



From Tyco Security Products

with
PowerG
Technology



PowerSeries Neo v 1.3 Control Panels **HS2016** **HS2128**

Compatible with:
 **ALARM.COM**

Features That Make a Difference:

- 16 to 128 zone panel configurations
- **PowerG** – robust, industry leading commercial grade wireless
- Simple partition management using Global keypads
- Compatible with Alarm.com home automation solutions with built-in Z-Wave capabilities through dual-path LTE/Internet
- Intuitive, quick installation
- User-friendly interfaces
- Visual alarm verification
- 2-way audio alarm verification via phone or cellular
- Alternate Communications via Cellular and IP
- Local and Remote Downloading
- Cost efficiencies through advanced system software
- 128 bit AES encryption (wireless, communicator & BUS)
- Remote firmware upgrade (panel/keypads/transceiver)

PowerSeries Neo is Security Redefined

PowerSeries Neo by DSC redefines intrusion security by combining the flexibility of a modular, hardwired system with the simplicity of a wide range of wireless devices and peripherals, resulting in the most comprehensive hybrid system available in the market today.

This brand new and exceptionally flexible platform leverages the superior capabilities of **PowerG** – the industry's leading-edge wireless intrusion technology. Innovative alarm verification solutions, together with an exceptionally comprehensive remote service software suite, make PowerSeries Neo the ideal first-class solution for residential and scalable commercial installations.

Bringing Home Closer

PowerSeries Neo is compatible with Alarm.com to deliver best in class smart home control and monitoring solutions. Anticipating future needs for a connected home, with infinite opportunities to maximise the system, PowerSeries Neo becomes an undisputed first-class investment.

PowerSeries Neo Revolutionary Control Panels with Flexible Scalability & Expansion

PowerSeries Neo control panels are the heartbeat to this revolutionary

hybrid system. DSC offers four control panels in the PowerSeries Neo portfolio, ranging in capacity from 16 to 128 zones and two to eight partitions, providing solutions for the spectrum of installations. Each control panel starts with six or eight hardwired inputs, two- four hardwired outputs and PSTN communication onboard. The system can be tailored for specific installations with added expansion capabilities, features and services. The modular and scalable structure of PowerSeries Neo provides a cost effective, tailored solution for even the most demanding installations. It includes a complete line of expansion modules to fit the requirements of today's installations while protecting the investment and ensuring growth in the future.

New Management System Software Custom Designed to Make Installation & Maintenance a Breeze

PowerSeries Neo introduces the most comprehensive suite of support software in the industry, designed specifically to help security professionals significantly cut time and cost invested in the installation and maintenance of the system.

The suite includes DLS5 Downloading Software, Routine System Management for remote diagnostics, inspections and maintenance, and WebSA System



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Administrator Software for professional end-user system management.

Innovative Alarm Verification Solutions Reduce False Alarms & Unnecessary Site Checks

PowerSeries Neo utilizes innovative, regionally compliant alarm verification solutions such as visual verification, two-way audio verification and sequential detection, greatly reducing incremental costs that can be incurred by false alarms, while adding to the security professional's RMR. Leveraging powerful support software, an accurate remote assessment is made of the situation inside the premises when an alarm is triggered by a burglary attempt, fire or other emergency. This eliminates the need for unnecessary site checks – ultimately saving time and cost while enabling responders to be alerted about any potentially dangerous situations.

Flexible Communications Offer Ultimate Peace of Mind

As traditional phone lines become less common and more users choose VoIP or mobile phones, PowerSeries Neo offers optional Cellular and/or IP communication methods. When connected to any PowerSeries Neo control panel, alarm reporting paths can be combined through the Public Switched Telephone Network (PSTN) if so desired, plus Cellular and/ or IP channels. The PowerSeries Neo communicators can conveniently utilize the Cellular and/or IP network as a primary or back-up communication path to ensure high speed, reliable and secure alarm communications. The integrated communicators also allow security professionals to offer RMR services such as alarm verification, even in instances where a traditional phone line is not present.

The Power of PowerG:

The power behind PowerSeries Neo lies in various innovative technologies, including the revolutionary **PowerG**, which, bundled together, provide a robust and feature-rich platform designed to reduce operational costs for dealers and provide ultimate reliability for end users.

- Multichannel, **Frequency Hopping Spread Spectrum** technology enables the system to hop between wireless frequency channels to ensure the seamless transmission of secure communications between the devices and the control panel.
- **Adaptive Transmission Power** translates into up to eight years of battery life for the system's devices and peripherals, reducing battery- replacement incurred costs.
- **High transmission ranges** allow for devices to reliably communicate within up to 2km/1.24 miles line-of-sight, therefore reducing the cost of installing additional repeaters to service larger premises.
- **TDMA synchronized communication technology** prevents messages from colliding by splitting channels into various time slots, allowing for an increased amount of data transmission and ensuring that devices are able to consistently communicate when needed.
- **128 bit AES encryption** offers exceptionally high level of protection against analysis tools and digital attacks.

