


Polarization Cell Replacement (PCR)

SHT 1 OF 3

CLIENT Transcanada Keystone Pipeline Limited Partnership TAG No. Note 2
 PROJECT Keystone XL Oil Pipeline SERVICE AC Grounding of Cathodically Protected Structures
 FABR. SPEC Per Manufacturer's Specification SITE Steele City Canada

CODE 1: Work may proceed. 
Permission to proceed does not constitute acceptance or approval of design details, calculations, analyses, test methods or materials developed or selected by the supplier and does not relieve the supplier from full compliance with contractual obligations.
 Name: jared_wharton Date: 11/16/2020

MANUFACT Dairyland Electric Industries Inc. MODEL
 SERIAL No. No. REQ. 148 Nos

DESCRIPTION		PURCHASER'S REQUIREMENTS	VENDOR'S RESPONSE (Note 1)
Environmental Conditions	Location (Indoors or Outdoors)	Outdoor	COMPLY
	Altitude	< 3300 Ft (1000 m)	COMPLY
	Ambient Temperatures	-45 °C to +40 °C	COMPLY
	Area Classification	Class 1, Zone 2, Group IIA	COMPLY
	Enclosure Rating	NEMA 4X	COMPLY
Typical Applications	AC Grounding and DC Isolation of Cathodically Protected Structures	<input checked="" type="checkbox"/>	COMPLY
	Over-Voltage Protection of Insulated Flange/Joints	<input checked="" type="checkbox"/>	COMPLY
	DC Isolation of Cathodically Protected Equipment from Utility	<input checked="" type="checkbox"/>	COMPLY
	Over-Voltage Protection of Equipment from AC Faults, Lightning, Switching transients	<input type="checkbox"/>	
	Blocking Stray DC Voltage	<input type="checkbox"/>	
	Mitigation of Induced AC Voltage	<input type="checkbox"/>	
DC Blocking/Threshold Voltage	-3.0 V / +1.0 V (Standard)	<input checked="" type="checkbox"/>	COMPLY
	-2.0 V / +2.0 V (Optional)	<input type="checkbox"/>	
	-4.0 V / +1.0 V (Optional)	<input type="checkbox"/>	
	-6.0 V / +2.0 V (Optional)	<input type="checkbox"/>	
	- ___ V / + ___ V (Custom)	<input type="checkbox"/>	
AC Fault Current Ratings (kA) at 30 Cycles, 60 Hz	PCR MODEL Rating at 30 Cycles, 60 Hz		
	PCR - 3.7 kA 3,700 (Amps AC-RMS Sym)	<input type="checkbox"/>	
	PCR - 5.0 kA 5,000 (Amps AC-RMS Sym)	<input checked="" type="checkbox"/>	COMPLY
	PCR - 10 kA 10,000 (Amps AC-RMS Sym)	<input type="checkbox"/>	
	PCR - 15 kA 15,000 (Amps AC-RMS Sym)	<input type="checkbox"/>	
Steady State Current Ratings (60 Hz)	Amps AC-RMS Sym		
	40 A (Standard)	<input checked="" type="checkbox"/>	COMPLY
	80 A (Optional)	<input type="checkbox"/>	
Lightning Surge Current Rating (kA)	Peak Amperes		
	100,000	<input checked="" type="checkbox"/>	COMPLY

- NOTES:
 1. Vendor to fill in data.
 2. Decoupler tags per separate tagging list, see Sheet 2.

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 FABR. SPEC Per Manufacturer's Specification SITE Steele City Canada

MANUFACT. Deryland Electric Industries Inc. MODEL
 SERIAL No. No. REQ. 148 Nos.

