

ABB IEC 60 309 International Pin and Sleeve

Plugs, Connectors, Receptacles and Inlets

Performance — Electrical

Dielectric Voltage Withstand	3000 volts for 1 minute (devices > 300V) 2000 volts for 1 minute (devices ≤ 300V)
Maximum Working Voltage	600VAC/250VDC (minimum creepage and clearances per UL 840)
Current Interrupting/ Load Breaking	Tested to 150% of full rated current for circuit interrupting
Temperature Rise	Maximum 30° C rise at full rated current after 50 cycles overload at 150% rated load at .75 pF
Endurance with Load Per IEC 60 309-1 Clause 21	20 Amp: 5000 cycles — Rated current, voltage 30 Amp: 1000 cycles — Rated current, voltage 60 Amp: 1000 cycles — Rated current, voltage 100 Amp: 250 cycles — Rated current, voltage

Performance — Mechanical

Cold (-25° C) Impact Resistance	Per UL 1682 Section 34 and IEC 60 309-1 Clause 24
Cable O.D. Accommodation	Round portable service cord from .57" O.D. through 1.79" O.D.
Terminal Identification	In accordance with UL 1682 standards and IEC 60 309-1: as L1-L2-L3-N-G
Cable Pull-Out Force	Per UL 1682 Section 33 and IEC 60 309-1 Clause 23
Product Identification	Product trademark(s) and UL approved product label

Performance — Environmental

Moisture Resistance	Per IEC 60 309-1; Watertight flap/screw cover on IP67 devices
Flammability	All components V2 for internal parts & V0 for external parts on 20A & 30A devices per UL94 or CSA 22.2 No. 0.6; V0 on 60A & 100A
Operating Temperatures	Maximum continuous 90° C/194° F; minimum -25° C/-13° F
Chemical Resistance	Resists standard industrial hydrocarbons, acids, bases and solvents
Corrosion Resistance	All metallic components stainless steel or brass sleeve pressure spring of stainless steel
UV Resistance	In accordance with UL® 746C

Materials

Housing	Valox®
Contact Carriers	Valox®
Cable Gland Nut	Valox®
Cable Bushing	Chloroprene, onion-ring type
O-Ring, Seals and Gaskets	Solid chloroprene
Pins & Sleeves	Brass
Sleeve Force Ring	Stainless steel
Terminal Screws	Zinc-plated steel
Flap/Screw Cover Springs	Stainless steel
Mounting Flanges	Valox®

Approvals and Compliances

1682, 1686 E109667 E109550 E163435	
60 309-1, -2, -4 LVD 2006/95/EC EMC 2004/108/EC	
C22.2 No. 182.1 LR700925	

Valox is a registered trademark of SABIC.

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Mechanical Interlocks (Unfused/Switched, Fused and Breakered)

Performance — Electrical

Dielectric Voltage Withstand	3000 volts
Maximum Working Voltage	480 volts RMS (circuit breaker version) 600 volts RMS (switch version)
Current Interrupting	Certified for current interrupting at full rated current and voltage
Short-Circuit Current Rating Operations	10,000 RMS symmetrical amperes Mechanical: 10,000 cycles Electrical: 6000 cycles
HP Ratings (switch version)	Complies with NEC® 430-151 ratings
Circuit Breaker UL Listed	22,000 AIC
Interrupting Rating	

Performance — Mechanical

Cold (-35° C) Impact Resistance	In accordance with UL 746C
Wiring Accommodations	Suitable for metallic conduit. Conduit entry locations at enclosure top and bottom
Terminal Identification	In accordance with UL, CSA and IEC 60 309 conventions
Product Identification	Identification, ratings and color code in accordance with UL, CSA and IEC 60 309 requirements
Lockout/Tagout	"ON" and "OFF" lockout/tagout capability at switch handle. Complies with OSHA Reg. 29CFR 1910.147
Mounting	External adjustable feet

Performance — Environmental

Moisture Resistance	Screw cap version: UL Type 4X & 12K, IP67
Flammability	UL 94-5VA and V0 classifications
Operating Temperatures	Maximum continuous: 60° C (140° F) Minimum continuous: -40° C (-40° F)
UV Resistance	UV-stabilized material in accordance with UL® 746C
Chemicals	Resists most standard industrial hydrocarbons, acids, bases and solvents

Materials

Enclosure (all exterior components)	UL 94-5VA/V0, UV-stabilized, impact-modified Valox®
Contact Carrier	Molded arc-resistant UL 94-V0 thermoplastic
Gaskets	Chloroprene or EPDM
Contacts (sleeves)	Brass
Hardware (screws and springs)	Steel with zinc-plated blue chromate or nickel plating

Approvals and Compliances

UL 508 and UL 98 (switch version) UL 231 and UL 489 (circuit breaker version) UL 1682, 1686	
IEC 60 309-1, -2, -4	
CSA C22.2 No. 14, 182.1	