

QUANTUM PEDESTAL

INSTALLATION & OPERATION MANUAL




ROLEC
Marina Services

Installation & Operation Manual - QMPM-01-V01-R7
April 2023

Amendments

Amendment Number	Details	Date
Ver 1 Rev 0	New Document to required specification.	November 2020
Ver 1 Rev 1	Amended Unpacking Information	April 2021
Ver 1 Rev 2	Addition of maintenance information for water systems	July 2021
Ver 1 Rev 3	Added warning about NOT using power tools to secure panels.	August 2021
Ver 1 Rev 4	Document review for translation	January 2022
Ver 1 Rev 5	Correction to IP Rating	April 2022
Ver 1 Rev 6	Upgrade to LED lighting	August 2022
Ver 1 Rev 7	Amendment to schematics for LED Lighting	April 2023



Product:	Quantum Marina Pedestal			
Applicable Models:	750mm	1000mm	1250mm	1500mm
	MAQR0010	MAQR0210	MAQR0310	MAQR0410
	MAQR0010/KWH	MAQR0210/KWH	MAQR0310/KWH	MAQR0410/KWH
	MAQR0010/KWH/TAP	MAQR0210/KWH/TAP	MAQR0310/KWH/TAP	MAQR0410/KWH/TAP
	MAQR0010/TAP	MAQR0210/TAP	MAQR0310/TAP	MAQR0410/TAP
	MAQR0020	MAQR0220	MAQR0320	MAQR0420
	MAQR0020/KWH	MAQR0220/KWH	MAQR0320/KWH	MAQR0420/KWH
	MAQR0020/KWH/TAP	MAQR0220/KWH/TAP	MAQR0320/KWH/TAP	MAQR0420/KWH/TAP
	MAQR0020/TAP	MAQR0220/TAP	MAQR0320/TAP	MAQR0420/TAP
	MAQR0030	MAQR0230	MAQR0330	MAQR0430
	MAQR0030/KWH	MAQR0230/KWH	MAQR0330/KWH	MAQR0430/KWH
	MAQR0030/KWH/TAP	MAQR0230/KWH/TAP	MAQR0330/KWH/TAP	MAQR0430/KWH/TAP
	MAQR0030/TAP	MAQR0230/TAP	MAQR0330/TAP	MAQR0430/TAP
	MAQR0040	MAQR0240	MAQR0340	MAQR0440
	MAQR0040/KWH	MAQR0240/KWH	MAQR0340/KWH	MAQR0440/KWH
	MAQR0040/KWH/TAP	MAQR0240/KWH/TAP	MAQR0340/KWH/TAP	MAQR0440/KWH/TAP
MAQR0040/TAP		MAQR0340/TAP		
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Safety

This manual is specifically applicable to the Quantum Marina Service Pedestal product and is provided as a guide to its installation and use.

	<p>WARNING: Potable Water</p> <p>Equipment equipped with potable (drinking) water systems must be installed in accordance with the appropriate legislation in the region of installation.</p>
	<p>IMPORTANT: Installers and End Users must read and understand the content of this manual before installation/use.</p>
<p>Installation must only be performed by someone who is properly qualified and competent to do so in accordance with the appropriate legislation in the region of installation.</p> <ul style="list-style-type: none">• Rolec Services Ltd cannot accept any responsibility for improper installation or any problems arising from improper installation.	
<p>NOTE: Damage to the equipment, connected systems or to property caused by improper installation/use are the responsibility of the installer/user.</p>	

- The information provided in this manual must **ONLY** be used with the model(s) listed on page 1 of this manual.
- The information provided in this manual must **NOT** be used with any other product.
- The content of this manual may be updated by the manufacturer as required.
- Do **NOT** use the equipment for anything other than its intended purpose.
- Do **NOT** modify the equipment unless specifically instructed to do so by the manufacturer.
- Do **NOT** attempt to repair the equipment unless specifically instructed to do so by the manufacturer.
- Damage to the product may render it unsafe. The product must be electrically isolated and **NOT** used until appropriate remedial action has been performed.

Safety Advice within this Manual

Rolec manuals use a system of warnings, cautions and notes.

- **WARNINGS** concern the safety of installers/end user and will be given before the detail/instructions in the manual.
- **CAUTIONS** concern the potential for damage to the equipment and will be given before the detail/instructions in the manual.
- **NOTES** are given to provide additional information and/or highlight information of importance. They will be given either before or after the detail/instructions as appropriate and may use different wording (such as **IMPORTANT**) where emphasis is required.

Warnings, Cautions and Notes may be repeated several times as appropriate and may be preceded by a hazard symbol.

Product Overview

The Quantum Marina Pedestal is specifically designed to provide an attractive and robust marina services outlet for a variety of needs which may be specified to include electrical power, potable water, and ethernet connections.

The sleek aluminium body is topped by a louvred luminaire which provides local illumination to the operator as well as marking pathways and quaysides of pontoons and decking areas.

The pedestal may be paired with the Rolec BerthMaster application to allow remote management of the pedestal and its services by both the marina operator and the pedestal user.

The Quantum Marina Pedestal is available with the following powers and configurations:

NOTE: Special order units may not be covered by the specifications shown in this manual.

