



# Polarization Cell Replacement (PCR)

## Data Sheet

The PCR is a solid-state device designed to simultaneously provide DC decoupling and AC continuity/grounding when used with cathodically protected structures, such as pipelines, tanks, grounding systems, and cable casings. By decoupling the cathodic protection system from grounding systems and other structures, the CP requirements can be minimized, while maintaining an effective ground or bond rated for AC faults and lightning current. All Dairyland devices are maintenance-free, with no requirements for periodic service or testing.

### Features:

- Fail-safe design assures bonding/grounding
- Certified for hazardous locations, electrical grounding
- Higher blocking voltage than polarization cells
- Inherent over-voltage protection provided to structure
- No maintenance or testing required

### Typical Applications:

- Insulated Joint Protection
- AC Voltage Mitigation
- Decoupling Electric Equipment Grounding Systems
- Decoupling From Utility Grounding Systems

### Why Fault Current Is Important:

Fault current exposure for the product relates to the ampacity, proximity and mode of current transfer from a faulting source (power transmission line, motor circuit, induction from overhead lines, etc.). Select a product rating that has reasonable margin above the site conditions. Contact Dairyland for any assistance with selection of appropriate ratings.

### AC Fault Current Ratings (Amps AC-RMS Symmetrical)

PCR Model	Rating at 30 Cycles 60Hz / 50Hz
PCR-3.7KA	3,700 / 3,500
PCR-5KA	5,000 / 5,000
PCR-10KA	10,000 / 9,000
PCR-15KA	15,000 / 14,000

Note: 60 Hz models shown. For other models and options available, please visit [dairyland.com](http://dairyland.com).

### Other Ratings and Certifications:

Threshold Voltage (absolute)

-3/+1V (standard)      -4/+1V (optional)

-2/+2V (optional)      -6/+1V (optional)

### AC Steady-State Current (amperes - rms) 50/60Hz

45A (standard)

80A (optional)

### Lightning Surge Current

100kA crest (8 x 20 μs waveform)

### Environmental rating:

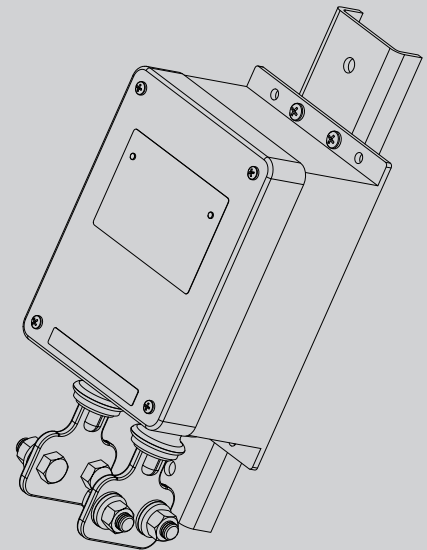
NEMA 4X: Rain-proof  
(Standard)

NEMA 6P: Submersible  
(Optional)

### Hazardous Location Certifications:

Rating	Certification Agency
Class I, Division 2, Groups A, B, C, D Temp Code T4	UL, C-UL
Class I, Zone 2, Group IIC, ATEX Directive, IECEx, Temp Code T4	UL/DEMKO

For model numbers, options and accessories, see full technical literature at [dairyland.com](http://dairyland.com)



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