

SCHAEFER

IEXR & IEHR

70-150W Switch Mode DC/DC Converters



IEXR

IEHR

- Full galvanic isolation
- Input potential cannot appear at the output
- Highly efficient, typically 80-85%
- Input fuse protection
- Parallel redundancy (N+1) option
- Short circuit protection
- Reverse polarity protection
- Proven rugged construction
- Complies with EMI standards CISPR22:1985 & AS/NZS3548:1992
- Suitable for battery charging (IEHR models only)
- 2 year warranty

SPECIFICATIONS: All specifications are typical at nominal input, full load and at 25°C unless otherwise stated.

ELECTRICAL

DC Input	<ul style="list-style-type: none"> • LV: 10-16V • MV: 21-60V • HV: 60-132V • Please note that our SR250 –750A Series is suitable for 110-375VDC input
Protection	
• Input	All models: Input fuse
• Output	IEHR: Overload: Output power limit Short circuit: Fuse IEHR: Electronic current limit on overload or short circuit
Reverse Polarity	Input protection by diode which opens fuse
Transient Protection	Varistor across input to limit supply transients (voltage spikes)
Isolation	≥ 1KV DC input / output ≥ 1KV DC input / output to ground
Efficiency	> 80%
Slow Start	1 second typical
Output Power	IEHR: 70W continuous IEHR: 150W continuous
Output Voltages	Refer to model table - other voltages available, please contact Schaefer
Voltage Adj. Range	IEHR: ±10% by internal potentiometer IEHR: ±10% by externally accessible potentiometer
Line Regulation	< 0.5% over input range
Load Regulation	< 0.7% open circuit to full load
Ripple	Typically 1% peak-peak
Noise	To CISPR14
Battery Charging Duty	IEHR: No IEHR: Yes

PHYSICAL

Connections Input/Output	IEHR: Plug-in screw terminal block IEHR: 'Barrier' type screw terminal
Enclosure	Base: anodized aluminum Cover: black powder coated mild steel
Indicators	Green LED for Power On
Weight	IEHR: 1 lb. (450g) IEHR: 2.75 lb (1.25Kg)
Mounting	IEHR: M5 Ø holes and/or M3 threaded inserts IEHR: To flat surface with brackets supplied, M4 Ø holes.

ENVIRONMENTAL

Operating Temperature	0 to 40°C, max. 50°C at 50% load
Cooling	Natural convection
Humidity	0 - 95% relative humidity non-condensing

OPTIONS

Rack mount	Optional 19" x 2U rack mounting—use code F+RM2U
Parallel Redundancy Option	Incorporates output series diode plus DC OK alarm relay for N+1 parallel redundancy IEHR: use suffix -P (** see model table) IEHR: internally fitted diode & alarm not available
Parallel Redundancy Option (Rack Mount)	IEHR: add F+P2UHR & F+RM2U IEHR: diode mounted outside of case, use F+P2UXR and F+RM2U
DIN Rail Mount	IEHR: add DIN rail mount clips—add code DINKIT

STANDARD MODEL TABLE - IEXR SERIES (70 Watt Nominal)				
MODELS	DC Input	DC Output*		
	Voltage Range (V)	Preset Voltage (V)	Voltage Range (V)	Output Current (A)
IEXRLV-09	10.5-16	9	8-10	7.5
IEXR12-12	10.8-14.4	13.8	11 - 14	5.0
IEXRLV-15	10.5-16	15	14-16	4.6
IEXR12-19	10.8-14.4	19	17-21	3.6
IEXR12-24	10.8-14.4	24	22-27	2.9
IEXR12-28	10.8-14.4	28	25-31	2.3
IEXR12-48	10.8-14.4	48	43-52	1.5
IEXR18-16	14.4-21.6	16	14-18	4.3
IEXR20-12	16 - 24	12	11-14	5.0
IEXR24-48	19.2 - 28	48	43-52	1.5
IEXR24-110	24 - 40 ^{*1}	110	100-120	0.45 (50W)
IEXRMV-05	21 - 60	5	4-6	10 (50W)
IEXRMV-08	21 - 60	8	7-9	6 (50W)
IEXRMV-12	21 - 60	13.8	11 - 14	5.0 / 8.0 ^{*2}
IEXRMV-15	21 - 60	15	14-16	4.6
IEXRMV-18	21 - 60	18	16-20	3.8
IEXRMV-24	21 - 60	24	22-27	3.0
IEXRMV-35	21 - 60	35	32-38	2.0
IEXR48-06	38 - 57	6	5-7	10
IEXR48-48	38 - 57	48	43-52	1.4
IEXR48-110	40 - 60	110	100-120	0.45 (50W)
IEXRHV-12	60 - 132	13.8	11-14	5.0
IEXRHV-24	60 - 132	24	22-27	3.0
IEXRHV-32	60 - 132	32	29-35	2.1
IEXRHV-48	60 - 132	48	43-52	1.5

* output current is stated at nominal voltage

*1 note input voltage range

*2 Intermittent 100W e.g. for radio telephone duty (special design unit)

NOTE:

An external series input diode must be used if the converter is utilized in a battery powered forklift application (for protection against high transient reverse polarity spikes).

Dimensions: IEXR

**7.09" L x 2.99" W x 1.38" H
180L x 76W x 35H (mm)**

STANDARD MODEL TABLE - IEHR SERIES (150 Watt Nominal)				
MODELS	DC Input ^{*3}	DC Output		
	Voltage Range (V)	Preset Voltage (V)	Voltage Range (V)	Output Current (A)
IEHRLV-12	10.5-16	13.8	11-14	11.2
IEHRLV-24**	10.5-16	24	22-27.6	6.2
IEHRLV-48**	10.5-16	48	43-55.2	3.2
IEHRMV-09	21-60	9	8-10	16
IEHRMV-12**	21-60	13.8	11-14	11.2
IEHRMV-21	21-60	21	19-23	7
IEHRMV-24**	21-60	24	22-27	6.2
IEHRMV-36	21-60	36	32-41.4	4
IEHRMV-48**	21-60	48	43-52	3.2
IEHRHV-12**	60 - 132	13.8	11-14	11.2
IEHRHV-24**	60 - 132	24	22-27	6.2
IEHRHV-48**	60 - 132	48	43-52	3.2

DC Input^{*3}

If the input voltage is below the minimum stated, the output power must be derated. Please contact us for details.

** Models marked are available with internal output series diode and DC OK alarm relay output for N+1 redundancy operation. Relay contacts rated 1A, 50VDC/32VAC

Specify suffix **-P**

Dimensions: IEHR

**8.15" L x 5.12" W x 2.36" H
207L x 130W x 60H (mm)**