



PowerView CP L141R Transformer/Rectifier

Model C2262A single channel 18V/6A Transformer/Rectifier with Remote Control

DATASHEET

- Control corrosion using this field-proven 18 Volt 6 Amp Transformer/Rectifier
- Communications built in for full remote monitoring and control.
- 2 highly accurate control modes: Constant Voltage and Constant Current
- High Efficiency for reduced heat loading
- Small form factor allows compact TRU's
- Accurate control over 0-100% of range
- LED Indicators for easy diagnostics



Features

- Accurate stable control down to low current levels
- Built-in shunt for accurate current measurement
- Designed for remote monitoring and control
- Indefinite Open/Short circuit protected output
- Wide operating temperature range
- Universal 100-240Vac input voltage
- DIN Rail mounting with small panel footprint
- Fanless efficient design for high reliability

Overview

The Powerterm L141R is a high efficiency Transformer/Rectifier module for use in Impressed Current Cathodic Protection systems.

This TR module provides a single controlled output of 6A or 18V.

The Powerterm L141R can be configured to control constant voltage, constant current, or constant reference potential. All configuration settings and readings can be viewed and changed from a locally mounted **PowerView CP Touch Screen**, and/or remotely using the Omniflex **Data2Desktop Web Portal** using a standard web browser.

Communications Interface

The Powerterm L141R T/R module has an integrated communications port. This provides the capability to distribute the TR modules for optimum cabling of the structure while keeping a single point of monitoring and control for the system.

See the system diagrams later in this datasheet for examples of how to connect Powerterm L141R module into distributed CP systems.

Independent Monitoring

The Powerterm L141R provides independent measurement of output voltage and current internally for increased confidence of system performance when remotely monitored

A Single 6A Zone Output

This TR module has a single fully configurable output for automatic control of constant current, voltage or reference potential.

Current and Voltage Limit settings for the output ensure that safe operating conditions selected by the user are not exceeded.

Automatic Instant Off

The Powerterm L141R allows time synchronised ON and OFF switching remotely via the communications link. This allows Instant Off and Depolarisation etc. testing to be conducted from a remote location, such as from the Data2Desktop website. Using the companion PowerView CP Touch Screen, Instant Off readings can be taken automatically from any number of reference inputs co-ordinated with the cycling of the T/R modules ON/OFF using user settable cycle times.

PowerView CP Touch Screen

Configuration and monitoring of the PowerView L141R T/R modules in a system is done through a single easy-to-use touch screen in the TRU without the need for special test equipment or custom software packages.