Model Number	Specification
750mm	
MAQR0010	1X16A Socket / 1X16A RCBO / LED ILLUMINATION
MAQR0010/KWH	1X16A Socket / 1X16A RCBO / LED ILLUMINATION / KWH METER
MAQR0010/KWH/TAP	1X16A Socket / 1X16A RCBO / LED ILLUMINATION / KWH METER / TAP
MAQR0010/TAP	1X16A Socket / 1X16A RCBO / LED ILLUMINATION / TAP
MAQR0020	2X16A Socket / 2X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR
MAQR0020/KWH	2X16A Socket / 2X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER
MAQR0020/KWH/TAP	2X16A Socket / 2X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH / TAP
MAQR0020/TAP	2X16A Socket / 2X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / TAP
MAQR0030	3X16A Socket / 3X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR
MAQR0030/KWH	3X16A Socket / 3X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER
MAQR0030/KWH/TAP	3X16A Socket / 3X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER / TAP
MAQR0030/TAP	3X16A Socket / 3X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / TAP
MAQR0040	4X16A Socket / 4X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR
MAQR0040/KWH	4X16A Socket / 4X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER
MAQR0040/KWH/TAP	4X16A Socket / 4X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER / TAP
MAQR0040/TAP	4X16A Socket / 4X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / TAP
1000mm	
MAQR0210	1X16A Socket / 1X16A RCBO / LED ILLUMINATION
MAQR0210/KWH	1X16A Socket / 1X16A RCBO / LED ILLUMINATION / KWH METER
MAQR0210/KWH/TAP	1X16A Socket / 1X16A RCBO / LED ILLUMINATION / KWH METER / TAP
MAQR0210/TAP	1X16A Socket / 1X16A RCBO / LED ILLUMINATION / TAP
MAQR0220	2X16A Socket / 2X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR
MAQR0220/KWH	2X16A Socket / 2X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER
MAQR0220/KWH/TAP	2X16A Socket / 2X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER / TAP
MAQR0220/TAP	2X16A Socket / 2X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / TAP
MAQR0230	3X16A Socket / 3X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR
MAQR0230/KWH	3X16A Socket / 3X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER
MAQR0230/KWH/TAP	3X16A Socket / 3X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER / TAP
MAQR0230/TAP	3X16A Socket / 3X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / TAP
MAQR0240	4X16A Socket / 4X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR
MAQR0240/KWH	4X16A Socket / 4X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER
MAQR0240/KWH/TAP	4X16A Socket / 4X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER / TAP

1250mm	
MAQR0310	1X16A Socket / 1X16A RCBO / LED ILLUMINATION
MAQR0310/KWH	1X16A Socket / 1X16A RCBO / LED ILLUMINATION / KWH METER
MAQR0310/KWH/TAP	1X16A Socket / 1X16A RCBO / LED ILLUMINATION / KWH METER / TAP
MAQR0310/TAP	1X16A Socket / 1X16A RCBO / LED ILLUMINATION / TAP
MAQR0320	2X16A Socket / 2X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR
MAQR0320/KWH	2X16A Socket / 2X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER
MAQR0320/KWH/TAP	2X16A Socket / 2X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER / TAP
MAQR0320/TAP	2X16A Socket / 2X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / TAP
MAQR0330	3X16A Socket / 3X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR
MAQR0330/KWH	3X16A Socket / 3X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER
MAQR0330/KWH/TAP	3X16A Socket / 3X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER / TAP
MAQR0330/TAP	3X16A Socket / 3X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / TAP
MAQR0340	4X16A Socket / 4X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR
MAQR0340/KWH	4X16A Socket / 4X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER
MAQR0340/KWH/TAP	4X16A Socket / 4X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER / TAP
MAQR0340/TAP	4X16A Socket / 4X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / TAP
1500mm	
MAQR0410	1X16A Socket / 1X16A RCBO / LED ILLUMINATION
MAQR0410/KWH	1X16A Socket / 1X16A RCBO / LED ILLUMINATION / KWH METER
MAQR0410/KWH/TAP	1X16A Socket / 1X16A RCBO / LED ILLUMINATION / KWH METER / TAP
MAQR0410/TAP	1X16A Socket / 1X16A RCBO / LED ILLUMINATION / TAP
MAQR0420	2X16A Socket / 2X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR
MAQR0420/KWH	2X16A Socket / 2X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER
MAQR0420/KWH/TAP	2X16A Socket / 2X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER / TAP
MAQR0420/TAP	2X16A Socket / 2X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / TAP
MAQR0430	3X16A Socket / 3X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR
MAQR0430/KWH	3X16A Socket / 3X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER
MAQR0430/KWH/TAP	3X16A Socket / 3X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER / TAP
MAQR0430/TAP	3X16A Socket / 3X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / TAP
MAQR0440	4X16A Socket / 4X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR
MAQR0440/KWH	4X16A Socket / 4X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER
MAQR0440/KWH/TAP	4X16A Socket / 4X16A RCBO / LED ILLUMINATION / 1X100A ISOLATOR / KWH METER / TAP

Refer to the Product Specification for further details.

NOTES:

1. * 'BerthMaster only' components.
2. Meters may be connected to the Berthmaster system.
3. Pipework may be plastic or copper as appropriate.
4. Item 4. LED Unit is replaced by a single GX53 LED light in later models.

