

# **Specifications PRXMG5050+-V74**

The PRXMG5050+-V74 is a Magellan 32-Zone Wireless Transceiver Control Panel.

## Features:

- 2 serial outputs master/slave
- M2 two-way FSK hardware ready
- 8 on-board zones (16 with ATZ)
- Built-in transceiver (433 MHz)
- Expandable to 32 zones, 2 partitions, 32 users and 32 remotes
- 4-wire communication bus (connect up to 15 modules)
- Supports IP and cellular IP reporting
- Supports 16 PGMs (any of which can be wireless)
- App-based system control via BlueEye
- In-field firmware upgrade via 307USB And BabyWare remote or local
- Menu-driven programming for the Installer, Master and Maintenance codes
- Multiple telephone numbers for event reporting: 3 monitoring and 5 for Personal Dialing
- Calendar with Daylight savings Time
- StayD Mode
- Sleep arming method
- RF Jamming Supervision
- 512 events buffered.





# $Specifications\ PRX2780000033\text{-}P2C$

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** 



# **525DM:** Microwave and Infrared Digital Anti-mask Motion Detector V2.4 P



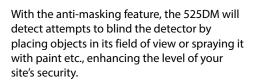








The 525DM is a microwave and infrared digital motion detector featuring anti-masking detection. It features both a microwave sensor and a passive infrared sensor, and includes Paradox's powerful signal processing algorithms for triggering an anti-masking alarm when certain conditions occur.





There are two mounting methods that can be used for the 525DM: corner mount and flat surface mount. To install the 525DM:

- 1) Select the detector's location. Avoid placing the detector in proximity to the following sources of interference: reflective surfaces, direct air flow, sources of steam/oil vapor, infrared light sources and objects causing temperature changes. Digital microwave detection will be hampered if installed close to vibrating metal surfaces, rotating fans, water flow in plumbing pipes or electromagnetic sources. Also note, microwave frequencies can penetrate walls, therefore, avoid installing the unit where it can respond to motion on the other side of the protected area's walls.
  - Using a Paradox standard lens at the recommended installation height of 2.1m (7ft)  $\pm$ 10%, the 525DM detector will provide full coverage from 1.5m (5ft) to 12m (40ft) without any dead zones (see Figure 1: Beam Pattern).
- 2) Remove the front cover screw holding the cover in place; open the cover.
- 3) Loosen the screw holding the PCB in place and gently slide and lift from back cover.
- 4) Drill or punch out the selected knockout holes from the 525DM back cover (as shown in Figure 2: *Installation)* and mount the back cover using the appropriate screws.
- 5) Wire the unit as shown in Figure 3: PCB Connection.
- 6) Perform a walk-test to verify detector coverage (see Walk-testing).

**WARNING**: Do not touch the sensor surface as this could result in a detector malfunction. If necessary, clean the sensor surface using a soft cloth with pure alcohol.

#### **Features**

- Digital microwave/infrared detection
- Anti-mask feature allows for the detection of close proximity movements (less than 0.75m / 2.5ft) within the detector range
- Adjustable microwave range
- Two auto pulse settings; one for typical environment (normal), and one for high false alarm rejection (high)
- Installer Test Mode: test microwave and infrared detection individually
- 12m (40ft) X 12m (40ft); 90° viewing angle

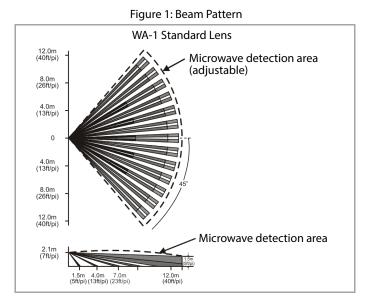


Figure 2: Installation

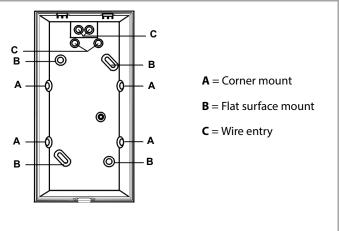
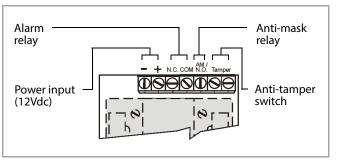


Figure 3: PCB Connection



## **Turning on the 525DM**

Turning on the detector initiates a self-testing program for the signal processor and memory. The LEDs will flash for 16 seconds. When the LEDs are no longer flashing, the detector is ready and fully operational.

