#### P 🔺 R 🔺 D O X

## 4 to 32-Zone Expandable Security Systems





#### Description

Spectra SP control panels (SP4000, SP5500, SP6000, SP65, and SP7000) offer a combination of innovative features and an advanced communication bus for a uniquely expandable security system. Through its communication bus, all Spectra SP panels can be expanded via wireless and hardwired expansion modules and a variety of accessory modules. With their in-field firmware upgrade capability, the Spectra SP series allows installers to upgrade their system without hassle – quickly, easily, and on-site. To further facilitate installation, every Spectra SP panel can be configured using easy-to-follow, menu-driven programming.

Spectra SP also features multipath communication; this enables your system to communicate through multiple channels, including telephony with its built-in landline dialer, IP with the IP150 Internet Module, IP/GPRS/GSM with the PCS series module, and voice with the VDMP3 Plug-In Voice Module.

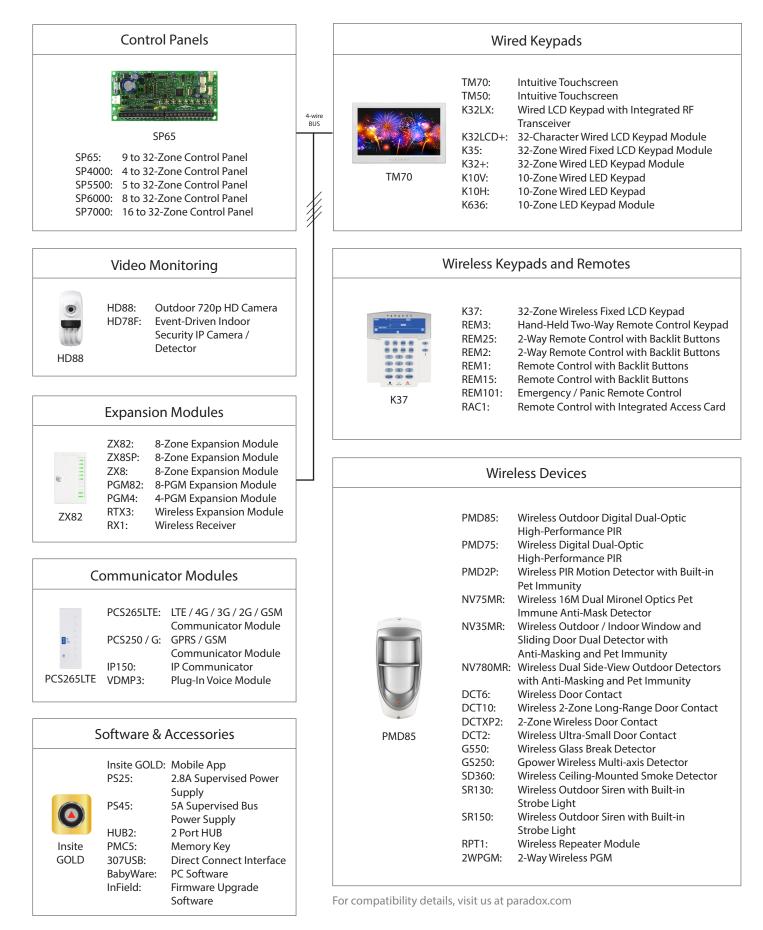
With its reliable communication technology, flexible expansion and user-friendly keypads, Spectra SP is the complete residential or commercial security solution.

#### Features

- Supports StayD mode
- 4-wire expansion bus
- Wireless expansion (via RTX3 / RX1)
- Expandable to 32 zones
- Expandable to 16 PGMs
- 2 partitions
- 32 user codes
- Supports PCS series modules
- Supports IP150 Internet Module
- Supports VDMP3 Plug-in Voice Module
- Supports REM3 Hand-held Remote Keypad
- Supports SR150 Wireless Siren
- Landline dialer (except SP65)
- In-field firmware upgradable



#### System Overview



#### Feature Details



#### Internet Communication (IP150)

The IP150 Internet Module allows you to control and monitor your security system remotely through any web browser. It allows for email notifications of important system events such as alarms, arm/disarm events, and troubles. For example, receive an email at work when your kids get back from school. Also, view the live status of your system and arm/disarm it. For instance, you have just left your office for the weekend but are unsure whether you armed the system. Simply check the status of your system from a laptop and arm it.