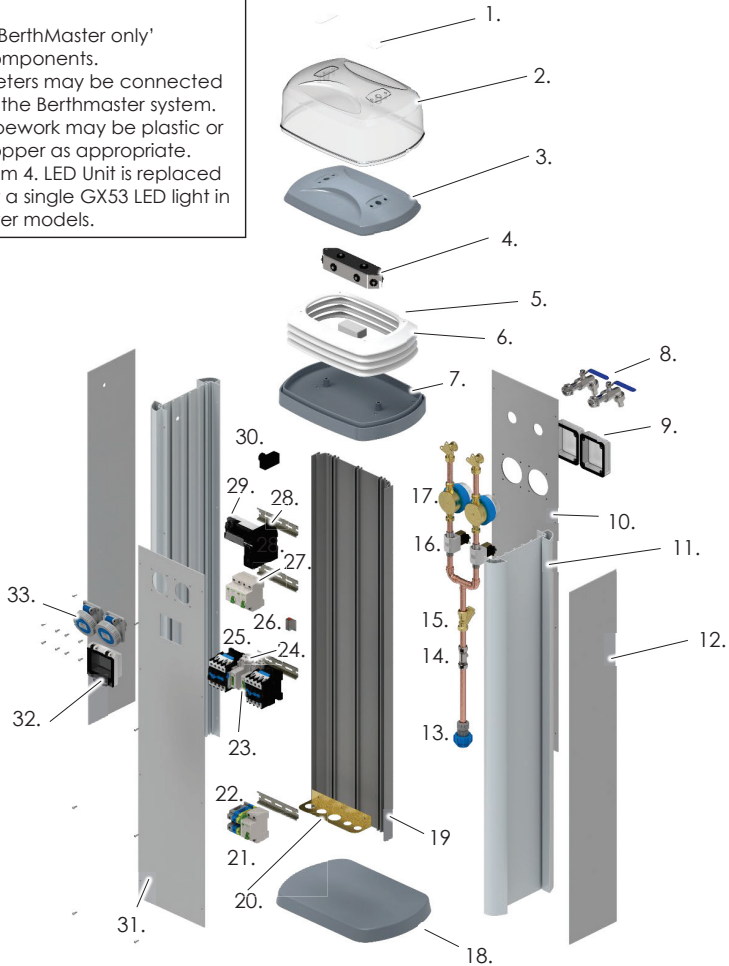


Figure 1 Typical Quantum Layout (including optional Meters and Berthmaster Communications Module)

NOTE: Taps and sockets may be located on side panels or front/rear panels as appropriate. Coloured side panels are an optional item.

- | | | | |
|------------------|---------------------------|---------------------------|----------------------------|
| 1. Finishing Cap | 10. Back Panel | 19. Central Divider | 28. PSU * |
| 2. Light Lens | 11. Side Extrusion | 20. Gland Plate (UK Only) | 29. Logic Controller * |
| 3. Top Plate | 12. Side Panel (optional) | 21. Electrical Connection | 30. Photocell |
| 4. LED Unit | 13. Water Connection | 22. MCB for Light | 31. Front Panel |
| 5. Diffuser | 14. Non-Return Valve | 23. Slice Relay * | 32. Switchgear Access Flap |
| 6. LED Driver | 15. Water Strainer * | 24. Electricity Meter | 33. Socket Outlets |
| 7. Top Sandwich | 16. Solenoid Valve * | 25. Contactor * | |
| 8. Taps | 17. Water Meter | 26. Panel Heater * | |
| 9. Meter Windows | 18. Base | 27. RCBO | |

Product Specification

Physical Specification

Materials	Anodised Aluminium Chassis, Optional Aluminium Composite Panels, Polycarbonate Lighting Dome
Mass	16-25kg (1000mm Unit – depending on installed options)
Environmental	<ul style="list-style-type: none"> • -30°C to +60°C operating temperature range • IP66 Weather resistance • IK10 Impact resistance • Flame retardant to UL94 Flame Rating at V2

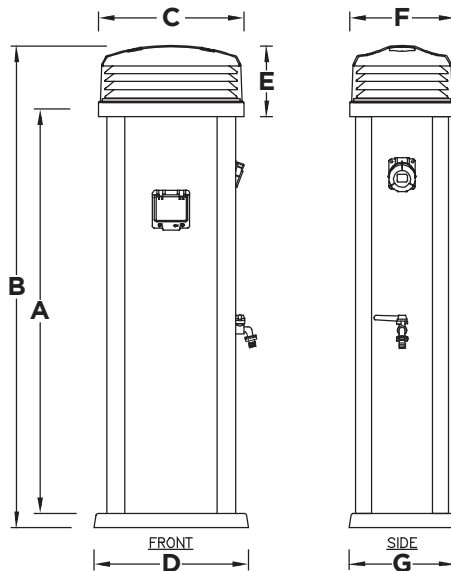


Figure 2 Quantum Pedestal Dimensions

A: 750mm, 1000mm, 1250mm, 1500mm

B: 940mm, 1190mm, 1440mm, 1690mm

C: 360mm

D: 382.5mm

E: 175mm

F: 260mm

G: 262.5mm

NOTE:

1. Heights **A** and **B** depend on the model selected.
2. Additional power outlets and water taps may be fitted depending on requirements.

Electrical Specification

Sockets	16A Single Phase to 250A Three Phase
Input Voltage	230V Single Phase to 400V Three Phase
Overload & Fault Current Protection	<ul style="list-style-type: none"> • MCBs IEC 60898-1 • RCD or RCBO BS EN IEC 61009-1
Output Voltage	230V / 400V
Isolation – Single socket units	Not Required
Isolation – Multi socket units	1 x 100amp 2-Pole Isolator where required
Lighting	4000k 1 x GX53 LED, 9W, 230-240V AC with MCB/RCBO

Water Specification

Taps	1/2" to 1"
Pressure	3 Bar Limit Controlled, 8 Bar Limit Non-Controlled
Protection	Lagging; <ul style="list-style-type: none"> • 1/2": 22 x 9mm. • 3/4": 28 x 13mm. • 1": 35 x 13mm.
Input	MDPE Coupler
Grade	Brass (UK), Stainless Steel (International)

Certifications and Compliances

This product has been designed and built in accordance with the following standards and legislation:

Wiring Regulations	BS7671 – BS EN 61439-2:2011, BS EN 61439-5:2015
Low Voltage Directive	2014/35/EU BS EN IEC 60947-1, BS EN IEC 60947-3
Controlgear	BS EN 61347-1:2015, BS EN 61347-2-13:2014+A1:2017
Electromagnetic Directive	2014/30/EU
EMC Directive	2014/30/EU
Electrical Enclosure	<ul style="list-style-type: none"> • Impact Protection IK10 (EN62262) • EN 60670-1:2005 General Requirements • EN 60670-22:2006 • UV Stabilised Materials
Sockets	BS EN 60309-1, BS EN 60309-2
Environmental Protection	<ul style="list-style-type: none"> • IP Weather resistance BS EN 60529:1992+A2:2013 • IK Impact Resistance BS EN 62262:2002
Cable	BS6004
RoHS	2011/65/EU
REACH	1907/2006



Schematics

The Quantum Marina Pedestal is available in 4 heights and 4 different configurations:

- Socket(s) only
- Socket(s) + kWh Meter
- Socket(s) + Tap
- Socket(s) + kWh Meter + Tap

Refer to the 4-socket schematic for wiring of the 2 and 3 socket models.

