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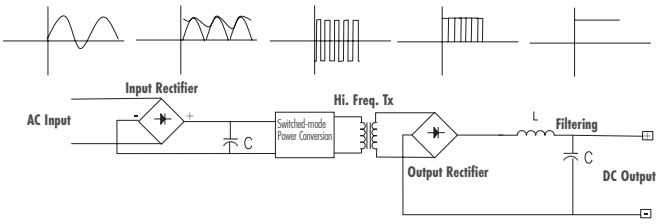
ACS-WM 48VDC

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

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

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

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