#### Wireless Communication (PCS Series)

The PCS series modules provide the Spectra SP control panels with wireless communication capabilities to report system events via IP, GPRS, and/or GSM. Whether it be uploading/ downloading via IP or GPRS, receiving system status and events by voice or text message, or reporting to the monitoring station via IP, GPRS, or GSM, the PCS series enhances the communication capabilities of any Spectra SP installation.



#### Voice Communication (VDMP3)

The VDMP3 is a plug-in, voice-assisted module that can be programmed to call up to five telephone numbers in the event of an alarm. For example, when an alarm occurs at your store during off-hours, every employee can receive notification via telephone. You can also call the VDMP3 from an outside line, enabling you to arm or disarm the system as well as activate PGMs. The VDMP3 essentially turns any outside telephone into a keypad. The VDMP3 is easy to install; plug it in directly onto the panel, set the phone numbers, and select the activation event.



#### StayD

StayD resolves all issues with common security systems and represents the only solution for secure living. The revolutionary StayD feature represents a completely reversed philosophy compared to all other security systems made today. Traditional systems share the same principle - in order to provide security, users must remember to arm the system; otherwise the system is disarmed and does not provide security. A StayD system is always armed, and needs only to be partly disarmed when an entry or exit is needed. With StayD, you can truly have peace of mind knowing, that you are always protected.



#### In-field Upgradable

Spectra SP is not only easy to install, but is also fully in-field upgradable, allowing for simple on-site updates. The process is effortless; connect the PC to the panel and you are a few clicks away from performing a complete system upgrade within minutes. No need to change panels or hardware; all the updates are performed using Paradox's InField Firmware Upgrade Software.



#### App-based System Control

The Insite GOLD app enables you to remotely access your Paradox security system and view your system cameras. Insite GOLD provides lots of functionality and information at one's fingertip. It has an intuitive user-interface which enables you to easily connect to your security system and edit settings. Now you can control your Paradox security system from any Android / iOS smartphone.

#### TM70 Overview



TM70: Intuitive Touchscreen

#### SpotOn Locator™

Upload photos, images, or schematics to eliminate the need for deciphering LED zone lights. These images display any door, window, or motion detector that are active. Since the images are uploaded by the user, they are truly customized, and can be unique to each installation. SpotOn Locator<sup>™</sup> is integrated in the original firmware, and when purchased, is unlocked with an authorization code.

#### ■ OneScreen Monitoring<sup>™</sup>

Provides a real-time visual display of the system's status on one screen. It allows the user to choose which partitions will be displayed showing arming level, alarm, ready, and troubles. It also displays zone statuses; open, close, bypass, alarm, and tamper. OneScreen Monitoring<sup>™</sup> also features Solo Test<sup>™</sup> mode, which allows installers and users to easily test all system zone's via the TM70 Touch's screen. OneScreen Monitoring<sup>™</sup> is integrated in the original firmware, and when purchased, is unlocked with an authorization code.

Display	16-bit, color LCD; 8.6 x 15.4 cm (3.1 x 5.9 in.), 800 x 480 pixels			
Input Voltage	9 to 15 Vdc			
Current Consumption	250 mA at max brightness + 80 mA sounder			
Keypad Zone Input1 for a detector or external temperature sensor				
Tamper	Built-in, cover and wall			
Humidity	5 to 90%			
Operating Temperature	-10 to 55 °C (14 to 131 °F)			
Compatibility	Swan, EVO, Spectra, Magellan			

#### Specifications

Note: All control panel outputs are rated to operate between 11.4 Vdc and 12.5 Vdc.

