TITANPOWER

This Document was created and supplied by Essential Supplies UK Limited and Titan Power for the purpose of instructing safe and proper installation and use of the Titan Handy Series. The following information is essential for the person(s) responsible for the installation of, maintenance of and use of the Titan Handy Series and in accordance with UKCA and CE regulations as well as BS 7671. This document is copyrighted by Essential Supplies and Vello Elektro.

For further technical information or any other queries, please use the below contact details:

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Mon-Thurs / 08:30AM – 17:30PM

Fri / 08:30AM – 17:00PM

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1.GENERAL INFORMATION

It is important to read this manual and installation guide carefully before using the electrical distribution box.

With certain products, additional instruction leaflets apply. Please consult all leaflets supplied by Essential Supplies and Titan Power.

Furthermore, consider that there must be adequate knowledge of the specification given by the manufacturer of the assembled components.

All products that this manual is applicable to are manufactured to BS 7671. take care for correct use and understand the law and regulations in the intended country of use.

1.1. Contact Information

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1.2. Product Types

Product Type	Product Code
S02	ENCSAA/XXX/S02/YYYY
S04	ENCSAA/XXX/S04/YYYY
S06	ENCSAA/XXX/S06/YYYY
S08	ENCSAA/XXX/S08/YYYY
S13	ENCSAA/XXX/S13/YYYY

AA – Amp Rating. XXX – Voltage Rating. YYYY – Serial number

2. SAFETY PRECAUTIONS

It is important to read this manual and installation guide carefully before using the electrical distribution box. Titan products meet the requirements and regulations which apply from manufacture.

2.1. Safe Use

The user of the distribution box carries responsibility for correct use of the product. If the distribution box shows sign of defects, make sure the box is voltage free and let a qualified person inspect it. Maintenance on the installation can only be executed by a qualified person.

Every user must follow local laws and regulation concerning the use and maintenance of electrical installations make sure that during installation or maintenance the distribution box is voltage free by disconnecting the power supply. Prevent switching power supply by locking the main switch in the 0-position.

Only use the correct tools, in the way they are supposed to be used. Apply installation material according to the instructions of the manufacturer. Power distribution boxes which have been adjusted should not be used. In case of a defect material or part, the power distribution box should not be used. Before using the distribution box make sure that it's suited for the intended environment. Prevent faulty usage of the power distribution box.

Titan Power will not take any responsibility in case the user does not follow the above precautions. The warranty and responsibility of the manufacturer will be voided.

2.2. The User

The power distribution box can be used by instructed persons or by ordinary persons. This depends on the field of application which can be derived from the norm to which it complies: BS 7671.

The initial user of the distribution box is responsible for correct use of the box and has the following obligations:

- Read, document and live up to the user instructions carefully
- Give instructions to people using the distribution box
- Recognise risks and prevent hazardous situations
- Make sure that other users have adequate knowledge of the user manual
- Protect persons who are incapable to recognise the risks of using the distribution box

3. STORAGE AND TRANSPORT

3.1. Storage

To guarantee an interference free use in the future, take the following precautions:

- Store the distribution box in a dust-free, dry environment with a temperature between 0°C - 40°C
- Cover the distribution box to prevent unnecessary aging and wear.

3.2. Vehicle Transport

- No other objects may be placed upon the distribution box during transport, unless specifically designed to.
- Make sure that the distribution box is secure and fixed during transport
- Boxes that are stacked during transport must be linked and securely fastened to each other.

3.3. Hoist Construction

- Handles: when the distribution box is equipped with more than 1 handle, always use at least 2 handles to lift the box.
- Do not use handles as a hoist
- Hoist construction for Forklifting; make sure the forks are inserted completely into the intended hole. Consider the stability of the box, making sure it does not lean.

3.4. Moving the Distribution Box

- Do not drag the box over the ground to prevent unnecessary wear and damage.
- Use the intended lifting construction for lifting – do not carry by the trailing lead.
- Take into consideration the weight of the box when moving it. The weight of the unit is on the bottom of the delivery consignment, and – depending on the unit – the silver stick nameplate.
- Do not attach objects to the box or the frame when it is being lifted. This is to prevent an increase of the total load the hoist construction must carry.

4. PARTS

The below displayed distribution box is an example for the HANDY series, but the specific product this manual is consulting may differ in terms of functionality, technique and looks.

