable cross section (mm ²)		1.5	1.5	1.5	2.5	2.5
Maximum Cu cable section (mm ²)		16	16	16	35	35
Tightening torque min/max (N•m)		2/2.2	2/2.2	2/2.2	3.5/3.85	3.5/3.85

1 A/B: Category with index A = frequent operation; category with index B = infrequent operation.
 2 The power value is given for information only; the current values vary from one manufacturer to another.
 3 For a rated operating voltage, $U_e = 400$ Vac.

UL specifications

RD16-3-508



RD16-3-508 with 6-pole conversion kit



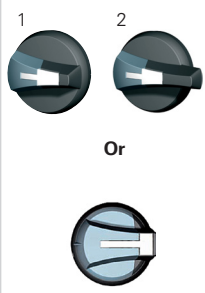


Catalog no.	RD16-3-508	RD25-3-508	RD40-3-508	RD63-3-508	RD80-3-508	
UL standard	UL 508	UL 508	UL 508	UL 508	UL 508	
Max ampacity	16 A	25 A	40 A	63 A	80 A	
Handle operation	Front/Side	Front/Side	Front/Side	Front/Side	Front/Side	
UL ratings						
Max voltage (AC)	600 Vac	600 Vac	600 Vac	600 Vac	600 Vac	
Max. Hp ratings	3-phase, 208	3	7.5	7.5	15	
	3-phase, 240	5	7.5	7.5	20	
	3-phase, 480	10	15	20	40	
	3-phase, 600	10	20	25	40	
Electrical characteristics						
SCCR with fuse (kA)	65	65	10/65	50/65	50/65	
Recommended upstream	Fuse class	J	J	J	J	
	Max. fuse rating (A)	30	30	60/30	100/60	100/60
Terminals	Integral	Integral	Integral	Integral	Integral	
Wire type	75°C Cu	75°C Cu	75°C Cu	75°C Cu	75°C Cu	
Wire range and torque - lb-in (N•m)	Solid single	14-10, 26.5 (3)	14-10, 26.5 (3)	14-10, 26.5 (3)	14-10, 31.1 (3.5)	
	Solid dual	12, 26.5 (3)	12, 26.5 (3)	12, 26.5 (3)	12, 31.1 (3.5)	
	Stranded single	14-4, 26.5 (3)	14-4, 26.5 (3)	14-4, 26.5 (3)	14-1, 31.1 (3.5)	
	Stranded dual	14-12, 26.5 (3)	14-12, 26.5 (3)	14-12, 26.5 (3)	10-6, 31.1 (3.5)	
Mechanical characteristics						
Endurances/cycles	10,000	10,000	10,000	10,000	10,000	
Physical characteristics						
Dimensions	See drawings on product pages					
Weight- lb (kg)	0.5 (0.2)	0.5 (0.2)	0.5 (0.2)	0.7 (0.32)	0.7 (0.32)	
Environmental						
Operating temperature	-20 to 70°C	-20 to 70°C	-20 to 70°C	-20 to 70°C	-20 to 70°C	
Flammability rating	UL 94-V0	UL 94-V0	UL 94-V0	UL 94-V0	UL 94-V0	
Accessories						
Handles	Direct	DIR-01	DIR-01	DIR-01	DIR-01	
	Short selector/NEMA 1, 3R, 4, 4X, 12	H4X-01B	H4X-01B	H4X-01B	H4X-01B	H4X-01B
		H4X-01R	H4X-01R	H4X-01R	H4X-01R	H4X-01R
	Long selector/NEMA 1, 3R, 4, 4X, 12	H4X-02B	H4X-02B	H4X-02B	H4X-02B	H4X-02B
		H4X-02R	H4X-02R	H4X-02R	H4X-02R	H4X-02R
	Pistol handle/NEMA 1, 3R, 4, 4X, 12	H4X-03B	H4X-03B	H4X-03B	H4X-03B	H4X-03B
H4X-03R		H4X-03R	H4X-03R	H4X-03R	H4X-03R	
Metallic hasp (HD) pistol handle/NEMA 1, 3R, 4, 4X, 12	H4X-03BHD	H4X-03BHD	H4X-03BHD	H4X-03BHD	H4X-03BHD	
	H4X-03RHD	H4X-03RHD	H4X-03RHD	H4X-03RHD	H4X-03RHD	
Selector handle shafts - 5x5mm	5.9"/150mm	SH4-150	SH4-150	SH4-150	SH4-150	
	7.9"/200mm	SH4-200	SH4-200	SH4-200	SH4-200	
	12.6"/320mm	SH4-320	SH4-320	SH4-320	SH4-320	
Pistol handle shafts - 5x5mm	7.9"/200mm	SH3-200	SH3-200	SH3-200	SH3-200	
	12.6"/320mm	SH3-320	SH3-320	SH3-320	SH3-320	
	15.75"/400mm	SH3-400	SH3-400	SH3-400	SH3-400	
Selector handle shaft guide	SH-GUIDE1	SH-GUIDE1	SH-GUIDE1	SH-GUIDE1	SH-GUIDE1	
Pistol handle shaft guide	SH-GUIDE2	SH-GUIDE2	SH-GUIDE2	SH-GUIDE2	SH-GUIDE2	
Door mount kit	DOOR-508	DOOR-508	DOOR-508	DOOR-508	DOOR-508	
Shrouds/switch amps	1-Pole	TSH1-1TB	TSH1-1TB	TSH1-1TB	—	
	3-Pole (loadside and lineside)	TSH1-3TB	TSH1-3TB	TSH1-3TB	TSH2-3TB	
	Switched 4th pole/switch amps	POLE-16	POLE-25	POLE-40	—	
	Ground module (conforms to IEC 60947-3)	GND-16-40	GND-16-40	GND-16-40	GND-63-80	GND-63-80
		NTRL-16-40	NTRL-16-40	NTRL-16-40	NTRL-63-80	NTRL-63-80
	Auxiliary contacts	NO + NC (1 ea.)	BAC01	BAC01	BAC01	BAC01
(2) NO		BAC02	BAC02	BAC02	BAC02	
AC ratings						
Volts		240 Vac	240 Vac	240 Vac	240 Vac	240 Vac
Amps		10	10	10	10	10
6-/8-pole conversion kit gangs two switches of same rating, 16-80 A switch amps	KIT-6POLE	KIT-6POLE	KIT-6POLE	KIT-6POLE	KIT-6POLE	

