

**Solid State Decoupler Device (SSD)**

SHT 1 OF 2

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, drawings, etc. by TC Energy. It is the responsibility of the contractor to ensure that the work complies with all applicable codes and standards.

**TC Energy**

Name: jared\_wharton Date: 11/16/2020

MANUFACT. Dairyland Electric Industries Inc.	MODEL	
SERIAL No.	No. REQ.	5 Nos.

	DESCRIPTION	PURCHASER'S REQUIREMENTS	VENDOR'S RESPONSE (Note 1)
Environmental Conditions	Location (Indoors or Outdoors)	Outdoor	<b>COMPLY</b>
	Altitude	< 3300 Ft (1000 m)	<b>COMPLY</b>
	Ambient Temperatures	-15 °C to +40 °C	<b>COMPLY</b>
	Area Classification	Class 1, Zone 2, Group IIA	<b>COMPLY</b>
	Environment	Wind Blown Road, Farm Dust, Ice, Snow	<b>COMPLY</b>
	Enclosure Rating	NEMA 4X	
Typical Applications	AC Grounding and DC Isolation of Cathodically Protected Structures	<input checked="" type="checkbox"/>	<b>COMPLY</b>
	Over-Voltage Protection of Insulated Flange/Joints	<input type="checkbox"/>	
	Mitigation of Induced AC Voltage	<input type="checkbox"/>	
	Decoupling Gradient Control Mats	<input type="checkbox"/>	
DC Blocking/Threshold Voltage	-3.0 V / +1.0 V (Standard)	<input checked="" type="checkbox"/>	<b>COMPLY</b>
	-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	<b>SSD MODEL</b> <b>Rating at 30 Cycles, 60 Hz</b>		
	SSD - 1.2 kA      1,200 (Amps AC-RMS Sym)	<input type="checkbox"/>	
	SSD - 2.0 kA      2,000 (Amps AC-RMS Sym)	<input type="checkbox"/>	
	SSD - 3.7 kA      3,700 (Amps AC-RMS Sym)	<input type="checkbox"/>	
	SSD - 5.0 kA      5,000 (Amps AC-RMS Sym)	<input checked="" type="checkbox"/>	<b>COMPLY</b>
Steady State Current Ratings (60 Hz)	<b>Amps AC-RMS Sym</b>		
	40 A (Standard)	<input checked="" type="checkbox"/>	<b>COMPLY</b>
	80 A (Optional)	<input type="checkbox"/>	
Lightning Surge Current Rating (kA)	<b>Peak Amperes</b>		
	75,000	<input type="checkbox"/>	
	100,000	<input checked="" type="checkbox"/>	<b>COMPLY</b>

NOTES:

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

<b>WorleyParsons</b> resources & energy	JOB No.      08E4490	REV	DATE	ISSUED FOR	BY	CHKD	APPD
	DATA SHEET No.      25472-101-EYD-EY00-WC002	00	12 Apr-13	QUOTATION	MAL	FM	EJ

