Allen-Bradley

Disconnect Switch and Circuit Breaker Mechanism Specifications

Bulletin Number 1494

Summary of Changes

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

Topic	Page
Updated 1494U specifications	3

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 460V/60 Hz 575V/60 Hz	7.5 15 20	15 30 50	30 60 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 440V/50 Hz 550V/50 Hz	5.5 11 15	11 22 37	22 45 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 60 A 100 A	**Conductor into Lug** 45 lb•in 45 lb•in 50 lb•in		**Lug to Terminal** 40…60 lb•in 40…60 lb•in 40…60 lb•in
Switches, Mechanisms, and Accessory Kits			Zinc-plated steel, RoHS Compliant finish		