

## **ELECTRIC VEHICLE CHARGING for SP38936**

### **Explanatory Notes:**

Sustainability is one of the top few worldwide issues. As part of sustainability, EV (Electric Vehicles) are increasingly becoming common place with most car manufactures announcing EV models. It is forecast that 10% of all vehicle sales worldwide will be EV by 2025. Although Australia is slow on the uptake, it is still forecast that 10% of all Australian car sales will be EVs by 2030. The NSW Government is in the process of changing the Act to facilitate easier approvals of EV charging in buildings – and are actively supporting a number of other sustainability projects. We have received and application from a resident to install EV charging for their EV

The committee has taken advice on the best options for our building and are recommending the installation of a low cost, modular and sustainable EV charging infrastructure in the building, which will be progressively installed according to demand and paid for by those wishing to use that infrastructure.

### Special By-law 33

Special By-law 33 is intended to facilitate and manage the introduction of EV charging in the building.

It consists of:

- The By-law terms.
- A Register of all EV connections to which the by-law refers and the conditions of use.
- A Consent Form signed by all those who's EV connections are included on the Register.

The intention is to:-

- Install EV charging infrastructure in our building using the NHP EV readiness device install, including connection to the level 2 distribution panel,
- Supply from the EV readiness device and necessary cable ducting to the residents carpark then other carparks as deemed necessary by the committee according to EV Charging demand.

## Special By-Law No. 33 — EV (Electric Vehicle) Charging

### DEFINITIONS

**EV Charging Infrastructure** means the connection from the main distribution board to a sub-board, distribution box or any other device the owners corporation has installed to facilitate the connection of EV Charging Devices to the common property electricity supply of the building. That infrastructure may include various control mechanisms to control when electricity is supplied to EV Charging Devices and to facilitate billing of electricity usage to individual residents. EV Charging Infrastructure may also include cable trays and/or ducting or any other cable management infrastructure that facilitates connection of an EV Charging Device to the EV Charging Infrastructure. EV Charging Infrastructure is common property and is owned by the owners corporation.

**EV Charging Device** means a device used to connect the EV Charging Infrastructure to an EV for the purpose of charging the EV. The EV Charging Device is owned and supplied by the EV Owner.

**Consent Form** means the form attached to this by-law used to express a particular lot owner's consent to this by-law and all the conditions contained in it.

**Connection** means the alterations and additions to common property and/or a lot space required to enable an EV Charging Device to be connected to the EV Charging Infrastructure, carried out in accordance with:

- (a) a Scope of Works that has been approved under clause 3(b) of this by-law;
- (b) all other by-laws of the scheme (insofar as they apply); and
- (c) this by-law.

**Scope of Works** means:

- (a) a detailed description of any works required to be undertaken by the owners corporation to install or modify EV Charging Infrastructure; and
- (b) a detailed description of the works proposed to be undertaken by the lot owner in order to connect the EV Charging Infrastructure to an EV Charging device,

a summary of which is included in the EV Connection Register annexed to this by-law (**EV Connection Register**).

**Connection Fee** means a fee determined by the owners corporation from time to time as a reasonable contribution by a lot owner to the costs of installation and maintenance of the EV Charging Infrastructure and a right to use that infrastructure.

**Usage Fee** means a fee determined by the owners corporation from time to time as a reasonable contribution to the cost of electricity used in charging an EV.

A term used in this by-law that appears in *the Strata Schemes Management Act 2015 (NSW) (Act)* has the same meaning as in that Act.

The singular includes the plural and vice versa.

Any use of the verb 'includes', or of words such as 'for example' or 'such as', do not limit anything else that is included in general speech.

A reference to one gender includes a reference to all genders.

Headings are included for convenience only and do not affect the meaning of the clauses to which they relate.

## **RIGHTS**

1. Owners are granted a special privilege to install a Connection and a licence to use the common property immediately affected by their Connection on the conditions of this by-law.

## **CONDITIONS**

2. Notwithstanding any other condition in this by-law, the special privileges and licences granted by this by-law are not effective until the relevant lot owner executes a Consent Form and delivers it to the owners corporation.
3. Before installing a Connection, the relevant lot owner must:
  - (a) submit a Scope of Works to the strata committee;
  - (b) obtain the strata committee's approval to the Scope of Works, such approval being given:
    - (i) in its discretion acting reasonably;
    - (ii) with or without requiring modification to the Scope of Works; and
    - (iii) subject to additional conditions (including payment of any Connection Fees or Usage Fees).
4. At least 14 days before commencing the installation of a Connection, the relevant lot owner must at the owner's cost provide to the strata committee:
  - (a) details of the licensed electrical contractor proposed to be used to perform the works (subject to approval by the strata committee, which the strata committee may in its discretion reasonably withhold), and any other relevant documentation requested by the strata committee in relation to the Scope of Works; and
  - (b) evidence of the proposed electrical contractor's all works insurance, workers compensation insurance and public liability insurance in an amount of not less than \$20 million effective throughout the period the work will be carried out.
5. When installing a Connection, the relevant lot owner must:
  - (a) continuously comply with the reasonable directions of the strata committee and the building manager as to permissible hours of work, movement of building materials on the parcel and the disposal of debris;
  - (b) ensure the Connection is installed in a proper and workmanlike manner by a suitably licensed and reputable electrical contractor that has been approved by the strata committee; and
  - (c) on completion of the work installing the Connection, provide written certification from the electrical contractor that the Connection:
    - (i) meets the relevant Australian electrical standards; and
    - (ii) does not compromise the structural integrity or safety of the building.
6. At all times, the relevant lot owner:

- (a) must, at the owner's cost, properly maintain and keep the Connection in a state of good and serviceable repair and replace the Connection or any part of it as the strata committee may reasonably require from time to time;
  - (b) is liable for any damage caused to the common property or any lot as a result of the exercise of the rights under this by-law and/or the installation, maintenance or repair of the Connection, and make good that damage as soon as reasonably practicable after it has occurred;
  - (c) must indemnify the owners corporation against any loss or damage the owners corporation reasonably suffers (including legal costs) as a result of the installation, maintenance or repair of the Connection and activities associated with them and pay those costs to the owners corporation on demand; and
  - (d) comply with any special conditions specified in the EV Connection Register.
7. The relevant lot owner must pay the Connection Fee and the Usage Fee on demand by the owners corporation. If not paid at the end of one month after the date on which it is due, any unpaid amount will bear simple interest at the same rate as unpaid contributions under the Act until paid and the interest will form part of that debt. The owner agrees that the owners corporation may record any amount owed under this by-law on the ledger for their lot as a contribution due and payable under the Act.

## **GENERAL**

8. Insofar as it may be necessary, the owners corporation specially resolves:
- (a) pursuant to section 106(3) of the Act that:
    - (i) it is inappropriate to maintain, renew, replace or repair the common property immediately affected by the Connection;
    - (ii) its decision will not affect the safety of any building, structure or common property in the strata scheme or detract from the appearance of any property in the strata scheme;
  - (b) pursuant to section 108 of the Act that:
    - (i) owners may add to or alter the common property necessarily affected by their respective Connection for the purpose of improving or enhancing the common property; and
    - (ii) the relevant owner will be responsible for the ongoing maintenance of such common property.

## **REMEDY**

9. If an owner fails to comply with any obligation under this by-law, including any condition imposed under clause 3(b)(iii) or to make any payment required by clause 7, the owners corporation may:
- (a) disconnect the relevant EV Charging Device from the EV Charging Infrastructure;
  - (b) carry out all work necessary to perform the owner's obligation under this by-law;
  - (c) upon reasonable written notice, enter onto any part of the owner's lot to carry out that work;
  - (d) recover the costs of carrying out that work from the relevant owner as a contribution recoverable under section 86(2A) of the Act; and
  - (e) include reference to that debt on levy notices and any other levy report or information.

EV CHARGING REGISTER

APPROVAL OF RENOVATIONS ACCORDING TO SPECIAL BY-LAW No. 33

Lot	Apartment	Approval Date strata committee / Owners Corp	Summary of Connection	Special Conditions (if any)
[insert lot number]	[insert apartment number]	[insert date]	Connection from Lot [insert lot number] Garage to EV Charging Infrastructure installed on Level [inset level number].	The owner will pay an annual connection fee of \$600.00, paid quarterly in advance and \$0.30c per KWH usage fee. Electricity for EV charging will only be provided during the hours of 11.00 pm to 7.00am [or times determined by the electrical adviser].

**Consent Form – Strata Plan No. 38936**

Owners Consent to repeal of special privilege by-law and special privilege and licence to use, add to or alter the common property

To: The Secretary  
The Owners - Strata Plan No. 38936

And: NSW Land Registry Services  
1 Prince Albert Rd Queens Square  
SYDNEY NSW 2000

I, [name of owner], being the registered owner of Lot [insert lot number] in Strata Plan No.38936 hereby consent to this special by-law granting me rights or special privilege and a licence to use, add to or alter the immediately affected common property, such by-law having been passed by special resolution of the owners corporation on [insert approval date]

Dated this [insert consent date]

..... Signature ..... [insert name of owner]

**STRATA PLAN No. 38936  
REGISTER**

**APPROVAL OF ELECTRIC VEHICLE CONNECTIONS ACCORDING TO SPECIAL BY-LAW No. 33**

<b>Lot</b>	<b>Unit</b>	<b>Approval Date: Strata Committee / Owners Corp</b>	<b>Summary of Electric Vehicle Connection :</b>	<b>Special Conditions (if any)</b>
110	110	10/12/2020	EV connection to garage space lot 110 Level 1	
183	34	16/11/2022	EV connection to garage space lot 181/Unit 34 Level 7	
116	116			





