

LTA's C&F List

LTA's List of Certificates and Forms for the Installation, Certification, and Inspection of EV Chargers

Explanatory Note

1. If you are installing/certifying (i) a new EV charger for the first time or (ii) relocated EV charger, use Forms 1 to 3.
2. If you are conducting periodic inspection and maintenance on an EV charger, use Forms A to E.
3. If you are conducting an inspection for a modified EV charger, use Forms 1A to 3A.
4. Please refer to the Table of Forms for the relevant forms to be used.

Table of Forms

Purpose	Location Installed	Type of EV Charger	Form
Installation of New EV Charger	Restricted Access Location	Fixed EV Charger less than 200kW without thermal management system	1
		Fixed EV Charger more than 150kW with thermal management system	2
Relocation of EV Charger	Non-Restricted Access Location	Non-Fixed EV Charger	3
Periodic Inspection (Every 24 months)	Restricted Access Location	Fixed EV Charger less than 200kW without thermal management system	A
		Non-Fixed EV Charger	B
		Fixed EV Charger more than 150kW with thermal management system	C
Periodic Inspection (Every 6 months)	Non-Restricted Access Location	Fixed EV Charger less than 200kW without thermal management system	A
		Non-Fixed EV Charger	B
		Fixed EV Charger more than 150kW with thermal management system	C
Periodic Inspection (Every Year)	Non-Restricted Access Location	Fixed EV Charger less than 200kW without thermal management system	D
		Fixed EV Charger more than 150kW with thermal management system	E
Modified EV Charger that are registered	Restricted Access Location	Fixed EV Charger less than 200kW without thermal management system	1A
		Fixed EV Charger more than 150kW with thermal management system	2A
	Non-Restricted Access Location	Non-Fixed EV Charger	3A

Contents

Certificate of Fitness for the Installation and Certification of an EV Charger

1.1	Form 1: Certificate of Fitness for the installation and certification of a fixed EV Charger (power rating of <200kW) without any Thermal Management System.....	4
1.2	Form 2: Certificate of Fitness for the installation and certification of a fixed high-powered (power rating of >150kW) EV Charger with a Thermal Management System.....	13
1.3	Form 3: Certificate of Fitness for the certification of a non-fixed EV Charger.....	23

Certificate of Continued Fitness for Inspection and Maintenance of an EV Charger

2.1	Form A: Certificate for the maintenance of a fixed EV Charger (power rating of <200kW) without any Thermal Management System.....	30
2.2	Form B: Certificate for the maintenance of a non-fixed EV Charger.....	36
2.3	Form C: Certificate for the maintenance of a fixed high-powered (power rating of >150kW) EV Charger with a Thermal Management System.....	41
2.4	Form D: Certificate for the periodic inspection (every year) of a fixed EV Charger (power rating of <200kW) without any Thermal Management System.....	47
2.5	Form E: Certificate for the periodic inspection (every year) of a fixed high-powered (power rating of >150kW) EV Charger with a Thermal Management System.....	51

Form for the Inspection of a Modified EV Charger

(Applicable only for registered EV Charger that have been modified.)

3.1	Form 1A: Form for the safety check of a modified fixed EV Charger (power rating of <200kW) without any Thermal Management System.....	54
3.2	Form 2A: Form for the safety check a modified fixed high-powered (>150kW) EV Charger with a Thermal Management System.....	64
3.3	Form 3A: Form for the safety check of a modified non-fixed EV Charger.....	73

Form 1:

Certificate of Fitness for the installation and certification of a fixed EV Charger (power rating of <200kW) without any Thermal Management System

Form 1: Certificate of Fitness for the installation and certification of a fixed EV Chargers (power rating of <200kW) without any Thermal Management System

This certificate, which contains the checklist, is to be used for certifying an EV Charger as fit for charging.

Purpose of use: Installation and Certification of:

(Please tick accordingly)

- A new EV Charger
- A relocated EV Charger

Details of the installation of the EV Charger

- a. EV Charger brand and model: _____
- b. EV Charger manufacturer serial number: _____
- c. EV Charger type-approval ID (if applicable): _____
- d. Name of the person who i) has charge and control of the EV Charger (for a non-registered EV Charger) or ii) is the Registered Responsible Person (RRP) (for registered EV Charger):

- e. Address where the EV Charger is installed:
(Please indicate the carpark lot number and the floor level where applicable)

This checklist is to be completed by the Equipment Specialist¹ (ES)

Adapted from TR 25: 2022 Part 1: Annex B Electrical safety and general requirements with permission from Enterprise Singapore


C – Compliant


NC – Not Compliant

NA – Not Applicable

	Description	Compliance			Remarks/ measurement value [^]
		C	NC	NA	
A	Authority Requirement				
A1	Letter of no objection (LNO) is obtained from relevant authority;				

¹ Equipment Specialists are the prescribed competent persons under section 23 of the Electric Vehicles Charging Act (EVCA) that certifies that the chargers are fit for use.

A2	LTA Approval Label affixed to the EV charger. Please provide serial number of Approval Label found on the respective label under Remarks				
A3	For building with Energy Market Authority Electrical Installation License, letter of consent is obtained from building Licensed Electrical Worker (LEW).				
B	External and environmental checks (with EV Charger power TURNED-OFF at isolator)				
B1	Installed outside hazardous zones where flammable or combustible gas or material may be present.				
B2	Enclosure is not dented, damaged, corroded or in any rusty condition.				
B3	Space around the EV Charger is adequate for easy access and maintenance work.				
B4	Sealing rubber of all doors are in order, and doors including lockset (if any) can be opened and closed easily.				
B5	No sign of insects inside EV Charger. Openings or vents are not blocked, no excess foreign particles.				
B6	Detachable parts are not loose or falling off and not in a rusty condition.				
B7	No visible moisture, waterlogging or burnt marks at the EV Charger and connector charging pins.				
B8	Floor or wall mounting of EV Charger remains rigid and strong.				
B9	Vehicle connector cable, mounting and support is secured and not damaged.				
B10	Electrical warning labels is clear and prominent.				
B11	Source of Distribution Box (DB) for EV Charger is clearly labelled and electrical source DB is accessible for operation.				
B12	Bollards or continuous kerb(s) or other means of crash protection is installed to provide adequate protection against moving vehicles.				
B13	Charger specification plate is clear, legible, and prominent according TR25 requirement.				
B14	RRP, Person who has charge and control or Operator (where applicable) of EV Charger contact details label is legible, and prominent.				
B15	Fail-safe emergency stop button (in red and yellow) is prominent and not damaged. For outdoor installation it shall be weatherproof. Clear directional signs shall be provided for multiple charger installations.				
B16	Adequate lighting for charging operation.				
B17	Inspection label provided as below. 				Last inspection date:

B18	EV Charger's display and all User Interface accessories (e.g. press button, RFID reader etc.) are not damaged and are working properly.				
B19	Incoming power supply cable including circuit protective conductor connections and termination(s) are properly made and tightened.				
B20	Measurement of Proximity Pin (PP) – Protective Earth (PE) resistance value and to be compared with the given value in the IEC Standard.				PP-PE: ____ (Ohm)
B21	Manufacturer handbook and instruction manuals given to the RRP, Person who has charge and control and Operator (where applicable) of the EV Charger				
C	Functionality checks and tests (with EV Charger power TURN-ON at isolator)				
C1	Inspect Residual Current Circuit Breaker(s) (RCCB(s)) protecting connecting points shall be at least type A 30mA of symbol  and perform manual trip test to all RCCB(s) for Mode 2/2A*/2B*/3 chargers. For mode 4 chargers, earth leakage protection device trip setting should comply with requirements in 411.5.3L of SS 638:2018. <i>*Modes 2A and 2B chargers with galvanic isolation shall be at least type AC</i>				
C2	Perform the sequence of normal start and stop on every charging point.				
C3	While charging, check EV ventilation fan (if any) is working.				
C4	While charging, test all the fail-safe emergency stop button(s) to ensure it is functioning. (EVSE shall reset to state A upon releasing)				
C5	Perform control pilot short fault simulation for every charging point. (EVSE shall reset to state A when fault is cleared)				
C6	(For AC charger) – connector 1 Perform functionality test for mode 2/2A/2B/3 charging point. EV Charger is able to complete energisation and deenergisation sequence.				
C7	(For AC charger) – connector 2 (if any) Perform functionality test for mode 2/2A/2B/3 charging point. EV Charger is able to complete energisation and deenergisation sequence.				
C8	(For DC charger) – connector 1 Perform functionality test for mode 4 charging point (refer to IEC 61851-23). EV Charger is able to complete energisation and deenergisation sequence.				
C9	(For DC charger) – connector 2 (if any)				

	Perform functionality test for mode 4 charging point (refer to IEC 61851-23). EV Charger is able to complete energisation and deenergisation sequence.				
D	Additional items not listed but required in the manufacturer's instructions <i>(Please list accordingly or indicate as NA where appropriate)</i>				
D1					
D2					
D3					

^Measured values where required shall be recorded in this report

If there are more tests carried out on the EV Charger than indicated in this form — for instance, functionality test for three or more connectors or under more test required by manufacturer's instruction — please append the results of these tests separately as annexes to this certificate.

