GS-RXXX12

DC/DC STEP DOWN POWER SUPPLY

PRELIMINARY DATA

FEATURES

- MODULE DC/DC STEP DOWN SINGLE OUTPUT
- WIDE RANGE INPUT VOLTAGE 100÷370 V_{dc}
- OUTPUT POWER 1.8W, 4.5W OR 12W MAX
- OUTPUT VOLTAGE PRECISION 5% FOR 4.5W AND 12W
- OUTPUT VOLTAGE PRECISION 10% FOR 1.8W
- OUTPUT SHORT CIRCUIT PROTECTION

DESCRIPTION

The DC/DC module is a high efficiency DC/DC not insulated switch mode constant voltage generator.

Designed for industrial application where low voltages are required from main.

Step down converter performs a max 1.8W, 4.5 W and 12W power conversion.

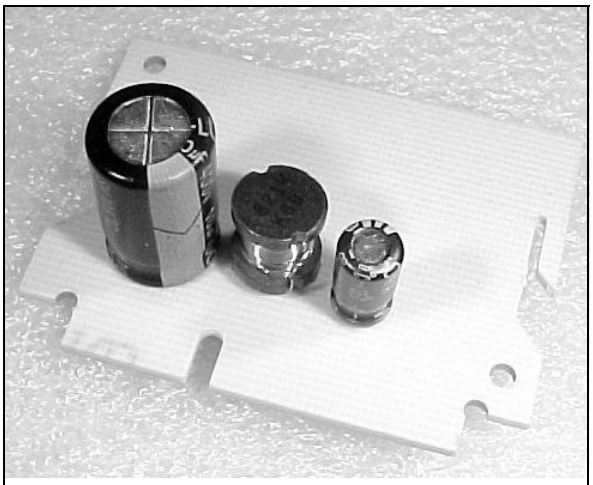
The output voltages and current level are set up by design in accordance with customer requirements.

Typical reference values for the shelf solution are:

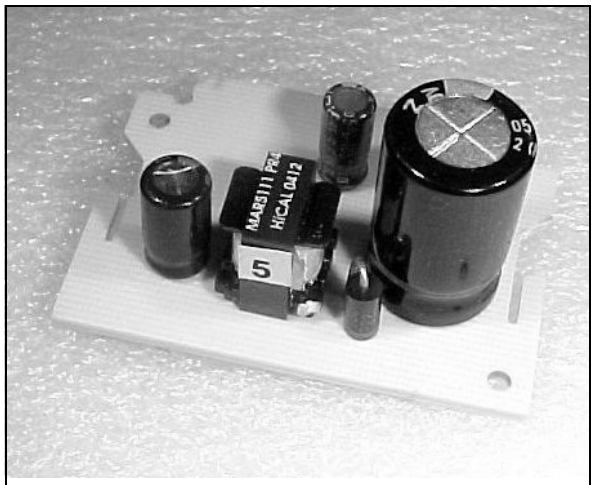
-single output -12V, ±10%, 0.15A for 1.8W;

-single output -12V, ±5%, 0.35A for 4.5W;

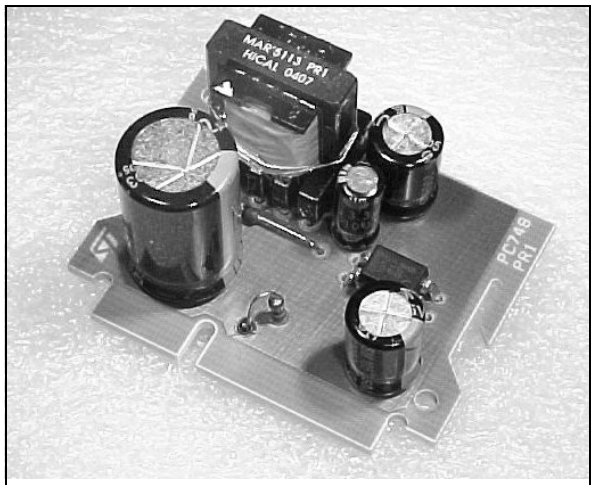
-single output -12V, ±5%, 1A for 12W.



