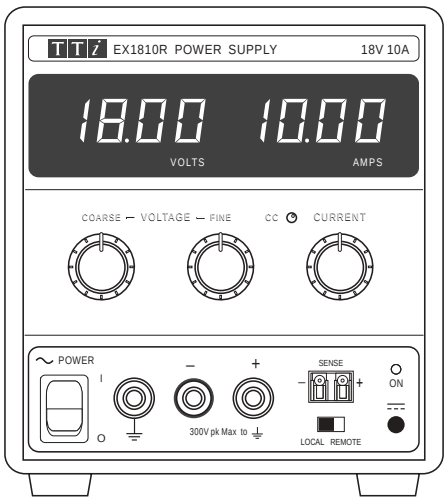
THURLBY THANDAR INSTRUMENTS

EX-R Series Compact high power bench DC PSUs



- Power levels up to 420 watts
- Current output up to 10 amps
- Compact and lightweight design
- Separate 4 digit voltage and current meters
- Switchable remote or local sensing
- Constant voltage or constant current operation
- DC output switch

The EX-R series is an extension to the highly successful EX series of dc bench power supplies (see separate data sheet).

To match their higher current capability, EX-R models include switchable remote sensing and extended voltmeter resolution.

EX1810R

The EX1810R is a high current single output bench power supply in a compact case style capable of providng 180 watts of power. High power efficiency allows it to operate without any cooling fan.

It can provide current of up to 10 amps at voltages up to 18V in both constant voltage and constant current modes.

Switchable remote sense is provided to remove the effects of connection lead resistance at high current.

EX4210R

The EX4210R is a high current single output bench power supply in a compact case style capable of providng 420 watts of power.

It can provide current of up to 10 amps at voltages up to 42V in both constant voltage and constant current modes.

The choice of 42 volts enables it to be used as a a test source for the new generation of automotive electrical parts which will use 42V (18 cell batteries) instead of 14V (6 cell batteries) thus reducing currents and hence wiring losses.



Switchable remote sense is provided to remove the effects of connection lead resistance at high current.

SPECIFICATIONS

OUTPUT

Operating Mode:	Constant voltage or constant current with automatic cross-over and indication.
Voltage Setting:	0V to >rated O/P by coarse and fine controls.
Current Setting:	0A to >rated O/P by single logarithmic control.
Load regulation:	<0.01% of max. O/P for a 90% load change.
Line regulation:	<0.01% of max. O/P for a 10% line voltage change.
Output impedance:	Typically <5mΩ in constant voltage mode. Typically >50kΩ in constant current mode.
Ripple & Noise (20MHz bandwidth):	Typically <2mV rms (CV mode).
Transient Response:	<200µs to within 50mV of set level for 90% load change.
Temp. Coefficient:	Typically <100ppm/°C.
Output Protection:	Outputs will withstand forward voltages above the rated output voltage. Reverse protection by diode clamp for currents up to 3A.
Status Indication:	Output ON lamps. Constant current lamps.
Output Switch:	Electronic. Preset voltage and current displayed when output is off.
Output Terminals:	4mm terminals on 19mm (0.75") pitch .

REMOTE SENSE

Selection:	Selectable as Local or Remote via front panel switch.
Connection:	Remote sense connections via spring loaded terminal block on front panel.
Capability:	Remote sense can eliminate up to 0.5V drop per lead.

METERS

Meter Types:	Separate 4 digit meters for voltage & current with 14mm (0.56") LED displays. Reading rate 4/sec.
Meter Resolutions:	10mV, 10mA.
Meter Accuracies:	Voltage 0.3% ±2 digit. Current 0.6% ±2 digit.

COOLING

EX1810R:	Convection cooling (silent operation).
EX4210R:	Fan blown cooling using low noise brushless fan.

POWER

AC Input:	230V ±14% (115V to order) 600VA max. Installation Category II.

SIZE AND WEIGHT

Size:	140 x 320 x 160 mm (WxDxH).
Weight:	1810R - 3.0 kg; 4210R - 3.8kg.

ENVIRONMENTAL

Operating Range:	+5°C to +40°C, 20% to 80% RH.
Storage Range:	-40°C to + 70°C.
Environmental:	Indoor use at <2000m, Pollution Degree 1.
Safety:	Complies with EN61010-1.
EMC:	Complies with EN61326.

Thurlby Thandar Instruments Ltd. operates a policy of continuous development and reserves the right to alter specifications without prior notice.

EX & EX-R series - combined range		
Single Output		
EX355	35V/5A	175 watts
EX355P	35V/5A	175 watts
EX1810R	18V/10A	180 watts
EX4210R	42V/10A	420 watts
Dual Output		
EX354D	2 x 35V/4A	280 watts
EX752M	2 x 75V/2A or 1 x 75V/4A or 1 x 150V/2A	300 watts
Triple Output		
EX354T	2 x 35V/4A + 5V/5A	305 watts

Designed and built in the EEC by:

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