

Disconnect Switch and Circuit Breaker Mechanism Specifications

Bulletin Number 1494

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Summary of Changes

This publication contains new and updated information as indicated in the following table.

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Additional Resources

These documents contain additional information concerning related products from Rockwell Automation®.

Resource	Description
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, http://www.rockwellautomation.com/global/certification/overview.page	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at <http://www.rockwellautomation.com/global/literature-library/overview.page>. To order paper copies of technical documentation, contact your local Allen-Bradley® distributor or Rockwell Automation sales representative.

Bulletin 1494U Disconnect Switches

Disconnect Switch Electrical Ratings					
Switch Size		30 A	60 A	100 A	
Rated Insulation Voltage (UL) IEC - Ui		(600) 1000V			
Ratings UL/CSA/NEMA	Hp	230V/60 Hz	7.5	15	30
		460V/60 Hz	15	30	60
		575V/60 Hz	20	50	75
	600V DC	15	30	50	
	Continuous Current, I _{the}	600V AC 600V DC	30	60	100
Ratings IEC Applications	Maximum kW (AC23)	220V/50 Hz	5.5	11	22
		440V/50 Hz	11	22	45
		550V/50 Hz	15	37	55
Auxiliary Contact Electrical Ratings					
Standard Contact 1 N.O. or 1 N.C.	NEMA/EEMAC	A600, Q600			
	IEC	AC 15, DC 13 to IEC/EN60947-5-1 and UL 508, 17V, 5 mA minimum			
Low Level Contact 1 N.O. or 1 N.C.	NEMA/EEMAC	C300, R150			
	IEC	AC 15, DC 13 to IEC/EN60947-5-1 and UL 508, 5V, 1 mA minimum			
Electrical Interlock Ratings					
Standard Contact 2 N.O.	NEMA/EEMAC	10 A: 250V AC, 0.3 A: 250V DC			
Mechanical					
Degree of Protection	Operating handles	Non-metallic Type 1, 3R, 4, 4X, 12 Painted Type 1, 3R, 4, 12 Stainless steel Type 4, 4X			
Mechanical Life (Typical)		10 000 operations (30...100 A)			
Switching Frequency (operations/hr)		30, 60, and 100 A sizes — 300 maximum			
Environmental					
Ambient Temperature	Open	-20...+60 °C (-4...+140 °F)			
	Enclosed	-20...+40 °C (-4...+104 °F)			
	Storage	-40...+65 °C (-40...+149 °F)			
Altitude (per IEC 947-1)		2000 m			
Relative Humidity (per IEC 947-1)		90% at 20 °C (68 °F) and 50% at 40 °C (104 °F)			
Design Specification/Test Requirements					
Dielectric Strength		2200V for 1 minute			
Electrical Life		6000 operations at rated current			
Short Circuit Withstand Capability		10 000 A, 600V AC/DC: unfused or with Class H fuses 10 000 A, 600V DC: with Class J or Class R fuses 200 000 A, 600V AC: with Class J or Class R fuses			
Construction					
Switch Body Material		Glass-filled thermoplastic			
All wire rated 75 °C (167 °F) or higher must be sized per the local Electric Code for 75 °C (167 °F) wire.					
Conductor Size and Lug Connectors	Single port, aluminum lug	30...60 A	(1) #14...2 AWG, copper - aluminum (2) #14...10 AWG, copper (2) #12...10 AWG, aluminum		
	Single port, aluminum lug	100 A	(2) #12...4 AWG, copper-aluminum (1) #14...1/0 AWG, copper (1) #12...1/0 AWG, aluminum		
	Multi-port, aluminum lug	30...100 A	(1) #14...4 AWG, copper (1) #12...4 AWG, aluminum (2) #10 AWG, copper-aluminum		
	Single port, copper lug	30...60 A	(1) #14...4 AWG, copper (2) #14...8 AWG, copper (4) #16 AWG, copper		
	Line Terminal Adapter Single port, copper lug	30...100 A	(1) #14...8 AWG, copper		
	Line Terminal Adapter Single port, copper lug	100 A	(1) #8...1/0 AWG, copper		
Recommended Torque	30 A	Conductor into Lug 45 lb-in		Lug to Terminal 40...60 lb-in	
	60 A	45 lb-in		40...60 lb-in	
	100 A	50 lb-in		40...60 lb-in	
Switches, Mechanisms, and Accessory Kits		Zinc-plated steel, RoHS Compliant finish			