Power Module VIP 1.8W



Power Module VIP 4.5W



Power Module SM 12W

Rev. 1

December 2004

Figure 1. Application Diagram for 1.8W and 4.5W

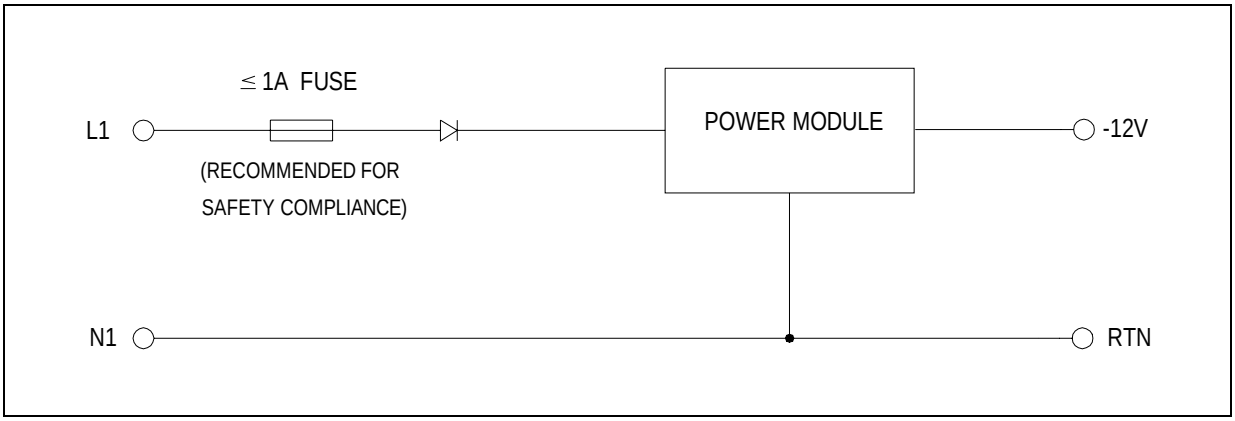


Figure 2. Application Diagram for 12W

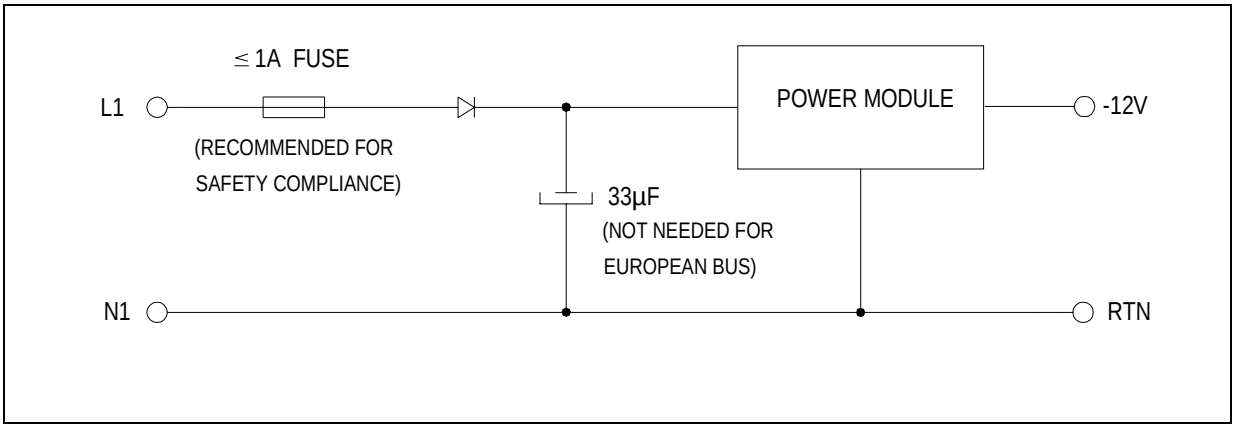


Table 1. Electrical Characteristics (T_{amb}=25°C, unless otherwise specified.)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
V_i	Input Voltage	Output Power 1.8W, 4.5W and 12W	100		370	V_{dc}
V_{o1}	Output Voltage	V_i = 100 to 370 V_{dc} for 4.5W and 12W	-12.6	-12	-11.4	V
V_{o2}	Output Voltage	V_i = 100 to 370 V_{dc} for 1.8W	-10.8	-12	-13.2	V
I_{o1}	Output Current	V_i = 100 to 370 V_{dc} for 1.8W	0.15			A
I_{o2}	Output Current	V_i = 100 to 370 V_{dc} for 4.5W	0.35			A
I_{o3}	Output Current	V_i = 100 to 370 V_{dc} for 12W	1			A
