

DuraGard waterproof connections

Features and benefits



Non-metallic plugs, connectors, receptacles and inlets – 20, 30, 50 and 60 A, maximum 600 V AC/250 V DC

Safety

- **Truly waterproof:** Not just watertight, but waterproof (tested under 1000 PSI)
- **Exclusive waterproof features:** The only thermoplastic connector designed to prevent short circuits due to water ingress under high water pressure
- **Different power supply ratings can't mix:** Six single-rate device polarizations ensure exact voltage, frequency and phase differentiation
- **Added safety measures:** Safety ground makes first, breaks last
- **Ultimate waterproof connection:** Watertight mated or unmated, while many watertight specifications cover mated connections only

Durability

- **Designed for durability:** DuraV® housing material specially selected for hot or cold and chemical washdown duty (flame-safe UL 94-V0 rated housings)
- **Versatile functionality:** Pin and sleeve design enables higher current flow at cooler temperatures due to large contact circular areas
- **Built to last:** A longer system life under corrosive environments

Performance

- **Long life:** Round, self-cleaning, constant-pressure pin and sleeve contacts of solid CDA 360 brass for long, reliable electrical life
- **Easy installation:** Drop-in assemble interior and easy pressure screw wire termination
- **Reliability:** DurOring sealing system for each pin and sleeve and interior assembly
- **Application flexibility:** Bushing size available for every cable diameter
- **Continuous operation:** Superior performance in corrosive environments

Russellstoll line selections for outdoor (and indoor) applications

DuraGard to 3P4W 20 through 60 A

The toughest design and construction in thermoplastic safety, durability and performance in UL 94-V0 flame-rated DuraV material. With DurOring sealed pins, sleeves and interiors are watertight even unmated. A 30 A and 50 A circuit breaker interlock line in DuraV are the best choices for standard voltage polarization options through 600 V AC (interlock to 480 V AC).

Interlocked outlets 20 through 60 A

USCG accepted 20–50 A convenience interlocked receptacles accept DuraGard plugs. Built from aluminum or brass for rough-service installations, in switched or circuit breaker formats, their extremely heavy-duty designs provide maximum durability.

IEC (IP67) to 4P5W 20 to 100 A

Thermoplastic international standard IEC 309-2 or CEE-17 connector usage is growing especially in OEM, export and standard performance applications. The IP67 style is watertight when mated and directly interchangeable with other manufacturers. International designations shadow U.S. amperage ratings: 20/(16), 30/(32), 60/(63) and 100/(125) amps. IP67 devices have screw collars or flap/screw covers, with catalog number “W” suffixes.

Usage

Any application where:

- Electrical connections need protection from water and/or dust entrance to the contacts or the wiring compartment
- Cable-to-connector sealing and device locking designs are critical

Typical application groups

Marine

- Lighting connectors
- Shore-to-ship power
- Low-power welding
- Power distribution panels
- Shipboard power outlets
- Barge power connection

Construction and agricultural

- Generator set panels
- Portable tools and equipment
- Irrigation systems panels
- Portable lighting and equipment

Food processing, brewery/beverage, pulp and paper, pharmaceuticals, portable building power

- Welding outlets
- Motor power connections
- Lighting systems
- Machinery interconnections
- Process control power systems

OEMs

- Export machinery
- Critical power connections and welding systems
- Transportable equipment



DuraGard waterproof connections

DuraGard pin and sleeve connections

- 01 Pulp and paper
- 02 Food processing
- 03 Beverage and bottling
- 04 Pharmaceutical manufacturing