No	Description
1	Logo option
2	handle
3	Rain cover
4	Hinged window
5	Test button
6	RCD
7	MCB
8	Circuit ID
9	Plug/Inlet
10	Outlet ID
11	Socket/Outlet
12	Screw
13	Test sticker
14	Name plate
15	Water drain
16	Rubber enclosure
17	Rubber lid
18	Wall mounting points
19	Cable gland
20	H07RN-F cable


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5. INSTALLATION AND COMMISSIONING

Installation and commissioning the distribution box may only be done by a qualified electro-technician. This person has the obligation to follow the safety precautions from chapter 2.

Risks:

- Commissioning of the distribution box by an unqualified person can lead to injury or death.
- The person(s) responsible for the installation must make sure that the power supply is protected and limited at the maximum operating current (in) of the distribution box. This is mentioned on the nameplate of the box. Ignoring this could lead to fire, injury or death.

5.1. Preparation

- Make sure the distribution box is not damaged in any way
- Check whether the protection degree is high enough to meet the requirements given by the user environment
- Try to avoid direct exposure to the sun, this could lead to unexpected temperature rises both externally and internally.

5.2. Positioning the distribution box

- Always position the box on a flat, stable surface, unless the Handy box is being wall mounted.
- Do not place objects on top, underneath, or lean objects on the box

5.3. Connect incoming power

Precautions:

- Make sure the incoming power supply is voltage free by switching it off, or by disconnection.
- Prevent incoming supply by locking the main isolator to OFF or 0 position
- Check if the specifications of the power supply match with the specifications of the distribution box: Voltage, Current and Frequency.

5.3.1. Opening the cable entry

- **5.3.1.A – Junction box.** Opening the junction box by turning the plastic screws in the corners through 90° counterclockwise. Use a wide flat-head screwdriver.
- **5.3.1.B – Wall fixed box.** To open the lid, unscrew it from the box. Be careful – when removing the lid, be aware of wiring connecting the lid to the base.
- **5.3.1.C – Hinged panel.** Use the supplied triangular 8mm key to unlock the panel. Turn both handles a quarter turn clockwise to release the lid. Open the lid by turning it upwards.

5.3.2. Inserting the incoming cable

- **5.3.2.A – Cable gland.** Turn the cable gland to open the cable entrance and remove the blind caps. Save them in case the setup is a temporary installation. Make sure the diameter of the incoming cable fits within the clamping range of the cable gland. See the below table.

Gland	Clamping range (mm)
M20	7-14
M25	9-18
M32	14-25
M40	18-32
M50	24-39
M63	34-44

- **5.3.2.B – HDPE cable entry.** Measure the cable diameter of the incoming cable(s). Remove the insert by pressing it from the inside to out. Enter the cable in the suited hole and check if the cable is properly sealed.

5.3.3. Connecting the incoming cables

- **5.3.3.A – Connecting lugs to copper bars** Remove the steel nut and washers from the bolt. Put the eye of the lug over the bolt. Make sure the flat part of the lug rests on the copper bar completely. Place the washers and the nut back on the bolt and tighten it with the required torque. Tighten the cable relief and make sure the cable is clamped firmly.
- **5.3.3.B – Copper conductor in cable clamp** Remove the conductor's insulation to the length given in the table. Put the conductor in the cable entry and tighten it with the torque given on the clamp and datasheet. Make sure the cable is not clamped on the insulation, but on the conductive core. Tighten the cable tension relief and make sure the cable is clamped firmly.

5.3.4. Closing the junction box

- Close the lid and retighten the screws.