V_{or}	Output Ripple	V_i = 100 to 370 V_{dc}			5%	mVpp
I_{osc}	Output short circuit current	V_i = 100 to 370 V_{dc}	Hiccup Mode			A
n	Efficiency	V_i = 100 to 370 V_{dc} I_o=0.15 A for 1.8W	70			%
n	Efficiency	V_i = 100 to 370 V_{dc} I_o=0.35 A for 4.5W	80			%
n	Efficiency	V_i = 100 to 370 V_{dc} I_o=1 A for 12W	83			%
$P_{stand\ by}$	Power losses in no load condition	V_i = 320 V_{dc} I_o = 0 mA			0.3	W
I_{ir}	Inrush input current	V_i = 320 V_{dc}		30		A
T_{op}	Operating Ambient Temperature		0		70	°C
T_{stg}	Storage Temperature Range		-20		85	°C

AGENCY APPROVALS

The safety and EMI compliance has to be assured by the user.

Figure 3. Mechanical Data for 1.8W (dimensions in mm)

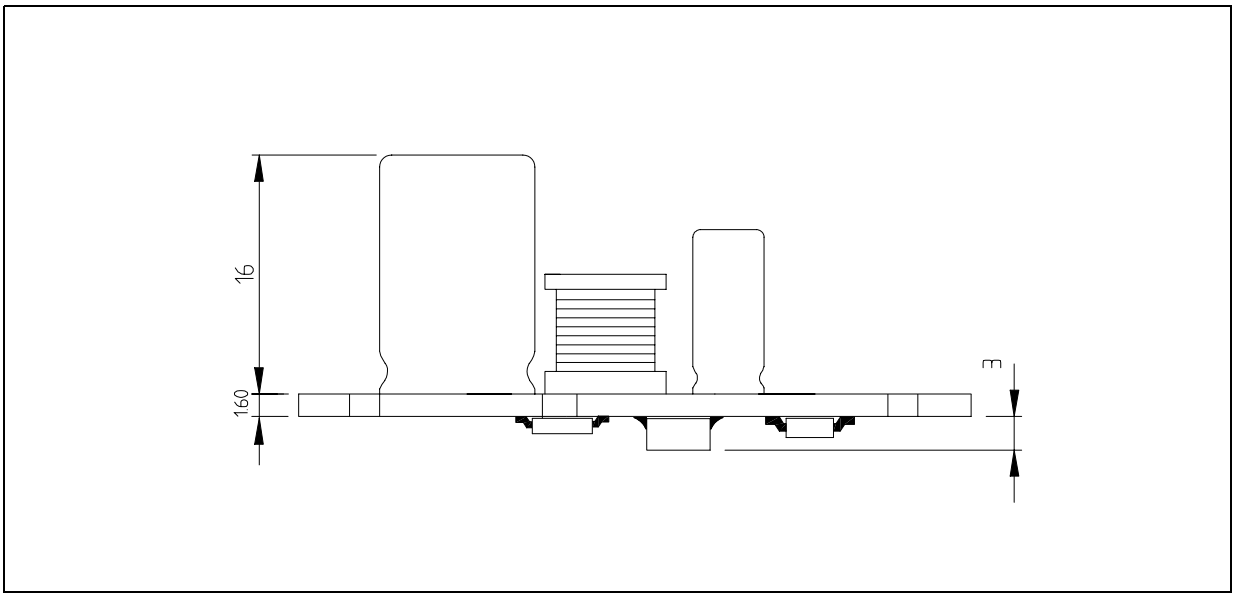


Figure 4. Mechanical Data for 4.5W (dimensions in mm)