Compatibility

PowerSeries Neo Hardwired Keypads

Full Message LCD Hardwired Keypad	HS2LCDS-N
Full Message LCD Hardwired Keypad with Prox Support	HS2LCDPS-N
ICON Hardwired Keypad	HS2ICNS
ICON Hardwired Keypad with Prox Support	HS2ICNPS
Hardwired 7 inch Touch Screen Keypad with Prox Support	HS2TCHP-N
Hardwired 7 inch Touch Screen Keypad with Prox Support Black	HS2TCHPBLK-N

PowerSeries Neo Hardwired Keypads with Built-In PowerG 433MHz Wireless Transceiver

Full Message LCD Hardwired Keypad with Built-in Transceiver - 433MHz	HS2LCDRF4-N
Full Message LCD Hardwired Keypad with Built-in Transceiver and Prox Support - 433MHz	HS2LCDRFP4-N
ICON Hardwired Keypad with built-in Transceiver - 433MHz	HS2ICNRF4
ICON Hardwired Keypad with Prox Support and built-in Transceiver - 433MHz.....	HS2ICNRF4P

PowerSeries Neo PowerG Wireless Keypads

Wireless Full Message LCD keypad - 433MHz	HS2LCDWF4
Wireless Full Message LCD keypad with Prox Support - 433MHz	HS2LCDWFP4
Wireless Full Message LCD keypad with Prox Support and Voice Prompting - 433MHz	HS2LCDWFPV4
Wirefree Deskmount stand with AU transformer	HS2LCDWFDKKAU

PowerSeries Neo PowerG Standalone Transceivers

Note: keypad with built-in transceiver modules are listed **PowerG** – Transceiver Modules

PowerG – Host Standalone Transceiver Module - 433MHz	HSM2HOST4
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PowerG Wireless Devices

Smoke and Heat Detector	PG4916
PIR Motion Detector	PG4914 ¹
PIR Motion Detector with Integrated Camera	PG4934P ¹
PIR Curtain Motion Detector	PG4924
Dual-Tech (PIR & MW) Motion Detector	PG4984P ¹
Mirror PIR Motion Detector.....	PG4974P ¹
Outdoor PIR Motion Detector	PG4994
Outdoor PIR Motion Detector with Integrated Camera	PG4944
Outdoor Curtain PIR	PG4902
360 Degree Ceiling Mount PIR - Residential	PG4862
360 Degree Ceiling Mount PIR - Commercial	PG4872
Glass Break Detector	PG4922
Shock Sensor	PG4935
Flood Detector	PG4985
Temperature Detector	PG4905
Optional External Waterproof Temperature Probe for Outdoor Refrigeration Measurement	PGTEMP-PROBE
4-Button Wireless Key ²	PG4929; PG4939
Indoor Siren	PG4901BATT
Outdoor Siren	PG4911B BATT
Repeater	PG4920AU
Door/Window Contact with Auxilliary Input	PG4945
Door/Window Contact	PG4303
Outdoor Magnetic Contact with Auxilliary Input	PG4312
Single Button Panic Key ²	PG4938
2-Button Wireless Key ²	PG4949

¹Includes Pet Immunity

²maximum 32 devices maximum any combination

PowerSeries Neo Power Supplies and High & Low Current Output Expansion

Power Supply Module	HSM2300
High Current Output Module.....	HSM2204
Output Module	HSM2208

PowerSeries Neo Hardwired Expansion

8 Zone Expander Module.....	HSM2108
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Alternate Communicator Options

HSPA Cellular Alarm Communicator	3G2080-AU
LTE/Internet Dual-Path Alarm Communicator with image sensor, compatible with Alarm.com services (ANZ)	TL880LEAT-ANZ
HSPA/Internet Dual-Path Alarm Communicator with image sensor, compatible with Alarm.com services (AU only)	TL2803G-AU
Internet Alarm Communicator	TL280E
Internet Alarm Communicator with RS-232 Integration	TL280RE
Universal LTE/IP Communicator, SMS/Voice Dialler, 6-Programmable Open Collector Output/Input ContactID	TL405LE-ANZ



From Tyco Security Products

Communicator Remote Mounting Module PCL-422

Note: Please refer to www.dsc.com for a complete list of alarm.com compatible products

Control Panel Specifications

Power Supply..... 16.5 VAC/40 VA @ 50/60 Hz
 Current Draw (Panel) 85mA (Nominal)
 Auxiliary Output..... 13.75 +/- 5% Vdc/700mA
 Bell Output..... 13.75 +/- 5% Vdc/700mA
 Operating Environment32° to 120° F (0° to 49° C)
 Relative Humidity..... 93%

Control Panel Approval Listings

FCC/IC, UL/ULC, SIA CP-01, CSFM, CNC, Anatel

Note: Please refer to www.dsc.com for the most current approval listings.

PowerSeries Neo Feature Comparison Chart

Features	HS2016	HS2032	HS2064 E	HS2128 E
Number of On-Board Zones	6	8	8	8
Total Zones Supported	16	32	64	128
Keypad Zone Expansion	Yes	Yes	Yes	Yes
Hardwired Zone	Yes	Yes	Yes	Yes
Wireless Zone Expansion	Yes	Yes	Yes	Yes
Number of Hardwired Keypads	8	8	8	16
Number of Wireless Keypads	8	8	8	16
Number of Wireless Receivers	1	1	1	1
Number of Wireless Repeaters	4	8	8	8
On-Board PGM Outputs	2	2	4	4
Number of Main Panel Low-Current PGM Outputs	1	1	1	1
Number of Main Panel High-Current PGM Outputs	1	1	3	3
PGM Expansion	Yes	Yes	Yes	Yes
Number of Additional High-Current PGM Outputs	4	4	12	16
Number of Additional Low-Current PGM Outputs	16	32	64	128
Number of Access Codes	47 + master	71 + master	499 + master	999 + master
Number of Partitions	2	4	8	8
Panel Event Buffer	500	500	500	1000
Phone Line Supervision	Yes	Yes	Yes	Yes
Siren Supervision	Yes	Yes	Yes	Yes
Bell Output	Yes	Yes	Yes	Yes
SIA CP-01 Compliant	Yes	Yes	Yes	Yes
SMS Command and Control	Yes	Yes	Yes	Yes
Upload/Download Support	Yes	Yes	Yes	Yes
Direct-Connect (PC Link) Downloading Support	Yes	Yes	Yes	Yes
DLS SA End-User Downloading Support	Yes	Yes	Yes	Yes
Internet Alarm Communications	Yes	Yes	Yes	Yes
Audio Alarm Verification	with HSM2955(R)	with HSM2955(R)	with HSM2955(R)	with HSM2955(R)
Cellular Alarm Communications	Yes	Yes	Yes	Yes
Battery Required	Yes	Yes	Yes	Yes



Specifications DSCPC5003C

The DSCPC5003C is the DSC Large Metal Cabinet/Enclosure.