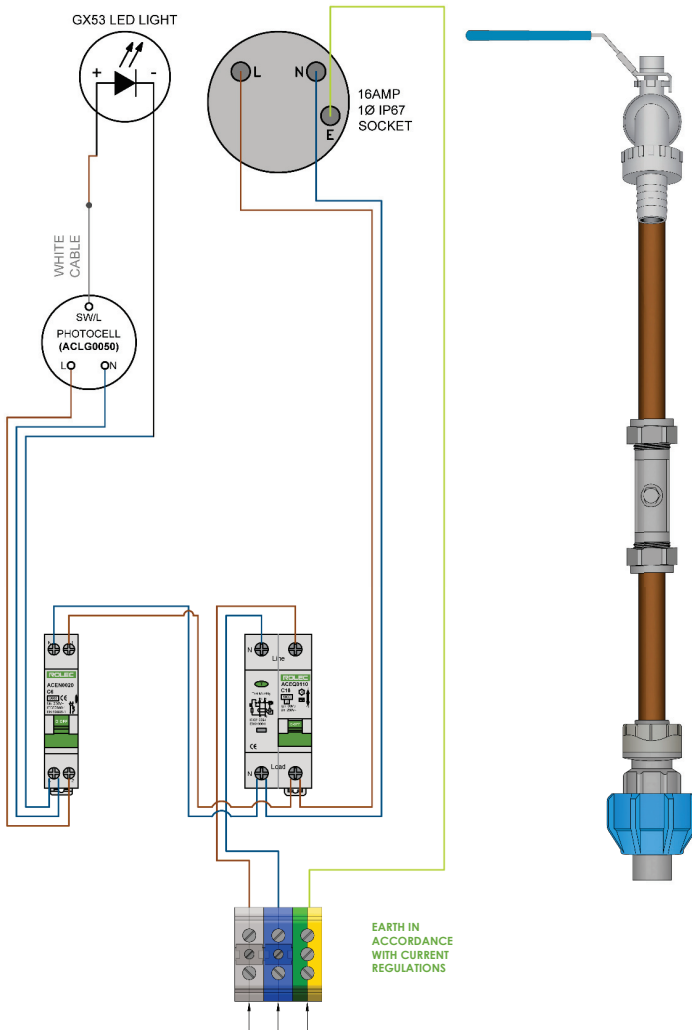


Figure 3 Typical Single Socket (Pipework may not be present)

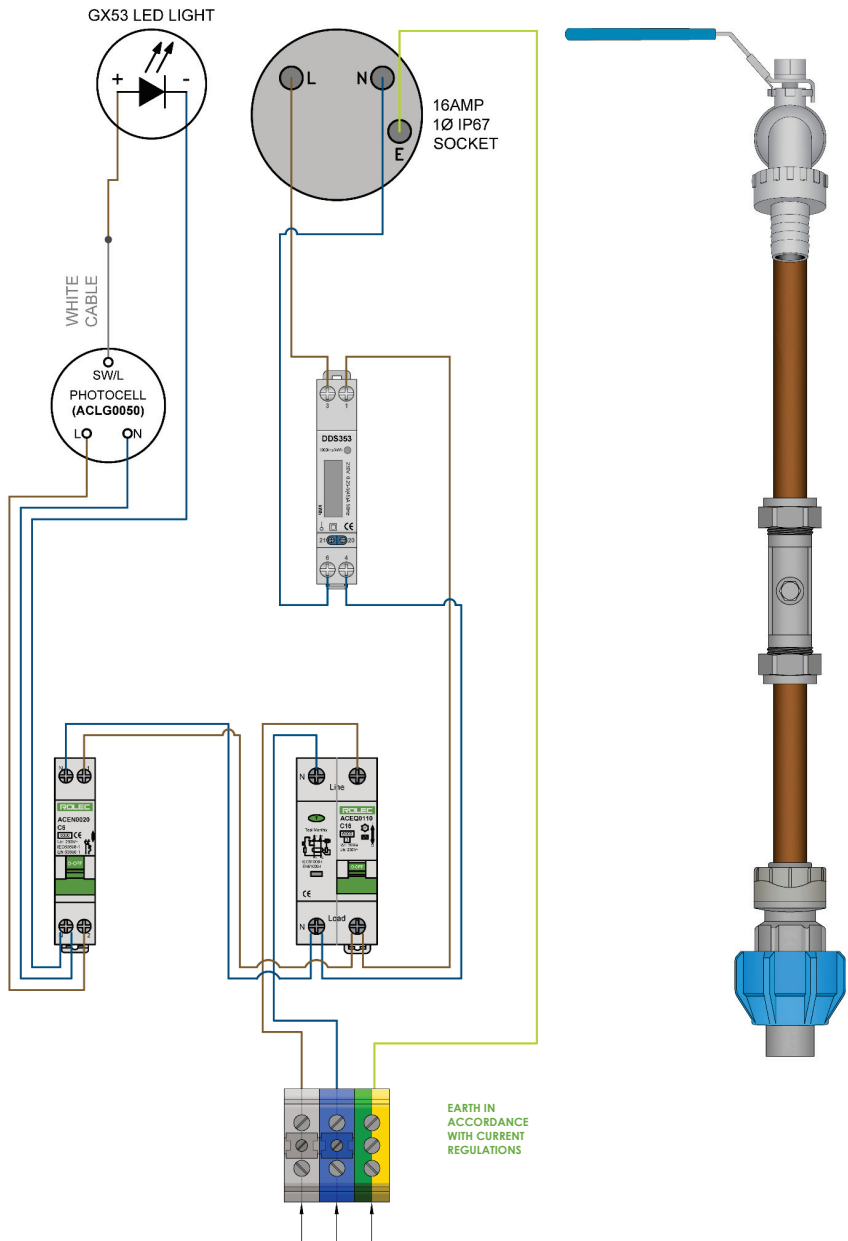


Figure 4 Typical Single Socket + kWh Meter (Pipework may not be present)