#### Walk-testing

At 20°C (68°F), at the highest sensitivity level, with APSP set to normal, and in dual-edge processing mode, you should be detected crossing at least one complete zone (consisting of 2 beams, left and right sensor detecting elements) in the coverage area with any kind of movement; slow/normal walking or running.

With APSP set to high, the amount of movement required to generate an alarm is doubled, and you should be detected within crossing 2 complete zones. The approximate width of a full beam at 12m (40ft) from the detector is 1.8m (6ft). To walk-test, move across the detection path, not toward the detector.

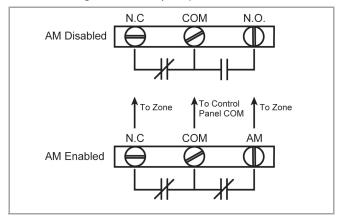
#### **Anti-mask Detection Details**

Anti-masking is active only if a valid movement detection occurred during the 10 minutes prior to the anti-mask detection. When a moving object gets near the detector, the blue LED starts flashing for 90 seconds (AM relay not activated yet). If an alarm occurs during that period, the LED stops flashing and no anti-mask trouble occurs. If no alarm occurs within that 90 seconds, antimask trouble occurs - AM relay is activated and the LED turns steady blue ON. The anti-mask trouble is cleared by an alarm event.

## **Relay Operation Details**

When anti-masking is enabled, both the alarm and anti-mask relay are independent. When anti-masking is disabled, both relays are activated by an alarm, where the anti-mask relay functions as N.O., and the alarm relay functions as N.C. In Installer Test Mode (see reverse page), the alarm relay is continuously activated, and the anti-mask relay is activated upon an alarm. For connection details, see Figure 4: AM Relay Output Connection.

Figure 4: AM Relay Output Connection



#### **LED Indicator (Normal Operation)**

LED State	Description				
Red - 4 seconds	Alarm (movement detection)				
Blue - Flashing 90 sec.	Anti-mask detection pending*				
Blue - ON	Anti-mask detection*				
Green - 0.5 seconds	Microwave detection				
Yellow - 0.5 seconds	Infrared detection				

<sup>\*</sup>See Anti-mask Detection Details for more information.

## **LED Indicator (Installer Test Mode)**

LED State	Description
Yellow - 4 seconds	Infrared detection
Green - 4 seconds	Microwave detection

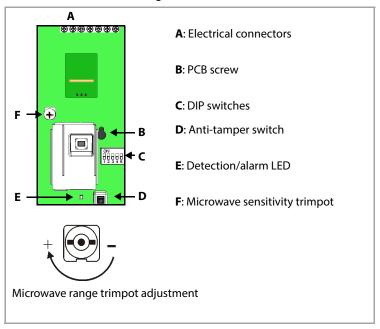


## **Detector Settings**

The following detector settings can be modified using the unit's DIP switches (see Figure 5: *Overview*). Any changes that are made to DIP switch settings are ignored during a movement alarm or an anti-mask detection. To ensure that new DIP switch settings have been registered, ensure that the unit is not in anti-mask alarm, then move out of the unit's detection path and wait for the LED to turn OFF.

