**Product Information: DC-Decoupler™**

**Product:** Rustrol® DC-Decoupler™ Model: DCD

**End User:**
- Oil and Gas Transmission Pipelines
- Refinery and Petrochemical Industries
- Electrical Utilities
- Tank Farm/Oil Depot Facilities

**Background:**
The Rustrol® DC-Decoupler™ Model: DCD is an enhanced development to the Rustrol® Product Line. The DC-Decoupler™'s unique features are based on the proven Rustrol® technology utilizing solid-state design and superior test proven, quality components throughout the construction. The DC-Decoupler™ Model: DCD is typically utilized within applications of light/moderate (ie. non-continuous) exposure of AC mitigation. The standard DCD Product Line provides an economical engineered solution in a compact, lightweight, ready to mount assembly.

**Applications:**
The Rustrol® DC-Decoupler™ Model: DCD device is designed to protect personnel and equipment from electrical disturbances. The DC-Decoupler™ device blocks DC current associated with cathodically protected structures, (ie. Pipelines, On-Grade or Buried Storage Tanks, etc.) and provides an effective and continuous conductive path to the Utilities Grounding/Earthing Network for all other forms of Electrical Exposures, such as:
- Lightning/Surge Currents
- AC Fault Currents
- AC Induced Voltages
- Over-Voltage Protection

The Rustrol® DC-Decoupler™ Model: DCD is capable of reducing the potential difference across Isolating Flange Assemblies and/or Monolithic Isolating Joints to well below the industry accepted criteria (ie. <10 volts AC rms).

The Rustrol® DC-Decoupler™ Model: DCD is versatile and can be used in numerous applications, including coupling the primary structure (ie. pipes, valves, pumps, etc.) in series through the DC-Decoupler™ to Gradient Control Systems.

**Typical Applications include:**
- Pipeline AC Mitigation/AC Discharger
- Isolating Joint Protection
- Decoupling from the Gradient Control Systems

**Advantages:**
- Product Certification—ATEX/IECEx, QPS, KCS
- Rustrol®, an Industry Leader for Safe DC Isolation
- Fail-Safe Design; Grounding Criteria Assured
- Compact; Ready to Mount Design
- Maintenance-Free Performance
- Eliminate “Step & Touch” Potential Risk
- Maintains coating Stress Voltages within Acceptable Limits
- No additional Mounting Accessories required for Installation
- No Structure Compromise Required for Installation (ie. Flange Drilling)

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Rustrol® DC-Decoupler™ - Model: DCD

Model: DCD Selection Guide

Standard assembly is installed in a performance test rated moulded Non-Metallic enclosure, suitable for indoor/outdoor applications (IP67 Certified; Equivalent to NEMA 4, 4X, 6P), complete with access cover and cable termination fittings.

**AC Fault Current Exposure - 1 cycle @ 60 Hz rms:** (1 cycle @ 50 Hz rms, Refer to Drawing DCD-00)

- ✔ 02.5 kA
- ✔ 06.3 kA
- ✗ 07.0 kA
- ✗ 10.0 kA

(Surge/Lightning Protection: Standard assembly, peak surge current rating)

- ✔ Primary @ 100kA @ 4/10 µs • 75kA @ 8/20 µs • 50kA @ 10/350 µs

(Refer to Drawing No. DCD-00 for Detailed Specifications @ 1, 3, 10 & 30 cycle @ 50 or 60 Hz rms: visit web site)

**DC Voltage Threshold**

Standard assembly @ -3.0/+1.0 volts DC

Optional Voltage Threshold Settings Available (i.e. -6/+6, -4/+4, -4/+2, -6/+1 volts DC or other)

- ✔ 0 amp (no AC Mitigation)
- ✗ 12 amps
- ✗ 24 amps
- ✗ 36 amps
- ✔ 48 amps
- ✗ 75 amps
- ✗ 100 amps

(Intermittent Non-Continuous Exposure for AC Mitigation)

**Mitigation of Induced AC-Steady State** (@ 50 or 60 Hz rms)

Selection range 0-100 Amperes, as specified by the customer.

Optional (As Specified by the Customer):

- ✗ ATEX/IECEx Certified
- ✗ QPS Certified
- ✗ KCS Certified
- ✗ Cable Termination - Standard - FMA
  - Optional - OT, DT or IT
- ✗ Optional Lightning - OL
- ✗ Submersible Enclosure (NEMA 6P/IP68 certified)
- ✗ Free-Standing Fibreglass Pedestal Mount
- ✗ Special finishes

**DCD – 02.5 – SL – 03 – A48 – specify**

(Typical Ordering Code)