

R3 IFS Rack Mount Card Cage



QUALITY DESIGN

The design approach employed by IFS for equipment mounted within the model R3 Chassis Rack Unit with Integral 115/230 VAC Power Supply, provides for the elimination of a single-point failure in the event of a major fault within any module located within the chassis rack. This is accomplished through the use of automatic electronic current limiting within each rack-mountable module, rather than to provide the current limiting within the power supply unit which supports the power requirements for equipment located within the rack. In nearly all competing designs, a major fault within a module, located within the chassis rack, results in the power supply unit going into a current limiting condition, and as a result, all of the modules located within the rack shut down. The R3 Rack design employed by IFS eliminates this possibility, as only the faulty module shuts down, and the operation of the other devices within the rack continues unimpaired. This automatic current limiting feature is also self-resetting, should the fault or overload be of a temporary or intermittent condition. Furthermore, all modules located within the chassis rack are hot-swappable, so that it is not necessary to power-down the rack when removing or replacing modules. Rather than utilizing a switching-mode or linear DC power supply for providing the operating power to the rack as

employed by most competing designs, the IFS Model R3 Chassis Rack uses a simple under stressed step-down power transformer, and all rectification, filtering, and regulation is performed within each rack mounted module. The use of a step-down power transformer for the power supply unit results in a significantly higher MTBF than any switching-mode or linear DC power supply can provide, as there are no semiconductors, electrolytic capacitors, etc., to degrade the reliability of the supply. In addition, the high-reliability transformer power supply and current limiting built into each module, eliminates the necessity of providing redundant power supplies within the chassis rack, as the overall system reliability is still much higher (and less costly) than can be provided with a redundant power supply design approach.

Ordering Information

	Part Number	Description
	R3	19" Rack, 115 VAC Input (Includes power suppy)
	R3-230	19" Rack, 230 VAC Input (Includes power supply)
	R3-CH	19" Rack, No power supply
Options	R3-BP	Blank Panel (1")
	PS-R3-115-07	115VAC Power Supply
	PS-R3-230-07	230VAC Power Supply

Specifications

Input Voltage:	115VAC (other voltages available)		
Power Supply (to plug-in modules):	20VAC C.T. @ 2.8A		
# Slots/Spacing R3:	14 one-inch modules or 7 two-inch modules* *Maximum number of modules based on total current draw of each. Maximum current draw of 2.8A.(Example 14 modules X .200A = 2.8A)		
Fusing			
	1A slow blow (Rack power supply) (Plug-in modules individually electronically fused		
AC Line Cord			
	Detachable, IEC-connectorized. Allows easy field replacement or exchange for various worldwide AC power plug configurations		
Electrical & Mechanical			
Circuit Board:	Meets IPC Standard		
Size (in./cm.) (LxWxH)			
Surface Mount:	19.0 x 7.0 x 5.25 in., 48.3 x 17.8 x 13.3 cm		
Shipping Weight:	< 5 lbs./2.15 kg		
Environmental			
MTBF:	> 100,000 hours		
Operating Temp:	-40° C to +74° C*		
Storage Temp:	-40° C to +85° C*		

Agency Compliance

Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J





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Specifications subject to change without notice.

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