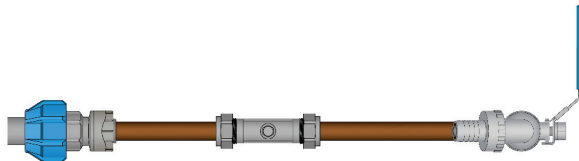
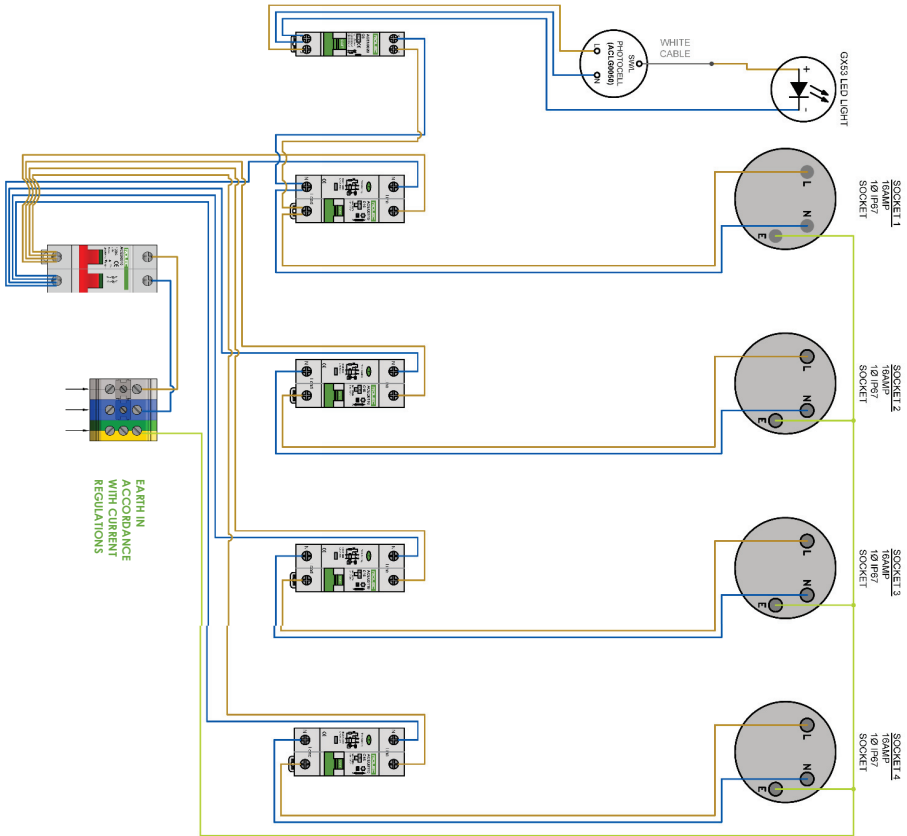


Figure 5 Typical Four Socket (Pipework may not be present)

NOTE: For 2 and 3 socket models, ignore wiring shown above for sockets 3 and/or 4 as appropriate.

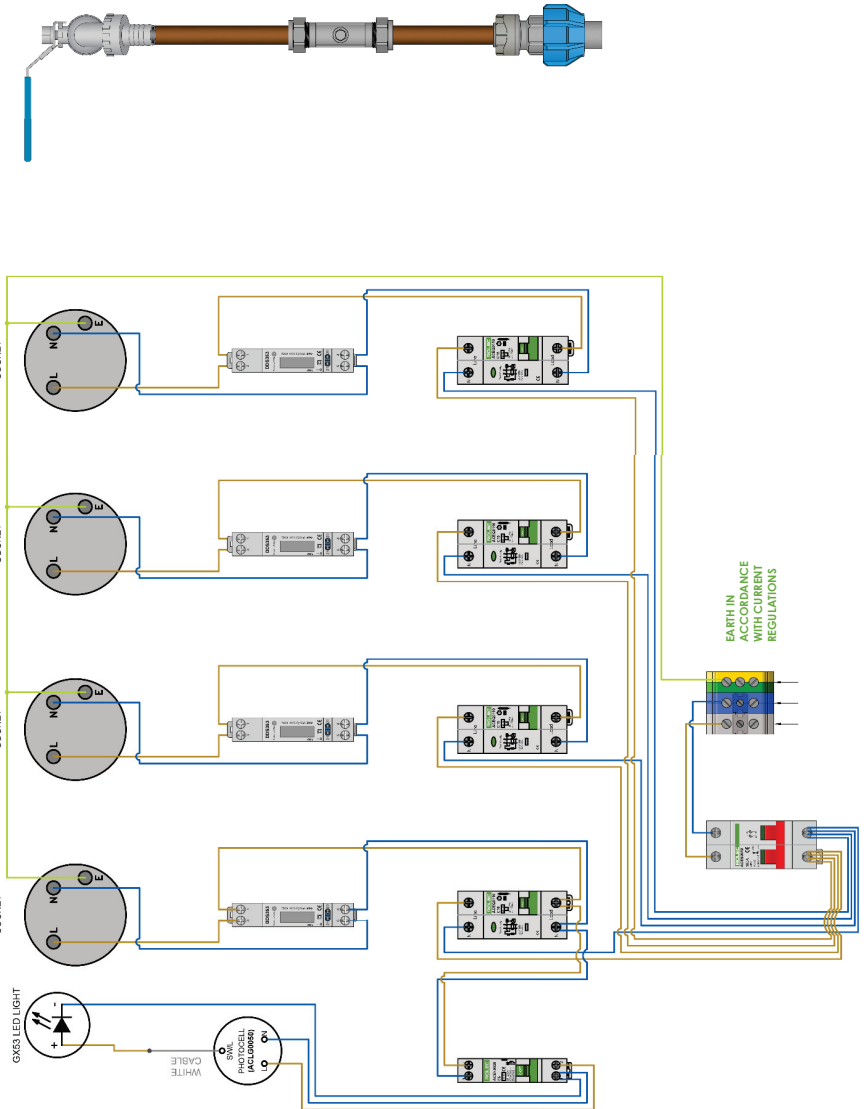


Figure 6 Typical Four Socket + kWh Meter (Pipework may not be present)

NOTE: For 2 and 3 socket models, ignore wiring shown above for sockets 3 and/or 4 as appropriate.