Dimension: 248 x 298 x 78mm

Suitable for:

- Alarm Panel:
 - PowerSeries: DSCPC1616PCBAUS, DSCPC1864PCBAUS
 - PowerSeries NEO: DSCHS2016PCBAU, DSCHS2064PCBAU, DSCHS2128PCBAU
- Input Expander:
 - PowerSeries: DSCPC5108
 - PowerSeries NEO: DSCHSM2108
- Output Expander:
 - PowerSeries: DSCPC5208
 - PowerSeries NEO: DSCHSM2208
- Power Supply Module:
 - PowerSeries: DSCPC5200, DSCPC5204
 - PowerSeries NEO: DSCHSM2204, DSCHSM2300



PowerSeries Neo Hardwired Keypads (optional: with Built-In PowerG Transceiver) HS2 Series



Features That Make a Difference:

- Available in three display options: Full message 2x16 character LCD, ICON
- Blue display on LCD & ICON versions
- Large, white backlit keypad buttons
- I/O for either zone or programmable output
- 5 programmable function keys
- 3 Separate panic keys
- Adjustable backlight and keypad buzzer
- Multiple door chimes per zone
- 8 Partition support
- Front and rear mount tamper
- Prox. Tag (Optional)
- With built in PowerG Transceiver (optional)
- Wire channel
- Easy-to-install mounting hinge
- Surface or single-gang box mount
- Remote firmware upgradable
- Compatible with PowerSeries Neo systems

The power of PowerG*:

The power behind PowerSeries Neo lies in various innovative technologies, including the revolutionary PowerG, which, bundled together, provide a robust and feature-rich platform designed to reduce operational costs for dealers and provide ultimate reliability for end users.

- Multichannel, Frequency Hopping Spread Spectrum technology - to overcome frequency blocking and interference
- Adaptive Transmission Power - for battery life preservation
- High transmission ranges - for reliable communication within up to 2km/2187 yards line-of-sight
- TDMA synchronized communication technology - to prevent message collisions
- 128 bit AES encryption - high level protection against analysis tools and digital attacks

PowerSeries Neo is Security Redefined

PowerSeries Neo by DSC redefines intrusion security by combining the flexibility of a modular, hardwired system with the simplicity of a wide range of wireless devices and peripherals, resulting in the most comprehensive hybrid system available in the market today.

This brand new and exceptionally flexible platform leverages the superior capabilities of PowerG – the industry’s leading-edge wireless intrusion technology. Innovative alarm verification solutions, together with an exceptionally comprehensive remote service software suite, make PowerSeries Neo the ideal first-class solution for residential and scalable commercial installations.

PowerSeries Neo Hardwired Keypads

PowerSeries Neo keypads are a primary interface to this revolutionary hybrid system.

These slim-profile keypads come with an optional integrated PowerG transceiver to maximize wireless configuration flexibility.

PowerSeries Neo hardwired keypads achieve a clean, unobtrusive look that users welcome in any work or living space. Installers appreciate them for their ease of programming and simplified installation.

Flexibility

In keeping with PowerSeries Neo’s wide spectrum of installation solutions, the PowerSeries Neo hardwired keypads are available with three display options: full message 2x16 character LCD, ICON. Customisable keypad features include an input/output terminal that can be programmed to operate as a zone input, a programmable output or as a low temperature sensor. Other features include adjustable backlit keys for low-light situations and five programmable keys for simple one button activation of system functions. The door chime

function allows for multiple pre-programmed chimes to identify specific zones.

The keypads' integrated temperature sensor can be programmed to activate when room temperature dips below 43° F (6° C) and restores at 47° F (8° C). Built-in logic prevents the panel from cycling in and out of alarm mode during minor temperature fluctuations, helping to reduce false alarms.

Easy To Use

PowerSeries Neo hardwired keypads feature five programmable keys for easy one-button activation of system functions. The quick exit function avoids having to disarm and rearm the system every time an occupant leaves the premises.

Prox versions of these keypads allow the user to arm or disarm the system in one easy swipe of the prox tag without needing to remember a security code.

128-zone full-message keypads support six languages, global partition status and full, 32-character programmable phrases.

Wireless Convenience

Offering identical features as their hardwired equivalents, RF versions of the keypads support up to 128 wireless zones and 32 wireless keys (on HS2128 version) without taking up a wireless zone slot.

Specifications:

Dimensions:..... (L x W x D): 168mm x 122mm x 20 mm
(6 1/16" x 4 7/16" x 13/16")

LCD Viewable Area: .99 mm x 24 mm (3 9/10" x 15/16")

Current Draw: 125 mA (Max)

HS2LCDS-N/HS2LCDPS-N/HS2ICNS/HS2ICNPS/
HS2LCDRF4-N/HS2LCDRFP4-N/HS2ICNRF4/
HS2ICNRFP4 60 mA

Voltage: 12 VDC Nominal

Operating Environment: .. -10°C to 55°C (14°F to 131°F)

Relative Humidity: 5 to 93%

Ordering Information:

HS2LCDS-N 128-Zone Full-Message LCD Keypad

HS2LCDPS-N 128-Zone Full-Message LCD Keypad
w/ Prox

HS2LCDRF4-N 128-Zone Full-Message LCD Keypad
w/ Transceiver

HS2LCDRFP4-N 128-Zone Full-Message LCD
Keypad w/ Transceiver and Prox

HS2ICNS 128-Zone ICON Keypad

HS2ICNPS 128-Zone ICON Keypad w/Prox

HS2ICNRF4 128-Zone ICON Keypad w/Transceiver

HS2ICNRFP4 128-Zone ICON Keypad
w/ Transceiver and Prox

Approvals:

FCC/IC, UL/ULC, SIA CP-01 CSFM

Compatibility:

The keypads are compatible with all PowerSeries Neo control panels.