# EV Readiness Board

Electric vehicle readiness in apartment blocks



**SMART DISTRIBUTION**

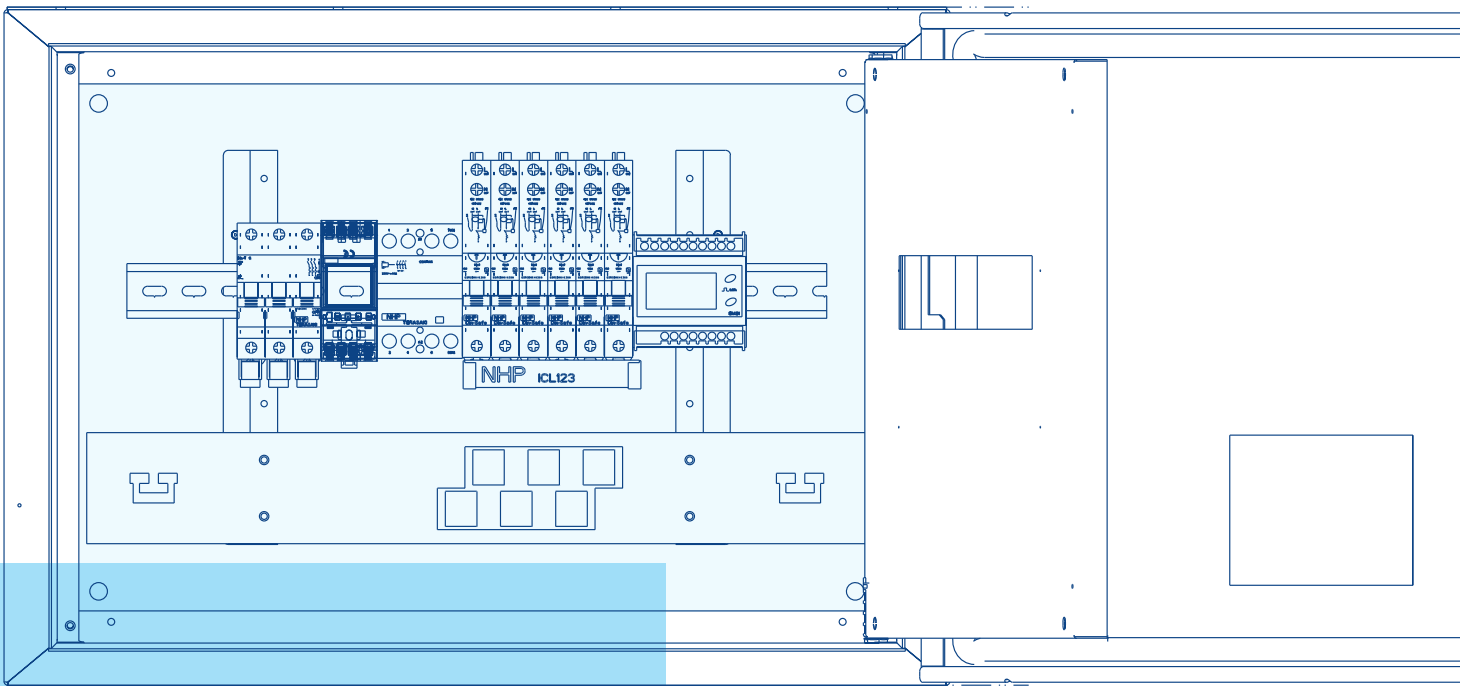
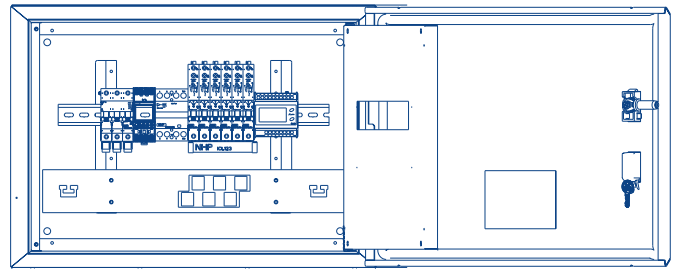


# Electric vehicle readiness in apartment blocks



*Australian apartment buildings are increasingly being asked to support their residents in the installation of electric vehicle chargers in existing buildings.*

*There are several key challenges, which NHP has worked with representatives of Owner's Corporations to address.*



*NHP's EV Readiness Board can be quickly and easily installed in most apartment buildings. Each board will support up to six electric vehicle chargers.*

*Most apartment buildings can support EV charging for at least 25% of dwellings this way.*

Making an established apartment building ready for every car to be electric can be very costly.... but getting ready for 25% of owners to shift to electric cars over the next 15 years doesn't need to be!

NHP has undertaken extensive modelling work on data from a wide range of apartment buildings to arrive at a single, scalable solution that will work for most apartment buildings.



## Electrical capacity at the site

To avoid significant upgrades to existing electrical equipment, charging needs to be scheduled when other demand is low.

NHP's EV Readiness Board contains a programmable timer. Car charging only happens when building demand is known to be low, delivering up to 150km worth of recharging per vehicle every night. No switchboard upgrade needed.

## 'User pays' for the electricity

EV charging equipment will often be supplied from common property power. NHP's EV Readiness Board contains metering for each charging circuit to enable costs to be passed on to the user, should they wish, subject to local energy regulations and strata bylaws.

## The shared infrastructure needs to be cheap!

An individual owner can pay for the installation of their EV charger and connection to the EV Readiness Board, but the infrastructure to enable multiple EV chargers to be installed is a shared expense. NHP's EV Readiness Boards will typically cost less than \$5,000 fully installed by the preferred contractor at the site, for that shared infrastructure.

## No lock-in contracts or ongoing costs

Where possible, avoiding lock-in contracts and substantial ongoing costs is generally a good idea. EV charging is no exception!

Unlike other EV solutions on the market, NHP's solution involves no ongoing costs or contracts.



Ready to learn more?