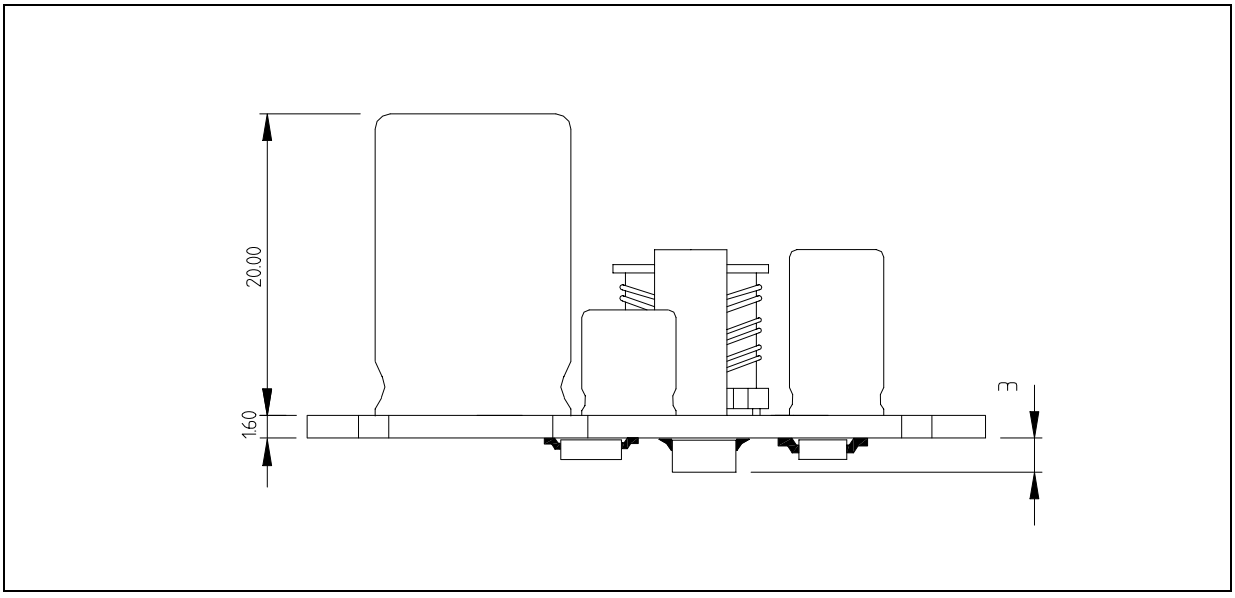


Figure 5. Mechanical Data for 12W (dimensions in mm)