TSP-G2K rev.15 - Printed in Canada 04/2019

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#### Specifications PRX2780000033-P2C

The PRX2780000033-P2C is a metal box enclosure for provision multiple module and panel mounting.

Features:

- Many punch-out holes for simple wiring
- Easy door removal
- Sizes: 28cm X 28cm X 7.6cm (11" x11" x 3")





#### **Specifications PRXK-TK278**

The PRXK-TK278 is a BOM Kit for 1x tamper switch PRX2502302000-P2C and 1x tamper bracket PRX2781030000-P2C to suit with Paradox Metal Box Enclosure PRX2780000033-P2C; to protects against tampering (opening door or removal from wall).



### SP5500+ / SP6000+ / SP7000+ User Guide

4 to 32-Zone Expandable Security Systems





#### NV5 High-Performance Digital Infrared Motion Detector

#### Description

The NV5 is the entry-level motion detector from Paradox's ENVY line of next generation motion detection. Featuring advanced processing technology, optical technology, and easy installation, the NV5 represents state of the art technology with the most advanced and innovative digital infrared detector of its class.

The NV5 features Paradox's developed optics - a Hybrid Cylindrical / Spherical combination 1.0 inch lens with 3<sup>rd</sup> generation 3D Lodiff<sup>®</sup> Fresnel segments- the first and most advanced lens in the detection industry. This combination offers the best detection possible for passive infrared energy reception optimized for far beams (cylindrical) and medium/ close beams (spherical). This lens also features Paradox's "Equalized" detection pattern, ensuring equal sensitivity throughout the protected area. Furthermore, the NV5 offers Small Pet Resistance or, alternatively, a Super Creep Zone Mirror add-on optics, which provides superior detection directly below the detector (see Beam Pattern).

The NV5 offers Auto Pulse Signal Processing with two levels of RF rejection, dual or single edge processing, and LED feedback for each setting. With precision and equalized detection, superior detector stability, total area coverage, and complete false alarm protection, the NV5 is the most advanced and innovative digital infrared detector in its class.

ENVY DE





#### Features

- Infrared motion detector managed by Full Authority Digital Electronics Control (FADEC)
- Paradox's Hybrid Cylindrical-Spherical 1.0 inch lens with 3<sup>rd</sup> generation 3D Lodiff<sup>®</sup> Fresnel segments- 10 x 10 m (32.8 x 32.8 ft), 90° viewing angle, and 0.5 m (1.6 ft) to max range (no dead zone beam pattern)
- Paradox's equalized detection pattern ensures equal sensitivity throughout the protected area
- Paradox Super Creep down-looking beam optic option for straight down detection
- Pet Resistance up to 16 kg (35 lb)
- Dual/Single Edge Processing selection the only one in its class
- Paradox patented Auto Pulse Signal Processing (APSP) with settings for normal or high interference environments
- Digitally equalized temperature compensation; unit performance specifically tailored to obtain same catch capability at all specified operating temperatures
- Digital Sensitivity trimmer adjustment with five range levels and LED feedback, allows for perfect unit adjustment for all room sizes
- Optional wall/ceiling mount bracket
- Miniature yet easy to install with no PCB removal or adjustment
- CE and EN50131 Grade 2 approved (see PARADOX.com for latest approval updates)
- Interchangeable lenses; 90° standard lens

#### Advanced Digital Technology (FADEC)

The NV5's digital analysis and algorithms ensure precise and accurate detection performance, managed by Full Authority Digital Electronics Control (FADEC). Depending on the environment application, the NV5 can be easily configured with its unique pre-programmed profile settings (Normal, Moderate, Pet Resistant, and Harsh).

