

Approvals Update

No. 132

Direct from IDEC Corporation

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SEMI Approvals Notification

SEMI F47 Sag Immunity

Power quality is a major issue for factories due to the sensitivity of equipment and process controls that are used in the manufacturing process. It is reported that voltage interruptions cost industry as much as one million dollars in revenue per day. Ice storms, floods, hurricanes, lightning, utility distribution equipment failures, or other systems anomalies cause such interruptions.

It was also found that the semiconductor industry is especially vulnerable to these voltage sags, which can cause equipment to shutdown, resulting in the loss of production and valuable product.

SEMI F47

The SEMI F47 standard "Specification for Semiconductor Processing Equipment Voltage Sag Immunity" defines the limits that a semiconductor tool, facility, and utility system must operate within and not have any interruptions.

A sag or dip is a decrease in voltage or current. Voltage sags are usually associated with system faults, but can also be caused by the switching of heavy loads or the starting of motors. It should be noted that "sag of 20%" means that the line voltage is reduced to 20% of the normal value and not a reduction of 20% in the line voltage.

SEMI F47 defines the minimum voltage sag ride-through requirements for semiconductor processing, monitoring, and automated test equipment. Basically, it requires that semiconductor-processing equipment tolerate voltage sags on their AC power line. Specifically, they must tolerate sags to 50% for 200 msec, sags to 70% for up to 0.5 seconds, and sags to 80% for up to 1 second. In addition to these requirements SEMI F47 recommends that equipment tolerate sags to 0% for one cycle, sags to 80% for 10 seconds, and continuous sags to 90%.

IDEC's latest addition to the PS5R-S slim power supplies, the 120W and 240W models, fully comply with the SEMI F47 requirements. This compliance was independently verified by EPRI PEAC Corporation (www.f47testing.com) who is the worldwide leader in conducting voltage sag testing of semiconductor tools and equipment. In addition to their independent verification, IDEC is the first company to be granted the license to use the EPRI PEAC SEMI F47 "PQ Star" mark directly on the actual product.



120W & 240W PS5R Slim Line Power Supplies

PQ Star Reference Number	Product	Part Number
SEMI F47.091	120W 24V DC Power Supply	PS5R-SF24
SEMI F47.092	240W 24V DC Power Supply	PS5R-SG24

For more product information please visit www.idec.com/powersupply or download a data sheet (catalog #PS9Y-DS100-0) at www.idec.com/distributor

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"See next page for SEMI S2 approval information"

SEMI S2 Safety Guidelines for Semiconductor Manufacturing Equipment

In developing guidelines to address the performance and safety of semiconductor process equipment, SEMI S2 “Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment,” was developed. It directly addresses the issue of safety including chemical, electrical and fire safety, software protocols, sound and radiation hazards, and ergonomics.

SEMI S2

The SEMI S2 Guideline covers a large range of safety and health provisions, including regulatory requirements, electrical, mechanical, fire, chemical, radiation, noise, and ergonomics hazards; emergency shutdown, ventilation and exhaust specifications; hazard warnings and more.

The SEMI S2 standard falls into three broad categories. The first is the E Standards, which are concerned with environmental mat-

ters such as the facilities interface (HVAC, plumbing), handling of hazardous materials used in conjunction with the equipment, and resource conservation. The second category is the F Standards, which address fire hazards and fire protection. The third is the S Standards, which cover mechanical, electrical, and other operational hazards, such as acoustic noise levels, optics and laser intensities, and ionizing and non-ionizing radiation.

U.S. buyers of semiconductor manufacturing equipment prefer and increasingly specify that such equipment undergo a comprehensive electrical safety, ergonomic and industrial hygiene evaluation in accordance with the SEMI S2 standard. SEMI S2 is likely to become the standard of choice in other industrialized countries around the world.

IDEC is pleased to announce that our HW Series E-Stops meet the SEMI S2 standards.

HW E-Stops & Shrouds

File Reference	Product	Part Number
	40mm Head EMO Pushlock Turn Reset, 1NO Contact, plastic bezel	HW1B-V4F10-R-EMO-2
	40mm Head EMO Pushlock Turn Reset, 1NO Contact, metal bezel	HW4B-V4F10-R-EMO-2
	40mm Head EMO Pushlock Turn Reset, 1NC Contact, plastic bezel	HW1B-V4F01-R-EMO-2
	40mm Head EMO Pushlock Turn Reset, 1NC Contact, metal bezel	HW4B-V4F01-R-EMO-2
	40mm Head EMO Pushlock Turn Reset, 1NO-1NC Contact, plastic bezel	HW1B-V4F11-R-EMO-2
	40mm Head EMO Pushlock Turn Reset, 1NO-1NC Contact, metal bezel	HW4B-V4F11-R-EMO-2
	40mm Head EMO Pushlock Turn Reset, 2NO Contact, plastic bezel	HW1B-V4F20-R-EMO-2
	40mm Head EMO Pushlock Turn Reset, 2NO Contact, metal bezel	HW4B-V4F20-R-EMO-2
	40mm Head EMO Pushlock Turn Reset, 2NC Contact, plastic bezel	HW1B-V4F02-R-EMO-2
	40mm Head EMO Pushlock Turn Reset, 2NC Contact, metal bezel	HW4B-V4F02-R-EMO-2
S2-0200 12.5.1	E-Stop Shroud	HW9Z-KG1-TK2120
S2-93 12.4	E-Stop Shroud	HW9Z-KG2-TK2120

For more product information, please visit www.idec.com/estop.



HW9Z-KG1-TK2120



HW9Z-KG2-TK2120

For more information call IDEC at:
 800-262-IDEC (4332)
 1175 Elko Drive • Sunnyvale, CA 94089
 Fax: 408-745-5258 • www.idec.com