

OR50

50A Active ORing Controller



OR50 is a modern, CPU controlled device and responds to a wide range of applications where strong redundancy of DC power supplies is needed.

By keeping the 2 power supplies (PS) “hot” (each operating at half of the load need) the system reaches higher MTBF than by using one PS “hot” and the other “cold” (as per standard ORing devices). It allows same life expectancy for the electrolytic capacitors and other sensitive parts of both PS and it prevents an excessive ageing of the unit that should be kept “hot”.

OR50 allows the paralleling of the output of any 2 identical PS with any current up to 50A and voltages from 12V to 85V. The isolation between the units is achieved through power MOSFETs with advanced control circuitry. Several **OR50** can be interconnected in order to achieve redundancy for >2 PS systems.

OR50 allows perfect current distribution between 2 PS, in case of their use for shared power.

OR50 provides perfect isolation between 2 PS in case of 1 unit failure and also the continuous delivery of energy towards a critical load. It is specially designed for high MTBF and compliance to a wide choice of PS and loads.

Pluggable connectors allow ease of use.

OR50 provides specific status signals related to:

- acknowledgment of the power supplies availability (correct output voltage for each)
- correct current share

TECHNICAL DATA

Model type	OR50
Input voltage range	12...85Vdc
Maximum input current	50A
Maximum continuous output current	50A
Peak output current	> 300A
Conduction resistance	< 4mΩ
Maximum dissipated power	< 10W
No load input power	< 1.5W
Status Signals	1) "IN1_OK, IN2_OK green LEDs 2) Redundancy fault red LED 3) Redundancy OK dry contact (1A/30) 4) Current share bargraph 5) Current share dry contact (1A/30V)
Input protection	Overvoltage > 100V Reverse polarity connection
Operating temperature	- 20°C...+ 70°C (no derating)
Overvoltage category	II
Pollution degree	2 (IEC 664-1)
Insulation enclosure to live parts	0.75 kVdc
Standards & Approvals	UL508 (certified), EN60950 (reference), CE marking
EMC Standards	EN61000-6-4, EN61000-6-2
Protection degree	IP20 acc. To EN60529
IN/OUT connectors	6 poles, 16mm ² , Pluggable screw type
Dry contact	4 poles, 1.5mm ² , Pluggable screw type
Case material	Aluminum
Approx. weight	0.250 kg
Size (W x H x D)	40.0 x 115.0 x 110.0mm
Mounting Rail	IEC 60715/H15/TH35-7.5(-15)
Rail mounting information	Vertical, allow 10mm spacing between adjacent items

Notes:

- Technical parameters are typical, measured at 25°C and 24Vdc input.
- Power rating, losses, efficiency, ripple, thermal behaviour may change outside of the nominal rated input range. Contact factory for details.
- Data may change without prior notice in order to improve the product.

Dimensions