- High-resolution and full-dynamic range digital signal conversion
- High-speed, advanced algorithm, digital signal processing
- Digital EMI / RFI interference rejection
- Five choices of digital range levels (via trimpot)

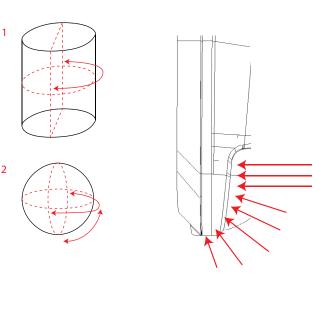
#### Advanced Optical Technology

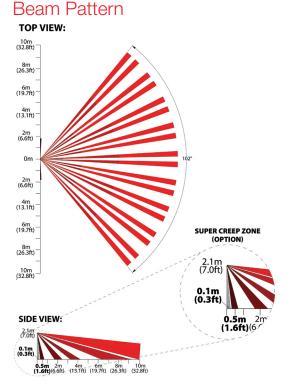
Paradox's Hybrid Cylindrical-Spherical combination offers the best detection possible for passive infrared energy reception for far beams (1. Cylindrical) and medium/close beams (2. Spherical). This lens design allows for ultimate perpendicular beam collection. Superior and uniform energy collection translates to a better image quality of the target which provides unmatched detection accuracy and stability.

- 3rd generation 3D LoDiff® Fresnel segments
- Optically and digitally equalized beam pattern (all beams optimized for generating equal signal level at any distance or angle)
- Optional Super Creep Zone or Pet Resistance up to 16 kg (35 lb)

#### **Technical Specifications**

Installation height	2.1 m – 3.1 m (7.0 ft – 10.2 ft) For 10 m and above range, unit must be installed at 2.1 m (7.0 ft) height and above						
Sensor	Dual rectangular element, low noise, high sensitivity, EMI immunity						
Lens	Hybrid Cylindrical Spherical 3 <sup>rd</sup> gen. Fresnel Lens, equal beam sensitivity (patent pending)						
Processing	High resolution digital signal processing. Four profiles (Normal, Medium, Pet Res., Harsh), true digital temperature compensation.						
Super Creep Zone	Add on mirror option for enhanced creep zone at 0.1 m from the wall (no Pet Resistence)						
Range adjustment	5 level range adjustments (50% to 150%)						
Startup time	10 seconds						
Detection speed	0.2 m/s to 3 m/s (0.6 ft/s to 9.8 ft/s)						
Power input	10 Vdc to 15 Vdc						
Current consumption	10.5 mA @ Standby / 11.3 mA @ Alarm						
Coverage	10 m (32.8 ft) x 90°						
Coverage	0.5 m (1.6 ft) down looking with optional creep zone						
PET Resistance	Up to 16 kg (35 lb)						
Alarm indicator	Red LED for 3 seconds						
Alarm output	Solid State, N.C. 150 mA						
Anti-tamper switch	N.C. 28 Vdc, 0.15 A						
Operating temperature	-10°C to 50°C (14°F to 122 °F)						
Humidity	95% max.						
Dimensions	9.1 x 5.5 x 4 cm (3.5 x 2.2 x 1.6 in.)						
RFI Immunity	10 V/m 80 MHz to 2 GHz						
Environmental standards	Complies with EN 50131 Security Grade 2 / Environmental Class I						





Ρ

#### Wall/Ceilling Bracket

Wall Mount Bracket





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#### **Specifications DFMWP16**

The DFMWP16 is combo siren and strobe (slim design).

- New design
- Siren tone selectable for different applications
- Sound volume adjustable: low dB for testing and high dB for normal operation
- Bright: new LED strobe design
- Independent siren and strobe operation
- High quality UV treated case
- Weatherproof
- Front and back tampers
- EOLRs built in, suitable for most major alarm panels