Email us at [sales@nhp.com.au](mailto:sales@nhp.com.au)

or see our website:  
<https://www.nhp.com.au/Power-Distribution/Electric-Vehicle-Chargers>

# Who are NHP?

NHP

Specialists in electrical and automation products, systems and solutions.

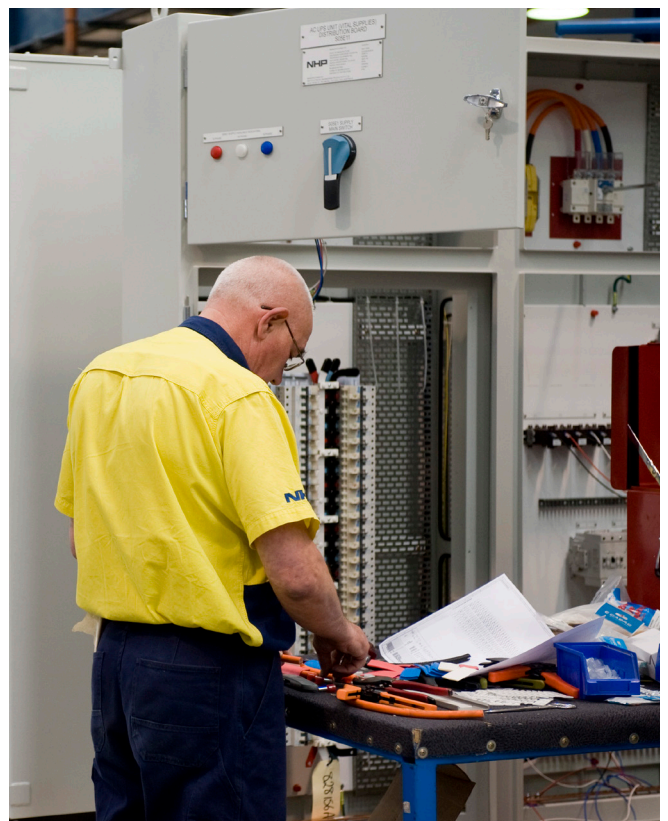


With 50 years of industry experience, NHP is consistently chosen as the partner of choice for leading electrical projects in Australia and New Zealand.

As a privately held, locally owned business we have established a network of metro and regional locations that ensure our people, products and services are available where and when you need them.

With leading experience across the broad landscape of local industries, we offer the capabilities to design solutions and service application and technology challenges that are experienced now and into the future.

We proudly manufacture many of our products right here in Australia, including the **EV Readiness Board**.



The NHP logo consists of the letters 'NHP' in a bold, white, sans-serif font, centered within a dark blue square background.

**NHP**

nhp.com.au  
SALES 1300 NHP NHP  
sales@nhp.com.au

**NHP Electrical Engineering Products**

A.B.N. 84 004 304 812  
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NHP5BCH 08/20

## Special By-Law No. 33 — EV (Electric Vehicle) Charging

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    - (i) meets the relevant Australian electrical standards; and
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EV CHARGING REGISTER

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**Consent Form – Strata Plan No. 38936**

Owners Consent to repeal of special privilege by-law and special privilege and licence to use, add to or alter the common property

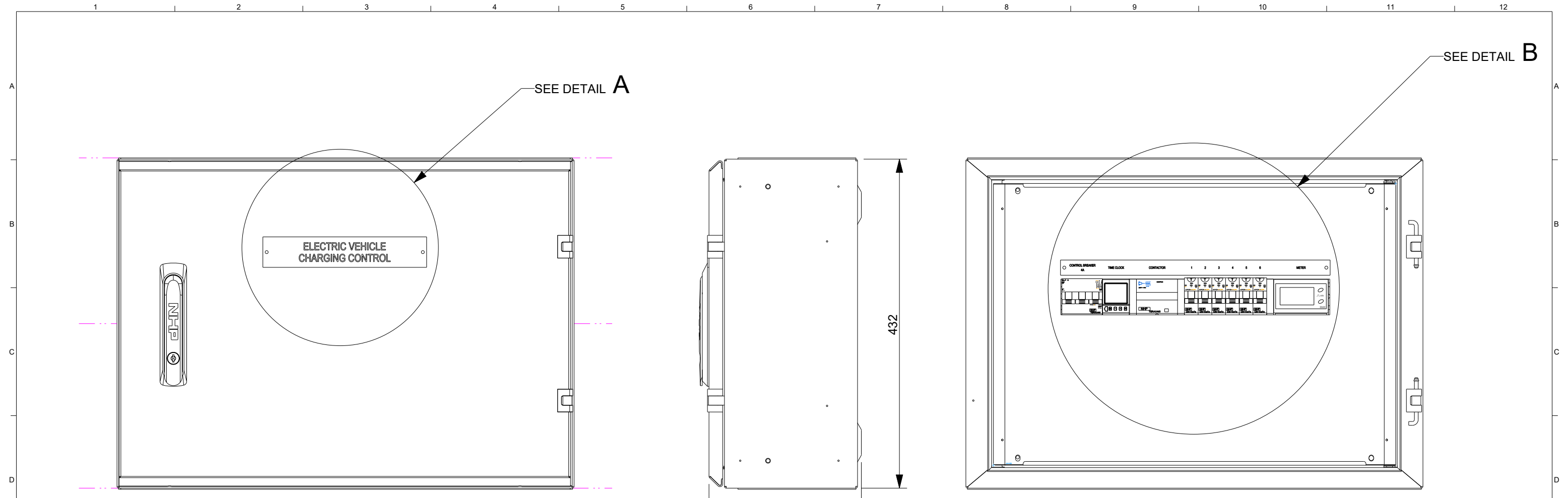
To: The Secretary  
The Owners - Strata Plan No. 38936

