



FORTRESS HARSH 1

0.075- 21KW SINGLE PHASE UNINTERRUPTED EMERGENCY LIGHTING & POWER SYSTEM

The Fortress Harsh 1 maintains efficient AC Emergency Power to operate all emergency lighting fixtures at “full-light” output after the transfer is complete, providing superior dependability and security to commercial and industrial environments in a small footprint.

POWER RATING

- 0.075KW – 21KW (or 75W – 21,000W) single phase output unit uses the latest DSP/PWM technology to provide the most advanced performance and reliability features

INPUT

- 120, 120/120, 240, 277 or 480V AC input 60Hz

OUTPUT

- 120, 208, 240, 277, 480, 120/240, 120/277 V AC
True “on-line” design is ≥92% efficient at 100% linear load

BATTERIES

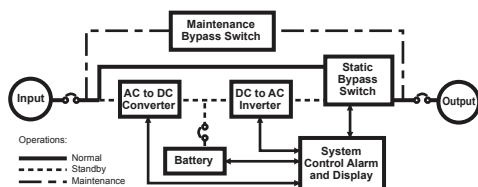
- Sealed, maintenance-free, lead calcium (AGM) batteries
- 10-Year pro-rated warranty
- Smart Battery Monitoring System is **Temperature Compensated** maintaining maximum runtime and battery life
- Microprocessor controlled recharge and DSP/PWM overcharge protection standard

LAMPS & LOADS

- Emergency power provides **Full Light Output** from all lamps and fixtures for the entire runtime
- Operates fluorescent, compact fluorescent, incandescent, quartz, H.I.D., LED and other lamp types
- Standard or electronic ballasts, dimming devices or panels, sensors and most control equipment
- Standard or LED Exits and other safety equipment

CODES

- UL924, UL1778, NFPA101, NFPA70, NEC & OSHA standards
- Cities of Chicago and New York approved
- Complies with the Buy American Act



PROTECTION

- Provides overload, surge and undercurrent protection using DSP/PWM technology and Watchdog Software to protect system performance and reliability
- Surge protection against load surges as defined in ANSI/IEEE C62.45 category A and B

DIAGNOSTICS & MAINTENANCE

- DSP/PWM technology and Watchdog Software provides complete self-diagnostic capabilities and LED monitoring
- Informative advanced Display and Alarms keep you in control of your emergency lighting environment 24/7
- Automatically performs periodic self-tests ensuring a safely lighted environment *prior* to an emergency
- Single point of testing instead of multiple testing points with battery packs

NEMA 4X OR 12 CABINET

- Modular design enables flexible installation
- Forced air cooling for maximum reliability
- Systems up to 12KW are self-contained; large systems require external battery cabinet(s)

INSTALLATION

- Modular design and small footprint allow easy installation in electrical closets or other convenient locations
- Phone assisted factory start-up standard for all systems
- Extended warranty available

SPECIAL APPLICATIONS

- Offers numerous UL924 optional devices to meet unusual or difficult application parameters
- ECM - Environmental Circuit Module allows fixtures and lamps on the emergency circuit(s) to be operated by normal switching and/or dimming devices in NON-emergency conditions
- Dimming Panel Interface allows use with emergency lights controlled by common dimmer panel

WARRANTY

- 1-Year full warranty on system electronics
- Battery warranty 1-Year with 9-Years pro-rated
- System 1-Year on-site warranty labor with Mfg. phone assisted start-up
- 5-Year powertrain warranty
- Maintenance contracts available

FORTRESS HARSH 1	POWER RATING	UPS			WEIGHT	BRITISH THERMAL UNITS	BATTERY TYPE	VOLTAGE (VAC)		OUTPUT PROTECTION	SAFETY APPROVALS
		CABINET DIMENSIONS						INPUT	OUTPUT		
FTH1	KVA/KW	W	H	D	(LBS)	BTUs	SEALED, MAINTENANCE FREE (AGM) LEAD CALCIUM	(select)	(select)	INPUT & OUTPUT CIRCUIT BREAKERS STANDARD	UL924 UL1778 NFPA101 NFPA70 NEC
	0.35	41"	52"	36"	950	95.2		120	120		
	0.525	41"	52"	36"	1140	142.8		208	277		
	0.7	41"	52"	36"	1170	190.4		240	480		
	0.875	41"	52"	36"	1190	238		277	120/240		
	1.05	41"	52"	36"	1220	285.6		or 408	or 120/277		
	1.4	41"	52"	36"	1350	380.8					
	2.0	41"	52"	36"	1410	544					
	2.4	41"	52"	36"	1460	652.8					
	2.6	41"	52"	36"	1620	707.2					
	3.0	41"	52"	36"	1730	816					
	3.4	41"	52"	36"	1780	924.8					
	3.8	41"	52"	36"	1830	1033.6					
	4.2	41"	52"	36"	1980	1142.4					
	4.7	41"	73"	36"	2350	1278.4					
	5.25	41"	73"	36"	2350	1428					
	7.0	41"	73"	36"	2600	1904					
	8.0	41"	73"	36"	2600	2176					
10.0	41"	73"	36"	3050	2720						
12.0	41"	73"	36"	3050	3264						
14.0	41"	73"	36"	3700	3808						
18.0	41"	73"	36"	4900	4896						
21.0	41"	73"	36"	5300	5712						

ORDERING INFORMATION

- Choose the bold face catalog nomenclature that best suites your needs
- Write them on the appropriate line
- Order accessories as separate catalog number

Example:

FTH1-8.0-120/277-ECM277/3 OCB/277/3/20/1-180

Description of Example:

(8.0KW, 120 Voltage In, 277 Voltage Out, 3 277V Environmental Control Modules, 3 Output 277 Voltage Circuit Breakers at 20amps, 2 pole, 180 minute run time)

FTH1		POWER RATING			VOLTAGE ¹		OPTIONS		TIME ³
FAMILY		KW			INPUT/OUTPUT	INPUT/OUTPUT			Minutes
		0.075	1.05	4.7	120/120	240/120-240	ECM120 – 120V Environmental Control Module ² /qty		5
		0.1	1.4	5.25	120/277	240/120-277	ECM277 – 277V Environmental Control Module ² /qty		10
		0.125	2.0	7.0	120/480	277/120	NOF – Normally "OFF" output circuit/voltage/qty/pole		15
		0.2	2.4	8.0	120/120-240	277/277	NOH – Normally OFF "HOLD ON"/voltage/qty/pole		20
		0.3	2.6	10.0	120/120-277	277/480	OCB – Output Circuit Breakers/voltage/qty/amps/pole		25
		0.35	3.0	12.0	208/120	277/120-240	EPO – Emergency Power Off		30
		0.525	3.4	14.0	208/277	277/120-277	RSSP – Remote Indicator Panel		45
		0.7	3.8	18.0	208/480	480/120	SNMP – SNMP Card		60
		0.875	4.2	21.0	208/120-240	480/277	FC – Form "C" Contacts		90 (Standard)
					208/120-277	480/480	STU1 – Onsite Start-up		120
					240/120	480/120-240	IDB – Internal Dimmer Bypass		180
					240/277	480/120-277	EMB – External Maintenance Bypass Switch		240
					240/480		HTR – Heater		
					240/120-240		EW – Extended Warranty		
					240/120-277				

¹ Consult factory for other voltage requirements
Special voltages may effect the weight, size and number of cabinets
² One ECM is used per switching device or circuit
³ Consult factory for other run times