From Tyco Security Products

PowerSeries Neo LTE/Internet Dual-Path Alarm Communicator **TL880LEAT-ANZ**



Features That Make a Difference:

- Back up and primary alarm communication
- Panel remote uploading/downloading support via Cellular/Internet
- Alarm.com Signal Forwarding or UL/ULC Pass-through reporting modes available
- SIA and Contact ID protocol
- Includes AT&T LTE SIM card
- Easy activation process through Alarm.com dealer portal
- Local signal strength and trouble indicators in addition to Alarm.com AirFX remote diagnostics and programming
- Can be located with alarm panel, or mounted remotely up to 100' away using PCL-422 module
- Visual Verification events can be reported to central station and viewed in the Alarm.com mobile app
- Includes Z-Wave Plus and Image Sensor capability to enable Smart Home features

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TL880LEAT-ANZ LTE/Internet Dual-Path Alarm Communicator

The TL880LEAT-ANZ Internet Dual-Path Alarm Communicator ensures reliable primary or back up alarm communication of the phone line for your home or business. When connected to a DSC HS2016/HS2064 or HS2128 control panel, alarm reporting paths can be combined through the Public Switched Telephone Network (PSTN), if so desired, plus the LTE cellular network and/or Internet for maximum redundancy.

This communicator uses the LTE cellular network to ensure high speed, reliable and secure alarm communications to alleviate any

concerns about the possibility of phone line disruption, or as a primary communicator in locations where there is no traditional phone line. Internet and LTE in the same module mean that as the industry moves away from traditional phone lines, customers can continue to rely on redundant transmission methods.

As more and more homes or businesses move away from traditional phone lines, towards VoIP (Voice over IP) or mobile phones, alternate delivery methods for alarm communication must be explored for security systems. The TL880LEAT-ANZ Internet Dual-Path Alarm Communicator is an ideal solution for both residential and small-to-medium business environments.



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False Alarm Reduction

PowerSeries NEO utilizes innovative, regionally compliant alarm verification solutions such as visual verification and sequential detection. PowerSeries NEO utilizes the TL880LEAT-ANZ Internet Dual-Path Alarm Communicator as a fundamental tool to deliver visual verification to reduce the high costs that can be incurred by false alarms and unnecessary site-checks while adding to the security professional's RMR.

Fully Redundant Alarm Communication at the Monitoring Station

When the TL880LEAT-ANZ is connected to the DSC PowerSeries Neo HS2016/HS2064 or HS2128 control panel, the alarm signal is sent to Alarm.com's signal processing center over either LTE or Internet paths, after which it can be forwarded to either primary or secondary central station receiver, providing a fully redundant solution.

Reduces Need for Dedicated Phone Lines

The TL880LEAT-ANZ conveniently utilizes the cellular network to reduce the need for dedicated phone lines and/or the impact of phone line interruption.

Control Panel Remote Programming & Management Support Saves Time and Money

The TL880LEAT-ANZ offers full data reporting and remote management for installers, saving time and reducing costs. With the use of DSC's DLS5 Downloading Software, you can remotely program and configure the control panel, change user information, retrieve historical records, generate the status reports and maintenance details from a PC via the Cellular or Internet connection.

Encryption & Supervision Services Provide High Security & Increased RMR

With 128-bit AES encryption of the alarm signal, central stations, installers and customers can be assured that this is the most secure alarm communicator offered. And with programmable (by seconds) supervision heartbeats, the communicator's availability is fully monitored.

Shorter installation times with PC-Link & easy activation and programming via Alarm.com AirFX

The TL880LEAT-ANZ connects to the PC-Link connector on the HS2016/HS2064 or HS2128 control panel, providing the Cellular and Internet connections to transmit events to the central monitoring station. For retrofit installations using the phone line, simply install this communicator to an already existing control panel and the service is instantly upgraded to a dual-path alarm communicator. Remote mounting is available for installations where the panel location does not provide acceptable cellular signal.

Activating and initializing the TL880LEAT-ANZ is done using the Alarm.com Dealer portal or MobileTech app.

Compatibility

- Compatible with HS2016/ HS2064/ HS2128 control panels V1.1 and higher
- Compatible with Sur-Gard System I-IP/II/III/IV/5 monitoring station receivers (SG-System 5 required for Visual Verification)

Specifications

Dimensions 5.875" W x 4.5" H (150mm x 115mm)
 Weight..... 0.683 lbs (310 g)
 Current Draw..... 150 mA
 Operating Environment 5° to 40° C (40° to 104° F)

Approval Listings

FCC/IC, PTCRB, UL/ULC, AT&T

For product information
www.dsc.com

Product specifications and availability subject to change without notice. Certain product names mentioned herein may be trade names and/or registered trademarks of other companies.
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Specifications DSCT-1

The DSCT-1 is the DSC tamper switch for DSC Metal Cabinet/Enclosure DSCPC5002C, DSCPC5003C, DSCPC4001CW.





Specifications DSCTB-1

The DSCTB-1 is the DSC tamper bracket for DSC Metal Cabinet/Enclosure DSCPC5002C, DSCPC5003C.

DSCTB-1 tamper bracket suitable to use with DSC Tamper Switch DSCT-1.