Step	DIP / Trimpot	Details
1 Operational Mode		The 525DM uses both infrared and microwave detection. Setting DIP switch 1 to OFF will allow you to test each detection method individually. This feature is used in conjunction with DIP switch 3 Installer Test Mode
	DIP Switch 1	DIP switch 1 OFF = installer test mode (see step 3)  DIP switch 1 ON = operational mode△
2		If DIP switch 2 is turned ON, the LED will indicate detections as per the LED Indicator table.
LED Settings	DIP Switch 2	DIP switch 2 OFF = LED disabled DIP switch 2 ON = LED enabled $\triangle$
3 Anti-Mask		When DIP switch 3 is turned ON, the anti-mask feature will detect close proximity movements (less than 0.75m / 2.5ft) within the detector range.  NOTE: For the anti-mask feature to be enabled, DIP switch 1 must be ON.
	DIP Switch 3	DIP switch 3 OFF = anti-mask disabled DIP switch 3 ON = anti-mask enabled $\triangle$
Installer Test Mode	DIP Switch	DIP switch 3 OFF = test infrared only DIP switch 3 ON = test microwave only
Mode	(with DIP1 OFF)	For test mode LED feedback, see LED Indicator (Installer Test Mode).  NOTE: In installer test mode, relay functions and anti-mask are deactivated or altered.
4		Preferably, dual edge processing should be used at all times. Dual edge processing requires balanced
Edge Processing Mode		detection from both sensor's elements and requires that a beam must be fully crossed even at close range. This setting provides better false alarm rejection. Single edge setting allows for faster detection of close range movements. Use this setting only in normal environments with minimal sources of interference. Never use single edge setting if the detector is placed near sources of interference that could adversely affect it.
	DIP Switch 4	DIP switch 4 OFF = single edge DIP switch 4 ON = dual edge △
5 Auto Pulse Signal Processing Level		APSP measures the energy from each detected signal and stores it in memory. To generate an alarm, the memory must reach a required minimum level. APSP can be set to <i>normal level</i> or <i>high level</i> . When APSP is set to <i>normal level</i> , the unit is calibrated to detect the energy level which is typical to crossing one full single beam at the maximum detection distance. When APSP is set to <i>high level</i> , the unit is calibrated to detect the energy level which is typical to crossing two full beams at the maximum detection distance. Set APSP to <i>high level</i> when the detector is installed in high-risk environments (potential interference) and to provide greatly increased false alarm immunity.
	DIP Switch 5	DIP switch 5 OFF = APSP - normal level △ DIP switch 5 ON = APSP - high level
8 Microwave Range Trimpot		Microwaves generated by the unit can pass through walls and have the potential to interfere with the performance of other 525DM units. The range of the microwaves emitted by the detector can be adjusted using the trimpot (see Figure 5: Figure 5: Overview). Microwave trimpot adjustment can be verified using microwave only test mode.
	Trimpot	Turn clockwise = increase microwave range Turn counterclockwise = decrease microwave range WARNING: The trimpot is fragile. Do not over-torque.

Figure 5: Overview



## **Technical Specifications**

Motion detector type	PIR + Microwave
PIR sensor element type	Dual elements
PIR sensor geometry	Rectangular
Range (90° standard lens)	12m x 12m (40ft x 40ft)
Microwave antenna type	Flat strip microwave antenna with FET oscillator
Frequency	FCC & DOC - 10.525GHZ (other frequencies available)
Operating temperature	-20° to +50°C (-4° to+122°F)
Voltage	10 - 16Vdc
Current consumption	30mA (approximately)
Alarm form A output	Standard 100mA, 28Vdc
Alarm solid-state output	N.C. 150mA, 28Vdc
Tamper form C output	N.C. 150mA
Alarm period	4 seconds
Detection speed	0.2m to 3.5m/s (0.6ft to 11.5ft/s)

#### Warranty

© 2020 Paradox Ltd. All rights reserved. Specifications may change without prior notice. One or more of the following US patents may apply: 7046142, 6215399, 6111256, 6104319, 5920259, 5886632, and RE39406 and other pending patents may apply. Canadian and international patents may also apply. LODIFF® lens: patent #4,787,722 (U.S.).

Digital Vision is a trademark or registered trademark of Paradox Ltd. or its affiliates in Canada, the United States and/or other countries. LODIFF® is a registered trademark of Fresnel Technologies Inc.

For the latest information on products approvals, such as UL and CE, please visit www.paradox.com.

Warranty: For complete warranty information on this product please refer to the Limited Warranty Statement found on the website www.paradox.com/terms. Your use of the Paradox product signifies your acceptance of all warranty terms and conditions.

525DM-EI10 - 02/2020



# **Specifications DFMSC03/CO/TOP**

The DFMSC03/CO/TOP is the siren cover kit.

This siren cover kit comes with:

- UV treated plastic cover
- Combo Siren/Horn,  $8\Omega/15W$
- LED Strobe (Water-proof), 50mA
- Reed tamper switch
- Top hat piezo, 90mA @ 105dB
- 7-Way terminal block (pre-wired)

Total current draw for DFMSC03/CO/TOP is 590mA.