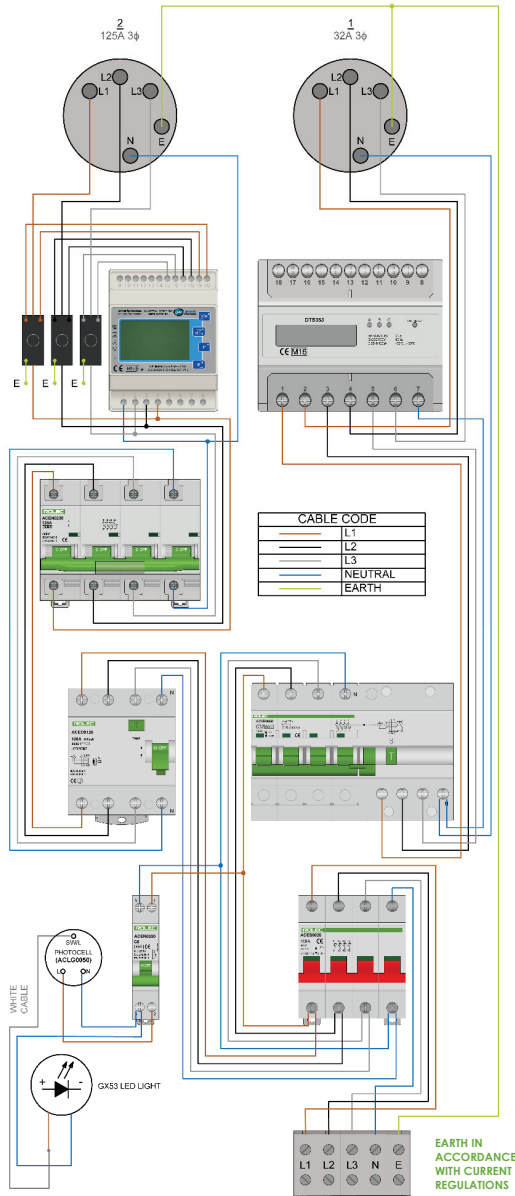


Figure 7 Example of a 3-Phase Pedestal with Different Socket Outputs

Labelling

Users must observe the information given on labels to ensure safe use of the product.



Figure 8 Typical Product Label



Figure 9 Power Warning Labels as Appropriate

NOTE: Sockets are individually labeled with their power rating as appropriate.

Options and Accessories

- Berthmaster remote management.
- Panel colours and materials.
- Branding vinyl.
- Electric and water metering.
- Switching and control.
- Deck fixing plate(s).
- Telephone and data connections.
- Heat trace tape.
- Galvanised steel ground mounting base.
- External Water Tap(s)/Faucet(s).

Unpacking

The content of the package depends on the model ordered and any options or accessories.



IMPORTANT: Make sure all packaging is disposed of responsibly and in accordance with the appropriate legislation in the region of installation.

Make sure the pedestal is NOT covered and all plastic packaging has been removed. Even in temperate climates, plastic packaging can cause localised heating of the pedestal that may result in temporary or permanent component failures.

Typical Contents

- Marina Pedestal.
- Rubber Splash Mat (may be pre-installed).
- Galvanised Steel Mounting Base (optional).
- External Water Tap(s)/Faucet(s) (optional – enclosed loose in the packaging).
- Installation and Operators Manual.

Installation

	<p>WARNING: Potable Water</p> <p>Equipment equipped with potable (drinking) water systems must be installed in accordance with the appropriate legislation in the region of installation.</p>
	<p>IMPORTANT: Installers and End Users must read and understand the content of this manual before installation/use.</p>
<p>Installation must only be performed by someone who is properly qualified and competent to do so in accordance with the appropriate legislation in the region of installation.</p> <ul style="list-style-type: none">• Rolec Services Ltd cannot accept any responsibility for improper installation or any problems arising from improper installation.	
<p>NOTE: Damage to the equipment, connected systems or to property caused by improper installation/use are the responsibility of the installer/user.</p>	

Before Installation

1. Establish a suitable site location for the unit that is both secure and environmentally safe.
2. Make sure the location meets current legislation (if applicable).
3. Make sure there is a suitable mains power supply available at the installation site.
4. Make sure there is a suitable water supply available at the installation site (if required).
 - It is important to ensure the water supply is clean and flowing freely.
 - Make sure the pipework is thoroughly flushed to remove any debris or stale water before connecting to the pedestal.
 - Clean or replace filters as appropriate
5. Make sure that the unit and any accessories have not been damaged in transit.

NOTE: Items damaged in transit must first be reported to the courier and then to the supplier.

Where possible, photographic evidence of package and/or unit damage should be provided.

6. Make sure the unit model is correct and matches the order.

NOTE: Incorrect or damaged units must NOT be installed. Contact your supplier to discuss rectification.

NOTE: If the pedestal is not going to be sited on a pontoon or similar decking type location, a firm mounting point will be needed in/on the ground. Refer to the two sections immediately below on setting up a base location.

Ground Mounting – if a Mounting Base is Supplied

1. Prepare the ground and set the ground mounting base in the desired location.
 - Make sure ALL cables are fed upward through the middle of the base.
2. Concrete the base into place and allow time for it to set.
 - The lip of the base should be 2 – 3 mm above the surface.

Ground Mounting – if a Mounting Plate is Supplied

1. Prepare the ground and set the mounting plate in the desired location.
 - Make sure ALL cables are fed upward through the middle of the plate.
2. Secure the mounting plate to the ground with appropriate fasteners.