VRLA 12V7AH

SA12V7

Specifications

Nominal Voltage	12 V	
Nominal Capacity 20HR	7.0 AH	
Dimensions	Length	151±1mm (5.94 inches)
	Width	65±1mm (2.56 inches)
	Container Height	95±1mm (3.74 inches)
	Total Height (with terminal)	100±1mm (3.94 inches)
Approx Weight	Approx 2.10 kg (4.63 lbs)	
Terminal	F1	
Container Material	ABS Plastic	
Lead Material	Purity Lead 99.995%	
Sulfuric Acid	Distilled Sulfuric Acid (Zero metal content)	
Separator	AGM	
Rated Capacity	7.00 AH/0.350A	(20hr, 1.80V/cell, 25°C/77°F)
	6.53 AH/0.653A	(10hr, 1.80V/cell, 25°C/77°F)
	6.00 AH/1.20A	(5hr, 1.75V/cell, 25°C/77°F)
	5.37 AH/1.79A	(3hr, 1.75V/cell, 25°C/77°F)
	4.55 AH/4.55A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	105A (5s)	
Internal Resistance	Approx 23mΩ	
Operating Temp.Range	Discharge	: -15 - 50°C (5 - 122°F)
	Charge	: 0 - 40°C (32 - 104°F)
	Storage	: -15 - 40°C (5 - 104°F)
Nominal Operating Temp.Range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 2.1A. Voltage 14.4V - 14.7V at 25°C (77°F) Temp.Coefficient -30mV/°C	
Standby Use	No limit on Initial Charging Current Voltage 13.5V - 13.8V at 25°C (77°F) Temp.Coefficient -20 mV/°C	
Capacity affected by Temperature	40°C (104°F) 103% 25°C (77°F) 100% 0°C (32°F) 86%	
Self Discharge	Sentry AGM series batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	



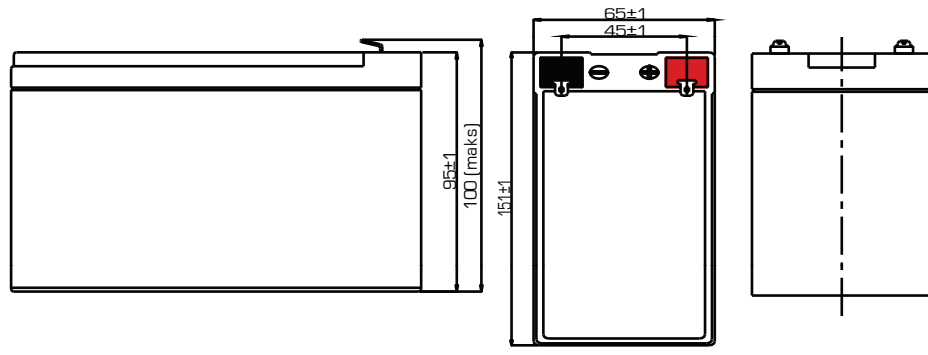
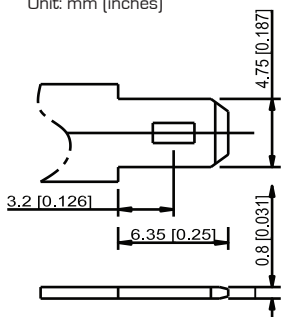
Applications

- All purpose
- Standby Applications
- Recreation Vehicles
- Uninterruptible Power Supply (UPS)
- Electric Power System (EPS)
- Fire & Security
- Generators
- Medical Equipment

Dimensions

F1 Terminal

Unit: mm (inches)



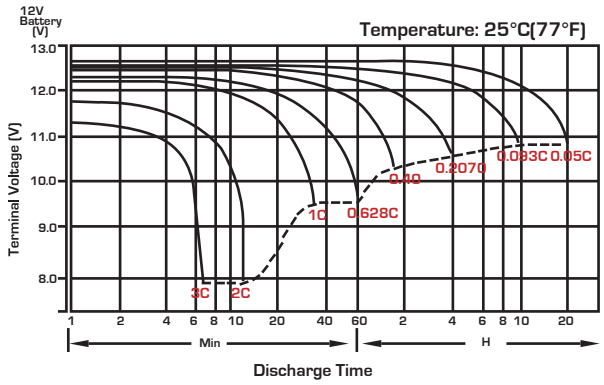
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V./Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	18.0	12.8	10.48	8.79	6.53	4.79	3.86	2.29	1.69	1.36	1.14	0.98	0.774	0.640	0.345
1.80V/cell	21.4	14.3	11.4	9.44	6.94	5.05	4.03	2.38	1.74	1.40	1.17	1.01	0.791	0.653	0.350
1.75V/cell	24.2	15.6	12.2	10.0	7.29	5.27	4.18	2.45	1.79	1.43	1.20	1.03	0.805	0.663	0.357
1.70V/cell	26.7	16.7	12.9	10.5	7.59	5.46	4.32	2.51	1.83	1.46	1.22	1.05	0.817	0.672	0.361
1.65V/cell	28.8	17.7	13.5	10.9	7.86	5.62	4.46	2.57	1.86	1.48	1.23	1.06	0.826	0.680	0.365
1.60V/cell	30.6	18.6	14.1	11.3	8.09	5.76	4.55	2.61	1.89	1.50	1.25	1.07	0.834	0.685	0.367

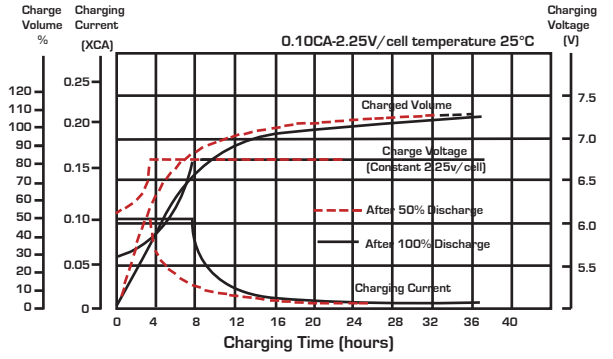
Constant Power Discharge (Watts/Cell) at 25°C (77°F)