Requirements for the emergency main isolation shut-off switch (to be completed by the Equipment Specialist)

First Schedule of the Electric Vehicles Charging (Electric Vehicle Chargers) Regulations 2023

(Applicable only for EV Chargers installed in non-restricted access locations)

	Description	C	NC	NA	Remarks
1.	Requirements relating to emergency main isolation shut-off switch as found in the First schedule of the <i>Electric Vehicles Charging (Electric Vehicle Chargers) Regulations 2023</i>				

This checklist is to be completed by the Licensed Electrical Worker² (LEW)

Adapted from TR 25: 2022 *Part 1: Annex B Electrical safety and general requirements* with permission from Enterprise Singapore

	Description	Compliance			Remarks/ measurement value [^]
		C	NC	NA	
E	Electrical checks and tests				
E1	Perform earth loop impedance test and record value complies with SS 638 (For TT and TNS system).				___ Ohm
E2	Record the incoming power supply and charging cable insulation resistance value is more than 1 M-ohm.				___ M-Ohm
E3	Tripping time of 30 mA RCCB type A (min) as measured by an RCCB tester using AC and DC injection curve is acceptable according to SS 97 tripping time for mode 2 and mode 3 chargers. For mode 4 charger, the trip setting should comply with 411.5.3L of SS 638:2018.				0 deg: _____ ms 180 deg: _____ ms
E4	EV Charger installation tally with single line diagram (SLD) provided by the RRP, person who has charge and control or operator (where applicable) of EV Charger. Means of isolation, lockable at OFF position (2P for 1 Phase and 3P/4P for 3 Phase), is provided for maintenance switching.				
E5	Rating of incoming cable from source DB and charging cable are adequate for max rated charging current.				

[^]Measured values where required shall be recorded in this report

Note: Any EV Charger installed in petrol kiosks shall comply with SCDF's requirements

General remarks:

² LEWs are the prescribed persons under section 24 of the Electric Vehicles Charging Act (EVCA) that ensure that the installation of a fixed charger is compliant with the relevant safety standards.

Please note the following:

Inspection and maintenance checks must be carried out based on the following frequencies:

Location of EV Charger	Qualified Personnel Required	Type of Check	Frequency
Non-restricted access locations [#]	Equipment Specialists	Maintenance	6 months
	Equipment Specialists and LEWs	Inspection	12 months
Restricted access locations [*]	Equipment Specialists	Maintenance	24 months

[#]Refers to any other location besides restricted access locations

^{*}Refers to bungalows, detached and semi-detached houses, terrace houses that are not strata titled

Date of next inspection : _____
(Based on Inspection Frequency as per the table above)

Endorsed by LEW

The results obtained in E (Electrical checks and tests) are acceptable to the best of my knowledge and the EV charger has been installed together with the apparatus and fittings required by TR25:2022.

Name of LEW: _____ Licence No.: _____

Date signature of LEW: _____ Date of installation: _____

Endorsed by ES

I have inspected and tested the EV Charger. To the best of my knowledge, I declare that the EV Charger is *fit and safe / unfit and unsafe for charging EVs.
(Please delete as appropriate)

Name of ES: _____

Company: _____ Designation: _____

Dated signature of ES: _____ Date of certification: _____

Please ensure that the LEW and ES have endorsed this checklist.

The certification was witnessed by the Registered Responsible Person (RRP) or the person who has charge and control of the EV Charger.

Name and dated signature of the RRP or person who has charge and control of the EV Charger:

Name: _____ Dated Signature: _____

Note 1 – It is the responsibility of the RRP or person who has charge and control of the EV Charger to perform the necessary maintenance routines as recommended by the equipment specialist or manufacturer to ensure the safe use of the EV Charger and any potential hazard due to lack of maintenance.

Note 2 – Fault reporting procedure

If any EV Charger is found to be unsafe or unsuitable for operation, the following steps shall be taken:

- a. The supply to the equipment shall be switched off;
- b. The means of isolation shall be off and locked to prevent re-connection of supply;
- c. A clear label notifying users that the equipment is out of service shall be displayed prominently; and
- d. The RRP or person who has charge and control of the EV Chargers shall be informed immediately.

Annex A (Optional)

This annex is optional. It may be appended to the main certificate if there are more tests carried out on the EV Charger than indicated on the main certificate, for instance, functionality test for three or more connectors or under most test required by manufacturer's instruction.

	Description	Compliance			Remarks/ measurement value^
		C	NC	NA	
1					
2					
3					

Form 2:
**Certificate of Fitness for the installation and
certification of a fixed high-powered (power rating
of >150kW) EV Charger with a Thermal Management**

Form 2: Certificate of Fitness for the installation and certification of a fixed high-powered (power rating of >150kW) EV Charger with a Thermal Management

This checklist is to be used for the purposes of installing and certifying a high-powered EV Charger.

Purpose of use: Installation and certification of
(Please tick accordingly)

- A new high-powered EV Charger
- A relocated high-powered EV Charger

Details of the installation of the EV Charger

- a. EV Charger brand and model: _____
- b. EV Charger manufacturer serial number: _____
- c. EV Charger type-approval ID (if applicable): _____
- d. Name of the person who i) has charge and control (for non-registered EV Charger) or ii) is the Registered Responsible Person (RRP) (for registered EV Charger)

- e. Address of where EV Charger is installed:
(Please indicate the carpark lot number and the floor level where applicable)

To be conducted by the Equipment Specialist³ (ES)


Adapted from TR 25: 2022 Part 3: Annex D High Powered Charging with permission from Enterprise Singapore

- C – Compliant
- NC – Not Compliant
- NA – Not Applicable

	Description	Compliance			Remarks/ measurement value [^]
		C	NC	NA	
A	Authority Requirement				
A1	Letter of no objection (LNO) is obtained from relevant authority;				

³ Equipment Specialists are the prescribed competent persons under section 23 of the Electric Vehicles Charging Act (EVCA) that certifies that the chargers are fit for use.

A2	LTA Approval Label affixed to the EV charger. Please provide serial number of Approval Label found on the respective label under Remarks				
A3	For building with Energy Market Authority Electrical Installation License, letter of consent is obtained from building Licensed Electrical Worker (LEW).				
B	External and environmental checks (with EV Charger power TURNED-OFF at isolator)				
B1	Installed outside hazardous zones where flammable or combustible gas or material may be present.				
B2	Enclosure is not dented, damaged, corroded or in any rusty condition.				
B3	Space around the EV C Charger is adequate for easy access and maintenance work.				
B4	Sealing rubber of all doors are in order, and doors including lockset (if any) can be opened and closed easily.				
B5	No sign of insects inside EV C Charger. Openings or vents are not blocked, no excess foreign particles.				
B6	Detachable parts are not loose or falling off and not in a rusty condition.				
B7	No visible moisture, waterlogging or burnt marks at the EV C Charger and connector charging pins.				
B8	Floor or wall mounting of EV Charger remains rigid and strong.				
B9	Vehicle connector cable, mounting and support is secured and not damaged.				
B10	Electrical warning labels is clear and prominent.				
B11	Source of Distribution Box for EV C Charger is clearly labelled and electrical source Distribution Board (DB) is accessible for operation.				
B12	Bollards or continuous kerb(s) or other means of crash protection is installed to provide adequate protection against moving vehicles.				
B13	Charger specification plate is clear, legible, and prominent according TR25 requirement.				
B14	RRP, Person who has charge and control or Operator (where applicable) of EV C Charger contact details label is legible, and prominent.				
B15	Fail-safe emergency stop button (in red and yellow) is prominent and not damaged. For outdoor installation it shall be weatherproof. Clear directional signs shall be provided for multiple charger installations.				
B16	Adequate lighting for charging operation.				
B17	Inspection label provided as below.				Last inspection date:

	50mm				
	25mm	Date of this inspection			
		Date of next inspection			
		(As recommended in TR25)			
B18	EV Charger 's display and all UI accessories (e.g. press button, RFID reader etc.) are not damaged and are working properly.				
B19	Incoming power supply cable including circuit protective conductor connections and termination(s) are properly made and tightened.				
B20	Measurement of Proximity Pin -Protective Earth resistance value and to be compared with the given value in the IEC Standard.				PP-PE: (Ohm)
B21	Manufacturer handbook and instruction manuals given to the RRP, person who has charge and control and Operator (where applicable) of the EV Charger				
C	Functionality checks and tests (with EV Charger power TURN-ON at isolator)				
C1	Inspect RCCB(s) protecting connecting points shall be at least type A 30mA of symbol  and perform manual trip test to all RCCB(s). For mode 4 chargers, earth leakage protection device trip setting should comply with requirements in 411.5.3L of SS 638:2018.				
C2	Perform the sequence of normal start and stop on every charging point.				
C3	While charging, check EV ventilation fan (if any) is working.				
C4	While charging, test all the fail-safe emergency stop button(s) to ensure it is functioning. (EVSE shall reset to state A upon releasing)				
C5	Perform control pilot short fault simulation for every charging point. (EVSE shall reset to state A when fault is cleared)				
C6	(For DC charger) – connector 1 Perform functionality test for mode 4 charging point (refer to IEC 61851-23). EV Charger is able to complete energisation and deenergisation sequence.				
C7	(For DC charger) – connector 2 (if any) Perform functionality test for mode 4 charging point (refer to IEC 61851-23). EV Charger is able to complete energisation and deenergisation sequence.				
D	Applicable for high powered chargers with thermal management using liquid-cooled cables				
D1	Door interlock test – open respective door of the charger and all its peripherals and the system shall show that the charger is unavailable.				