— Not available.

UL 508 non-fused rotary disconnect switches — 16, 25, 40, 63 and 80 A

For a complete assembly, select:

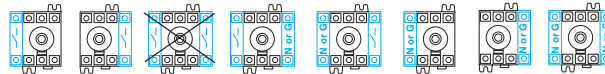
Switch	Switch		SCCR @600V (kA)	Max. Class J fuse amps	Max horsepower rating, 3-Phase				Conductor AWG size/type	Catalog no.		
	Amps	Poles			208	220/240	440/480	600				
	16	3	65	30	3	5	10	10	14-10 Sol, Dual 12 Sol, 14-4 Str, Dual	RD16-3-508		
	25				7.5	7.5	15	20		RD25-3-508		
	40		10	65	30	7.5	7.5	20	25	14-12 Str, 75°C Cu	RD40-3-508	
			63									50
	80		50	100	15	20	40	40	10-6 Str, 75°C Cu	RD80-3-508		
				65							60	
	PLUS											
			Direct mount handle - mounts directly to switch, no shaft required									
			For switch cat. no.		Color		Test function		Padlockable		Catalog no.	
	All switches		Black		N		Y - On Switch		DIR-01			
OR												
	External front or right side operated selector handles - shaft required											
	NEMA type		Color		Handle length		Test function		Padlockable		Catalog no.	
	1, 3R, 4, 4X, 12	Black		Short		N	Y	H4X-01B (1)				
		Red/yellow						H4X-01R (1)				
		Black		Long				H4X-02B (2)				
		Red/yellow						H4X-02R (2)				
	External front operated pistol handles - shaft required											
	NEMA type		Color		Handle length		Test function		Padlockable		Defeatable	Catalog no.
	1, 3R, 4, 4X, 12	Black		—		N	Y	Y	H4X-03B			
		Red/yellow							H4X-03R			
Metallic hasp (heavy duty) external front operated pistol handles - shaft required												
NEMA type		Color		Handle length		Test function		Padlockable		Defeatable	Catalog no.	
1, 3R, 4, 4X, 12	Black		—		N	Y	Y	H4X-03BHD				
	Red/yellow							H4X-03RHD				
Shafts for selector handles												
Length — in (mm)		Mounting depth (X) - in (mm)								Catalog no.		
5.9 (150)		3.50~7.60 (89~193)								SH4-150 (1)		
7.9 (200)		3.50~9.50 (89~241)								SH4-200 (1)		
12.6 (320)		3.50~14.9 (89~378)								SH4-320 (1)		
Shafts for pistol handles												
Length — in (mm)		Mounting depth (X) - in (mm)								Catalog no.		
7.9 (200)		3.30~7.40 (84~188)								SH3-200 (2)		
12.6 (320)		3.30~9.30 (84~236)								SH3-320 (2)		
15.7 (400)		3.30~14.7 (84~373)								SH3-400 (2)		
Shaft guides for selector and pistol handles												
Handle type										Catalog no.		
Selector		Required for 12.6" (320mm) long shafts, optional for other lengths								SH-GUIDE1		
Pistol		Required for 15.7" (400mm) long shafts, optional for other lengths								SH-GUIDE2		
Door mount kit												
For mounting switch on the right side of the enclosure or directly on the enclosure door using switch side operation shaft location. Kit includes a shaft. Order switch and selector handle separately.										Catalog no.		
Switch										DOOR-508		
All switches - kit includes shaft										DOOR-508		

AND...

Aux. Contacts		Auxiliary contacts																				