And: NSW Land Registry Services  
1 Prince Albert Rd Queens Square  
SYDNEY NSW 2000

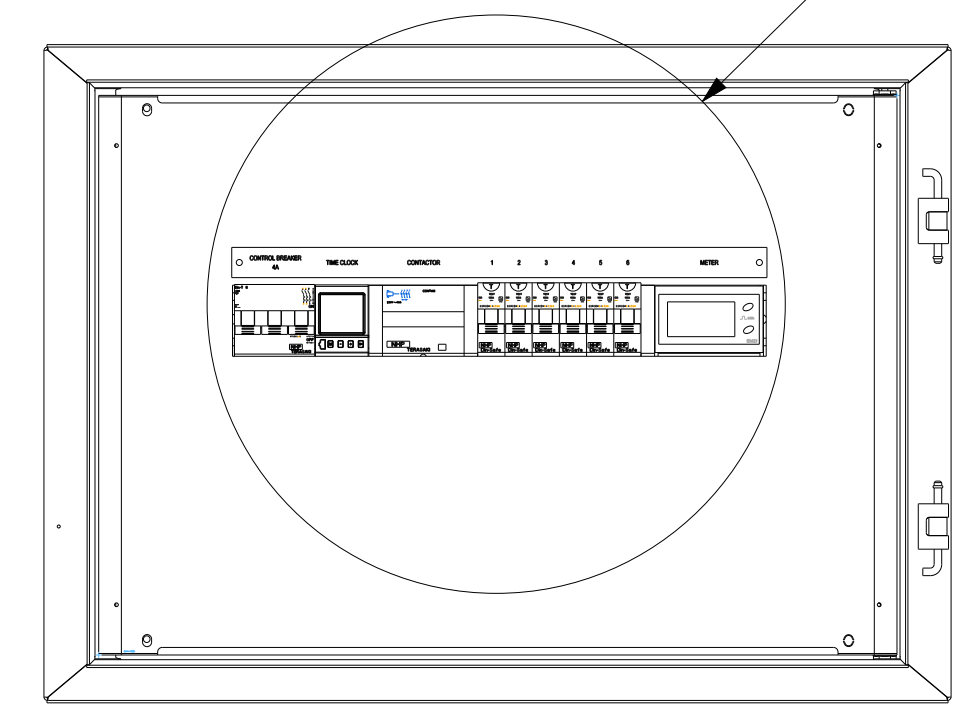
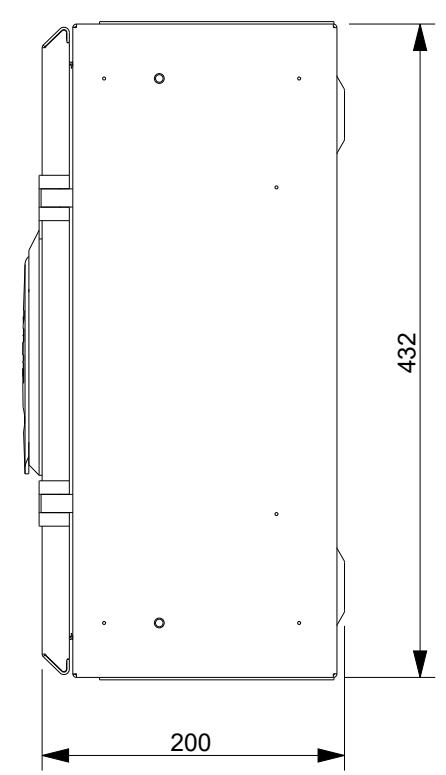
I, [name of owner], being the registered owner of Lot [insert lot number] in Strata Plan No.38936 hereby consent to this special by-law granting me rights or special privilege and a licence to use, add to or alter the immediately affected common property, such by-law having been passed by special resolution of the owners corporation on [insert approval date]

Dated this [insert consent date]