D2	Emergency stop check – Start charging the EV, press open one of the doors during charging. Did the charge session stop immediately and did the system display an error screen?				
D3	Insulation monitoring device for DC – EVSE OEM to provide system status/report on site and shall comply to 6.4.3.106 of IEC 61851-23.				
D4	Surge protection device – Test/confirm that Type 1 or Type 2 protection is still active and available.				
D5	Cooling unit – Are the inlet and outlet of the cooling unit connected in the right order to the cable?				
D6	Cooling unit – via visual inspection of the cooling unit, no coolant/oil shall be leaking.				
D7	Verify that all connections of CCS cables are tightened.				
E	Additional items not listed but required in the manufacturer’s instructions <i>(Please list accordingly or indicate as NA where appropriate)</i>				
E1					
E2					
E3					

^Measured values where required shall be recorded in this report

If there are more tests carried out on the EV Charger than indicated in this form — for instance, functionality test for three or more connectors or under more test required by manufacturer’s instruction — please append the results of these tests separately as annexes to this certificate.

Requirements for the emergency main isolation shut-off switch (to be completed by the Equipment Specialist)

*First Schedule of the Electric Vehicles Charging (Electric Vehicle Chargers) Regulations 2023
(Applicable only for EV Chargers installed in non-restricted access locations)*

	Description	C	NC	NA	Remarks
1.	Requirements relating to emergency main isolation shut-off switch as found in the First schedule of the <i>Electric Vehicles Charging (Electric Vehicle Chargers) Regulations 2023</i>				

To be conducted by the Licensed Electrical Worker⁴ (LEW)

Adapted from TR 25: 2022 Part 3: Annex D High Powered Charging with permission from Enterprise Singapore

	Description	Compliance			Remarks/ measurement value [^]
		C	NC	NA	
F	Electrical checks and tests				
F1	Perform earth loop impedance test and record value complies with SS 638 (For TT and TNS system).				___ Ohm
F2	Record the incoming power supply and charging cable insulation resistance value is more than 1 M-ohm.				___ M-Ohm
F3	Tripping time of 30 mA RCCB type A (min) as measured by an RCCB tester using AC and DC injection curve is acceptable according to SS 97 tripping time For mode 4 charger, the trip setting should comply with 411.5.3L of SS 638:2018.				0 deg: _____ ms 180 deg: _____ ms
F4	EV Charger installation tally with single line diagram (SLD) provided by the RRP, person who has charge and control or operator (where applicable) of EV Charger . Means of isolation, lockable at OFF position (2P for 1 Phase and 3P/4P for 3 Phase), is provided for maintenance switching.				
F5	Rating of incoming cable from source DB and charging cable are adequate for max rated charging current.				

[^]Measured values where required shall be recorded in this report

Note: Any EV Charger installed in petrol kiosks shall comply with SCDF's requirements

General remarks:

⁴ LEWs are the prescribed persons under section 24 of the Electric Vehicles Charging Act (EVCA) that ensure that the installation of a fixed charger is compliant with the relevant safety standards.

Please note the following:

Inspection and maintenance checks must be carried out based on the following frequencies:

Location of EV Charger	Competent Persons Required	Type of Check	Frequency
Non-restricted access locations [#]	Equipment Specialists	Maintenance	6 months
	Equipment Specialists and LEWs	Inspection	12 months
Restricted access locations*	Equipment Specialists	Maintenance	24 months

[#]Refers to any other location besides restricted access locations

*Refers to bungalows, detached and semi-detached houses, terrace houses that are not strata titled

Date of next inspection : _____

Endorsed by LEW

The results obtained in F (Electrical checks and tests) is acceptable to the best of my knowledge and the EV charger has been installed together with the apparatus and fittings required by TR25:2022.

Name of LEW: _____ Licence No.: _____

Date signature of LEW: _____ Date of installation: _____

Endorsed by ES

I have inspected and tested the EV Charger. To the best of my knowledge, I declare that the EV Charger is *fit and safe / unfit and unsafe for charging EVs.

(Please delete as appropriate)

Name of ES: _____

Company: _____ Designation: _____

Dated signature of ES: _____ Date of certification: _____

Please ensure that the LEW and ES have endorsed this checklist.
--

The certification was witnessed by the RRP or person who has charge and control of the EV Charger.

Name and dated signature of the RRP or person who has charge and control of the EV Charger:

Name: _____ Dated Signature: _____

Note 1 – It is the responsibility of the RRP or the person who has charge and control of the EV Charger to perform the necessary maintenance routines as recommended by the equipment specialist or manufacturer to ensure the safe use of the EV Charger and any potential hazard due to lack of maintenance.

Note 2 – Fault reporting procedure

If any EV Charger is found to be unsafe or unsuitable for operation, the following steps shall be taken:

- e. The supply to the equipment shall be switched off;
- f. The means of isolation shall be off and locked to prevent re-connection of supply;
- g. A clear label notifying users that the equipment is out of service shall be displayed prominently; and
- h. The RRP or person who has charge and control of the EV Chargers shall be informed immediately.

Annex A (Optional)

This annex is optional. It may be appended to the main certificate if there are more tests carried out on the EV Charger than indicated on the main certificate, for instance, functionality test for three or more connectors or under most test required by manufacturer's instruction.

	Description	Compliance			Remarks/ measurement value^
		C	NC	NA	
1					
2					
3					

Form 3:
**Certificate of Fitness for the certification of a non-
fixed EV Charger**

Form 3: Certificate of Fitness for the certification of a non-fixed EV Charger

This checklist is to be used for the purposes of certifying a non-fixed EV Charger as fit for charging.

Purpose of use: Certification for:

(Please tick accordingly)

- A new EV Charger
- A relocated EV Charger

Details of the installation of the EV Charger

- a. EV Charger brand and model: _____
- b. EV Charger manufacturer serial number: _____
- c. EV Charger type-approval ID (if applicable): _____
- d. Name of the person who i) has charge and control (for non-registered EV Charger) or ii) is the Registered Responsible Person (RRP) (for registered EV Charger)

- e. Address where the EV Charger will be primarily be used at:

To be conducted by the Equipment Specialist⁵ (ES)

Adapted from TR 25: 2022 Part 1: Annex B Electrical safety and general requirements with permission from Enterprise Singapore

C – Compliant


NC – Not Compliant

NA – Not Applicable

	Description	Compliance			Remarks/ measurement value [^]
		C	NC	NA	
A	Authority Requirement				
A1	Letter of no objection (LNO) is obtained from relevant authority;				

⁵ Equipment Specialists are the prescribed competent persons under section 23 of the Electric Vehicles Charging Act (EVCA) that certifies that the chargers are fit for use.

A2	LTA Approval Label affixed to the EV charger. Please provide serial number of Approval Label found on the respective label under Remarks				
A3	For building with Energy Market Authority Electrical Installation License, letter of consent is obtained from building Licensed Electrical Worker (LEW).				
A4	Fixed installation of the EV Charger that connects it to the grid is carried out by an LEW.				
B	External and environmental checks (with EV Charger power TURNED-OFF at switched-socket outlet)				
B1	Installed outside hazardous zones where flammable or combustible gas or material may be present.				
B2	Enclosure is not dented, damaged, corroded or in any rusty condition.				
B3	Space around the EV Charger is adequate for easy access and maintenance work.				
B4	Sealing rubber of all doors are in order, and doors including lockset (if any) can be opened and closed easily.				
B5	No sign of insects inside EV Charger. Openings or vents are not blocked, no excess foreign particles.				
B6	Detachable parts are not loose or falling off and not in a rusty condition.				
B7	No visible moisture, waterlogging or burnt marks at the EV Charger and connector charging pins.				
B8	Floor or wall mounting of EV Charger remains rigid and strong.				
B9	Vehicle connector cable, mounting and support is secured and not damaged.				
B10	Electrical warning labels is clear and prominent.				
B11	Source of Distribution Box (DB) for EV Charger is clearly labelled and electrical source DB is accessible for operation.				
B12	Bollards or continuous kerb(s) or other means of crash protection is installed to provide adequate protection against moving vehicles.				
B13	Charger specification plate is clear, legible, and prominent according TR25 requirement.				
B14	RRP, Person who has charge and control or Operator (where applicable) of EV Charger contact details label is legible, and prominent.				
B15	Fail-safe emergency stop button (in red and yellow) is prominent and not damaged. For outdoor installation it shall be weatherproof. Clear directional signs shall be provided for multiple charger installations.				
B16	Adequate lighting for charging operation.				
B17	Inspection label provided as below.				Last inspection date:

	50mm				
	25mm	Date of this inspection			
		Date of next inspection			
		(As recommended in TR25)			
B18	EV Charger's display and all User Interface accessories (e.g. press button, RFID reader etc.) are not damaged and are working properly.				
B19	Incoming power supply cable including circuit protective conductor connections and termination(s) are properly made and tightened.				
B20	Measurement of Proximity Pin (PP) – Protective Earth (PE) resistance value and to be compared with the given value in the IEC Standard.				PP-PE : (Ohm)
B21	Manufacturer handbook and instruction manuals given to the RRP, person who has charge and control and Operator (where applicable) of the EV Charger				
C	Functionality checks and tests (with EV Charger power TURN-ON at isolator)				
C1	Inspect Residual Current Circuit Breaker(s) (RCCB(s)) protecting connecting points shall be at least type A 30mA of symbol  and perform manual trip test to all RCCB(s) for Mode 2/2A*/2B*/3 chargers. <i>*Modes 2A and 2B chargers with galvanic isolation shall be at least type AC</i>				
C2	Perform the sequence of normal start and stop on every charging point.				
C3	While charging, check EV ventilation fan (if any) is working.				
C4	While charging, test all the fail-safe emergency stop button(s) to ensure it is functioning. (EVSE shall reset to state A upon releasing)				
C5	Perform control pilot short fault simulation for every charging point. (EVSE shall reset to state A when fault is cleared)				
C6	(For AC charger) – connector 1 Perform functionality test for mode 2/2A/2B/3 charging point. EV Charger is able to complete energisation and deenergisation sequence.				
C7	(For AC charger) – connector 2 (if any) Perform functionality test for mode 2/2A/2B/3 charging point. EV Charger is able to complete energisation and deenergisation sequence.				
C8	(For DC charger) – connector 1 Perform functionality test for mode 4 charging point (refer to IEC 61851-23).				

	EV Charger is able to complete energisation and deenergisation sequence.				
C9	(For DC charger) – connector 2 (if any) Perform functionality test for mode 4 charging point (refer to IEC 61851-23). EV Charger is able to complete energisation and deenergisation sequence.				
D	Additional items not listed but required in the manufacturer’s instructions <i>(Please list accordingly or indicate as NA where appropriate)</i>				
D1					
D2					
D3					

^Measured values where required shall be recorded in this report

If there are more tests carried out on the EV Charger than indicated in this form — for instance, functionality test for three or more connectors or under most test required by manufacturer’s instruction — please append the results of these tests separately as annexes to this certificate.

General remarks:

Please note the following:

Inspection and maintenance checks must be carried out based on the following frequencies:

Location of EV Charger	Competent Persons Required	Type of Check	Frequency
Restricted access locations*	Equipment Specialists	Maintenance	24 months

*Refers to bungalows, detached and semi-detached houses, terrace houses that are not strata titled

Date of next inspection : _____

(Based on Inspection Frequency as per the table above)

Endorsed by ES

I have inspected and tested the EV Charger. To the best of my knowledge, I declare that the EV Charger is *fit and safe / unfit and unsafe for charging EVs.

(Please delete as appropriate)

Name of ES: _____

Company: _____ Designation: _____

Dated signature of ES: _____ Date of certification: _____

Please ensure that the ES has endorsed this checklist.

The certification was witnessed by the RRP or person who has charge and control of the EV Charger.

Name and dated signature of the RRP or person who has charge and control of the EV Charger:

Name: _____ Dated Signature: _____

Note 1 – It is the responsibility of the RRP or person who has charge and control of the EV Chargers to perform the necessary maintenance routines as recommended by the equipment specialist or manufacturer to ensure the safe use of the EV Charger and any potential hazard due to lack of maintenance.

Note 2 – Fault reporting procedure

If any EV Charger is found to be unsafe or unsuitable for operation, the following steps shall be taken:

- a. The supply to the equipment shall be switched off;
- b. The means of isolation shall be off and locked to prevent re-connection of supply;
- c. A clear label notifying users that the equipment is out of service shall be displayed prominently; and
- d. The RRP or person who has charge and control of the EV Chargers shall be informed immediately.

Annex A (Optional)

This annex is optional. It may be appended to the main certificate if there are more tests carried out on the EV CHARGER than indicated on the main certificate, for instance, functionality test for three or more connectors or under most test required by manufacturer's instruction.

	Description	Compliance			Remarks/ measurement value^
		C	NC	NA	
1					
2					
3					

Form A:
Certificate for the maintenance of a fixed EV Charger
(power rating of <200kW) without any Thermal
Management System

Form A: Certificate for the maintenance of a fixed EV Charger (power rating of <200kW) without any Thermal Management System

This checklist is to be used for the purposes of maintenance for an EV Charger.

Details of the maintenance check for the EV Charger

- a. EV Charger brand and model: _____
- b. EV Charger manufacturer serial number: _____
- c. EV Charger type-approval ID (if applicable): _____
- d. Name of the registered responsible person (RRP) of the EV Charger:
The RRP refers to the person that has applied for the registration for the EV Charger.

- e. Address where the EV Charger is installed
(Please indicate the carpark lot number and the floor level where applicable)

To be conducted by the Equipment Specialist⁶ (ES)

Adapted from TR 25: 2022 Part 1: Annex C Electrical safety and general requirements with permission from Enterprise Singapore



C – Compliant

NC – Not Compliant

NA – Not Applicable

	Description	Compliance			Remarks/ measurement value [^]
		C	NC	NA	
A	Authority Requirement				
A1	No parts replacement or modification to EV Charger installation.				
B	External and environmental checks (with EV Charger power TURN-OFF at isolator)				
B1	Installed outside hazardous zones where flammable or combustible gas or material may be present.				
B2	Enclosure is not dented, damaged, corroded or in any rusty condition.				
B3	Space around the EV Charger is adequate for easy access and maintenance work.				

⁶ Equipment Specialists are the prescribed competent persons under section 23 of the Electric Vehicles Charging Act (EVCA) that certifies that the chargers are fit for use.

B4	Sealing rubber of all doors are in order, and doors including lockset (if any) can be opened and closed easily.				
B5	No sign of insects inside EV Charger. Openings or vents are not blocked, no excess foreign particles.				
B6	Detachable parts are not loose or falling off and not in a rusty condition.				
B7	No visible moisture, waterlogging or burnt marks at the EV Charger and connector charging pins.				
B8	Floor or wall mounting of EV Charger remains rigid and strong.				
B9	Vehicle connector cable, mounting and support is secured and not damaged.				
B10	Electrical warning labels is clear and prominent.				
B11	Source of Distribution Box (DB) for EV Charger is clearly labelled and electrical source DB is accessible for operation.				
B12	Bollards or continuous kerb(s) or other means of crash protection is installed to provide adequate protection against moving vehicles.				
B13	Charger specification plate is clear, legible, and prominent according TR25 requirement.				
B14	RRP or Operator of EV Charger contact details label is legible, and prominent.				
B15	Fail-safe emergency stop button (in red and yellow) is prominent and not damaged. For outdoor installation it shall be weatherproof. Clear directional signs shall be provided for multiple charger installations.				
B16	Adequate lighting for charging operation.				
B17	<p>Inspection label provided as below.</p> 				Last inspection date:
B18	EV Charger's display and all User Interface accessories (e.g. press button, RFID reader etc.) are not damaged and are working properly.				
B19	Incoming power supply cable including circuit protective conductor connections and termination(s) are properly made and tightened.				
B20	Measurement of Proximity Pin (PP) – Protective Earth (PE) resistance value and to be compared with the given value in the IEC Standard.				PP-PE : (Ohm)
C	Functionality checks and tests (with EV Charger power TURN-ON at isolator)				
C1	Inspect RCCB(s) protecting connecting points shall be at least type A 30mA of symbol  and				Quarterly trip test sticker (to SS 638) to

	perform manual trip test to all RCCB(s) for Mode 2/2A*/2B*/3 chargers. For mode 4 chargers, earth leakage protection device trip setting should comply with requirements in 411.5.3L of SS 638:2018. <i>*Modes 2A and 2B chargers with galvanic isolation shall be at least type AC</i>				be pasted next to the RCCB
C2	Perform the sequence of normal start and stop on every charging point.				
C3	While charging, check EV ventilation fan (if any) is working.				
C4	While charging, test all the fail-safe emergency stop button(s) to ensure it is functioning. (EVSE shall reset to state A upon releasing)				
C5	Perform control pilot short fault simulation for every charging point. (EVSE shall reset to state A when fault is cleared)				
C6	(For AC charger) – connector 1 Perform functionality test for mode 2/2A/2B/3 charging point. EV Charger is able to complete energisation and deenergisation sequence.				
C7	(For AC charger) – connector 2 (if any) Perform functionality test for mode 2/2A/2B/3 charging point. EV Charger is able to complete energisation and deenergisation sequence.				
C8	(For DC charger) – connector 1 Perform functionality test for mode 4 charging point (refer to IEC 61851-23). EV Charger is able to complete energisation and deenergisation sequence.				
C9	(For DC charger) – connector 2 (if any) Perform functionality test for mode 4 charging point (refer to IEC 61851-23). EV Charger is able to complete energisation and deenergisation sequence.				
D	Additional items not listed but required in the manufacturer's instructions <i>(Please list accordingly or indicate as NA where appropriate)</i>				
D1					
D2					
D3					

^Measured values where required shall be recorded in this report

Note: Any EV Charger installed in petrol kiosks shall comply with SCDF's requirements

General remarks:

Please note the following:

Inspection and maintenance checks must be carried out based on the following frequencies:

Location of EV Charger	Competent Persons Required	Type of Check	Frequency
Non-restricted access locations [#]	Equipment Specialists	Maintenance	6 months
	Equipment Specialists and LEWs	Inspection	12 months
Restricted access locations*	Equipment Specialists	Maintenance	24 months

[#]Refers to any other location besides restricted access locations

*Refers to bungalows, detached and semi-detached houses, terrace houses that are not strata titled

Date of next inspection : _____

Endorsed by ES

I have inspected and tested the EV Charger. To the best of my knowledge, I declare that the EV Charger is *fit and safe / unfit and unsafe for charging EVs.