Operating voltage: 9-15VDC

SPL @ 1meter: 110dB

Siren current draw: 150mA

Strobe current draw: 50mA

Siren tone selectable: Tone 1: warble; Tone 2: Hi/Lo

Dimension: 200 x 110 x 40mm



SECOR				١	/olume Hig	h [	J1	Low
WP16 Combo Sire	en/Strobe	:	Siren Tone	1 [	■ ■ ■ J2	] Tone 2		
Voltage: 9-15VDC				Та		6.8K		
Current: Max 150mA High Volume: 110±3	-					mper o		5.6K
Low Volume: 95±3 d	B @ 1meter					Tamper output EOL		3.3K 2.2K
Tone 1: Warble Tone 2: Hi/Lo						P	<b>J</b> 3	0
000	00	$\oslash$	$\oslash$	$\oslash$	$\oslash$	,	$\oslash$	
		LED – t Comfort		nper tput	Spare			





#### **Specifications DFMWP08**

The DFMWP08 is indoor top hat piezo.

Input voltage: 12VDC

SPL @ 1meter: 105dB

Current draw: 90mA



#### VRLA 12V7AH

#### SA12V7

#### **Specifications**

Nominal Voltage	12 V
Nominal Capacity 20HR	7.0 AH
Dimensions	Length Width Container Height Total Height (with terminal)
Approx Weight	Approx 2.10 kg (4.63 lbs)
Terminal	F1
Container Material	ABS Plastic
Lead Material	Purity Lead 99.995%
Sulfurid Acid	Distilled Sulfurid Acid (Zero met
Separator	AGM
Rated Capacity	7.00 AH/0.350A 6.53 AH/0.653A 6.00 AH/1.20A 5.37 AH/1.79A 4.55 AH/4.55A
Max. Discharge Current	105A (5s)
Internal Resistance	Approx 23mΩ
Operating Temp.Range	Discharge : -15 - 50°C (5 - 12 Charge : 0 - 40°C (32 - 104 Storage : -15 - 40°C (5 - 10
Nominal Operating Temp.Range	25±3°C (77±5°F]
Cycle Use	Initial Charging Current less that 14.4V - 14.7V at 25°C (77°F) 1

0°C

(32°F)

Standby Use

Capacity affected by Temperature

Self Discharge

# Width $65\pm 1 mm$ [2.56 inches] Container Height 95±1mm [3.74 inches] Total Height (with terminal) 100±1mm [3.94 inches] Approx 2.10 kg (4.63 lbs) F1 ABS Plastic Purity Lead 99.995% Distilled Sulfurid Acid [Zero metal content] AGM 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] 5.35 AH/4.55A (1hr, 1.60V/cell, 25°C/77°F] 105A [5s] Approx 23mΩ Discharge : -15 - 50°C [5 - 122°F] Charge : 0 - 40°C [32 - 104°F] Storage : -15 - 40°C [5 - 104°F] Storage : -15 - 40°C [5 - 104°F]

151±1mm (5.94 inches)

 25±3°C
 (77±5°F)

 Initial Charging Current less than 2.1A. Voltage

 14.4V - 14.7V at 25°C
 (77°F) Temp.Coefficient -30mV/°C

 No limit on Initial Charging Current Voltage

 13.5V - 13.8V at 25°C
 (77°F) Temp.Coefficient -20 mV/°C

 40°C
 (104°F)
 103%

 25°C
 (77°F)
 100%

86%

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

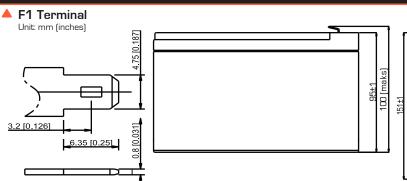
- All purpose
- Standby Applications
- Recreation Vehicles
- Uninterruptible Power Supply (UPS)
- Electric Power System (EPS)
- Fire & Security
- Generators