Operating voltage is 12VDC.

Siren	Horn	Strobe	Tamper	Spare
0 0	0 0	0 0	0 0	
+ -		+ -		FOI R





# VRLA 12V7AH

# **SA12V7**

## **Specifications**

Nominal Voltage Nominal Capacity 20HR

Dimensions

Approx Weight

Terminal

Container Material

Lead Material

Sulfurid Acid

Separator

Rated Capacity

Max. Discharge Current

Internal Resistance

Operating Temp.Range

Nominal Operating Temp.Range

Cycle Use

Standby Use

Capacity affected by Temperature

Self Discharge

12 V

7.0 AH

 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 2.10 kg (4.63 lbs)

F1

**ABS Plastic** 

Purity Lead 99.995%

Distilled Sulfurid Acid (Zero metal content)

AGM

105A (5s)

Approx  $23m\Omega$ 

Discharge: -15 - 50°C (5 - 122°F) Charge: 0 - 40°C (32 - 104°F) Storage: -15 - 40°C (5 - 104°F)

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% 0°C (32°F) 86%

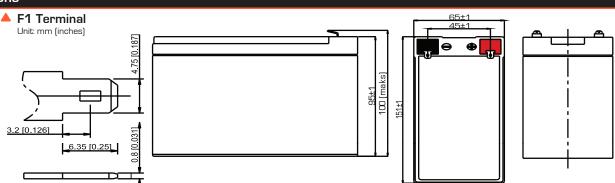
Sentry AGM series batteries may be stored for up to 6 months at  $25^{\circ}$ C ( $77^{\circ}$ F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.



# **Applications**

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

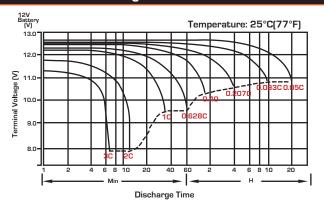
# **Dimensions**



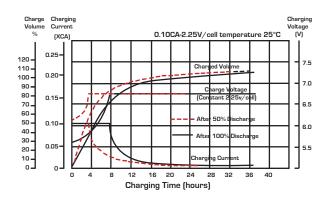
	Constant Current Discharge (Amperes) at 25°C (77°F)														
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	18.0	12.8	10.48	8.79	6.53	4.79	3.86	2.29	1.69	1.36	1.14	0.98	0.774	0.640	0.345
1.80V/cell	21.4	14.3	11.4	9.44	6.94	5.05	4.03	2.38	1.74	1.40	1.17	1.01	0.791	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

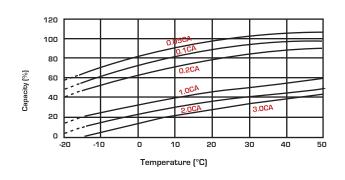
## **Discharge Characteristics**



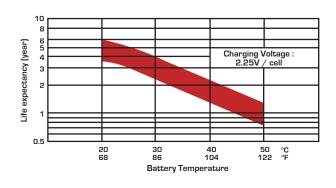
# Float Charging Characteristics



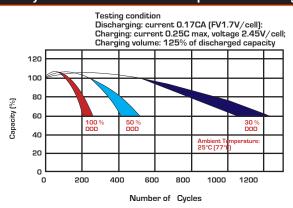
# Temperature Effects in Relation to Battery Capacity



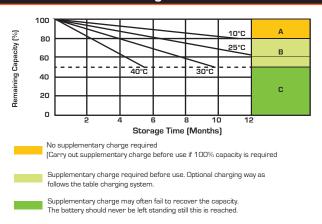
## Effect of Temperature on Long Term Float Life