(Please delete as appropriate)

Name of ES: _____

Company: _____ Designation: _____

Dated signature of ES: _____ Date of inspection: _____

The maintenance check was witnessed by the RRP.

Name and dated signature of the RRP of the EV Charger:

Name: _____ Dated Signature: _____

Note 1 – It is the responsibility of the RRP or person who has charge and control of the EV Chargers to perform the necessary maintenance routines as recommended by the equipment specialist or manufacturer to ensure the safe use of the EV Charger and any potential hazard due to lack of maintenance.

Note 2 – Fault reporting procedure

As of 8 Dec 2023

If any EV Charger is found to be unsafe or unsuitable for operation, the following steps shall be taken:

- a. The supply to the equipment shall be switched off;
- b. The means of isolation shall be off and locked to prevent re-connection of supply;
- c. A clear label notifying users that the equipment is out of service shall be displayed prominently; and
- d. The RRP shall be informed immediately.

**Form B:
Certificate for the maintenance of a non-fixed EV
Charger**

Form B: Certificate for the maintenance of a non-fixed EV Charger

This checklist is to be used for the purposes of maintenance of a non-fixed EV Charger.

Details of the maintenance check for the EV Charger

- a. EV Charger brand and model: _____
- b. EV Charger manufacturer serial number: _____
- c. EV Charger type-approval ID (if applicable): _____
- d. Name of the registered responsible person (RRP) of the EV Charger:
The RRP refers to the person that has applied for the registration for the EV Charger.

- e. Address where EV Charger will primarily be used

To be conducted by the Equipment Specialist⁷ (ES)

Adapted from TR 25: 2022 Part 1: Annex C Electrical safety and general requirements with permission from Enterprise Singapore



C – Compliant

NC – Not Compliant

NA – Not Applicable

	Description	Compliance			Remarks/ measurement value [^]
		C	NC	NA	
A	Authority Requirement				
A1	No parts replacement or modification to EV Charger.				
B	External and environmental checks (with EV Charger power TURN-OFF at switched socket-outlet)				
B1	Installed outside hazardous zones where flammable or combustible gas or material may be present.				
B2	Enclosure is not dented, damaged, corroded or in any rusty condition.				
B3	Space around the EV Charger is adequate for easy access and maintenance work.				

⁷ Equipment Specialists are the prescribed competent persons under section 23 of the Electric Vehicles Charging Act (EVCA) that certifies that the chargers are fit for use.

B4	Sealing rubber of all doors are in order, and doors including lockset (if any) can be opened and closed easily.				
B5	No sign of insects inside EV Charger. Openings or vents are not blocked, no excess foreign particles.				
B6	Detachable parts are not loose or falling off and not in a rusty condition.				
B7	No visible moisture, waterlogging or burnt marks at the EV Charger and connector charging pins.				
B8	Floor or wall mounting of EV Charger remains rigid and strong.				
B9	Vehicle connector cable, mounting and support is secured and not damaged.				
B10	Electrical warning labels is clear and prominent.				
B11	Source of DB for EV Charger is clearly labelled and electrical source DB is accessible for operation.				
B12	Bollards or continuous kerb(s) or other means of crash protection is installed to provide adequate protection against moving vehicles.				
B13	Charger specification plate is clear, legible, and prominent according TR25 requirement.				
B14	RRP's or Operator contact details label is legible, and prominent.				
B15	Fail-safe emergency stop button (in red and yellow) is prominent and not damaged. For outdoor installation it shall be weatherproof. Clear directional signs shall be provided for multiple charger installations.				
B16	Adequate lighting for charging operation.				
B17	<p>Inspection label provided as below.</p> 				Last inspection date:
B18	EV Charger's display and all User Interface accessories (e.g. press button, RFID reader etc.) are not damaged and are working properly.				
B19	Incoming power supply cable including circuit protective conductor connections and termination(s) are properly made and tightened.				
B20	Measurement of Proximity Pin (PP) – Protective Earth (PE) resistance value and to be compared with the given value in the IEC Standard.				PP-PE : (Ohm)
C	Functionality checks and tests (with EV Charger power TURN-ON at isolator)				
C1	<p>Inspect RCCB(s) protecting connecting points shall be at least type A 30mA of symbol  and perform manual trip test to all RCCB(s) for Mode</p>				Quarterly trip test sticker (to SS 638) to be pasted next to the RCCB

	2/2A*/2B*/3 chargers. For mode 4 chargers, earth leakage protection device trip setting should comply with requirements in 411.5.3L of SS 638:2018. <i>*Modes 2A and 2B chargers with galvanic isolation shall be at least type AC</i>				
C2	Perform the sequence of normal start and stop on every charging point.				
C3	While charging, check EV ventilation fan (if any) is working.				
C4	While charging, test all the fail-safe emergency stop button(s) to ensure it is functioning. (EVSE shall reset to state A upon releasing)				
C5	Perform control pilot short fault simulation for every charging point. (Charger shall reset to state A when fault is cleared)				
C6	(For AC charger) – connector 1 Perform functionality test for mode 2/2A/2B/3 charging point. EV Charger is able to complete energisation and deenergisation sequence.				
C7	(For AC charger) – connector 2 (if any) Perform functionality test for mode 2/2A/2B/3 charging point. EV Charger is able to complete energisation and deenergisation sequence.				
D	Additional items not listed but required in the manufacturer’s instructions <i>(Please list accordingly or indicate as NA where appropriate)</i>				
D1					
D2					
D3					

^Measured values where required shall be recorded in this report

Note 1: Any EV Charger installed in petrol kiosks shall comply with SCDF’s requirements

General remarks:

Please note the following:

Inspection and maintenance checks must be carried out based on the following frequencies:

Location of EV Charger	Competent Persons Required	Type of Check	Frequency
------------------------	----------------------------	---------------	-----------

As of 8 Dec 2023

Restricted access locations*	Equipment Specialists	Maintenance	24 months
-------------------------------------	-----------------------	-------------	-----------

*Refers to bungalows, detached and semi-detached houses, terrace houses that are not strata-titled

Date of next inspection : _____

Endorsed by ES

I have inspected and tested the EV Charger. To the best of my knowledge, I declare that the EV Charger is *fit and safe / unfit and unsafe for charging EVs.

(Please delete as appropriate)

Name of ES: _____

Company: _____ Designation: _____

Dated signature of ES: _____ Date of inspection: _____

The maintenance check was witnessed by the RRP.

Name and dated signature of the RRP of the EV Charger:

Name: _____ Dated Signature: _____

Note 1 – It is the responsibility of the RRP or person who has charge and control of the EV Chargers to perform the necessary maintenance routines as recommended by the equipment specialist or manufacturer to ensure the safe use of the EV Charger and any potential hazard due to lack of maintenance.

Note 2 – Fault reporting procedure

If any EV Charger is found to be unsafe or unsuitable for operation, the following steps shall be taken:

- e. The supply to the equipment shall be switched off;
- f. The means of isolation shall be off and locked to prevent re-connection of supply;
- g. A clear label notifying users that the equipment is out of service shall be displayed prominently; and
- h. The RRP shall be informed immediately.

Form C:

Certificate for the maintenance of a fixed high-powered (power rating of >150kW) EV Charger with a Thermal Management System

**Form C: Certificate for the maintenance of a fixed high-powered (power rating of >150kW)
EV Charger with a Thermal Management System**

This checklist is to be used for the purposes of maintenance for a high-powered EV Charger.

Details of the maintenance check for the EV Charger

- a. EV Charger brand and model: _____
- b. EV Charger manufacturer serial number: _____
- c. EV Charger type-approval ID (if applicable): _____
- d. Name of the registered responsible person (RRP) of the EV Charger:
The RRP refers to the person that has applied for the registration for the EV Charger.

- e. Address of where EV Charger is installed
(Please indicate the carpark lot number and the floor level where applicable)

To be conducted by the Equipment Specialist⁸ (ES)

Adapted from TR 25: 2022 Part 3: Annex E High Powered Charging with permission from Enterprise Singapore



C – Compliant

NC – Not Compliant

NA – Not Applicable

	Description	Compliance			Remarks/ measurement value [^]
		C	NC	NA	
A	Authority Requirement				
A1	No parts replacement or modification to EV Charger installation.)				
B	External and environmental checks (with EV Charger power TURNED-OFF at isolator)				
B1	Installed outside hazardous zones where flammable or combustible gas or material may be present.				
B2	Enclosure is not dented, damaged, corroded or in any rusty condition.				
B3	Space around the EV Charger is adequate for easy access and maintenance work.				

⁸ Equipment Specialists are the prescribed competent persons under section 23 of the Electric Vehicles Charging Act (EVCA) that certifies that the chargers are fit for use.