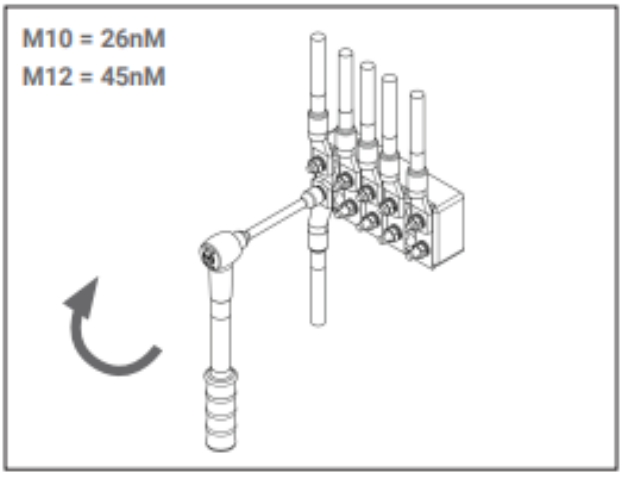
5.3.5. Voltage check

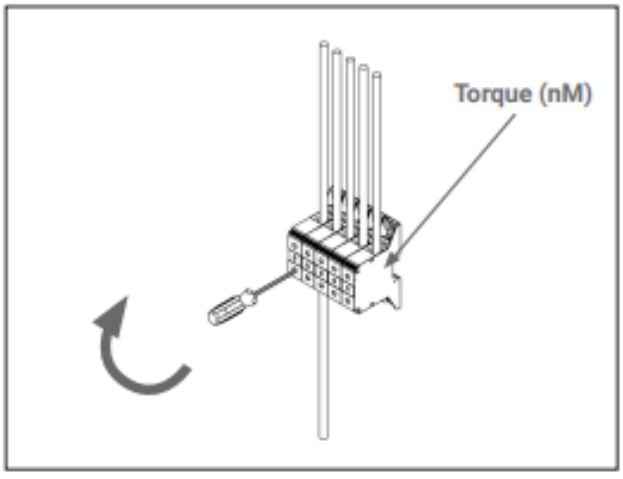
- Check if the rotating field is correct on the outputs

5.3.6. Connecting a pluggable power supply

- Before plugging in, make sure the main switch is in the OFF position.
- Press the female socket over the male plug until it reaches its limit. In case of an IP67 connection, the bayonet ring must be fully turned clockwise to reach the IP67 connection.

Cable mm^2	Clamp type	Stripping length (mm)
2.5-25	A / B	19
16-35	C / D	22
35-50	RKA50	16
70-95	RKA95	26
120-185	RKA185	29



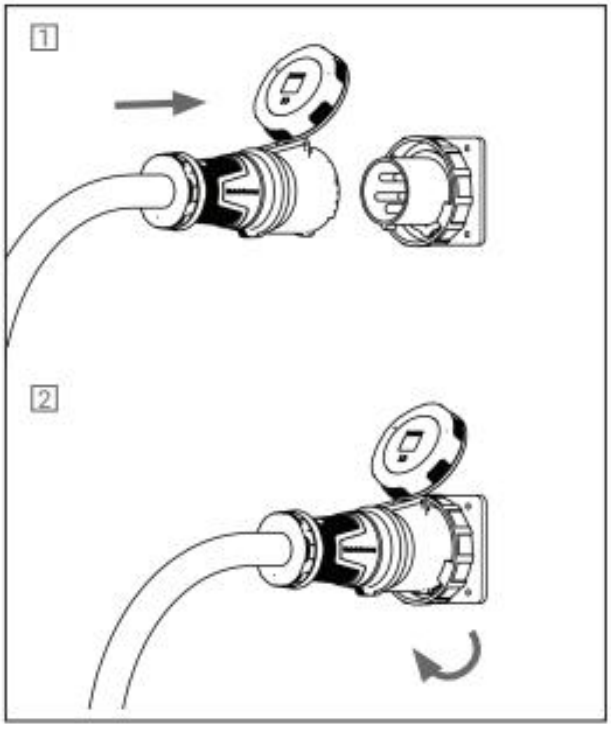


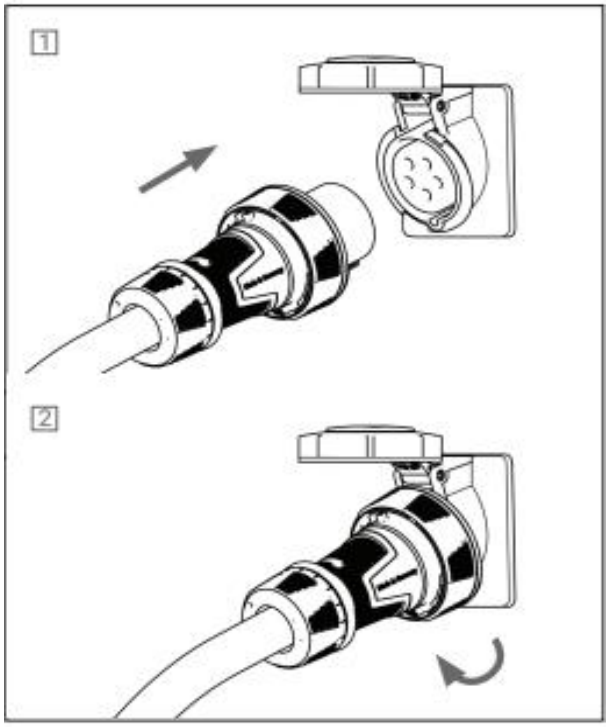
6.1. Preparation

- Check if the distribution box has any damages or flaws. If this is the case, do not use the distribution box and call for a qualified technician to inspect it.
- Prevent faulty usage of the power distribution box. Use the box according to the given specifications and respect the RDF and protection degree.