# Cycle Life in Relation to Depth of Discharge



# Self Discharge Characteristics



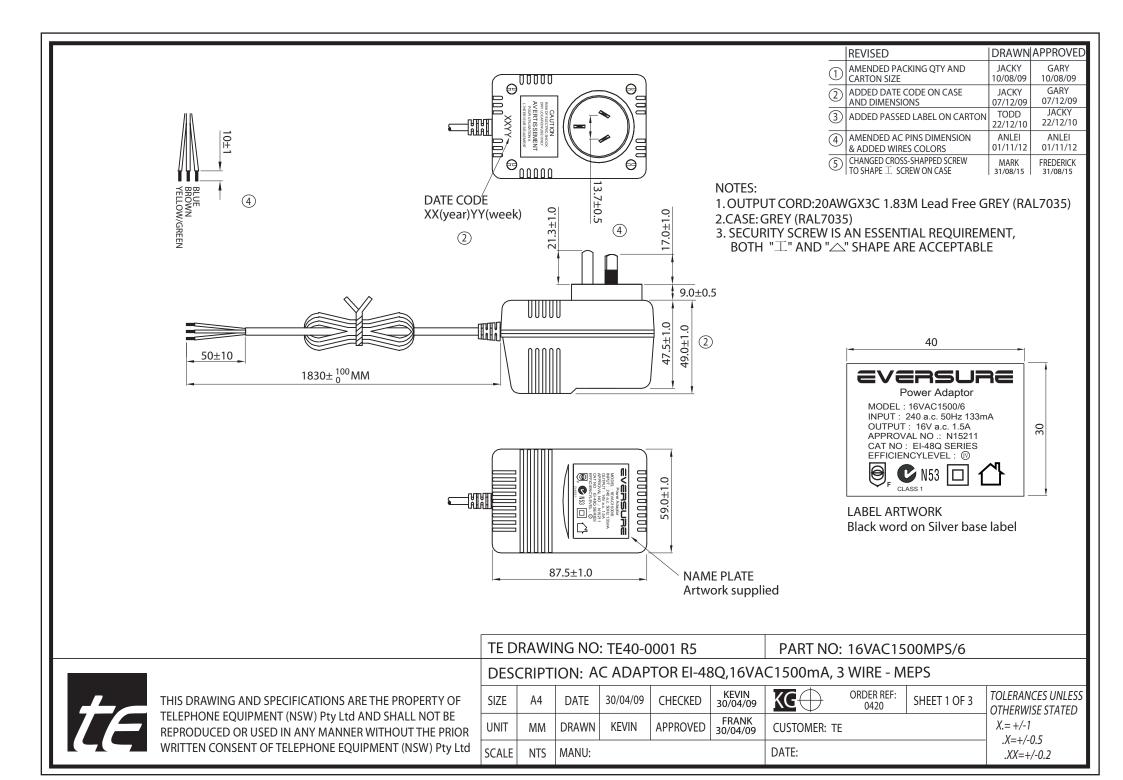
## **Charging System**

DOD	Currency Limit (A)	Constant Voltage (V)	Fully Charged Time (h)
	0.15C₁₀	13.5-13.8 vpc (12V)	10
20	0.20C <sub>10</sub>	6.75-6.9 vpc (6V)	8
E0	0.15C <sub>10</sub> 13.5-13.8 vpc (12)	13.5-13.8 vpc (12V)	15
50	0.20C <sub>10</sub>	6.75-6.9 vpc (6V)	12
80	0.15C₁₀	13.5-13.8 vpc (12V)	16
80	0.20C <sub>10</sub>	6.75-6.9 vpc (6V)	14
400	0.15C₁₀	13.5-13.8 vpc (12V)	20
100	0.20C <sub>10</sub>	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





ITE	B.4	SPECIFICATION					
	•••						
1. Primary rated in		AC240V 50Hz 133mA					
2. Secondary rated output		Unloaded voltage: AC 18 V ± 5%					
voltage and cur	rent	Loaded Voltage : AC 16 V ± 5% AT 1500 mA					
3. Ripple voltage		*** mV (RMS) MAX. AT Rated Loading					
4. Insulation resis	tance	Primary - secondary: DC 500 V 100 M Ω Min					
5. Dielectric withs	tand test	Primary - secondary: AC 3.64 KV 1 seconds					
6. Temperature ris	ie	At rated loading 90℃ max. For input coil (By resistance method)					
		and 55°C max. on case surface (By use of thermometer)					
7. EFFICIENCY		≥ 79%					
	Primary	SAA PLUG IN TYPE					
8. Leadout							
	Secondary	PVC cable length: 1.8 Meter					
		Colour GREY (RAL7035)					
		Wire size: AWG#20/3C					
		Plug : STRIPPED AND TINNED					
		PRIMARY SECONDARY					
9. Test circuit		THERMAL FUSE					
		   LOADING					
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
(	4)	AMENDED AC PINS DIMENSION & ADDED WIRES COLORS	ANLEI 01/11/12	ANLEI 01/11/12
(	5)	CHANGED CROSS-SHAPPED SCREW TO SHAPE ⊥ SCREW ON CASE	MARK 31/08/15	FREDERICK 31/08/15