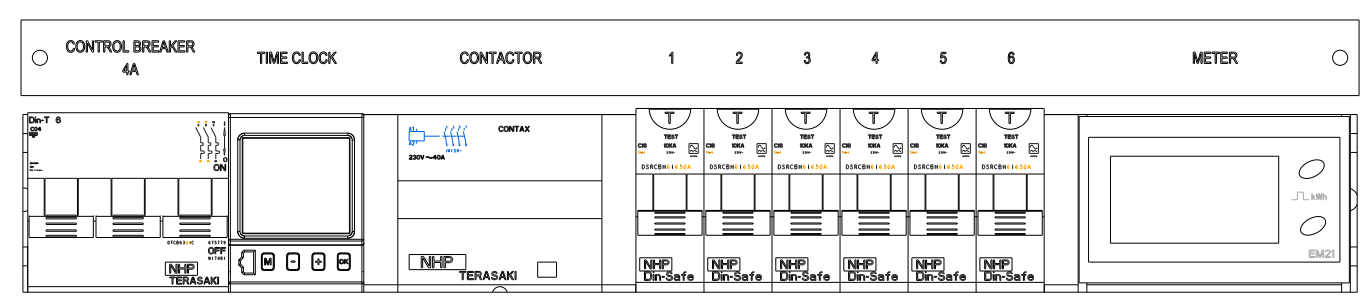
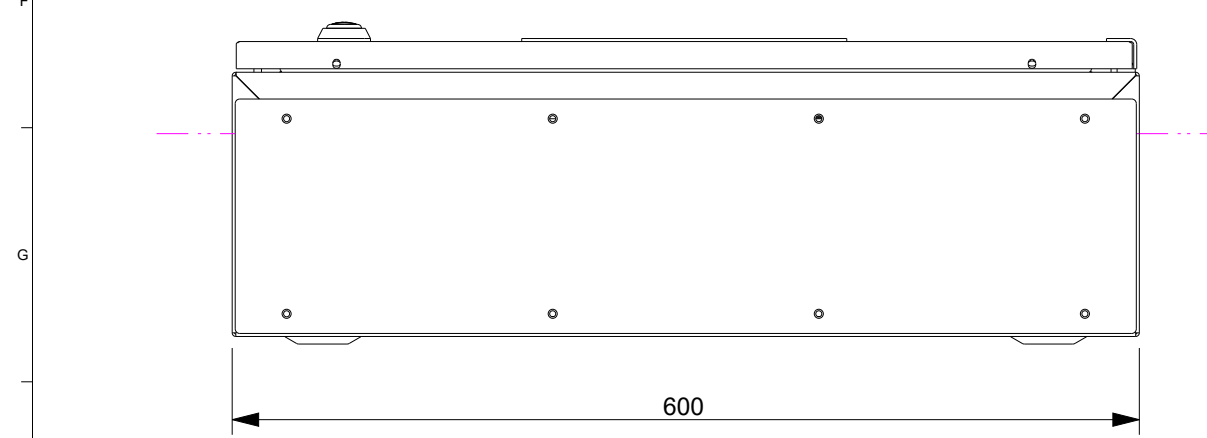
..... Signature ..... [insert name of owner]



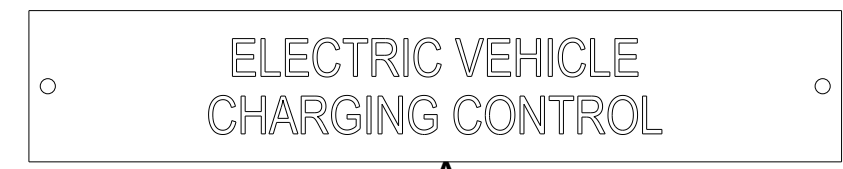
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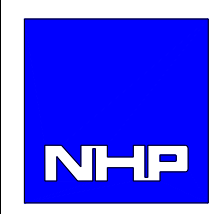
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SCALE 1:5



DETAIL B  
SCALE 1:2



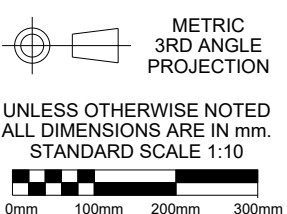
DETAIL A  
SCALE 1:2



**NHP ELECTRICAL ENGINEERING PRODUCTS PTY LTD**  
SPECIALISTS IN ELECTRICAL AND AUTOMATION PRODUCTS, SYSTEMS AND SOLUTIONS  
43 - 67 RIVER ST RICHMOND, VICTORIA 3121  
TEL: 1300 NHP NHP (1300 647 647)  
EMAIL: NHPSALES@NHP.COM.AU  
A.C.N: 004 304 812  
WWW.NHP.COM.AU  
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REV	DESCRIPTION	DATE	DRAWN	CHECKED