6.2. Connecting and disconnecting plugs

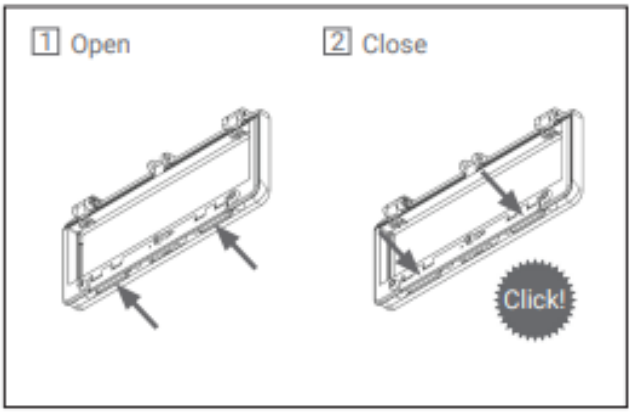
- **6.2.A. – IP44** Before inserting the male plug into the female socket, make sure the piece of equipment is switched OFF. Open the lid of the socket and insert the plug completely. The equipment is ready for use and can be switched ON. For removal, turn the equipment OFF, lift the socket lid and pull firmly until released.
- **6.2.B. – IP67** Before inserting the male plug into the female socket, make sure the equipment is turned OFF. Open the lid of the socket and insert the plug completely. The bayonet ring must be fully turned clockwise to reach the IP67 connection. For removal, turn the equipment OFF, turn the bayonet ring by turning it counterclockwise lift the socket lid and pull firmly until released.





6.3. Opening and closing the hinged window

- Open the lid by pulling the tabs on the bottom of the window.
- Make sure the lids are always closed fully by pressing on the tabs. Press firmly until a 'CLICK' is noticed.
- All windows come with screws for IP67 rating. Hand-tighten the screws to secure the sealing.



6.4. Controlling protection devices

- Call for a qualified technician in case of malfunction or failure.
- Earth leakage and short circuit protection devices are safety components in the first place, using them as a switch will affect the components lifespan.
- If a circuit breaker detects faults and switches frequently, always check the circuit behind for any faults.
- If the earth leakage protection switches off, the source of the leakage must be found before switching the circuit back on.
- If necessary, fuses must be replaced by a qualified electro-technician.

7. MAINTENANCE

7.1. Cleaning

7.1.A. – Dry cleaning Titan Power and ES advises to dry clean the distribution box regularly. Before doing this, make sure the box is disconnected from the power supply.

7.1.B. – Liquid cleaning If considered necessary, the distribution box can be cleaned with a clean, wet cloth. Before doing this, make sure the box is disconnected from the power supply.

7.2. Inspection

- Check if the earth leakage protection is working by operating the TEST function.
- The owner of the distribution box has the responsibility to let a qualified person do a first periodical inspection according to BS 7671. The frequency for periodical inspections will be determined by the technician but recommended to 1 year as per the RCD/RCBO sticker on the distribution box. Defects must be resolved by a qualified person before the unit can be used again.

8. DECOMMISSIONING

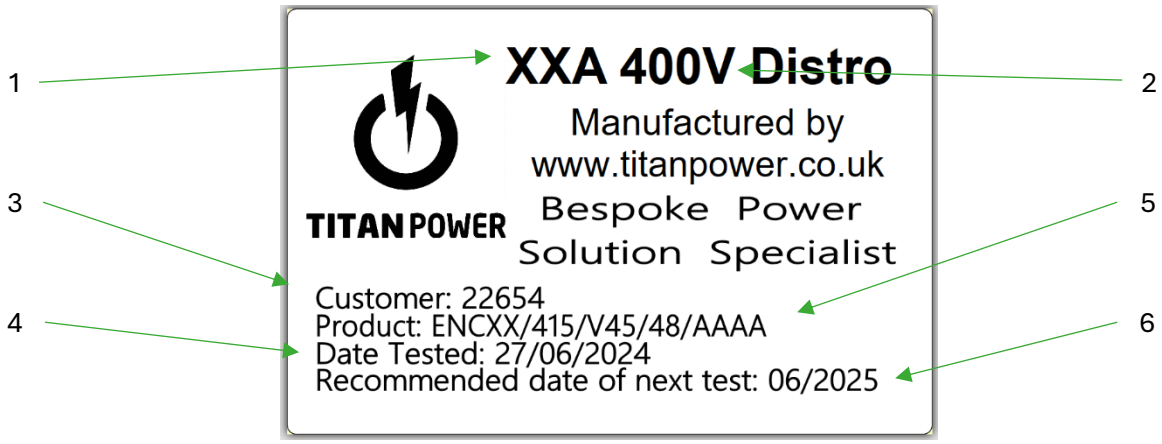
8.1. Decommissioning

- Make sure the power supply is switched OFF and disconnect the plugged-in connectors before decommissioning the distribution box.