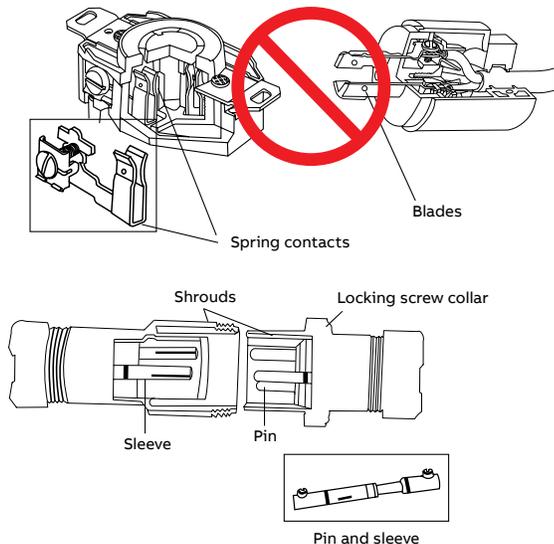
Washdown duty, chemical, outdoor, industrial and marine use non-metallic plugs, connectors receptacles and inlets – 20, 30, 50 and 60 A, maximum 600 V AC/250 V DC

Pin and sleeve contact devices consist of round male pins that are inserted into tubular female sleeves. Current flows through a large pin-to-sleeve circular contact area. Because current is not restricted through point contact only, higher current flow and cooler operating temperatures are achieved in a compact connection. Wiping action during insertion or withdrawal provides positive self cleaning. Shrouded pins and sleeves are protected from physical damage or casual access and aid in polarization features of the line. The shroud and screw collar completely lock plugs to receptacles or connectors for a reliable connection. Step on the cord, kick or drop a plug – your connection will remain tight.

Pin and sleeve devices are the safety standard for high-current applications worldwide.

Bladed plug and receptacle

Spring blade contact designs offer point contact only, with minimal mechanical support in receptacles. Higher heat is generated in use as contacts loosen with age and dirt accumulation, resulting in failures. Exposed blade contacts can easily be damaged. Contacts are both the electrical and mechanical locking method.



Pin and sleeve connector and plug

Pin and sleeve design enables higher current flow at cooler temperatures due to large circular contact area. Sleeves act as retainers for the pins, making a reliable connection. Shrouded pins and sleeves are protected from damage and inadvertent access. Locking housing screw collars provide for a reliable, long-lasting connection with electrical contacts separate.

The water spray test

1000-PSI water spray was directly applied at the face of DuraGard receptacles. No damage occurred, and no water penetrated the housing or cord seal. DuraGard plugs, connectors and receptacles are designed to withstand water spray test at 1000 PSI. No extra boots or adapters required.



DuraGard: designed for the toughest washdown applications



01



02



03



04

The ultimate in waterproof connections

- Washdown duty, chemical, outdoor, industrial and marine use non-metallic plugs, connectors receptacles and inlets – 20, 30, 50 and 60 A, maximum 600 V AC/250 V DC
- 20, 30, 50 and 60 A, 600 V AC, 20 A, 250 V DC

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- Lockout capable (30/50/60A plugs):**
- Access hole (not seen) for padlock hasp
 - Interlock engagement CDA 360 solid brass pin and sleeve contacts

- Waterproof cable sealing:**
- Neoprene compression bushing cable locking system
 - Locking bushing nut with external cable clamps
 - Bushing sizes available for any cable size

- Waterproof locking connections:**
- Locking screw collars with O-ring gaskets
 - Housing mechanical support and pin and sleeve connection

- High reliability, high-performance connections:**
- CDA 360 solid brass pin and sleeve contacts

- Safety specified voltage connections:**
- Safety ground makes first breaks last
 - Voltage polarized to meet NEC 210-7 and OSHA standards

- Long-lasting self-cleaning connections:**
- Full round pin and sleeve contacts

- Durable and UL 94-V0 flame rated housings:**
- DuraV high-impact body and collars
 - Thermoset interiors
 - Deadfront construction

- Fast, easy, rear-load wiring and assembly:**
- Drop-in assembly interior
 - Sleeve and cable bushing
 - Easy-in pressure screw wiring terminations

- Dry wiring compartments:**
- DurOring sealing system for each pin and sleeve and interior assembly

01 50 A plug and connector shown