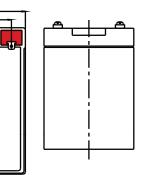
65±1 45±1

- -

• Medical Equipment

#### Dimensions

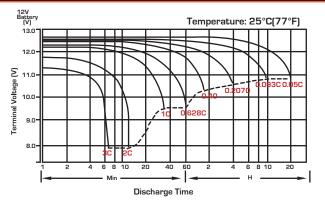




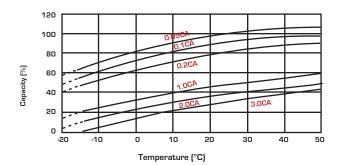
	Constant Current Discharge (Amperes) at 25°C (77°F)														
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	Зh	4h	5h	6h	8h	10h	20h
1.85V/cell	18.0	12.8	10.48	8.79	6.53	4.79	3.86	2.29	1.69	1.36	1.14	0.98	0.774	0.640	0.345
1.80V/cell	21.4	14.3	11.4	9.44	6.94	5.05	4.03	2.38	1.74	1.40	1.17	1.01	0.791	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	Зh	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

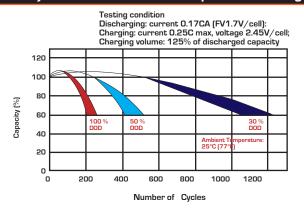
#### **Discharge Characteristics**



#### Temperature Effects in Relation to Battery Capacity



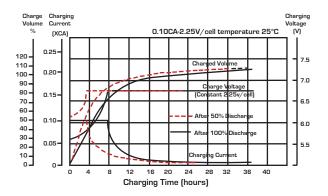
#### Cycle Life in Relation to Depth of Discharge



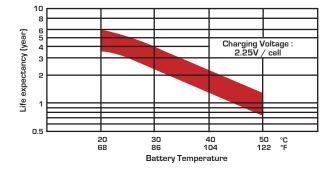
#### Charging System

DOD	Currency Limit (A)	Constant Voltage (V)	Fully Charged Time (h)
	0.15C10	13.5-13.8 vpc (12V)	10
20	0.20C10	6.75-6.9 vpc (6V)	8
50	0.15C10 13.5-13.8 vpc	13.5-13.8 vpc (12V)	15
50	0.20C10	6.75-6.9 vpc (6V)	12
	0.15C10	13.5-13.8 vpc (12V)	16
80	0.20C10	6.75-6.9 vpc (6V)	14
400	0.15C10	13.5-13.8 vpc (12V)	20
100	0.20C10	6.75-6.9 vpc (6V)	18

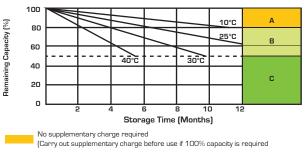
#### **Float Charging Characteristics**



#### Effect of Temperature on Long Term Float Life



#### Self Discharge Characteristics



Supplementary charge required before use. Optional charging way as follows the table charging system.

Supplementary charge may often fail to recover the capacity. The battery should never be left standing still this is reached.