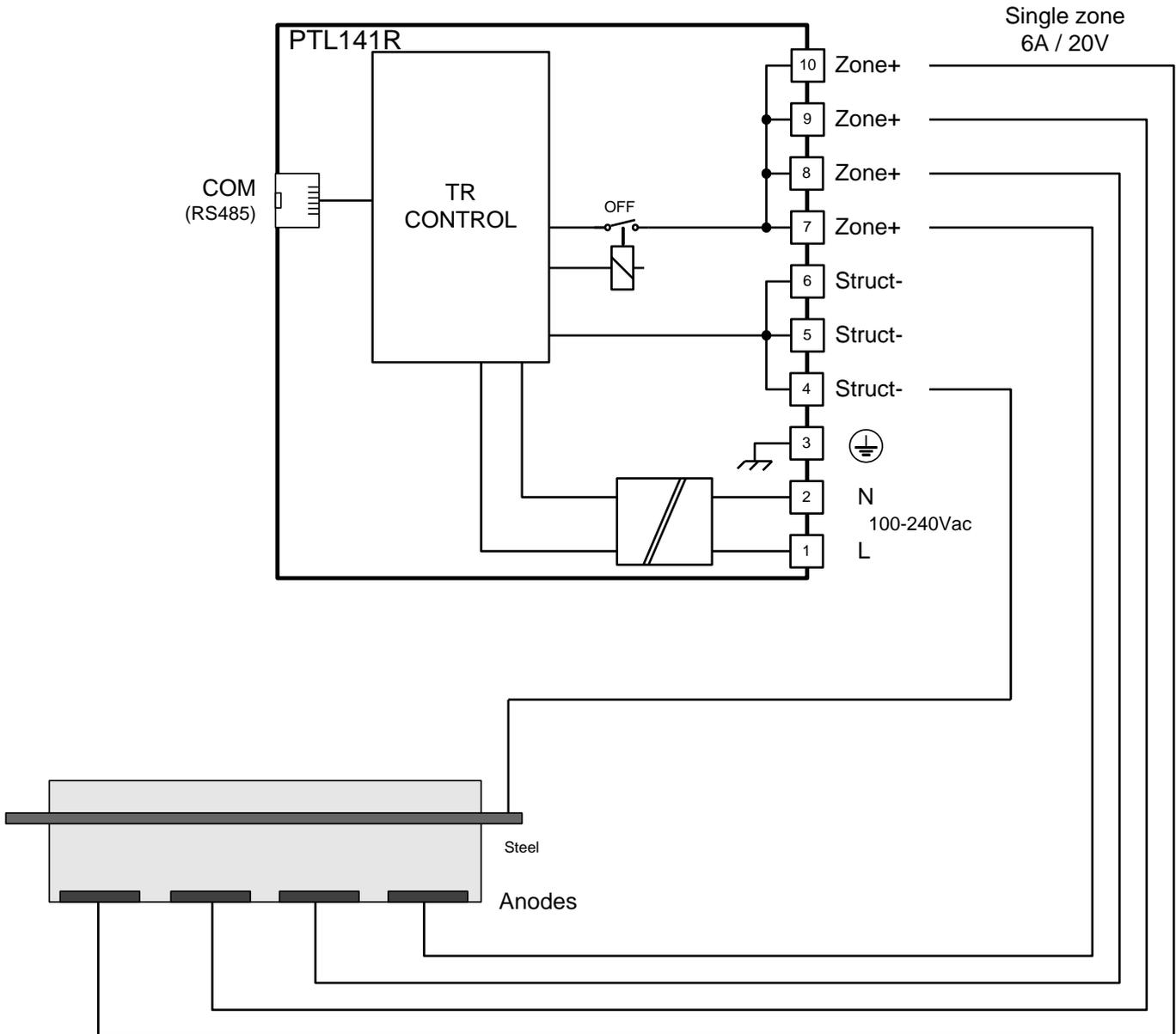




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Typical L141R System Connection Diagram





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Typical PowerView CP System Configuration

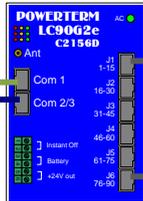
ZONE OUTPUTS

Touch Screen
Model PT6070A



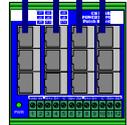
Antenna

Master
Controller
Type LC90G2e
Model C2156D

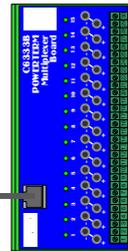


AC IN

Communications
Patch Board
Model C6175B

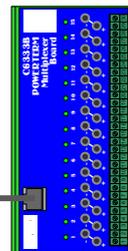


REFERENCE INPUTS



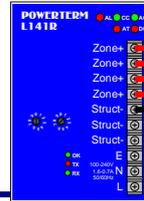
Ref 15

Ref 1



Ref 90

Ref 76



Zone+
Zone+
Zone+
Zone+
Struct.
Struct.

Zone 1-1
Zone 1-2
Zone 1-3
Zone 1-4

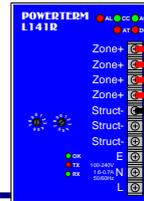
AC IN



Zone+
Zone+
Zone+
Zone+
Struct.
Struct.

Zone 2-1
Zone 2-2
Zone 2-3
Zone 2-4

AC IN



Zone+
Zone+
Zone+
Zone+
Struct.
Struct.

Zone 3-1
Zone 3-2
Zone 3-3
Zone 3-4

AC IN

Up to 99 Model C2262A T/R's
(99 Independent Zones of 6A / 20V)

Up to 6 Model C6333A Multiplexer Boards
(15 references per Multiplexer = 90 Refs Total)