		<table border="1"> <thead> <tr> <th>Contact type</th> <th>No. of contacts</th> <th>Continuous amp rating</th> <th>Voltage (Vac) rating</th> <th>Max number of units per switch</th> <th>Catalog no.</th> </tr> </thead> <tbody> <tr> <td>NO + NC</td> <td>1 Ea.</td> <td></td> <td></td> <td></td> <td>BAC01</td> </tr> <tr> <td>NO</td> <td>2</td> <td>10</td> <td>240</td> <td>2 (1 per side/4 contacts total)</td> <td>BAC02</td> </tr> </tbody> </table>	Contact type	No. of contacts	Continuous amp rating	Voltage (Vac) rating	Max number of units per switch	Catalog no.	NO + NC	1 Ea.				BAC01	NO	2	10	240	2 (1 per side/4 contacts total)	BAC02		
Contact type	No. of contacts	Continuous amp rating	Voltage (Vac) rating	Max number of units per switch	Catalog no.																	
NO + NC	1 Ea.				BAC01																	
NO	2	10	240	2 (1 per side/4 contacts total)	BAC02																	
AND...																						
Shrouds		Terminal shrouds - includes terminal shroud for both lineside and loadside																				
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		Switch amps	Poles	Location on switch	Catalog no.																	
16-40	1 (for switched 4th pole)		TSH1-1TB																			
16-40		Lineside and loadside	TSH1-3TB																			
63-80	3		TSH2-3TB																			
AND...																						
4th pole		Switched 4th pole - converts 3-pole switch to 4-pole switch																				
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		Switch amps	Catalog no.																			
		16	POLE-16																			
25	POLE-25																					
40	POLE-40																					
AND...																						
Gnd./neut. mods		Ground and Neutral Modules - provides unswitched ground or neutral pole - conforms to IEC 60947-3																				
		<table border="1"> <thead> <tr> <th>Switch amps</th> <th>Module Type</th> <th>Catalog no.</th> </tr> </thead> <tbody> <tr> <td>16-40</td> <td rowspan="2">Ground</td> <td>GND-16-40</td> </tr> <tr> <td>63-80</td> <td>GND-63-80</td> </tr> <tr> <td>16-40</td> <td rowspan="2">Neutral</td> <td>NTRL-16-40</td> </tr> <tr> <td>63-80</td> <td>NTRL-63-80</td> </tr> </tbody> </table>	Switch amps	Module Type	Catalog no.	16-40	Ground	GND-16-40	63-80	GND-63-80	16-40	Neutral	NTRL-16-40	63-80	NTRL-63-80							
		Switch amps	Module Type	Catalog no.																		
		16-40	Ground	GND-16-40																		
63-80	GND-63-80																					
16-40	Neutral	NTRL-16-40																				
63-80		NTRL-63-80																				
AND...																						
6 pole kit		6-pole conversion kit - creates a 6-pole switch by ganging two 3-pole switches of equal rating																				
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		Switch amps	Catalog no.																			
All switches	KIT-6POLE*																					
<p>* Kit ships with a direct handle. If external handle is needed order a selector handle and shaft for the UL 508 Rotary Disconnect Switches. Note: To create an 8-pole switch from 16 to 40 amp switches, use two 3-pole switches of equal ratings plus two switched 4th poles (part # POLE-). Order switches separately</p>																						

