SINGLE OUTPUT DIRECT CURRENT POWER SUPPLIES

ASR SERIES

Overview

Single output AC/DC power supplies, in PWM switching technology. Particularly developed for industrial automation applications where are requested high reliability and the ability to withstand, in input and output terminals, high overvoltages generated by perturbations on input line.

Electrical characteristics

The most important characteristics that distinguish this type of power supply are:

Input voltage	110/220 Vac
Admitted tolerance	±20%
Input frequency	from 50 to 60 Hz
Output voltage	5/12/24/48 Vdc
Warranted tolerances	
Line variations	±0,5%
Load variations	±0,5%
AC superimposed ripple	less than 2% RMS
Overvoltages rejection	more than 40 dB
Short circuit current	130% I nominal
Inrush current	less than 6 times the nominal input current
Power factor	more than 0,7 lagging at full load
Efficiency	more than 80%
Sustain time	about 50 mS with output voltage at -10%
Single unit MTBF	ab. 100.000 hours
Redundance	Available with the insertion of the dedicated accessory or panel.

Output power

The product range includes the following models as a function of the output powers.

Model	Output power
ASR75	75 Watt
ASR150	150 Watt
ASR300	300 Watt
ASR600	600 Watt
ASR1200	1200 Watt

Accessories

A wide range of accessories is available to equal the power supplies to the more complex applications and specifications.
The ones foreseen in normal production are the following.

Input magnetothermic breaker
Output magnetothermic breaker
Redundant connection diode
Not trimmable output voltage breakdown relay
Analog output instruments (V/ I)
Forced ventilation
Trimmable low output voltage relay
Trimmable bipolar ground output voltage relay
Output overvoltage protection

Mechanical characteristics

The mechanical construction is 19 inches Rack type according to DIN41612 standard, with stainless steel AISI 316 structure and anodized aluminium front side in black or natural color. The height units and modularity are a function of the supplied power. The overall dimensions are the following.

Model	Units x width	Depth
ASR75	3 x 14TE	270mm
ASR150	3 x 21TE	270mm
ASR300	3 x 42TE	270mm
ASR600	3 x 84TE	330mm
ASR1200	4 x 84TE	420mm

Ambient compatibility

The power supplies are submitted to typical or production tests to warrant the ambient compatibility. The fundamental tests are the following (* identifies typical tests).

***Vibrations**	5 $m.s^{-2}$ - 0,032mm
***Storage temperature**	from -25 to 70 °C
***Working temperature**	from -10 to 55 °C
***Injected harmonics**	less than 40%
1,2/50 µs pulse withstand	2 kVp
Dielectric strenght	2 kV RMS
Insulation resistance	100 MΩ at 500 Vcc
Damped oscillatory waves	1 kVp at 1MHz
CE mark ref. standards	EN50081-2/50082-2

Product range

Model	Redundance with diode	Input voltage 50/60 Hz A=115 B=220	Input breaker	Output breaker	Output breakdown relay	Instruments	Forced ventilation	Low output voltage relay	Output overvoltage protect.	Ground fault relay	**Output voltage**	**Output current**
ASR75-0	R	A/B			R1				P1		12	6
ASR75-1	R	A/B			R1				P1		24	3
ASR75-2	R	A/B			R1				P1		48	1,5
ASR75-3	R	A/B			R1				P1		110	0,7
ASR75-5	R	A/B			R1				P1		5	15
ASR150-0		A/B			R1				P1		12	12
ASR150-1	R	A/B			R1				P1		24	6
ASR150-2	R	A/B			R1				P1		48	3
ASR150-3	R	A/B			R1				P1		110	1,3
ASR150-5		A/B			R1				P1		5	30
ASR300-0	R	A/B	I1		R1			R6	P1		12	25
ASR300-1	R	A/B	I1		R1			R6	P1		24	12
ASR300-2	R	A/B	I1		R1			R6	P1		48	6
ASR300-3	R	A/B	I1		R1			R6	P1		110	2,6
ASR300-5		A/B	I1		R1			R6	P1		5	60
ASR600-1		A/B	I1	I3	R1	S1	V1	R6	P1	T1	12	50
ASR600-2	R	A/B	I1	I3	R1	S1	V1	R6	P1	T1	24	25
ASR600-3	R	A/B	I1	I3	R1	S1	V1	R6	P1	T1	110	5
ASR1200-1	R	A/B	I1	I3	R1	S1	V1	R6	P1	T1	24	50
ASR1200-2	R	A/B	I1	I3	R1	S1	V1	R6	P1	T1	48	25
ASR1200-3	R	A/B	I1	I3	R1	S1	V1	R6	P1	T1	110	11

Mechanical dimensions