



DAIRYLAND ELECTRICAL INDUSTRIES

ALWAYS RUGGED. ALWAYS RELIABLE.

Polarization Cell Replacement (PCRH) Data Sheet

The PCRH 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. Differentiating it from the PCR, the PCRH line of products features explosion-proof construction certified for Zone 1, Group IIB, and Class I, Division 1 & 2, Groups B, C, D hazardous locations. The PCRH has been fully tested and listed by Underwriter's Laboratory (UL) to the US and Canadian standards, as well as to International standards ATEX and IECEx.

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 DEI for any assistance with selection of appropriate ratings.

AC Fault Current Ratings (Amps AC-RMS Symmetrical)

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

Note: For other models and options available, please visit dairyland.com
XXX = BCD for Div 1 versions
XXX = IECEx for Zone 1 versions

OTHER RATINGS AND CERTIFICATIONS:

Threshold Voltage

-3/+1V (standard) 2/+2V (optional)

AC Steady-State Current (amperes - rms) 50/60Hz
45A

Lightning Surge Current

100kA crest (8 x 20 μs waveform)

Environmental rating:

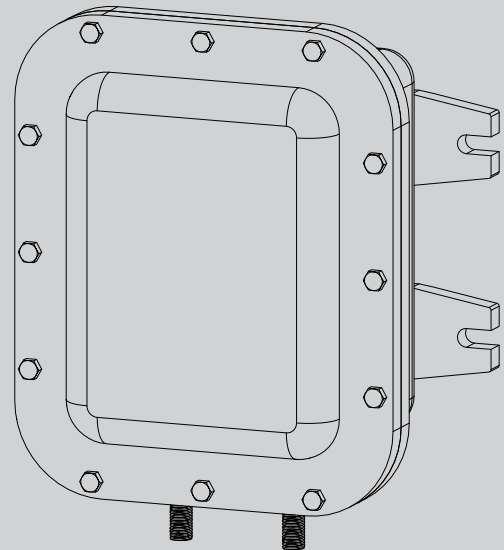
NEMA 4X (for Div 1 versions)

IP66 (for Zone 1 versions)

Hazardous Location Certifications:

Rating	Certification Agency
Class I, Division 1 & 2 Groups B, C, D, Temp Code T5 Zone 1, Group IIB	UL, C-UL UL/DEMKO

For model numbers, options and accessories, see full technical literature at .dairyland.com



PCRH
Polarization Cell Replacement