Ground Mounting – if a Base or Plate is NOT Supplied

1. Prepare a suitable area of firm, flat ground.
 - It must be possible to secure the pedestal to the ground with bolts or similar fasteners that are appropriate to the type of prepared ground.
 - Typically, into concrete, M8 x 100mm Anchor Bolts should be used but installers must assess the site and choose the most appropriate fastener for their needs.

Install the Pedestal

NOTE: All electrical work must be performed in accordance with the current electrical regulations applicable in the region of use.



CAUTION: Equipment Damage

Do NOT use power tools to remove/install panel fasteners.

Power tools can apply too much torque and shear the captive nut behind the panel, making it difficult to remove without causing damage.

Only use hand tools and do not overtighten fasteners.

1. Remove and retain the fasteners securing the front and rear panels to the pedestal chassis.
 - Fasteners may be left in the panel and should be retained in place by the rubber washer.
2. Carefully ease the panels away from the unit to gain access to the interior.
3. Cut a neat appropriately sized hole(s) in the base of the pedestal, taking note of the preformed areas in the base, to allow entry of the power cable and water pipe (if required).
4. Cut a neat, appropriately sized hole(s) in the supplied rubber splash mat to match the mounting points of the base and to allow entry of the power cable and water pipe (if required).
5. Fit the mat over the cables and onto the four studs of the ground mounting base or the securing points if a base was not supplied.

6. Carefully lift the pedestal then lower it over the cable / pipe and onto its mounting position.
 - If a Ground Mounting Base has been used, align the four holes in the chassis with the four studs of the base.
7. Route the cable to the appropriate length to be able to connect to the terminals.
8. If required, route the water pipe to be able to connect to the pedestal water system.
9. Secure the pedestal to the ground with the correct type and size of fasteners for the location.
10. Trim around the pedestal base to remove any excess rubber from the splash mat (if required).

NOTE: All electrical and plumbing work must be performed by an appropriately qualified engineer in accordance with the current regulations in the region of use.

11. Secure the incoming cable(s) to the gland plate (UK models only).
12. Terminate the supply cable in the appropriate manner and connect to the pedestal as per the appropriate schematic.
13. Make sure all cable connections are secure and have not become loose or damaged in transit or during installation.
14. If required, connect the water supply to the pedestal in accordance with the current, appropriate legislation.
 - Make sure the water supply pipes have been flushed and that the water is free of debris before connection to the pedestal.
 - Clean or replace water system filters before connection to the pedestal.

CAUTION: Equipment Damage

If an external water tap/faucet is to be installed, do NOT attempt to force the connection to be tight and vertically aligned. The tap and/or water system will be damaged. Refer to step 15 for further details.

15. If an external water tap/faucet is to be installed, make sure to apply sufficient thread sealing tape to the tap threads to ensure the connection will become vertically aligned and tight **BEFORE** reaching the end of the threads.
 - Test fit the tap (without sealing tape) to determine the point at which the fitting can no longer turn (the end of the threads).
 - Remove the tap and apply sealing tape to the threads of the tap connection.
 - Fit the tap and ensure it becomes tight and vertically aligned before reaching the end of the threads.
 - If required, repeat these steps to either add or remove sealing tape until the correct tap fitting and alignment is achieved.
16. Make sure ALL debris is removed from the enclosure and that no debris is present on any of the components.

IMPORTANT NOTE:

- It is the responsibility of the installing engineer to satisfy themselves that all cable terminations throughout this product are secure and tight and have not become loose, strained or disconnected during transit and/or installation.
- It is the responsibility of the installing engineer to satisfy themselves, that the water connection has been performed in accordance with the current legislation in the region of use.

17. Turn the water supply ON and test the system for leaks and security of connection.

WARNING: Electrical Power

Do NOT apply electrical power to the pedestal until all water connections are secure and leak free.

- Make sure electrical components are dry before power is applied.

18. Switch ON the internal switchgear for the power and LED lamp.

WARNING: Electrical Power

Make sure it is safe to apply electrical power to the pedestal.

19. Switch ON the power to the unit and test in accordance with current regional Electrical Wiring Regulations in the region of installation.

Commissioning

Before handing over to the customer:

Switchgear	Test the switchgear protecting each socket in accordance with the regulations.
Socket	Test the polarity of each socket in accordance with the regulations.
Meters	If fitted, make sure meters are functioning.
LED Lamp	The pedestal incorporates an area illumination lamp which activates in response to changing light levels. <ol style="list-style-type: none">1. Cover the light sensor, located on the side of the pedestal, the lamp should illuminate.2. Uncover the light sensor and the lamp should switch OFF.

NOTE: To prevent flickering in frequently changing light conditions the lamp has a built-in delay before it switches on / off.

Water	<ol style="list-style-type: none">1. Make sure the site water system has been flushed and site filters/strainers have been cleaned/replaced before water reaches the pedestal(s).2. Perform a visual check that water flow/pressure appears sufficient.
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NOTE: Debris in the water may cause water meters to fail or to provide incorrect readings.

Secure

CAUTION: Equipment Damage

Do NOT use power tools to install panel fasteners.

- **Do NOT overtighten.** ONLY use hand tools to tighten fasteners.
- Make sure each fastener has a metal rubber washer below the head and rubber washer between the metal washer and the panel surface.

1. Refit the front panel, taking care not to trap any electrical cables. Secure the panel with the fasteners removed earlier in the procedure.
2. If required, refit the rear panel. Secure the panel with the fasteners removed earlier in the procedure.
3. Make sure you are satisfied that the installation is complete and is in a safe condition.

Clean

1. Make sure all information labels are present, undamaged and visible.
2. Clean the pedestal ready for hand over to remove handling and installation marks.

Handover

1. Make sure the pedestal is NOT covered and all plastic packaging has been removed. Even in temperate climates, plastic packaging can cause localised heating of the pedestal that may result in temporary or permanent component failures.
2. Make sure this manual is given to the customer along with copies of any installation paperwork.