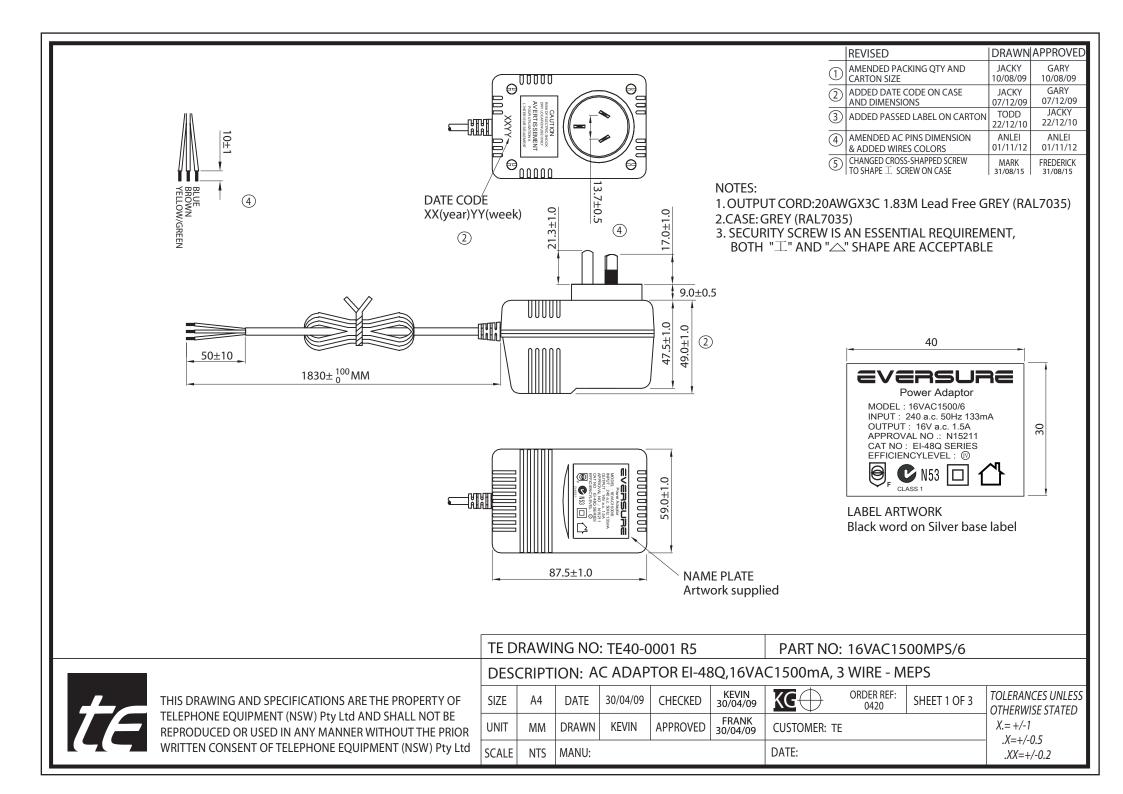
#### State of Charge (SOC)

