



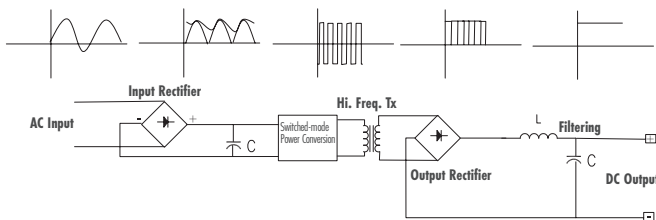
an EnerSys® company

ACS-WM 48VDC

Wall-Mount Switched-Mode Charger



- Modular switched-mode charger technology
- Accommodates up to four hot-swappable Cordex® 1.2kW power rectifier modules for N+1 redundancy capability
- Unity power factor with >93.9% efficiency
- Expandable to 100A output capacity
- Advanced communication capabilities
- Excellent DC output regulation
- High power density with a small compact enclosure
- High resolution touch screen color LCD display for control and monitoring



The ACS-WM 48VDC charger is designed to charge all types of stationary batteries (flooded lead-acid, VRLA and NiCad) for utility, petrochemical and industrial applications.

A compact 11RU enclosure accommodates up to four hot swappable, fan-cooled Cordex® 1.2kW rectifier modules. The ACS-WM 48VDC charger possesses high power density, providing the most power in the least amount of wall space and requires only a single step process to program using a touchscreen interface on the controller. Supported communication protocols include TCP/IP, Modbus, Ethernet, SNMP and optional DNP3.

ACS-WM 48VDC Charger Specifications

Electrical Input	
Nominal Voltage:	176 to 276VAC (single-phase)
Operating Voltage:	90 to 300VAC
Extended Voltage:	90 to 175VAC and 277 to 300VAC (derated output power)
Phase:	Single
Frequency:	45 to 70Hz
Nominal Current:	7.4A / 14.8A / 22.2A / 29.6A
Power:	1.2kW / 2.4kW / 3.6kW / 4.8kW
Power Factor:	>0.99 (50 to 100% load)
THD:	<5% at nominal input voltage up to 100% output
Efficiency:	>93.9% (50 to 100% load)

Electrical Output	
Voltage:	42 to 58VDC
Current:	25A / 50A / 75A / 100A
Load Regulation:	Static <±0.5%; dynamic <±1% @ 40-90-40% load step change
Line Regulation:	Static <±0.1%; dynamic <±1%
Transient Response:	<±2% for 40 to 90% load step, 2ms recovery time
Ripple:	<30mV rms battery eliminator

Mechanical	Enclosure	Rectifier Module
Dimensions H × W × D (in/mm):	21.4 × 20 × 20.25 / 544 × 508 × 514	1.63 × 3.3 × 10.1 / 41.1 × 84.8 × 256.8
Weight (kg/lbs):	43 / 95	1.76 / 3.9
Cabinet:	NEMA 1 (black finish)	NEMA 1 (black finish)

Environment	
Operating Temperature:	Forced cooling: -40 to 50°C (-40 to 122°F)
Extended Temperature:	Module @ 65°C (149°F); derated output power @ >65°C (149°F)
Storage Temperature:	-40 to 85°C (-40 to 185°F)
Humidity:	0 to 95% non-condensing
Elevation:	-500 to 3000m (-1,640 to 9843ft); derate @ -4°C/1000m above sea level (-7.2°F/3281ft)
Audible Noise:	<55dBa @ 1m (3ft)
Cooling:	Forced
MTBF:	>400,000 hours
Heat Dissipation:	<308 BTU per each rectifier module

ACSWM-HP 48VDC Part Numbers				
With DNP3 Card:	ACSWM-48-25-1	ACSWM-48-50-1	ACSWM-48-75-1	ACSWM-48-100-1
Without DNP3 Card:	ACSWM-48-25-0	ACSWM-48-50-0	ACSWM-48-75-0	ACSWM-48-100-0
AC Input:	Voltage: 208 to 250VAC Phase: Single-phase Frequency: 50 to 60Hz	Voltage: 208 to 250VAC Phase: Single-phase Frequency: 50 to 60Hz	Voltage: 208 to 250VAC Phase: Single-phase Frequency: 50 to 60Hz	Voltage: 208 to 250VAC Phase: Single-phase Frequency: 50 to 60Hz
DC Output Voltage (V):	48	48	48	48
DC Output Current (A):	25	50	75	100

Standard Features	
- Full graphic LCD touch screen with virtual alphanumeric keyboards (480x272 pixels) - High interrupting current input and output breakers (10kAIC) - Reverse polarity protection - Current limit protection - Soft start protection	- Battery temperature compensation probe (24ft to 3/8in lug) - Thermal foldback/shutdown - AC low line foldback/shutdown - AV high voltage shutdown - Input transient protection (MOV)

Communication Features	
- SNMP/Modbus via Ethernet TCP/IP (IPv4 or 6) - Access web user interface via internet browser through Ethernet port on CXC-HP controller - Common Form C alarm relay contacts - High voltage shutdown	- AC failure alarm - High/low voltage alarm - Charger failure alarm - Ground fault alarm - DC output failure alarm

Standard Functions	
Control Functions:	- Automatic, scheduled or manual float charging (adjustable) - Automatic, scheduled or manual equalize charging (adjustable) - High/low voltage alarm setting (adjustable) - Charge current limit (adjustable) - Automatic or manual battery testing - Battery capacity and runtime prediction - Temperature compensation
Daily Statistics:	- Minimum, maximum and average on input channels with date and time stamp - Battery current, rectifier current and AC mains voltage for prior 90 days
Event Log:	On all events such as alarms, power on, any change of state of the digital inputs or other miscellaneous events
Battery Monitor:	Battery test

Options	
DNP3+ communication protocol	

Standards and Certifications	
Safety:	- EN 60950 - CE EN 60950, CB Scheme - Telcordia (Bellcore) GR-1089-CORE - NEMA PE 5-1997 (R2003)
EMC:	- EN 55022 (CISPR 22) - EN 61000-3-2 EN 61000-3-3 - EN 61000-4-2 EN 61000-4-3 - EN 61000-4-4 EN 61000-4-5 - EN 61000-4-6 EN 61000-4-11 - ETS 300 019-1-1 ETS 300 019-1-2 - ETS 300 753 IEC60950 - ICES-003 Class B FCC Part 15 Class B - FCC Part 68