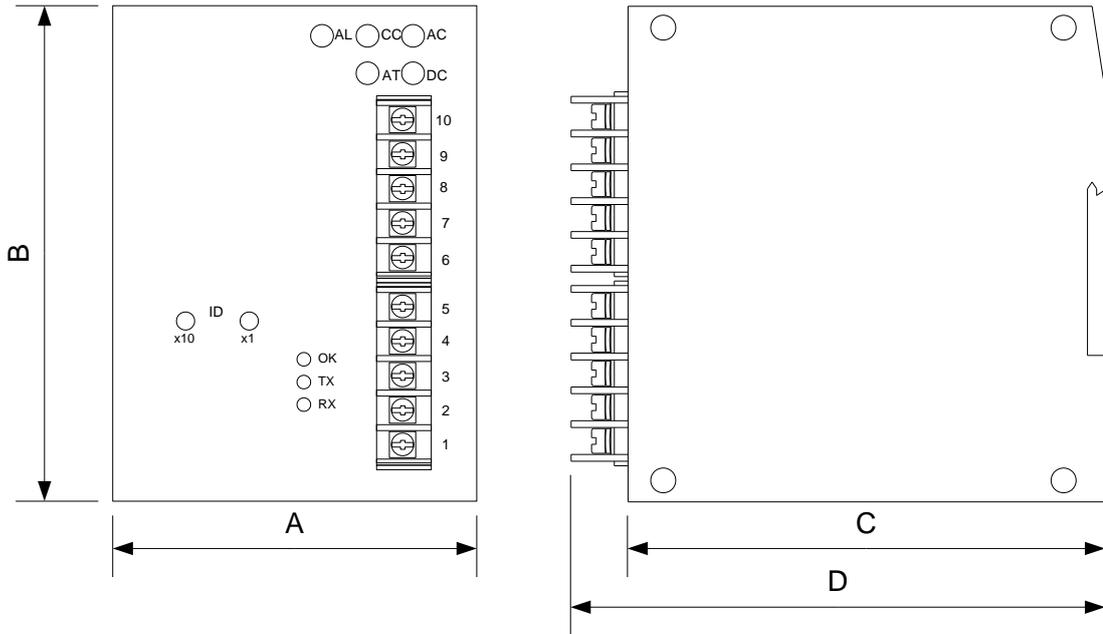




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Mechanical Details



A	80mm
B	110mm
C	110mm
D	120mm





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Specifications

AC Input

AC input voltage range	85-264Vac
AC input frequency	47-63 Hz
Input current at full load	<1.5A rms at 115Vac <0.8A rms at 230Vac
Switch-on inrush current	15A for <10ms
Surge withstand	2.5kA 8/20us pulse 40 joules max.
Fast Transients	2 kV

DC Outputs (Terminals 7,8 and 9,10)

Output Range	0-18Vdc 0-6Adc
Maximum Continuous Total Power	90 Watts at 60°C ambient (see de-rating under Environment)
AC line regulation	0.5% over 85-132 & 170-264Vac
Load Regulation	2% max over 10-100% of total load
Output Ripple	<100mVrms
Efficiency	>80% at full load

Test Capability

Instant Off	Internal Cycle Timer synchronised to the system master for automated Instant Off measurements
On/Off Control	On/Off control from the system master for synchronised depolarisation and interference testing.

Constant Current Settings

Current Setpoint	0 to 6 Amps*
Maximum Voltage Limit	0 to 18 Volts*

* Ensure the maximum power of 90W is not exceeded

Constant Voltage Settings

Voltage Setpoint	0 to 18 Volts*
Current Limit	0 to 6 Amps*

* Ensure the maximum power of 90W is not exceeded

Indicator Lights

AC (Green)	ON when AC power is ON
DC (Red)	ON when any DC Output is ON
CC (Green)	ON when output set to constant current mode. Flashing when out of control

AT (Green)	ON when output set to constant reference mode Flashing when out of control
ALM (Red)	ON when any Alarm is present
Detected Alarms	Low Current Voltage Overload Current Underload Reference out of limits

Environment

Operating Temperature	0 to +60°C at full load
Temperature derating	Derate 4 W/°C up to 70°C max
Storage Temperature	-10°C – 70 °C (+14°F – 158°F)
Design Life at 50°C full load	50 000hours

Mechanical

Width	80mm
Height	110mm
Depth	120mm (including terminals)

Weight

Unpacked	680gm approx.
Packed	710gm approx.

Compliance to Standards

Safety	IEC950; EN60950:1995
Emissions	EN 55011 & EN50081-2:1994 Group I, Class A
Immunity – ESD	IEC 61000-4-2:1995, level 3
Immunity – RF Fields	IEC 61000-4-3:1995, level 3
Immunity – Fast Transients	IEC 61000-4-4:1995 2 kV – AC & DC power ports 1 kV – other input/output lines
Insulation Resistance (100% tested)	100Mohm at 500Vdc input to output to ground.
Insulation Breakdown (100% tested)	1500Vac input to earth for 1s 1000Vac output to earth for 1s

Ordering Information

ORDER CODE	DESCRIPTION
C2262A	Powerterm L141R 18V/6A Transformer/Rectifier