8.2. Removal

Removing the electrical installation must comply with the law and regulations in the country of use

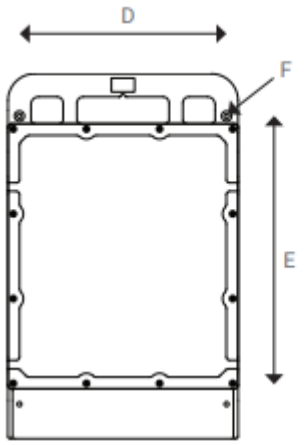
9.1. Nameplate



No	Description
1	Current rating
2	Voltage rating
3	Customer account number
4	RCD (if applicable) test date
5	Product SKU code
6	Dat of next recommended RCD test

9.2. Dimensions

Enclosure	A	B	C	D	E	F
S02	90	380	70	65	355	Ø6.5
S04	135	375	103	105	312	Ø6.5
S06	170	375	131	140	310	Ø6.5
S08	200	475	144	170	375	Ø6.5
S13	300	475	144	270	375	Ø6.5



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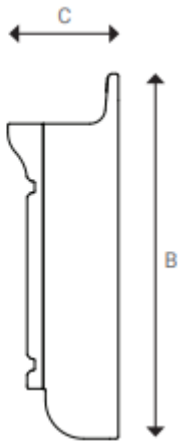

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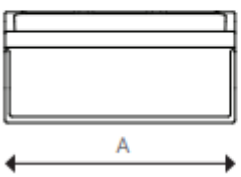

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9.3. Technical Specifications

	S02	S04	S06	S08	S13
Material	Rubber (SBR-EPDM)	Rubber (SBR-EPDM)	Rubber (SBR-EPDM)	Rubber (SBR-EPDM)	Rubber (SBR-EPDM)
Wall thickness (mm)	8	8	8	8	8
Wall mount dimensions	65 x 355	105 x 312	140 x 310	170 x 375	270 x 375
hole diameter (mm)	Ø6.5	Ø6.5	Ø6.5	Ø6.5	Ø6.5
Inserts	38 x M5 brass inserts	42 x M5 brass inserts	54 x M5 brass inserts	58 x M5 brass inserts	78 x M5 brass inserts
Weight (kg)	1.12	1.84	2.16	4.05	5.54
Dimensions (H x W x D) (mm)	380 x 90 x 70	380 x 140 x 100	380 x 170 x 100	480 x 200 x 150	480 x 300 x 150
Enviroment	Indoor/outdoor	Indoor/outdoor	Indoor/outdoor	Indoor/outdoor	Indoor/outdoor
Corrosion resistance	resistant to acids, salts and bases	resistant to acids, salts and bases	resistant to acids, salts and bases	resistant to acids, salts and bases	resistant to acids, salts and bases
UV resistance	Very high	Very high	Very high	Very high	Very high
Heat resistance	up to 100°C for 100 hours	up to 100°C for 100 hours	up to 100°C for 100 hours	up to 100°C for 100 hours	up to 100°C for 100 hours
Impact resistance	IK10	IK10	IK10	IK10	IK10
Protection degree	IP67	IP67	IP67	IP67	IP67
Appliance class	II (double insulated)	II (double insulated)	II (double insulated)	II (double insulated)	II (double insulated)
Pollution degree	3: industrial	3: industrial	3: industrial	3: industrial	3: industrial
Normal operating temperature (lower limit)	~25°C	~25°C	~25°C	~25°C	~25°C
Normal operating temperature (upper limit)	40°C	40°C	40°C	40°C	40°C
Normal operating temperature (maximum day average)	35°C	35°C	35°C	35°C	35°C
Maximum capacity	16A	32A	63A	63A	63A
Mobility	mobile	mobile	mobile	mobile	mobile
Handles	1	1	1	1	1
Lid fixation	8 x M4 Brass inserts / Stainless steel screws	8 x M4 Brass inserts / Stainless steel screws	10 x M4 Brass inserts / Stainless steel screws	10 x M4 Brass inserts / Stainless steel screws	12 x M4 Brass inserts / Stainless steel screws
Logo	yes	yes	yes	yes	yes
Rain cover	no	no	no	no	no
Stackable	no	no	no	no	no
Hoist construction	no	no	no	no	no