PCR DECOUPLER TAG NUMBER

PS-01	PS-02	PS-03	PS-04	PS-05	PS-06
	122-LKSDE-B0-PCR-0101	123-MTRSP-B0-PCR-0101	124-OYENS-B0-PCR-0101		126-FXVLY-B0-PCR-0101
	122-LKSDE-B0-PCR-0102	123-MTRSP-B0-PCR-0102	124-OYENS-B0-PCR-0102		126-FXVLY-B0-PCR-0102
	122-LKSDE-B0-PCR-0205	123-MTRSP-B0-PCR-0205	124-OYENS-B0-PCR-0205		126-FXVLY-B0-PCR-0205
121-HRDBP-B0-PCR-0001	122-LKSDE-B0-PCR-0001	123-MTRSP-B0-PCR-0001	124-OYENS-B0-PCR-0001	125-BDLSS-B0-PCR-0001	126-FXVLY-B0-PCR-0001
121-HRDBP-B0-PCR-0002	122-LKSDE-B0-PCR-0002	123-MTRSP-B0-PCR-0002	124-OYENS-B0-PCR-0002	125-BDLSS-B0-PCR-0002	126-FXVLY-B0-PCR-0002
121-HRDBP-B0-PCR-0003	122-LKSDE-B0-PCR-0003	123-MTRSP-B0-PCR-0003	124-OYENS-B0-PCR-0003	125-BDLSS-B0-PCR-0003	126-FXVLY-B0-PCR-0003
121-HRDBP-B0-PCR-0004	122-LKSDE-B0-PCR-0004	123-MTRSP-B0-PCR-0004	124-OYENS-B0-PCR-0004	125-BDLSS-B0-PCR-0004	126-FXVLY-B0-PCR-0004
121-HRDBP-B0-PCR-0005	122-LKSDE-B0-PCR-0005	123-MTRSP-B0-PCR-0005	124-OYENS-B0-PCR-0005	125-BDLSS-B0-PCR-0005	126-FXVLY-B0-PCR-0005
121-HRDBP-B0-PCR-0006	122-LKSDE-B0-PCR-0006	123-MTRSP-B0-PCR-0006	124-OYENS-B0-PCR-0006	125-BDLSS-B0-PCR-0006	126-FXVLY-B0-PCR-0006
	122-LKSDE-B0-PCR-0007	123-MTRSP-B0-PCR-0007	124-OYENS-B0-PCR-0007		126-FXVLY-B0-PCR-0007
	122-LKSDE-B0-PCR-0008	123-MTRSP-B0-PCR-0008	124-OYENS-B0-PCR-0008		126-FXVLY-B0-PCR-0008
121-HRDBP-B0-PCR-0009	122-LKSDE-B0-PCR-0009	123-MTRSP-B0-PCR-0009	124-OYENS-B0-PCR-0009	125-BDLSS-B0-PCR-0009	126-FXVLY-B0-PCR-0009
	122-LKSDE-B0-PCR-0010	123-MTRSP-B0-PCR-0010	124-OYENS-B0-PCR-0010	125-BDLSS-B0-PCR-0010	126-FXVLY-B0-PCR-0010
				125-BDLSS-B0-PCR-0011	
				125-BDLSS-B0-PCR-0012	
				125-BDLSS-B0-PCR-0013	
121-HRDBP-B0-PCR-0014				125-BDLSS-B0-PCR-0014	

PCR DECOUPLER TAG NUMBER (CONT.)

PS-07	PS-08				
127-PIAPT-B0-PCR-0101					
127-PIAPT-B0-PCR-0102					
127-PIAPT-B0-PCR-0205					
127-PIAPT-B0-PCR-0001	128-GRSSY-B0-PCR-0001				
127-PIAPT-B0-PCR-0002	128-GRSSY-B0-PCR-0002				
127-PIAPT-B0-PCR-0003	128-GRSSY-B0-PCR-0003				
127-PIAPT-B0-PCR-0004	128-GRSSY-B0-PCR-0004				
127-PIAPT-B0-PCR-0005	128-GRSSY-B0-PCR-0005				
127-PIAPT-B0-PCR-0006	128-GRSSY-B0-PCR-0006				
127-PIAPT-B0-PCR-0007					
127-PIAPT-B0-PCR-0008					
127-PIAPT-B0-PCR-0009	128-GRSSY-B0-PCR-0009				
127-PIAPT-B0-PCR-0010	128-GRSSY-B0-PCR-0010				
	128-GRSSY-B0-PCR-0011				
	128-GRSSY-B0-PCR-0012				
	128-GRSSY-B0-PCR-0013				
	128-GRSSY-B0-PCR-0014				

NOTES:

- Vendor to fill in data.
- Decoupler tags per separate tagging list, see Sheet 2.