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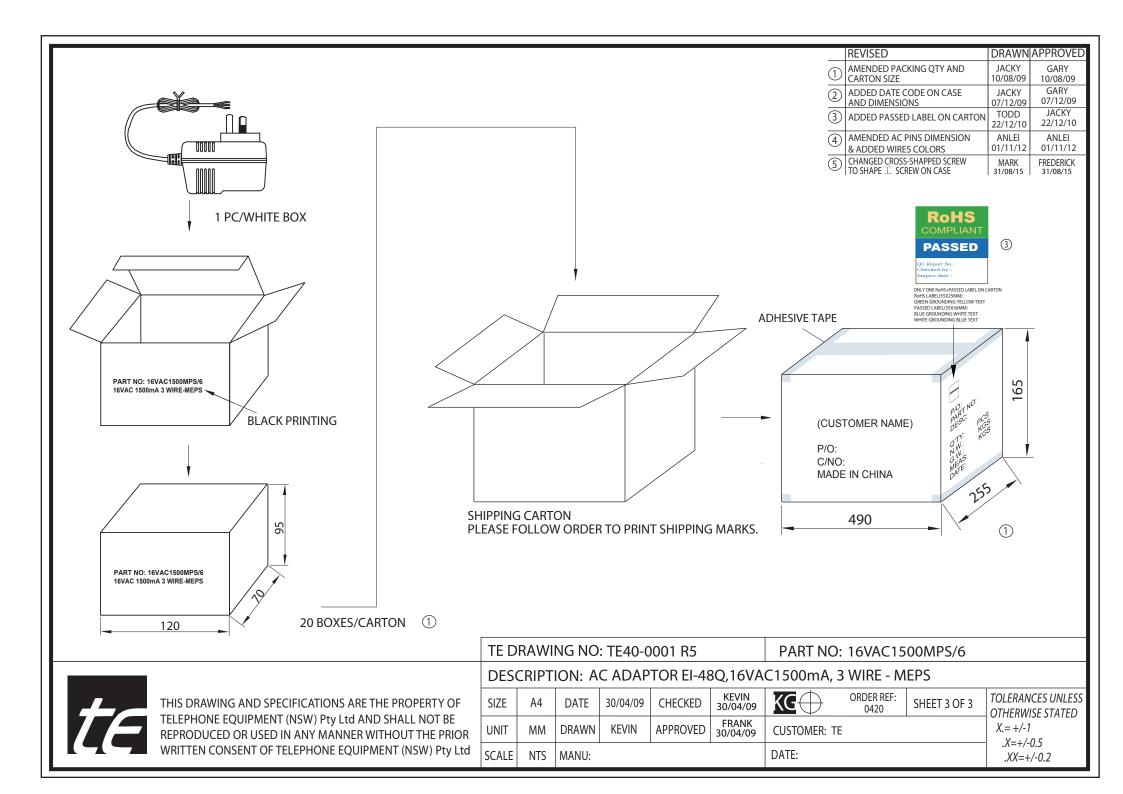
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TE DRAWING NO: TE40-0001 R5

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

SIZE	A4	DATE	30/04/09	CHECKED	KEVIN 30/04/09	KG	ORDER REF: 0420	SHEET 2 OF 3	TOLERANCES UNLESS OTHERWISE STATED			
UNIT	MM	DRAWN	KEVIN	APPROVED	FRANK 30/04/09	CUSTOMER: TE			X.= +/-1			
SCALE	NTS	MANU:				DATE:			.X=+/-0.5 .XX=+/-0.2			

PART NO: 16VAC1500MPS/6





# **Specifications TELLC0280**

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

Colour: Ivory.