B4	Sealing rubber of all doors are in order, and doors including lockset (if any) can be opened and closed easily.				
B5	No sign of insects inside EV Charger. Openings or vents are not blocked, no excess foreign particles.				
B6	Detachable parts are not loose or falling off and not in a rusty condition.				
B7	No visible moisture, waterlogging or burnt marks at the EV Charger and connector charging pins.				
B8	Floor or wall mounting of EV Charger remains rigid and strong.				
B9	Vehicle connector cable, mounting and support is secured and not damaged.				
B10	Electrical warning labels is clear and prominent.				
B11	Source of Distribution Box (DB) for EV Charger is clearly labelled and electrical source DB is accessible for operation.				
B12	Bollards or continuous kerb(s) or other means of crash protection is installed to provide adequate protection against moving vehicles.				
B13	Charger specification plate is clear, legible, and prominent according TR25 requirement.				
B14	RRP or Operator of EVSE's contact details label is legible, and prominent.				
B15	Fail-safe emergency stop button (in red and yellow) is prominent and not damaged. For outdoor installation it shall be weatherproof. Clear directional signs shall be provided for multiple charger installations.				
B16	Adequate lighting for charging operation.				
B17	<p>Inspection label provided as below.</p> 				Last inspection date:
B18	EV Charger's display and all User Interface accessories (e.g. press button, RFID reader etc.) are not damaged and are working properly.				
B19	Incoming power supply cable including circuit protective conductor connections and termination(s) are properly made and tightened.				
B20	Measurement of Proximity Pin -Protective Earth resistance value and to be compared with the given value in the IEC Standard.				PP-PE: (Ohm)
C	Functionality checks and tests (with EV Charger power TURN-ON at isolator)				
C1	Inspect RCCB(s) protecting connecting points shall be at least type A 30mA of symbol  and				

	perform manual trip test to all RCCB(s). For mode 4 chargers, earth leakage protection device trip setting should comply with requirements in 411.5.3L of SS 638:2018.				
C2	Perform the sequence of normal start and stop on every charging point.				
C3	While charging, check EV ventilation fan (if any) is working.				
C4	While charging, test all the fail-safe emergency stop button(s) to ensure it is functioning. (EVSE shall reset to state A upon releasing)				
C5	Perform control pilot short fault simulation for every charging point. (EV Charger shall reset to state A upon releasing)				
C6	(For DC charger) – connector 1 Perform functionality test for mode 4 charging point (refer to IEC 61851-23). EV Charger is able to complete energisation and deenergisation sequence.				
C7	(For DC charger) – connector 2 (if any) Perform functionality test for mode 4 charging point (refer to IEC 61851-23). EV Charger is able to complete energisation and deenergisation sequence.				
D	Applicable for high powered chargers with thermal management using liquid-cooled cables				
D1	Door interlock test – open respective door of the charger and all its peripherals and the system shall show that the charger is unavailable.				
D2	Emergency stop check – Start charging the EV, press open one of the doors during charging. Did the charge session stop immediately and did the system display an error screen?				
D3	Insulation monitoring device for DC – EVSE OEM to provide system status/report on site and shall comply to 6.4.3.106 of IEC 61851-23.				
D4	Surge protection device – Test/confirm that Type 1 or Type 2 protection is still active and available.				
D5	Cooling unit – Are the inlet and outlet of the cooling unit connected in the right order to the cable?				
D6	Cooling unit – via visual inspection of the cooling unit, no coolant/oil shall be leaking.				
D7	Verify that all connections of CCS cables are tightened.				
E	Additional items not listed but required in the manufacturer's instructions <i>(Please list accordingly or indicate as NA where appropriate)</i>				
E1					
E2					
E3					

^Measured values where required shall be recorded in this report

As of 8 Dec 2023

Note: Any EV Charger installed in petrol kiosks shall comply with SCDF's requirements.

General remarks:

Please note the following:

Inspection and maintenance checks must be carried out based on the following frequencies:

Location of EV Charger	Competent Persons Required	Type of Check	Frequency
Non-restricted access locations [#]	Equipment Specialists	Maintenance	6 months
	Equipment Specialists and LEWs	Inspection	12 months
Restricted access locations*	Equipment Specialists	Maintenance	24 months

[#]Refers to any other location besides restricted access locations

*Refers to bungalows, detached and semi-detached houses, terrace houses that are not strata titled

Date of next inspection : _____

Endorsed by Equipment Specialist⁹

I have inspected and tested the EV Charger. To the best of my knowledge, I declare that the EV Charger is *fit and safe / unfit and unsafe for charging EVs.

(Please delete as appropriate)

Name of ES: _____

Company: _____ Designation: _____

Dated signature of ES: _____ Date of certification: _____

The inspection was witnessed by the RRP of the EV Charger.

Name and dated signature of the RRP.

Name: _____ Dated Signature: _____

⁹ Equipment Specialists are the prescribed competent persons under section 23 of the Electric Vehicles Charging Act (EVCA) that certifies that the chargers are fit for use.

Note 1 – It is the responsibility of the RRP or person who has charge and control of the EV Chargers to perform the necessary maintenance routines as recommended by the equipment specialist or manufacturer to ensure the safe use of the EV Charger and any potential hazard due to lack of maintenance.

Note 2 – Fault reporting procedure

If any EV Charger is found to be unsafe or unsuitable for operation, the following steps shall be taken:

- a. The supply to the equipment shall be switched off;
- b. The means of isolation shall be off and locked to prevent re-connection of supply;
- c. A clear label notifying users that the equipment is out of service shall be displayed prominently; and
- d. The RRP shall be informed immediately.

Form D:

**Certificate for the periodic inspection (every year) of
a fixed EV Charger (power rating of <200kW) without
any Thermal Management System**

Form D: Certificate for the periodic inspection of a fixed EV Charger (power rating of <200kW) without any Thermal Management System

*This checklist is to be used for the purposes of inspecting an EV Charger (applicable only for EV Charger in **non-restricted access locations**)*

Details of the annual inspection of the EV Charger

- a. EV Charger brand and model: _____
- b. EV Charger manufacturer serial number: _____
- c. EV Charger type-approval ID (if applicable): _____
- d. Name of the registered responsible person (RRP) of the EV Charger:
The RRP refers to the individual that has applied for the registration for the EV Charger.

- e. Address of where the EV Charger is installed:
(Please indicate the carpark lot number and the floor level where applicable)

To be conducted by the Licensed Electrical Worker¹⁰ (LEW)

Adapted from TR 25: 2022 Part 1: Annex D Electrical safety and general requirements with permission from Enterprise Singapore

C – Compliant

NC – Not Compliant

NA – Not Applicable

	Description	Compliance			Remarks/ measurement value [^]
		C	NC	NA	
A	Electrical checks and tests				
A1	Incoming power supply cable including circuit protective conductor connections and termination are properly made and tightened.				
A2	Perform earth loop impedance test and record value complies with SS 638.				Ohm
A3	Record the charging cable insulation resistance value is more than 1 M-Ohm.				M-ohm

¹⁰ LEWs are the prescribed persons under section 24 of the Electric Vehicles Charging Act (EVCA) that ensure that the installation of a fixed charger is compliant with the relevant safety standards.

A4	Tripping time of 30 mA RCCB type A (min) as measured by an RCCB tester using AC and DC injection is acceptable according to manufacturer tripping curve.				
A5	Earthing and bonding for EV Charger complies with SS 638.				

^Measured values where required shall be recorded in this report

Note: Any EV Charger installed in petrol kiosks shall comply with SCDF's requirements

General remarks:

Please note the following:

Inspection and maintenance checks must be carried out based on the following frequencies:

Location of EV Charger	Competent Persons Required	Type of Check	Frequency
Non-restricted access locations [#]	Equipment Specialists	Maintenance	6 months
	Equipment Specialists and LEWs	Inspection	12 months
Restricted access locations [*]	Equipment Specialists	Maintenance	24 months

[#]Refers to any other location besides restricted access locations

^{*}Refers to bungalows, detached and semi-detached houses, terrace houses that are not strata titled

Date of next inspection : _____

Endorsed by LEW

The results obtained in A (Electrical checks and tests) is acceptable to the best of my knowledge.

Name of LEW: _____ Licence No.: _____

Date signature of LEW: _____ Date of installation: _____

As of 8 Dec 2023

Endorsed by Equipment Specialist(ES)¹¹

I have inspected and tested the EV Charger. To the best of my knowledge, I declare that the EV Charger is *fit and safe / unfit and unsafe for charging EVs.

(Please delete as appropriate)

Name of ES: _____

Company: _____ Designation: _____

Dated signature of ES: _____ Date of certification: _____

The inspection was witnessed by the RRP of the EV Charger.

Name and dated signature of the RRP of the EV Charger:

Name: _____ Dated Signature: _____

Note 1 – It is the responsibility of the RRP or person who has charge and control of the EV Chargers to perform the necessary maintenance routines as recommended by the equipment specialist or manufacturer to ensure the safe use of the EV Charger and any potential hazard due to lack of maintenance.

Note 2 – Fault reporting procedure

If any EV Charger is found to be unsafe or unsuitable for operation, the following steps shall be taken:

- e. The supply to the equipment shall be switched off;
- f. The means of isolation shall be off and locked to prevent re-connection of supply;
- g. A clear label notifying users that the equipment is out of service shall be displayed prominently; and
- h. The RRP shall be informed immediately.

