

User Manual

IENT., IEHR.,

70- 150 Watt DC-DC Converter



Model Codes: IEXT/LV, IEXT/MV, IEXT/HV
IEHR/LV, IEHR/MV, IEHR/HV


IEXT

- Isolated input- output
- IEXT = 70W, IEHR = 150W
- Designed for industrial use
- Output over voltage protection (IEXT)
- Input transient/surge suppression
- Suitable for battery charging
- Constant current limit for charging (IEXT)
- Optional output decoupling diode for parallel redundancy
- Short circuit protection
- Reverse polarity protection
- External trim pot for output voltage adjustment
- Complies with EMI standards CISPR22:1985 & AS/NZS3548:1992

◆ 24 Month Warranty

SPECIFICATIONS All specifications are typical at nominal input, full load and at 20°C unless otherwise stated.

ELECTRICAL		PHYSICAL	
DC Input	<ul style="list-style-type: none"> • LV: 11-16V • MV: 21-60V • HV: 60-132V 	Connections - In/Out	IEXT: Plug-in screw terminal block IEHR: 'Barrier' type screw terminal
Protection - input	All models: Input fuse	Enclosure	Base: anodised aluminium Cover: black powder coated mild steel
• output	IEXT: <i>Overload:</i> constant current limit <i>Short circuit:</i> shutdown to zero output (reset by power off) IEHR: Hiccup current limit on overload or short circuit	Indicators	Green LED for Power On
Reverse Polarity	IEXT/LV & IEHR: input fuse IEXT/MV & IEXT/HV: not polarity sensitive	Weight	IEXT: 450g IEHR: 1.25Kg
Transient Protection	Varistor across input to limit supply transients (voltage spikes)	Mounting	IEXT: M5 Ø holes 164 x 46 mm, and/or: M3 threaded inserts 164 x 66 mm IEHR: To flat surface with brackets supplied, M4 Ø holes. Side mounting centres 140 x 78 mm, End mounting centres 216 x 78 mm
Isolation	1KV DC input - output / earth	OPTIONS	
Efficiency	72-85% (model dependent)	Parallel Redundancy	Output decoupling diode plus DC OK alarm (Relay contacts rated 1A, 50VDC/32VAC) Add suffix - P
Overvoltage Protection (IEXT only)	Operates at 25% above nominal output voltage (converter shuts down - reset by power off)	Rack mount	Converter fitted into 19" x 2U subrack Add : +RM2U For rack mount with parallel redundancy Add: +P2UXR or +P2UHR
Soft Start	1 second typical	DIN Rail Mount	Using DIN rail clips, add DINKIT
Output Power	IEXT: 70W continuous IEHR: 150W continuous	Fork Hoist Use	Please call our sales staff to discuss your application, add option +FORKHOIST
Output Voltages	Refer to model table - other voltages available, please ask our sales staff	Low Temperature	Operation to -20°C, add suffix -LT
Voltage Adj. Range	Approx. ±10%, refer to model table	Conformal Coating	For harsh environments, add option code: +CONFORMAL COATING
Line Regulation	< 0.5% over input range	Battery Charging	The IEXT has a constant output current limit and is suitable for battery charging. The IEHR does not have a constant current limit but in practice it may still be used for float charging lead acid batteries provided the batteries are not deep discharged. Please specify output voltage if used for charging.
Load Regulation	< 0.7% open circuit to full load	Undervoltage lockout	Available on IEXT/LV models, Lockout at 10.2V, auto reset at 12.4V, add suffix -UV
Ripple	Typically 1% Peak-Peak		
EMC	To CISPR22		
Operating temperature	0 to 40°C; linearly derate to 50% output at 50°C		

70-150W Isolated DC-DC Converter

IEXT & IEHR

IEXT - SINGLE OUTPUT (70W)				
MODELS	DC Input	DC Output		
	Voltage Range	Voltage * ¹	Amps	Voltage Range
IEXT/LV-12	11-16	13.8	5.0	11 - 14
IEXT/LV-24	11-16	24	2.9	22-28
IEXT/LV-48	11-16	48	1.5	43-55.2
IEXT/MV-08	21 - 60	8	6.5	7 - 9.5
IEXT/MV-12	21 - 60	13.8	5.0	11 - 14
IEXT/MV-18	21 - 60	18.5	3.8	16.6 - 20.3
IEXT/MV-24	21 - 60	24	3.0	22-28
IEXT/MV-48	21 - 60	48	1.5	43-55.2
IEXT/HV-12	60 - 132	13.8	5.0	11-14
IEXT/HV-24	60 - 132	24	3.0	22-28
IEXT/HV-48	60 - 132	48	1.5	43-55.2

Dimensions: IEXT
180L x 76W x 35H

*¹ Factory set output unless otherwise requested. All models may be set for float charging lead acid batteries.