F.V./Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	34.2	24.5	20.2	17.1	12.8	9.44	7.64	4.56	3.37	2.72	2.29	1.99	1.565	1.296	0.701
1.80V/cell	40.2	27.2	21.9	18.3	13.5	9.91	7.96	4.72	3.47	2.79	2.34	2.03	1.593	1.318	0.708
1.75V/cell	45.1	29.5	23.3	19.3	14.2	10.3	8.23	4.85	3.55	2.85	2.39	2.06	1.616	1.344	0.719
1.70V/cell	49.2	31.3	24.5	20.1	14.7	10.6	8.48	4.96	3.62	2.89	2.42	2.09	1.633	1.347	0.725
1.65V/cell	52.6	32.9	25.5	20.8	15.2	10.9	8.73	5.05	3.68	2.93	2.45	2.11	1.649	1.359	0.731
1.60V/cell	55.5	34.3	26.3	21.5	15.5	11.2	8.88	5.12	3.72	2.96	2.47	2.13	1.660	1.367	0.734

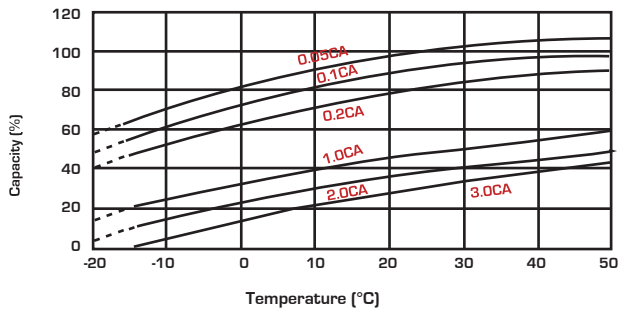
Discharge Characteristics



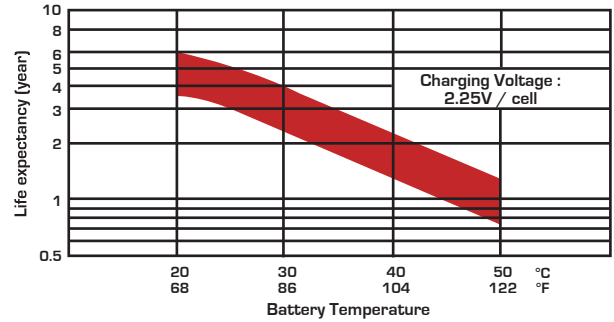
Float Charging Characteristics



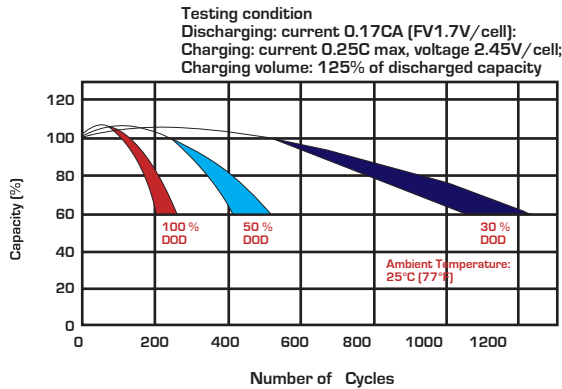
Temperature Effects in Relation to Battery Capacity



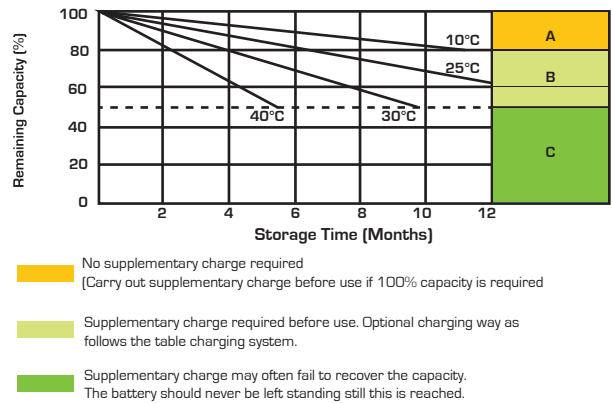
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



Charging System

DOD	Current Limit (A)	Constant Voltage (V)	Fully Charged Time (h)
20	0.15C ₁₀	13.5-13.8 vpc (12V)	10
	0.20C ₁₀	6.75-6.9 vpc (6V)	8
50	0.15C ₁₀	13.5-13.8 vpc (12V)	15
	0.20C ₁₀	6.75-6.9 vpc (6V)	12
80	0.15C ₁₀	13.5-13.8 vpc (12V)	16
	0.20C ₁₀	6.75-6.9 vpc (6V)	14
100	0.15C ₁₀	13.5-13.8 vpc (12V)	20
	0.20C ₁₀	6.75-6.9 vpc (6V)	18

State of Charge (SOC)

Open Circuit Voltage (V/cell)	Open Circuit Voltage (12V/cell)	Open Circuit Voltage (6V/cell)	State of Charge (% of full charge capacity)
2.14-2.15	12.84-12.90	6.42-6.46	100
2.12-2.13	12.72-12.78	6.36-6.39	90
2.11	12.66	6.33	80
2.09	12.54	6.27	70
2.07	12.42	6.21	60
2.05	12.30	6.15	50