WorleyParsons
 resources & energy

JOB No. 08E4490
 DATA SHEET No. 25472-101-EYD-EYB0-W0001

REV	DATE	ISSUED FOR	BY	CHKD	APPD
00	17-Feb-13	QUOTATION	MLM	FM	[Signature]

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SHT 3 OF 3

CLIENT	Transcanada Keystone Pipeline Limited Partnership	TAG No.	Note 2
PROJECT	Keystone XL Oil Pipeline	SERVICE	AC Grounding of Cathodically Protected Structures
FABR. SPEC	Per Manufacturer's Specification	SITE	Steele City Canada

MANUFACT.	Dairyland Electric Industries Inc.	MODEL	
SERIAL No.		No. REQ.	148 Nos.

PCR DECOUPLER TAG NUMBER
IMLV

240-HRDBP-01A-B0-PCR-01	240-GRSSY-01A-B0-PCR-01				
240-HRDBP-01A-B0-PCR-02	240-GRSSY-01A-B0-PCR-02				
240-HRDBP-01A-B0-PCR-03	240-GRSSY-01A-B0-PCR-03				
240-LKSDE-01A-B0-PCR-01	240-GRSSY-03A-B0-PCR-01				
240-LKSDE-01A-B0-PCR-02	240-GRSSY-03A-B0-PCR-02				
240-LKSDE-01A-B0-PCR-03	240-GRSSY-03A-B0-PCR-03				
240-LKSDE-02A-B0-PCR-01	240-GRSSY-04A-B0-PCR-01				
240-LKSDE-02A-B0-PCR-02	240-GRSSY-04A-B0-PCR-02				
240-LKSDE-02A-B0-PCR-03	240-GRSSY-04A-B0-PCR-03				
240-MTRSP-01A-B0-PCR-01					
240-MTRSP-01A-B0-PCR-02					
240-MTRSP-01A-B0-PCR-03					
240-OYENS-01A-B0-PCR-01					
240-OYENS-01A-B0-PCR-02					
240-OYENS-01A-B0-PCR-03					
240-OYENS-02A-B0-PCR-01					
240-OYENS-02A-B0-PCR-02					
240-OYENS-02A-B0-PCR-03					
240-OYENS-03A-B0-PCR-01					
240-OYENS-03A-B0-PCR-02					
240-OYENS-03A-B0-PCR-03					
240-BDLSS-01A-B0-PCR-01					
240-BDLSS-01A-B0-PCR-02					
240-BDLSS-01A-B0-PCR-03					
240-BDLSS-04A-B0-PCR-01					
240-BDLSS-04A-B0-PCR-02					
240-BDLSS-04A-B0-PCR-03					
240-FXVLY-01A-B0-PCR-01					
240-FXVLY-01A-B0-PCR-02					
240-FXVLY-01A-B0-PCR-03					
240-FXVLY-03A-B0-PCR-01					
240-FXVLY-03A-B0-PCR-02					
240-FXVLY-03A-B0-PCR-03					
240-PIAPT-02A-B0-PCR-01					
240-PIAPT-02A-B0-PCR-02					
240-PIAPT-02A-B0-PCR-03					
240-PIAPT-03A-B0-PCR-01					
240-PIAPT-03A-B0-PCR-02					
240-PIAPT-03A-B0-PCR-03					
240-PIAPT-04A-B0-PCR-01					
240-PIAPT-04A-B0-PCR-02					
240-PIAPT-04A-B0-PCR-03					

- NOTES:
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 - Decoupler tags per separate tagging list, see Sheet 2 and 3.



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