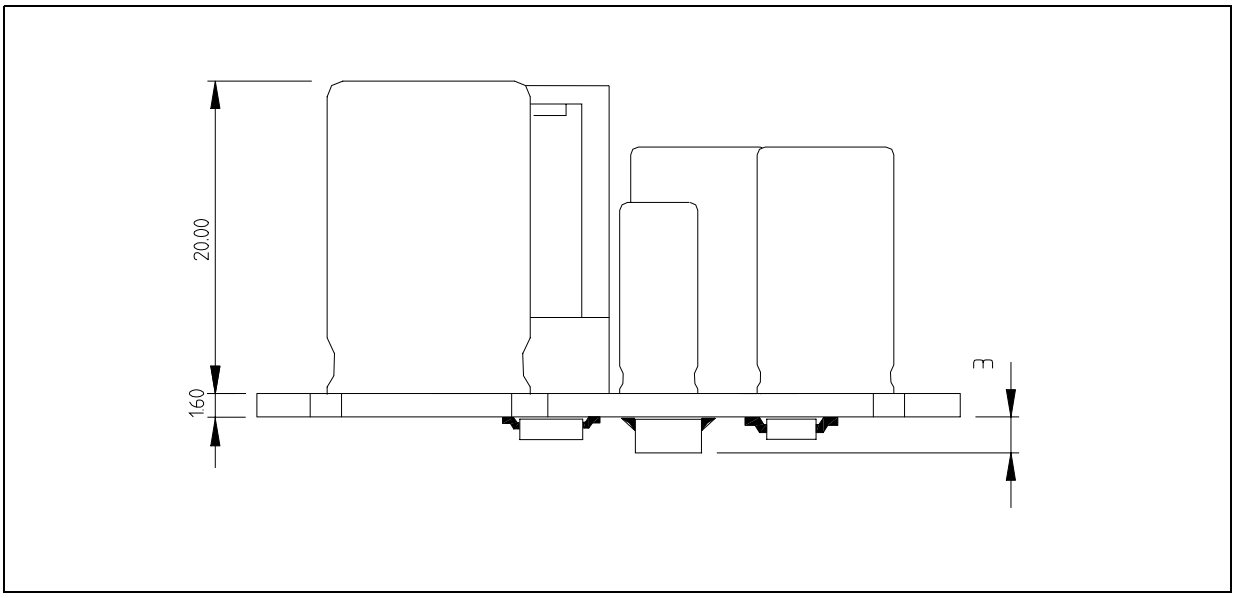


Figure 6. Mechanical Data for 1.8W (dimensions in mm)

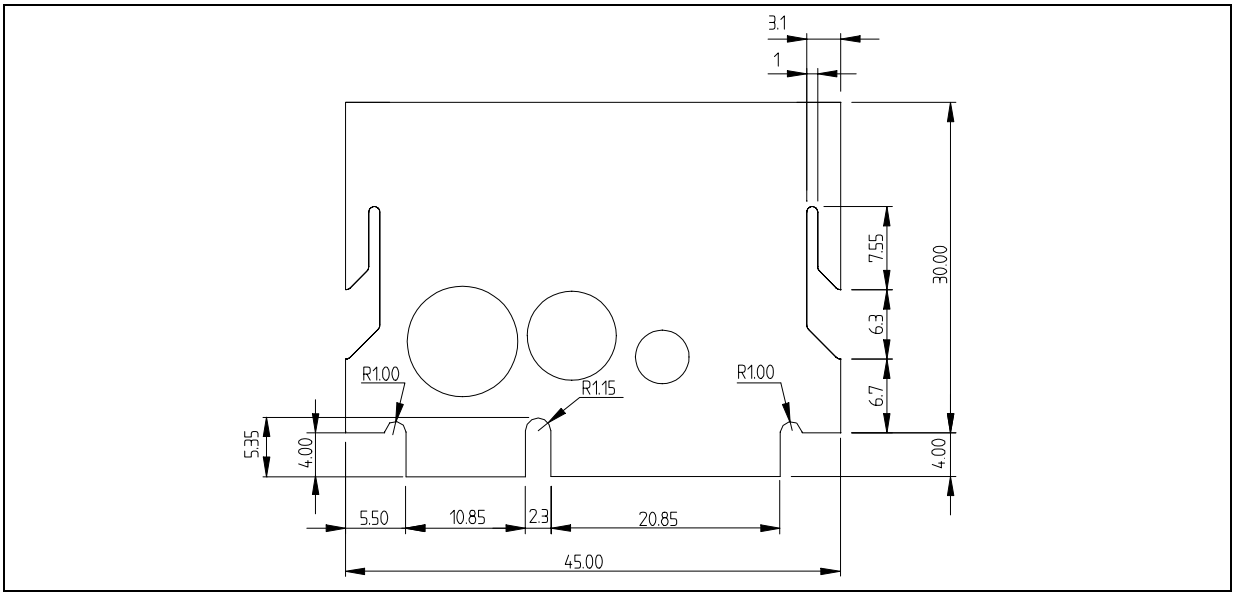


Figure 7. Mechanical Data for 4.5W (dimensions in mm)