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

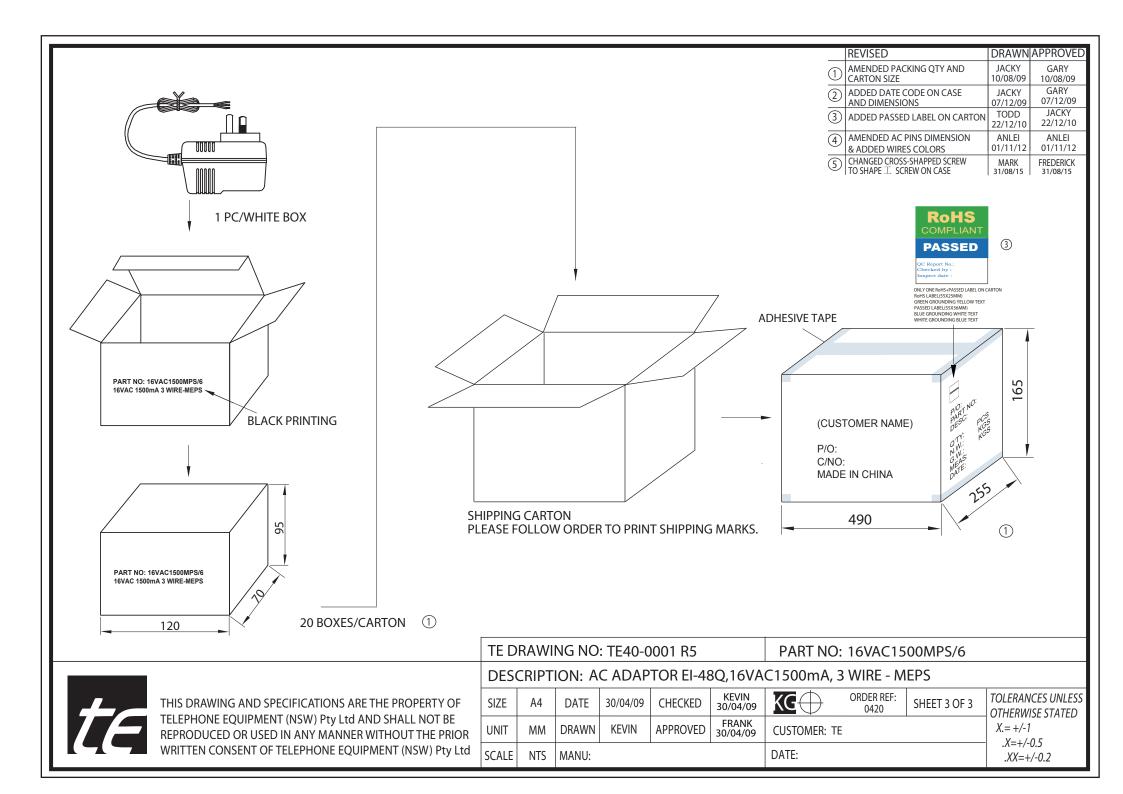


Sealed Performance Batteries

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, Melburne VIC 3170



										REVISED		DRAWN	APPROVED
ITEM			SPECI	FICAT	ION					AMENDED PAC	KING QTY AND	JACKY 10/08/09	GARY 10/08/09
1. Primary rated input	ut voltage	AC240V 50Hz 133mA							$ \frac{1}{2}$	ADDED DATE C	CODE ON CASE	JACKY	GARY
2. Secondary rated of	output	Unloaded voltage: AC 18	V±	5%							ONS D LABEL ON CARTON	07/12/09 TODD	07/12/09 JACKY
voltage and curre	nt	Loaded Voltage : AC 16	V ±	5%	Α	T 15	00 mA					22/12/10	22/12/10
3. Ripple voltage		*** mV (RMS) MAX. AT Rate	d Loa	ding					(4)	& ADDED WIRE	PINS DIMENSION	ANLEI 01/11/12	ANLEI 01/11/12
4. Insulation resista	nce	Primary - secondary: DC 500	V 100	ΜΩΝ	<i>l</i> lin				5	CHANGED CROSS TO SHAPE I SCR	S-SHAPPED SCREW REW ON CASE	MARK 31/08/15	FREDERICK 31/08/15
5. Dielectric withsta	nd test	Primary - secondary: AC	3.64	KV 1	secon	ds							
6. Temperature rise		At rated loading 90℃ max. For	input	coil (B	y resis	tance m	ethod)						
		and 55°C max. on case surface	(By us	se of t	hermor	neter)							
7. EFFICIENCY		≥ 79%											
	Primary	SAA PLUG IN TYPE											
8. Leadout													
	Secondary	PVC cable length: 1.8 M	eter										
		Colour GREY (RAL7035)											
		Wire size: AWG#20/3C											
		Plug : STRIPPED AND TINK	NED										
	-	PRIMARY SEC	COND	ARY			_						
9. Test circuit													
							.OADING						
10. Case		SAA48 colour = GREY (RAL7035)											
									0.000				
						: TE40-0				16VAC15			
	DESC	CRIPTI	ON: A	C ADAP	TOR EI-48	3Q,16VA	C1500mA, 3	B WIRE - M	EPS				
THIS DRAWING AND SPECIFICATIONS ARE THE PROPERTY OF TELEPHONE EQUIPMENT (NSW) Pty Ltd AND SHALL NOT BE			SIZE	A4	DATE	30/04/09	CHECKED	KEVIN 30/04/09	KG	ORDER REF: 0420	SHEET 2 OF 3		ICES UNLESS ISE STATED
		IN ANY MANNER WITHOUT THE PRIOR	UNIT	MM	DRAWN	KEVIN	APPROVED	FRANK 30/04/09	CUSTOMER: TE			X.= +/-1 .X=+/-	
WRIT		FELEPHONE EQUIPMENT (NSW) Pty Ltd	SCALE	NTS	MANU:		I		DATE:				





#### **Specifications TELLC0280**

The TELLC0280 is the telephone lead with 606 Socket and 2 Meter length of Telephone Cord.

Colour: Ivory.