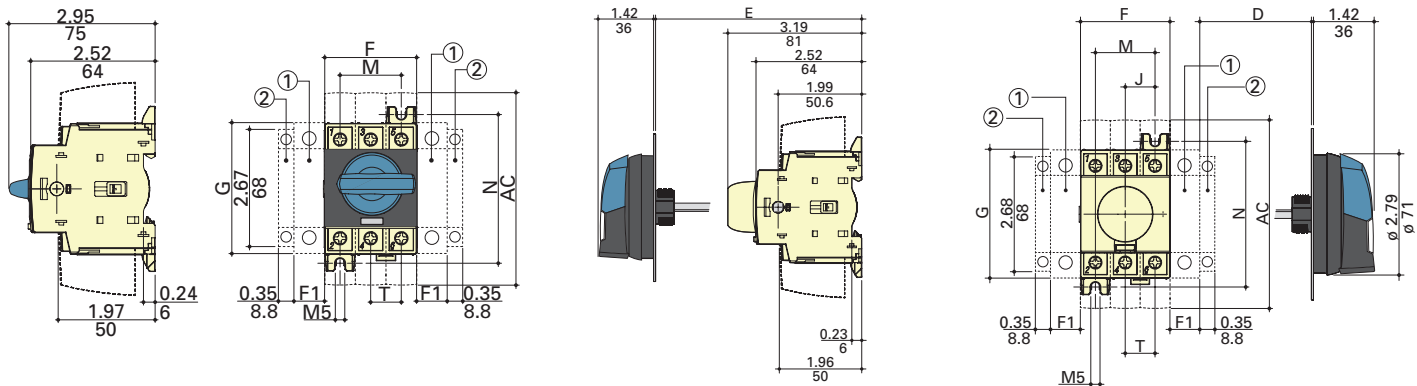


Auxiliary contact configurations



Ground and neutral module, and switched 4th pole configurations.