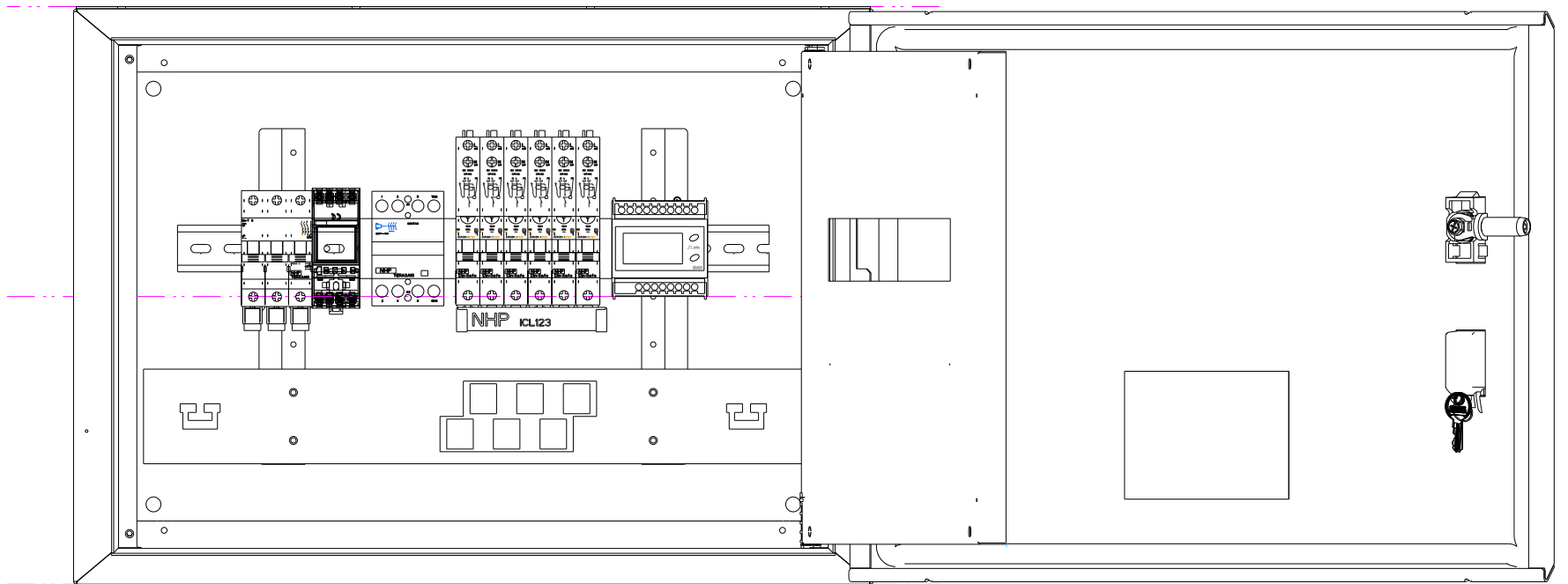
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OVER	TO	TOL
0	5	±0.2
5	20	±0.4
20	50	±0.5
50	100	±1.0
100	250	±1.5
>250		±2.0
ANGULAR		±1°
HOLE SIZES		+0.2/-0




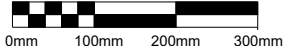
DRAWN	IL	03.06.20	SALES ORDER NO.
CHECKED	CH	03.06.20	QUOTE NUMBER
APPROVED			CUSTOMER ORDER NO.
SCALE	1:25	SHEET No.	1 OF 3
DRAWING NUMBER			

TITLE		ELECTRIC VEHICLE CHARGING CONTROL	
PROJECT	EV BOX	REV.	0
CUSTOMER			A3

INDEX	SCHEMATICS REFERENCE	P/N	DESCRIPTION	QTY
1		CELAGMS05	CEL PBD ACC GEAR TRAY 0.5M- 213mm WHITE SUITS CPL & CPR	1
2		CELBNC12A2	CEL PBD E/N BAR 250A 12 WAY 2 SCREW 1-12	2
3		CELES2NAP	PBD C/PLUS & C/PREM ESC BLANK 2M-432mm WHITE	1
4		CELHCRP21A60	CEL PBD DOOR HANDLE CAM ROLLER SINGLE POINT	1
5		CELHDSPSC	CEL PBD DOOR SWING HANDLE CL001 KEY	1
6		CELSDSB444	CEL PBD DIN RAIL 15mm SLOTTED 444mm LONG	1
7		CELSNM517	CEL PBD NEUTRAL SUPPORT BRACKET	2
8		CELSRZ58	CEL DIN RAIL Z SUPPORT 58mm HIGH	2
9		CPL2MSSG	PBD C/PLUS ENCLOSURE NO ESC 2M-432mm GREY	1
10		DGT2230	TIME SWITCH 2C/O 30MEM 230VAC CONTROL	1
11		DSRCBH61630A	RCBO DIN-SAFE 6ka 1P+N 16A C CURVE 30mA TYPE A LONGBODY	6
12		DTC4040240L	DIN CONTACTOR 40A 4N/O 240VAC	1
13		DTCB6304C	MCB 6KA 3P 4A C CURVE DIN	1
14		DTSP	SPACER 1/2 MODULE	3
15		DTTAX25SP	DIN-T TERMINAL AXIAL SPADE 25MM	3
16		EM28072DMV53X2SX	ENERGY METER EM280 240V AC SELF SUPPLY RS485	1
17		ICL123	BUSBAR 100A 12P 3 PHASE COMB	1
18		ICLEC23	ENDCAP COMB BUSBAR ICL2,3&3AUX	2
19		TCD06BX3280CMX	EM280 6 CHANNEL CT 32A 7mm HOLE DIAMETER 800mm CABLE	1