¹¹ Equipment Specialists are the prescribed competent persons under section 23 of the Electric Vehicles Charging Act (EVCA) that certifies that the chargers are fit for use.

Form E:

**Certificate for the periodic inspection (every year) of
a fixed high-powered (power rating of >150kW) EV
Charger with a Thermal Management System**

Form E: Certificate for the periodic inspection (every year) of a fixed high-powered (power rating of >150kW) EV Charger with a Thermal Management System

*This checklist is to be used for the purposes of inspecting a high-powered EV C Charger (applicable only for EV Chargers in **non-restricted access locations**)*

Details of the annual inspection for the EV Charger

- a. EV Charger brand and model: _____
- b. EV Charger manufacturer serial number: _____
- c. EV Charger type-approval ID (if applicable): _____
- d. Name of the registered responsible person (RRP) of the EV Charger:
The RRP refers to the person that has applied for the registration for the EV Charger.

- e. Address of where the EV Charger is installed:
(Please indicate the carpark lot number and the floor level where applicable)

To be conducted by the Licensed Electrical Worker¹² (LEW)

Adapted from TR 25: 2022 Part 3: Annex D Electrical safety and general requirements with permission from Enterprise Singapore

- C – Compliant
- NC – Not Compliant
- NA – Not Applicable

	Description	Compliance			Remarks/ measurement value [^]
		C	NC	NA	
A	Electrical checks and tests				
F1	Incoming power supply cable including circuit protective conductor connections and termination are properly made and tightened.				
F2	Perform earth loop impedance test and record value complies with SS 638.				Ohm
F3	Record the charging cable insulation resistance value is more than 1 M-Ohm				M-Ohm

¹² LEWs are the prescribed persons under section 24 of the Electric Vehicles Charging Act (EVCA) that ensure that the installation of a fixed charger is compliant with the relevant safety standards.

F4	Tripping time of 30 mA RCCB type A (min) as measured by an RCCB tester using AC & DC injection curve is acceptable according to SS 97 tripping time for mode 2 and mode 3 chargers. For mode 4 charger, the trip setting shall comply with 411.5.3L of SS 638:2018				
F5	Earthing and bonding for EV Charger complies with SS 638				

^Measured values where required shall be recorded in this report

Note: Any EV Charger installed in petrol kiosks shall comply with SCDF's requirements

General remarks:

Please note the following:

Inspection and maintenance checks must be carried out based on the following frequencies:

Location of EV Charger	Competent Persons Required	Type of Check	Frequency
Non-restricted access locations [#]	Equipment Specialists	Maintenance	6 months
	Equipment Specialists and LEWs	Inspection	12 months
Restricted access locations [*]	Equipment Specialists	Maintenance	24 months

[#]Refers to any other location besides restricted access locations

^{*}Refers to bungalows, detached and semi-detached houses, terrace houses that are not strata titled

Date of next inspection : _____

Endorsed by LEW

I have inspected and tested the EV Charger in accordance with the procedure and standard set out in the checklist above.

Name of LEW: _____ Licence No.: _____

Date signature of LEW: _____ Date of installation: _____

Endorsed by ES

I have inspected and tested the EV Charger. To the best of my knowledge, I declare that the EV Charger is *fit and safe / unfit and unsafe for charging EVs.

(Please delete as appropriate)

Name of ES: _____

Company: _____ Designation: _____

Dated signature of ES: _____ Date of inspection: _____

The annual inspection was witnessed by the RRP of the EV Charger.

Name and dated signature of the RRP of the EV Charger:

Name: _____ Dated Signature: _____

Note 1 – It is the responsibility of the RRP or person who has charge and control of the EV Chargers to perform the necessary maintenance routines as recommended by the equipment specialist or manufacturer to ensure the safe use of the EV Charger and any potential hazard due to lack of maintenance.

Note 2 – Fault reporting procedure

If any EV Charger is found to be unsafe or unsuitable for operation, the following steps shall be taken:

- a. The supply to the equipment shall be switched off;
- b. The means of isolation shall be off and locked to prevent re-connection of supply;
- c. A clear label notifying users that the equipment is out of service shall be displayed prominently; and
- d. The RRP shall be informed immediately.

Form 1A:

**Checklist for the safety check of a modified fixed EV
Charger (power rating of <200kW) without any
Thermal Management System**

Form 1A: Checklist for the safety check of a modified fixed EV Charger (power rating of <200kW) without any Thermal Management System

Purpose of use: Safety checks for any modified fixed EV Charger before it is first used to charge an Electric Vehicle

Details of the EV Charger

- a. EV Charger brand and model: _____
- b. EV Charger manufacturer serial number: _____
- c. EV Charger type-approval ID (if applicable): _____
- d. Name of the registered responsible person (RRP) of the EV Charger:

- e. Address where EV Charger is installed:
(Please indicate the carpark lot number and the floor level where applicable)


To be conducted by the Equipment Specialist¹³ (ES)


Adapted from TR 25: 2022 Part 1: Annex B Electrical safety and general requirements with permission from Enterprise Singapore

- C – Compliant
- NC – Not Compliant
- NA – Not Applicable

	Description	Compliance			Remarks/ measurement value [^]
		C	NC	NA	
A	Authority Requirement				
A1	LTA Alteration Approval Label affixed to the EV charger. Please provide Alteration Approval Code found on the respective label under Remarks.				
A2	For building with Energy Market Authority Electrical Installation License, letter of consent is obtained from building Licensed Electrical Worker (LEW).				
B	External and environmental checks (with EV Charger power TURNED-OFF at isolator)				
B1	Installed outside hazardous zones where flammable or combustible gas or material may be present.				

¹³ Equipment Specialists are the prescribed competent persons under section 23 of the Electric Vehicles Charging Act (EVCA) that certifies that the chargers are fit for use.

B2	Enclosure is not dented, damaged, corroded or in any rusty condition.				
B3	Space around the EV Charger is adequate for easy access and maintenance work.				
B4	Sealing rubber of all doors are in order, and doors including lockset (if any) can be opened and closed easily.				
B5	No sign of insects inside EV Charger. Openings or vents are not blocked, no excess foreign particles.				
B6	Detachable parts are not loose or falling off and not in a rusty condition.				
B7	No visible moisture, waterlogging or burnt marks at the EV Charger and connector charging pins.				
B8	Floor or wall mounting of EV Charger remains rigid and strong.				
B9	Vehicle connector cable, mounting and support is secured and not damaged.				
B10	Electrical warning labels is clear and prominent.				
B11	Source of Distribution Box (DB) for EV Charger is clearly labelled and electrical source DB is accessible for operation.				
B12	Bollards or continuous kerb(s) or other means of crash protection is installed to provide adequate protection against moving vehicles.				
B13	Charger specification plate is clear, legible, and prominent according TR25 requirement.				
B14	RRP or Operator (where applicable) of EV Charger contact details label is legible, and prominent.				
B15	Fail-safe emergency stop button (in red and yellow) is prominent and not damaged. For outdoor installation it shall be weatherproof. Clear directional signs shall be provided for multiple charger installations.				
B16	Adequate lighting for charging operation.				
B17	<p>Inspection label provided as below.</p> 				Last inspection date:
B18	EV Charger's display and all User Interface accessories (e.g. press button, RFID reader etc.) are not damaged and are working properly.				
B19	Incoming power supply cable including circuit protective conductor connections and termination(s) are properly made and tightened.				
B20	Measurement of Proximity Pin (PP) – Protective Earth (PE) resistance value and to be compared with the given value in the IEC Standard.				PP-PE : (Ohm)

B21	Manufacturer handbook and instruction manuals given to the RRP and Operator (where applicable) of the EV Charger				
C	Functionality checks and tests (with EV Charger power TURN-ON at isolator)				
C1	Inspect Residual Current Circuit Breaker(s) (RCCB(s)) protecting connecting points shall be at least type A 30mA of symbol  and perform manual trip test to all RCCB(s) for Mode 2/2A*/2B*/3 chargers. For mode 4 chargers, earth leakage protection device trip setting should comply with requirements in 411.5.3L of SS 638:2018. <i>*Modes 2A and 2B chargers with galvanic isolation shall be at least type AC</i>				
C2	Perform the sequence of normal start and stop on every charging point.				
C3	While charging, check EV ventilation fan (if any) is working.				
C4	While charging, test all the fail-safe emergency stop button(s) to ensure it is functioning. (EVSE shall reset to state A upon releasing)				
C5	Perform control pilot short fault simulation for every charging point. (EVSE shall reset to state A when fault is cleared)				
C6	(For AC charger) – connector 1 Perform functionality test for mode 2/2A/2B/3 charging point. EV Charger is able to complete energisation and deenergisation sequence.				
C7	(For AC charger) – connector 2 (if any) Perform functionality test for mode 2/2A/2B/3 charging point. EV Charger is able to complete energisation and deenergisation sequence.				
C8	(For DC charger) – connector 1 Perform functionality test for mode 4 charging point (refer to IEC 61851-23). EV Charger is able to complete energisation and deenergisation sequence.				
C9	(For DC charger) – connector 2 (if any) Perform functionality test for mode 4 charging point (refer to IEC 61851-23). EV Charger is able to complete energisation and deenergisation sequence.				
D	Additional items not listed but required in the manufacturer's instructions <i>(Please list accordingly or indicate as NA where appropriate)</i>				
D1					
D2					
D3					

^Measured values where required shall be recorded in this report

As of 8 Dec 2023

If there are more tests carried out on the EV Charger than indicated in this form — for instance, functionality test for three or more connectors or under most test required by manufacturer's instruction — please append the results of these tests separately as annexes to this certificate.

