



> Description

The SRE series is a very low profile converter designed specifically for use on railway rolling stock. Rated at 120W, units are available in single or dual output configurations with input ranges to cover all those typically found in rail applications. The unit is suitable for either rack or bulkhead mounting. The range is fully compliant with the current national and international railway standards and norms.

Special features include:

- Very low profile
- Very high efficiency
- Fully enclosed 3U euro cassette
- Active current sharing as standard

> Input Specifications

The following input voltages versions are available as standard:

110V	(77.0 - 137.5V)	dc	(Suffix A)
72V	(50.0 - 90.0V)	dc	(Suffix D)
52V	(36.0 - 65.0V)	dc	(Suffix C)
36V	(25.0 - 45.0V)	dc	(Suffix F)
24V	(16.0 - 30.0V)	dc	(Suffix B)



Parameter	Detail
Input Ripple	To EN50155
Input Protection	Reverse polarity protection. Surges and transients EN50155
Inrush Current	Limited to typically 5 x nominal current (after 0.1ms)
Efficiency	Typically 90%
Hold up time	Consult factory for optional hold up module to EN50155 Class S2
Input fuse	Board mounted.

> Output Specifications

Parameter	Detail
Maximum Output Power	120W (for most output versions)
Output Versions	Single and dual output
Output Voltage	Can be specified from 5V to 48V
Setting Tolerance	±0.6% at 50% load, 15°C to 25°C
Line Regulation	±0.2%
Load Regulation	±0.5% (U1 only)
Cross Regulation (dual output versions)	U1= ±0.5%, U2= ±3.5% (for 10 - 100% loading)
Temperature Coefficient	<0.02% / °C
Output Ripple	<1% Pk-Pk of Output Voltage
Output Noise	<1% Pk-Pk superimposed (up to 20MHz)
Response Time	0.5ms to within 2% (for a 20% - 90% load change)
Indicators	Output OK LED
Signal	Output good signal given by an isolated open collector transistor.
Current sharing	Active current sharing fitted to U1 on both single & dual versions
Output Protection	Protected against indirect transients to EN50155
Overvoltage Protection	Operates at approximately 120% of nominal output Standard for all single output versions. Dual output versions either U1 or U2 - consult Sales team
Current limit	Operates at approximately 115% of nominal or peak load. Auto recovery.
Thermal Protection	Shuts down PSU if safe internal temperature is exceeded. Auto recovery.
Isolation (tested at dc equivalent voltage)	Input to Output 2.0kV ac Input to Case 1.0kV ac Output to Case 1.0kV ac Output to Output 0.3kV ac

Part number	Output 1		Output 2	
	Vdc	A	Vdc	A
SRE 0500	5	15.0		
SRE 1200	12	10.0		
SRE 1500	15	8.0		
SRE 2400	24	5.0		
SRE 3600	36	3.3		
SRE 4800	48	2.5		
SRE 1212	12	5.0	12	5.0
SRE 1515	15	4.0	15	4.0
SRE 2424	24	2.5	24	2.5





> Environmental Details

Parameter	Detail
Operating Temperature	-40°C to +71°C (no derating). {90°C max case temperature} Note: 5Vdc output versions are -25°C to +71°C.
Storage Temperature	-55°C to +80°C
Cooling	Convection / Conduction
Relative Humidity	95% max.
Shock & Vibration	EN50155 (EN61373)
Environmental Protection	IP54

> Applicable Norms

Parameter	Detail
EMC	EN50155 (2007), EN50121-3-2 (2006)
Other	EN50155 (2007)

> Mechanical Characteristics

Parameter	Detail
Construction	Euro cassette
Dimensions	Depth = 166.7 mm Width = 4TE (20.32mm) Height = 3U (111 mm)
Weight	<0.5kg
Connections	DIN 41612 H15 Class 1.
Fixings	Four ø 3mm tapped holes in cassette Four ø 5mm clear holes in mounting plate option

Option	Detail	Code
Mounting plate	Chassis mounting	M