SCALE 1:5

 <p><b>NHP ELECTRICAL ENGINEERING PRODUCTS PTY LTD</b> SPECIALISTS IN ELECTRICAL AND AUTOMATION PRODUCTS, SYSTEMS AND SOLUTIONS</p> <p>43 - 67 RIVER ST RICHMOND, VICTORIA 3121 TEL: 1300 NHP NHP (1300 647 647) EMAIL: NHPSALES@NHP.COM.AU A.C.N: 004 304 812 WWW.NHP.COM.AU © Copyright NHP 2020</p>	REV	DESCRIPTION	DATE	DRAWN	CHECKED	<p><b>TOLERANCES</b> UNLESS SPECIFIED OTHERWISE</p> <table border="1"> <thead> <tr> <th>OVER</th> <th>TO</th> <th>TOL</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>5</td> <td>±0.2</td> </tr> <tr> <td>5</td> <td>20</td> <td>±0.4</td> </tr> <tr> <td>20</td> <td>50</td> <td>±0.5</td> </tr> <tr> <td>50</td> <td>100</td> <td>±1.0</td> </tr> <tr> <td>100</td> <td>250</td> <td>±1.5</td> </tr> <tr> <td>&gt;250</td> <td></td> <td>±2.0</td> </tr> <tr> <td colspan="2">ANGULAR</td> <td>± 1°</td> </tr> <tr> <td colspan="2">HOLE SIZES</td> <td>+0.2/-0</td> </tr> </tbody> </table>	OVER	TO	TOL	0	5	±0.2	5	20	±0.4	20	50	±0.5	50	100	±1.0	100	250	±1.5	>250		±2.0	ANGULAR		± 1°	HOLE SIZES		+0.2/-0	<p>METRIC 3RD ANGLE PROJECTION</p> <p>UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN mm. STANDARD SCALE 1:10</p> 	<table border="1"> <tr> <td>DRAWN</td> <td>IL</td> <td>03.06.20</td> <td>SALES ORDER NO.</td> </tr> <tr> <td>CHECKED</td> <td>CH</td> <td>03.06.20</td> <td>QUOTE NUMBER</td> </tr> <tr> <td>APPROVED</td> <td></td> <td></td> <td>CUSTOMER ORDER NO.</td> </tr> <tr> <td>SCALE</td> <td>1:25</td> <td>SHEET No.</td> <td>2 OF 3</td> </tr> <tr> <td colspan="4">DRAWING NUMBER</td> </tr> </table>	DRAWN	IL	03.06.20	SALES ORDER NO.	CHECKED	CH	03.06.20	QUOTE NUMBER	APPROVED			CUSTOMER ORDER NO.	SCALE	1:25	SHEET No.	2 OF 3	DRAWING NUMBER				<table border="1"> <tr> <td>TITLE</td> <td rowspan="2">ELECTRIC VEHICLE CHARGING CONTROL</td> </tr> <tr> <td>PROJECT</td> <td>EV BOX</td> </tr> <tr> <td>CUSTOMER</td> <td></td> </tr> </table>	TITLE	ELECTRIC VEHICLE CHARGING CONTROL	PROJECT	EV BOX	CUSTOMER		<table border="1"> <tr> <td>REV.</td> <td>0</td> </tr> <tr> <td></td> <td>A3</td> </tr> </table>	REV.	0		A3
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CONSTRUCTION NOTES CONCEPT PLUS	ENCLOSURE	NHP CONCEPT PLUS MULTI-PURPOSE PANELBOARD	
	BODY	1.6mm MILD STEEL	
	DOOR	1.6mm MILD STEEL	RIGHT-HAND HINGED
		HANDLE: PLASTIC SWING HANDLE CL001 KEY c/w "A4" SIZE LEGEND CARD & HOLDERS BEHIND DOOR	
	ESCUTCHEON	HINGED 1.2mm MILD STEEL	
	FINISH	ELECTROSTATIC POWDERCOATED TO AS 2700-2011: DOOR: STORM GREY N42 SATIN TEXTURED BASE: STORM GREY N42 SATIN TEXTURED ESCUTCHEON: INTERPON 610 BRIGHT WHITE GLOSS (MA030A) GEARPLATE: INTERPON 610 BRIGHT WHITE GLOSS (MA030A)	
	EARTHING	SYSTEM EARTHING = TN-S	
RATINGS	AS/NZS 61439.3:2016 DEGREE OF PROTECTION= IP42 FORM OF INTERNAL SEPARATION= FORM 1 RATED INSULATION VOLTAGE $U_i = 500V$ RATED IMPULSE VOLTAGE $U_{imp} = 4kV$ RATED DIVERSITY FACTOR= 0.6 FUNCTIONAL UNIT CONNECTIONS = FFF MAXIMUM OUTGOING CIRCUIT= 63A NEUTRAL BAR RATING = 250A	POLLUTION DEGREE= 3 INDOOR, STATIONARY ASSEMBLY FOR USE BY ORDINARY PERSONS EMC ENVIRONMENT = B WALL-MOUNTED SURFACE TYPE ASSEMBLY FIXED PART CONSTRUCTION BASIC PROTECTION BY ENCLOSURE(S) TERMINALS SUIT COPPER CONDUCTORS TYPE B DBO	
	<b>SUPPLY (MAINS)</b> RATED CURRENT $I_{nA} = 32A$ RATED VOLTAGE $U_n = 240/415V AC 3\phi + N + E$ RATED FREQUENCY $f_n = 50Hz$ FAULT WITHSTAND $I_{cc} = 6kA$ CONDITIONAL DEVICE= DTCBx332C		



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REV	DESCRIPTION	DATE	DRAWN	CHECKED

TOLERANCES UNLESS SPECIFIED OTHERWISE		
OVER	TO	TOL
0	5	±0.2
5	20	±0.4
20	50	±0.5
50	100	±1.0
100	250	±1.5
>250		±2.0
	ANGULAR	±1°
	HOLE SIZES	+0.2/-0

METRIC 3RD ANGLE PROJECTION

UNLESS OTHERWISE NOTED  
 ALL DIMENSIONS ARE IN mm.  
 STANDARD SCALE 1:10

DRAWN	IL	03.06.20	SALES ORDER NO.
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TITLE		ELECTRIC VEHICLE CHARGING CONTROL	
PROJECT	EV BOX	REV.	0
CUSTOMER			A3