Operation

Operators who have chosen the BerthMaster option should refer to the BerthMaster Operation Manual and the BerthMaster Management Portal Operation Manual as appropriate:

Maintenance

NOTE: In the event of a hardware issue, always contact your installer first.

- Damage caused to the equipment by misuse, lack of maintenance, inappropriate maintenance or modification is not covered by the manufacturer warranty.

NOTE: Water quality can vary greatly at different locations around the world, even when it is classified as 'drinking quality'. All water contains microscopic particles and dissolved minerals which under certain conditions can accumulate within the water system. Typically, this will be seen where there is a restriction in the flow in the water filter/strainer for example but can also pass through these filters to accumulate within components. Marina sites should consider the quality of their water supply and set their maintenance schedules and tasks appropriately to their needs.

1. Regularly clean the external surfaces of the equipment by wiping with a damp cloth.

CAUTION: Equipment Damage

To avoid damage to the surface finish, and/or internal components do NOT use:

- Abrasive materials.
- Mineral or petroleum solvents / degreasers.
- Hose pipes, Jet washers or Steam cleaners.

Cleaning using these methods will invalidate the warranty.

2. Regularly, visually inspect the exterior of the equipment for damage.
 - If damage affects safety, isolate the equipment and prevent its use until appropriate repairs have been completed.

3. Water systems must be allowed to flow on a regular basis to reduce the opportunity for calcification or other accumulations of water born solids which may cause water meter inaccuracy or failure.
 - If a water system has not been used for several weeks, the system should be allowed to flow, and meter accuracy should be assessed before relying on meter readings for billing.
 - Where deposits (scale) have formed within components such as the solenoids or water meter, the component should be removed and cleaned with a proprietary de-scaling chemical suitable for use with food preparation equipment. Make sure to follow the manufacturer's instructions regarding the correct and safe use of the chemical(s).
4. Make sure water filters leading to the pedestal(s) are clean and free from debris.
5. Make sure any water filters or strainers within pedestal components are clean and free from debris.
 - Mineral deposits can be removed from filters/strainers and from within components with a domestic grade, de-scaling chemical. Make sure the system is flushed with clean water to remove all traces of the chemical before returning the pedestal to use.
6. After performing work or maintenance on the site water system, make sure the system is flushed and filters are cleaned to remove debris and contaminated water BEFORE it reaches the pedestal(s).
7. Perform a functional test of the switchgear every six months by pressing the test button and making sure that the switchgear deactivates.
 - If the equipment fails the test, isolate the equipment and prevent its use until appropriate repairs have been completed.
8. The pedestal and switchgear should be electrically inspected in accordance with the current legislation for the installation location.
 - If the equipment fails the test, isolate the equipment and prevent its use until appropriate repairs have been completed.

Replace the LED Bulb

The LED bulb in the lighting head can be easily replaced.

IMPORTANT: Only install a bulb of the same specification.
Heat from other types of bulb may damage the pedestal.

- Bulb Type: GX53 LED
- Power: 9W / 230 - 240 Volts
- Colour Temperature: 4000K

WARNING: Electrical Power

Turn OFF electrical power to the pedestal before starting work.



CAUTION: Equipment Damage

Do NOT use power tools to remove/install panel fixings.

Power tools can damage the fixings, making the panel difficult to remove.

Use hand tools ONLY and do not overtighten fasteners.

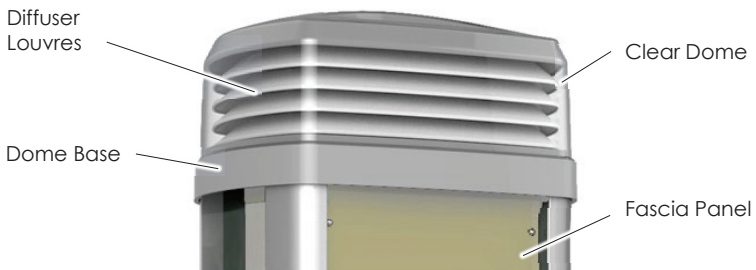


Figure 10 Typical Quantum Lighting Head

NOTE: GX53 bulbs do not have a polarity.

1. Make sure electrical power to the ChargePoint is OFF.
2. Remove and retain the fixings that secure the front fascia panel to the pedestal chassis.
3. Carefully ease the panel away from the unit to gain access to the interior and, if installed, an internal protective panel.

CAUTION: Equipment Damage

Fascia panels may be connected to the main assembly by electrical cables. Take care not to damage, strain, or disconnect the cables. Make sure all connections are secure before refitting the panel(s).

4. Inside the pedestal, locate and remove 2x 5 mm hex bolts and washers that secure the clear dome to the dome base.
 - Take care to not drop the bolts and washers when they are released from the dome.

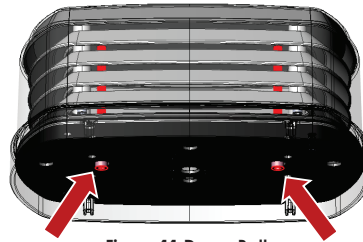


Figure 11 Dome Bolts

5. Carefully lift the clear dome from the pedestal and place it to one side.
 - The louvered light diffuser will remain attached to the dome.
6. Turn the old GX53 bulb counter clockwise to release it from the surface fitting.
 - Lift the LED bulb from the fitting.
 - Dispose of the bulb as appropriate to the region of use.
7. Place the new GX53 LED bulb into the fitting then turn the bulb clockwise to lock it in place.
8. Place the clear dome onto the pedestal.
 - Make sure the bottom edge of the dome sits on the rubber seal of the dome base.
9. Refit and carefully tighten the 2x 5 mm hex bolts and washers to secure the clear dome to the dome base.
 - Do not overtighten the bolts.
10. Refit and secure the front fascia panel using the fixing removed at the start of the process,
11. Apply electrical power to the pedestal.

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