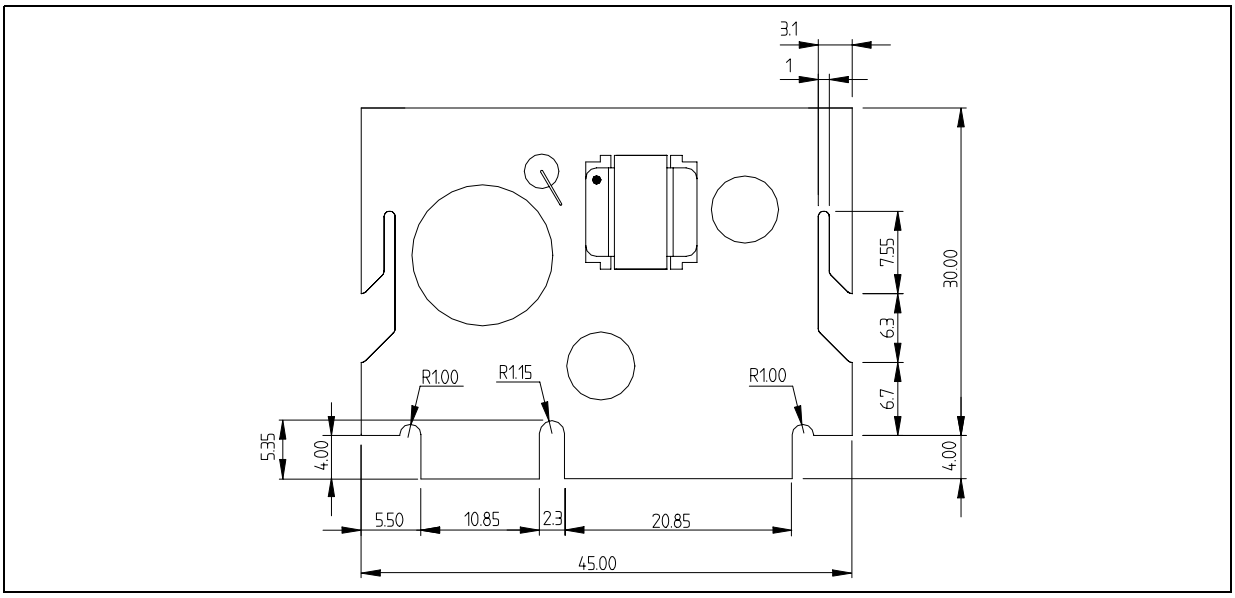


Figure 8. Mechanical Data for 12W (dimensions in mm)