Dimensions — in (mm)



Direct handle operation

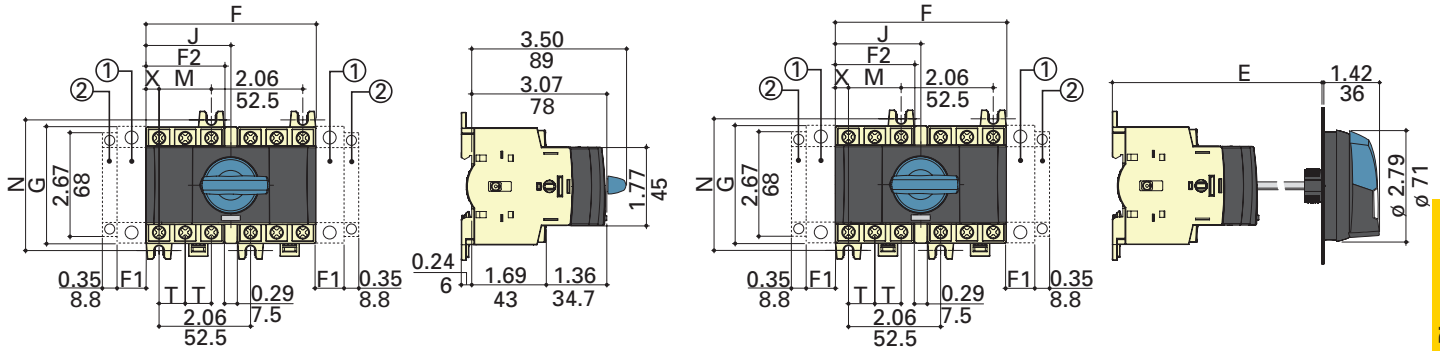
External front operation

External side operation

- Position for 1 switched 4th pole (1 per device max.), or ground or neutral module (2 per device max.) or 1 auxiliary contact.
 - Position for 1 auxiliary contact only.
- Note: Maximum of 4 Auxiliary contacts, or 3 Auxiliary contacts + one ground or neutral module, or one switched 4th pole.

Switch amps	Overall dimensions				Terminal shroud AC	Switch body				Switch mounting			Connection T
	D min	D max	E min	E max		F	F1	G	J	M	N		
16 to 40	1.18 (30)	9.25 (235)	3.94 (100)	14.64 (372)	4.33 (110)	1.77 (45)	0.59 (15)	2.67 (68)	0.59 (15)	1.18 (30)	2.95 (75)	0.59 (15)	
63 to 80	1.18 (30)	9.25 (235)	3.93 (100)	14.64 (372)	4.33 (110)	2.06 (53)	0.69 (18)	2.99 (76)	0.69 (18)	1.38 (35)	3.35 (85)	0.69 (18)	

Dimensions — in (mm)



Direct front operation for 6/8-pole disconnects

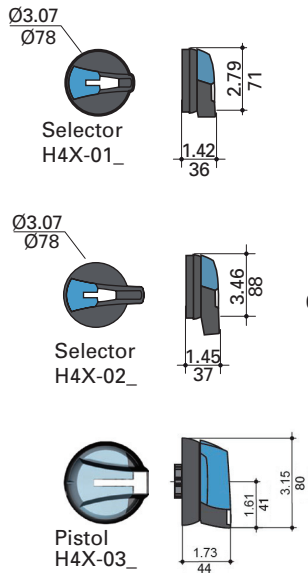
External front operation for 6/8-pole disconnects

- 1. Position for 1 switched 4th pole (1 per device max.) or 1 auxiliary contact.
 - 2. Position for 1 auxiliary contact only.
- Note: Maximum of 4 auxiliary contacts, or 3 auxiliary contacts + one switched 4th pole.

Switch amps	Overall dimensions				Switch body			Switch mounting			Connection	
	E min	E max	F	F1	F2	G	J	M	N	T	X	
16 to 40	4.13 (105)	14.64 (372)	3.83 (98)	0.59 (15)	1.77 (45)	2.67 (68)	1.92 (48.75)	1.18 (30)	2.95 (75)	0.59 (15)	0.29 (8)	
63 to 80	4.13 (105)	14.65 (372)	4.13 (105)	0.69 (18)	2.06 (53)	2.99 (76)	2.06 (52.5)	1.38 (35)	3.35 (85)	0.69 (18)	0.34 (9)	

External selector and pistol handles

Handle type



Door drilling layouts