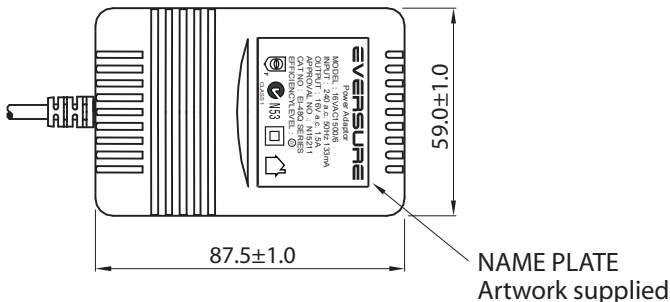
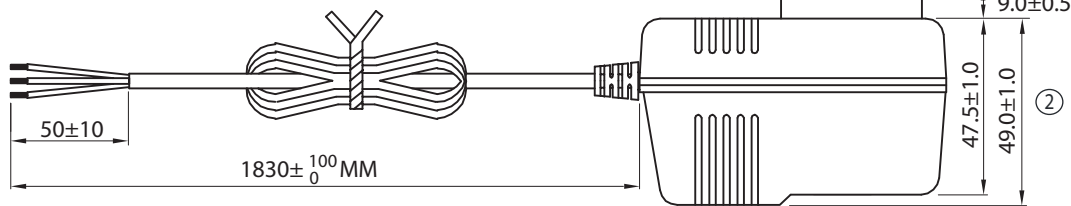
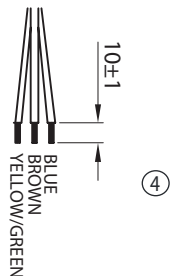
Sealed Performance Batteries

Domestic Sales | Ph: +61 (0)7 3386 1102 | Fax: +61 (0)7 3102 9913

sales@spb.net.au | www.sealedperformance.com.au

National Warehouse | 1 Ant Road | Yatala, Brisbane QLD 4207

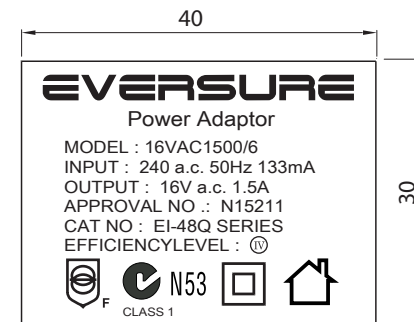
Melbourne Office | 2/9 Compark Circuit | Mulgrave, Melbourne VIC 3170



	REVISED	DRAWN	APPROVED
①	AMENDED PACKING QTY AND CARTON SIZE	JACKY 10/08/09	GARY 10/08/09
②	ADDED DATE CODE ON CASE AND DIMENSIONS	JACKY 07/12/09	GARY 07/12/09
③	ADDED PASSED LABEL ON CARTON	TODD 22/12/10	JACKY 22/12/10
④	AMENDED AC PINS DIMENSION & ADDED WIRES COLORS	ANLEI 01/11/12	ANLEI 01/11/12
⑤	CHANGED CROSS-SHAPED SCREW TO SHAPE SCREW ON CASE	MARK 31/08/15	FREDERICK 31/08/15

NOTES:

1. OUTPUT CORD: 20AWGX3C 1.83M Lead Free GREY (RAL7035)
2. CASE: GREY (RAL7035)
3. SECURITY SCREW IS AN ESSENTIAL REQUIREMENT, BOTH "⊥" AND "△" SHAPE ARE ACCEPTABLE



LABEL ARTWORK
Black word on Silver base label

TE DRAWING NO: TE40-0001 R5					PART NO: 16VAC1500MPS/6					
DESCRIPTION: AC ADAPTOR EI-48Q, 16VAC1500mA, 3 WIRE - MEPS										
SIZE	A4	DATE	30/04/09	CHECKED	KEVIN 30/04/09		ORDER REF:	0420	SHEET 1 OF 3	TOLERANCES UNLESS OTHERWISE STATED X.= +/- .X.= +/-0.5 .XX.= +/-0.2
UNIT	MM	DRAWN	KEVIN	APPROVED	FRANK 30/04/09		CUSTOMER: TE			
SCALE	NTS	MANU:				DATE:				



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ITEM		SPECIFICATION
1. Primary rated input voltage		AC240V 50Hz 133mA
2. Secondary rated output voltage and current		Unloaded voltage: AC 18 V ± 5% Loaded Voltage : AC 16 V ± 5% AT 1500 mA
3. Ripple voltage		*** mV (RMS) MAX. AT Rated Loading
4. Insulation resistance		Primary - secondary: DC 500 V 100 MΩ Min
5. Dielectric withstand test		Primary - secondary: AC 3.64 KV 1 seconds
6. Temperature rise		At rated loading 90°C max. For input coil (By resistance method) and 55°C max. on case surface (By use of thermometer)
7. EFFICIENCY		≥ 79%
8. Leadout	Primary	SAA PLUG IN TYPE
	Secondary	PVC cable length: 1.8 Meter Colour : GREY (RAL7035) Wire size: AWG#20/3C Plug : STRIPPED AND TINNED
9. Test circuit		
10. Case		SAA48 colour = GREY (RAL7035)

	REVISED	DRAWN	APPROVED
①	AMENDED PACKING QTY AND CARTON SIZE	JACKY 10/08/09	GARY 10/08/09
②	ADDED DATE CODE ON CASE AND DIMENSIONS	JACKY 07/12/09	GARY 07/12/09
③	ADDED PASSED LABEL ON CARTON	TODD 22/12/10	JACKY 22/12/10
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⑤	CHANGED CROSS-SHAPED SCREW TO SHAPE SCREW ON CASE	MARK 31/08/15	FREDERICK 31/08/15

TE DRAWING NO: TE40-0001 R5


PART NO: 16VAC1500MPS/6

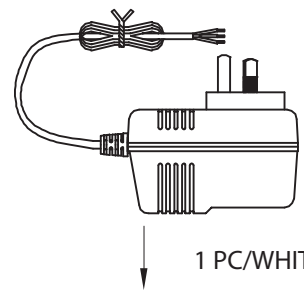
DESCRIPTION: AC ADAPTOR EI-48Q,16VAC1500mA, 3 WIRE - MEPS