IEHR - SINGLE OUTPUT (150 Watt)				
MODELS	DC Input	DC Output		
	Voltage Range	Voltage * ¹	Amps	Voltage Range
IEHR/LV-12	10.5-16	13.8	11.2	11-14
IEHR/LV-24	10.5-16	24	6.2	22-28
IEHR/LV-36	10.5-16	36	4.2	32-41.4
IEHR/LV-48	10.5-16	48	3.2	43-55.2
IEHR/MV-09	21-60	9	16	8-10
IEHR/MV-12	21-60	13.8	11.2	11-14
IEHR/MV-19	21-60	19	7.9	17-21
IEHR/MV-21	21-60	21	7	19-23
IEHR/MV-24	21-60	24	6.2	22-28
IEHR/MV-36	21-60	36	4	32-41
IEHR/MV-48	21-60	48	3.2	43-55.2
IEHR/HV-12	60 - 132	13.8	11.2	11-14
IEHR/HV-24	60 - 132	24	6.2	22-28
IEHR/HV-36	60 - 132	36	4.2	32-41.4
IEHR/HV-48	60 - 132	48	3.2	43-55.2



Dimensions: IEHR
207L x 130W x 60H

IEXTS - Single Output & IEXTD - Dual Output	
2:1 input range:	9-18, 18-36, 36-72V
Output power	32- 60W
Single outputs	3.3, 5, 6.6, 10, 12, 15, 24, 30V
Dual outputs	±3.3, ±5, ±12, ±15V
4:1 input range:	9.4-36, 18-72V
Output power	12- 30W
Single outputs	3.3, 5, 6.6, 10, 12, 15, 24, 30V
Dual outputs	±3.3, ±5, ±12, ±15V
<i>Please contact us for further information & full specifications.</i>	

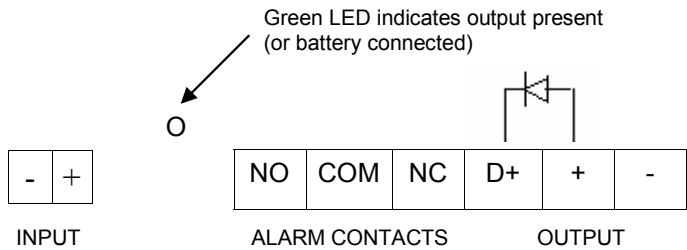


Optional leads available (no connectors)

Connections

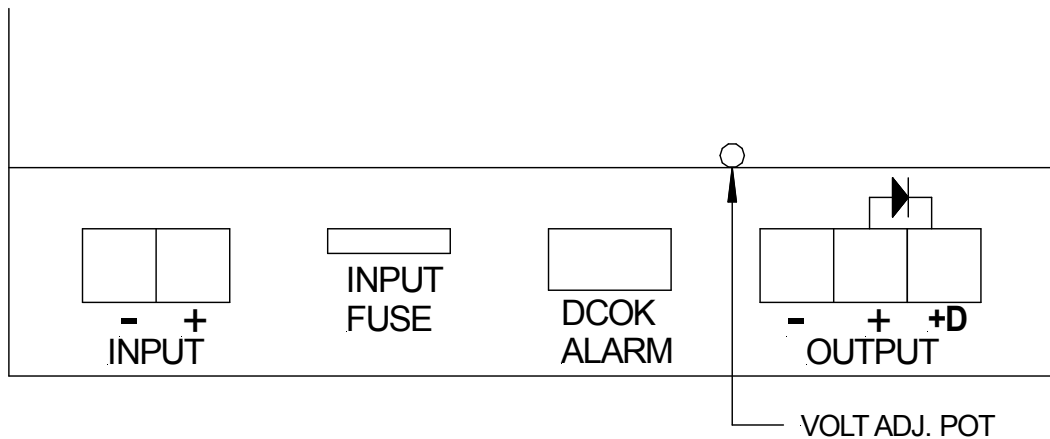
If used as a battery float charger always connect the positive output of the converter to the positive terminal of the battery.

Terminal Layout for IEXT/



NOTE: Alarms and D+ (internal output diode) fitted only on "P" version

Terminal Layout for IEHR/



DC OK alarm & +D output only on -P versions

General

Equipment should be installed in a clean dry environment with adequate ventilation.

WARRANTY

Innovative Energies Ltd warrants its power supplies for 24 months (two years) from date of shipment against material and workmanship defects.

Innovative Energies' liability under this warranty is limited to the replacement or repair of the defective product as long as the product has not been damaged through misapplication, negligence, or unauthorized modification or repair.