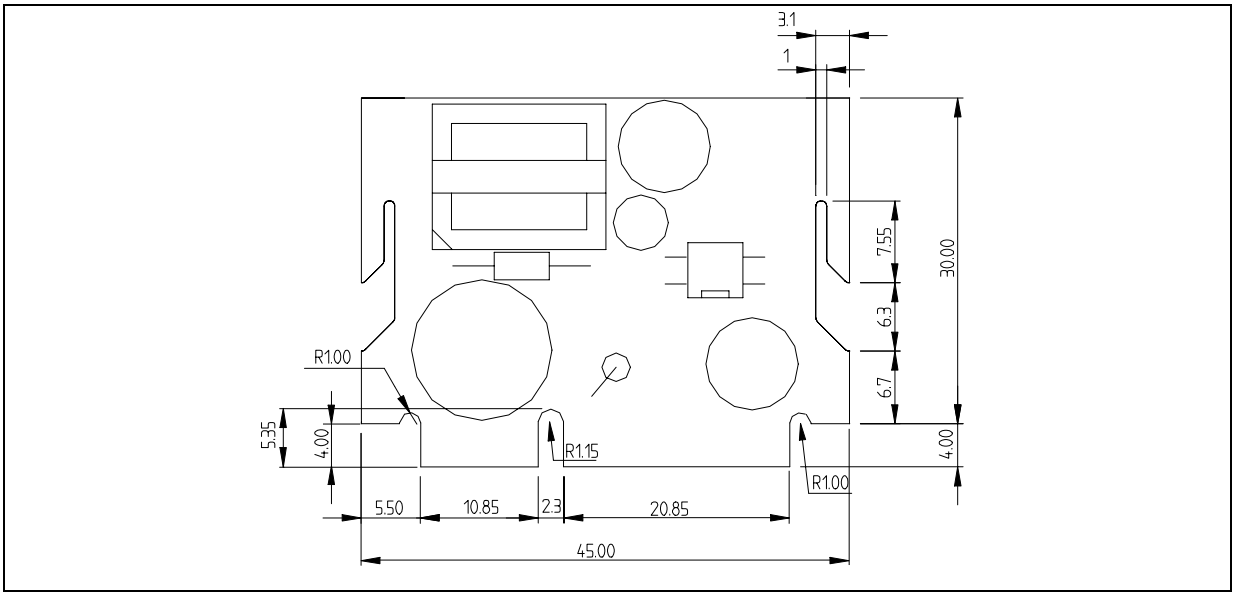


Figure 9. Mechanical Data (dimensions in mm)

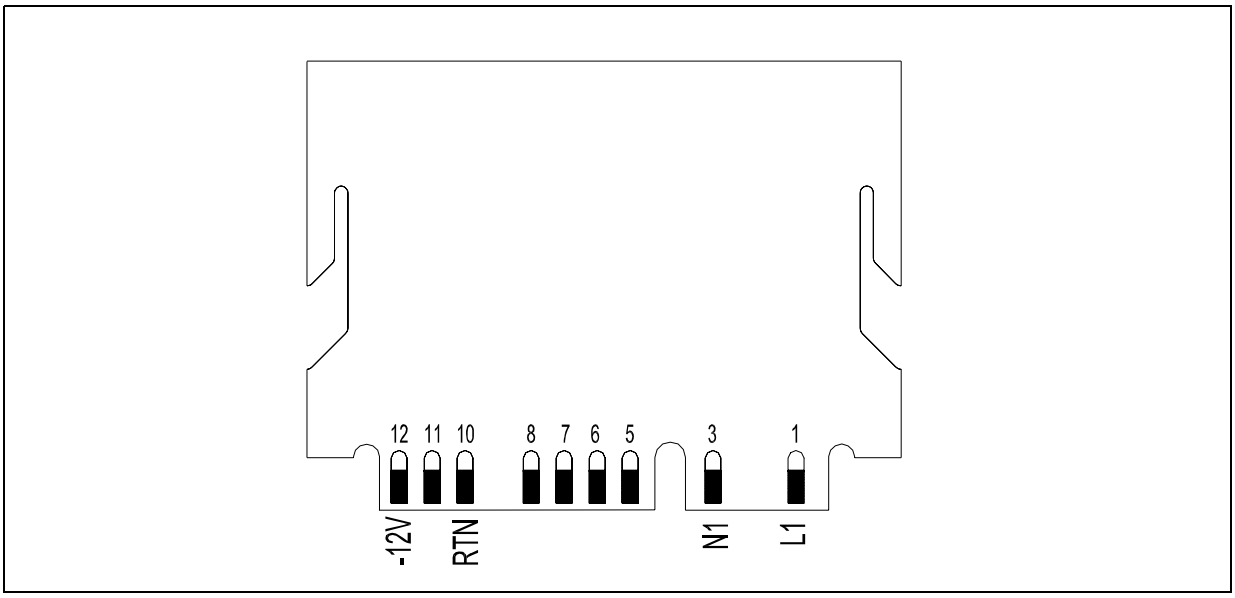


Figure 10. Ordering Information Scheme

G S - R x . x x 1 2 y y y

Output Current

0.15
0.35
1.00

Output Voltage

VIP
VIP
SM

Table 2. Revision History

Date	Revision	Description of Changes
14-Dec.-2004	1	First Release