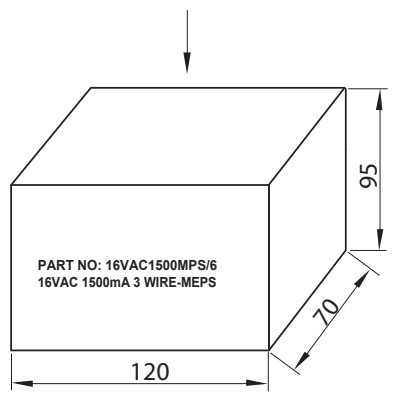
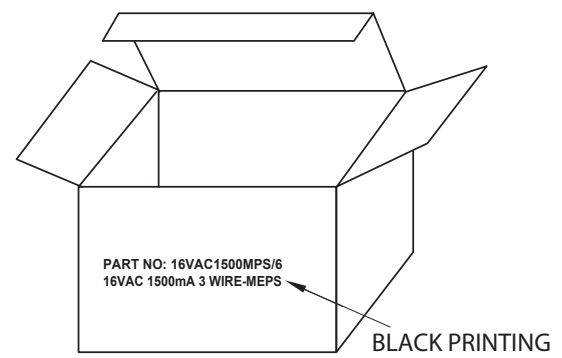
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SIZE	A4	DATE	30/04/09	CHECKED	KEVIN 30/04/09		ORDER REF:	0420	SHEET 2 OF 3	TOLERANCES UNLESS OTHERWISE STATED X.= +/- .X= +/-0.5 .XX= +/-0.2
UNIT	MM	DRAWN	KEVIN	APPROVED	FRANK 30/04/09		CUSTOMER:	TE		
SCALE	NTS	MANU:				DATE:				

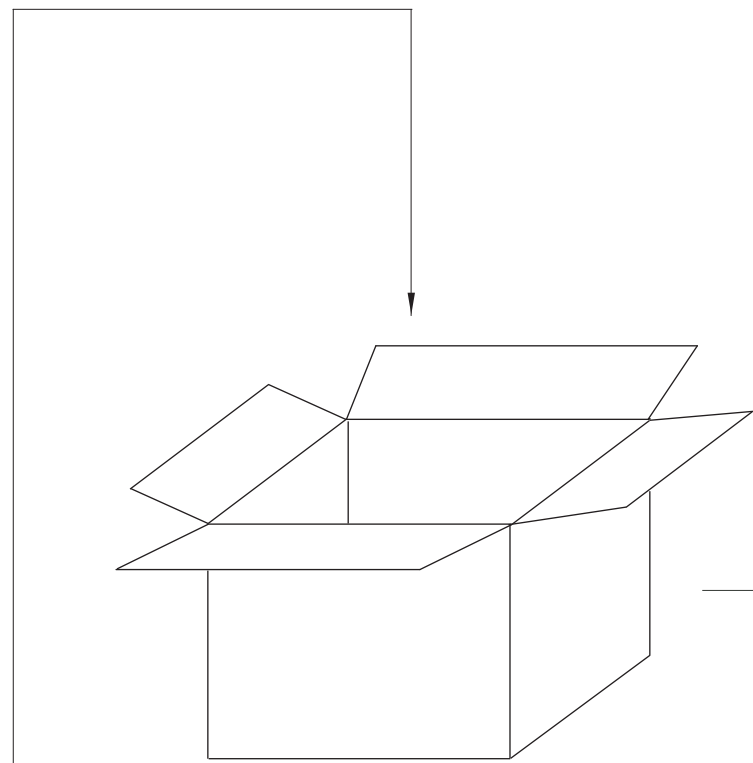
	REVISED	DRAWN	APPROVED
①	AMENDED PACKING QTY AND CARTON SIZE	JACKY 10/08/09	GARY 10/08/09
②	ADDED DATE CODE ON CASE AND DIMENSIONS	JACKY 07/12/09	GARY 07/12/09
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⑤	CHANGED CROSS-SHAPPED SCREW TO SHAPE  SCREW ON CASE	MARK 31/08/15	FREDERICK 31/08/15



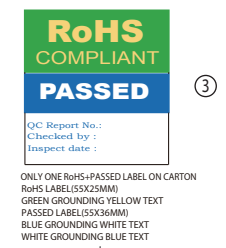
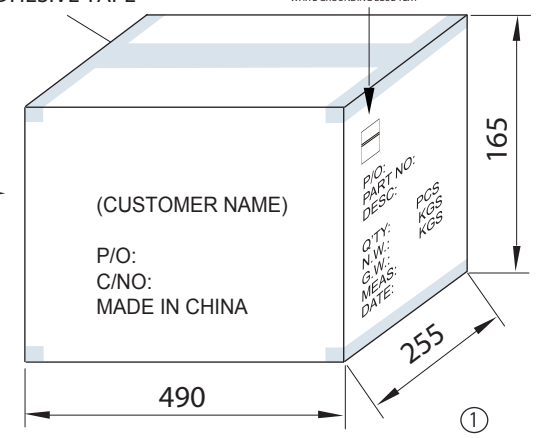
1 PC/WHITE BOX



20 BOXES/CARTON ①



ADHESIVE TAPE




TE DRAWING NO: TE40-0001 R5 PART NO: 16VAC1500MPS/6

DESCRIPTION: AC ADAPTOR EI-48Q,16VAC1500mA, 3 WIRE - MEPS



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SIZE	A4	DATE	30/04/09	CHECKED	KEVIN 30/04/09		ORDER REF:	0420	SHEET 3 OF 3	TOLERANCES UNLESS OTHERWISE STATED X.= +/-1 .X.= +/-0.5 .XX.= +/-0.2
UNIT	MM	DRAWN	KEVIN	APPROVED	FRANK 30/04/09		CUSTOMER:	TE		
SCALE	NTS	MANU:					DATE:			