Requirements for the emergency main isolation shut-off switch (to be completed by the Equipment Specialist)

*First Schedule of the Electric Vehicles Charging (Electric Vehicle Chargers) Regulations 2023
(Applicable only for EV Charger s installed in non-restricted access locations)*

	Description	C	NC	NA	Remarks
1.	Requirements relating to emergency main isolation shut-off switch as found in the First schedule of the <i>Electric Vehicles Charging (Electric Vehicle Chargers) Regulations 2023</i>				

To be conducted by the Licensed Electrical Worker¹⁴ (LEW)

Adapted from TR 25: 2022 Part 1: Annex B Electrical safety and general requirements with permission from Enterprise Singapore

	Description	Compliance			Remarks/ measurement value [^]
		C	NC	NA	
E	Electrical checks and tests				
E1	Perform earth loop impedance test and record value complies with SS 638 (For TT and TNS system).				Ohm
E2	Record the incoming power supply and charging cable insulation resistance value is more than 1 M-ohm.				M-Ohm
E3	Tripping time of 30 mA RCCB type A (min) as measured by an RCCB tester using AC and DC injection curve is acceptable according to SS 97 tripping time for mode 2 and mode 3 chargers. For mode 4 charger, the trip setting should comply with 411.5.3L of SS 638:2018.				0 deg: _____ ms 180 deg: _____ ms
E4	EV Charger installation tally with single line diagram (SLD) provided by the RRP or Operator. Means of isolation, lockable at OFF position (2P for 1 Phase and 3P/4P for 3 Phase), is provided for maintenance switching.				
E5	Rating of incoming cable from source DB and charging cable are adequate for max rated charging current.				

[^]Measured values where required shall be recorded in this report

Note: Any EV Charger installed in petrol kiosks shall comply with SCDF's requirements

General remarks:

¹⁴ LEWs are the prescribed persons under section 24 of the Electric Vehicles Charging Act (EVCA) that ensure that the installation of a fixed charger is compliant with the relevant safety standards.

Please note the following:

Inspection and maintenance checks must be carried out based on the following frequencies:

Location of EV Charger	Competent Persons Required	Type of Check	Frequency
Non-restricted access locations [#]	Equipment Specialists	Maintenance	6 months
	Equipment Specialists and LEWs	Inspection	12 months
Restricted access locations*	Equipment Specialists	Maintenance	24 months

[#]Refers to any other location besides restricted access locations

*Refers to bungalows, detached and semi-detached houses, terrace houses that are not strata titled

Date of next inspection : _____

(Based on Inspection Frequency as per the table above)

Endorsed by LEW

The results obtained in E (Electrical checks and tests) is acceptable to the best of my knowledge and the EV charger has been installed together with the apparatus and fittings required by TR25:2022.

Name of LEW: _____ Licence No.: _____

Date signature of LEW: _____ Date of installation: _____

Endorsed by ES

I have inspected and tested the EV Charger. To the best of my knowledge, I declare that the EV Charger is *fit and safe / unfit and unsafe for charging EVs.

(Please delete as appropriate)

Name of ES: _____

Company: _____ Designation: _____

Dated signature of ES: _____ Date of certification: _____

Please ensure that the LEW and ES have endorsed this checklist.

The safety check was witnessed by the RRP of the EV Charger.

Name and dated signature of the RRP of the EV Charger:

Name: _____ Dated Signature: _____

Note 1 – It is the responsibility of the RRP or person who has charge and control of the EV Chargers to perform the necessary maintenance routines as recommended by the equipment specialist or manufacturer to ensure the safe use of the EV Charger and any potential hazard due to lack of maintenance.

Note 2 – Fault reporting procedure

If any EV Charger is found to be unsafe or unsuitable for operation, the following steps shall be taken:

- a. The supply to the equipment shall be switched off;
- b. The means of isolation shall be off and locked to prevent re-connection of supply;
- c. A clear label notifying users that the equipment is out of service shall be displayed prominently; and
- d. The RRP or person who has charge and control of the EV Chargers shall be informed immediately.

Annex A (Optional)

This annex is optional. It may be appended to the main certificate if there are more tests carried out on the EV Charger than indicated on the main certificate, for instance, functionality test for three or more connectors or under most test required by manufacturer's instruction.

	Description	Compliance			Remarks/ measurement value^
		C	NC	NA	
1					
2					
3					

Form 2A:

**Checklist for the safety check of a modified fixed
high-powered (>150kW) EV Charger with a Thermal
Management System**

Form 2A: Checklist for the safety check of a modified fixed high-powered (>150kW) EV Charger with a Thermal Management System

Purpose of use: Safety checks for any modified fixed high-powered EV Charger before it is first used to charge an Electric Vehicle

Details of the installation of the EV Charger

- a. EV Charger brand and model: _____
- b. EV Charger manufacturer serial number: _____
- c. EV Charger type-approval ID (if applicable): _____
- d. Name of the registered responsible person (RRP) of the EV Charger:

- e. Address where EV Charger is installed:
(Please indicate the carpark lot number and the floor level where applicable)


To be conducted by the Equipment Specialist¹⁵ (ES)


Adapted from TR 25: 2022 Part 3: Annex D High Powered Charging with permission from Enterprise Singapore

- C – Compliant
- NC – Not Compliant
- NA – Not Applicable

	Description	Compliance			Remarks/ measurement value [^]
		C	NC	NA	
A	Authority Requirement				
A1	LTA Alteration Approval Label affixed to the EV charger. Please provide Alteration Approval Code found on the respective label under Remarks.				
A2	For building with Energy Market Authority Electrical Installation License, letter of consent is obtained from building Licensed Electrical Worker (LEW).				

¹⁵ Equipment Specialists are the prescribed competent persons under section 23 of the Electric Vehicles Charging Act (EVCA) that certifies that the chargers are fit for use.

B	External and environmental checks (with EV Charger power TURNED-OFF at isolator)				
B1	Installed outside hazardous zones where flammable or combustible gas or material may be present.				
B2	Enclosure is not dented, damaged, corroded or in any rusty condition.				
B3	Space around the EV Charger is adequate for easy access and maintenance work.				
B4	Sealing rubber of all doors are in order, and doors including lockset (if any) can be opened and closed easily.				
B5	No sign of insects inside EV Charger. Openings or vents are not blocked, no excess foreign particles.				
B6	Detachable parts are not loose or falling off and not in a rusty condition.				
B7	No visible moisture, waterlogging or burnt marks at the EV Charger and connector charging pins.				
B8	Floor or wall mounting of EV Charger remains rigid and strong.				
B9	Vehicle connector cable, mounting and support is secured and not damaged.				
B10	Electrical warning labels is clear and prominent.				
B11	Source of Distribution Box for EV Charger is clearly labelled and electrical source Distribution Board (DB) is accessible for operation.				
B12	Bollards or continuous kerb(s) or other means of crash protection is installed to provide adequate protection against moving vehicles.				
B13	Charger specification plate is clear, legible, and prominent according TR25 requirement.				
B14	RRP or Operator (where applicable) of EV Charger contact details label is legible, and prominent.				
B15	Fail-safe emergency stop button (in red and yellow) is prominent and not damaged. For outdoor installation it shall be weatherproof. Clear directional signs shall be provided for multiple charger installations.				
B16	Adequate lighting for charging operation.				
B17	Inspection label provided as below. 				Last inspection date:
B18	EV Charger's display and all UI accessories (e.g. press button, RFID reader etc.) are not damaged and are working properly.				

B19	Incoming power supply cable including circuit protective conductor connections and termination(s) are properly made and tightened.				
B20	Measurement of Proximity Pin -Protective Earth resistance value and and to be compared with the given value in the IEC Standard.				PP-PE: (Ohm)
B21	Manufacturer handbook and instruction manuals given to the RRP and Operator (where applicable) of the EV Charger				
C	Functionality checks and tests (with EV Charger power TURN-ON at isolator)				
C1	Inspect RCCB(s) protecting connecting points shall be at least type A 30mA of symbol  and perform manual trip test to all RCCB(s). For mode 4 chargers, earth leakage protection device trip setting should comply with requirements in 411.5.3L of SS 638:2018.				
C2	Perform the sequence of normal start and stop on every charging point.				
C3	While charging, check EV ventilation fan (if any) is working.				
C4	While charging, test all the fail-safe emergency stop button(s) to ensure it is functioning. (EVSE shall reset to state A upon releasing)				
C5	Perform control pilot short fault simulation for every charging point. (EVSE shall reset to state A when fault is cleared)				
C6	(For DC charger) – connector 1 Perform functionality test for mode 4 charging point (refer to IEC 61851-23). EV Charger is able to complete energisation and deenergisation sequence.				
C7	(For DC charger) – connector 2 (if any) Perform functionality test for mode 4 charging point (refer to IEC 61851-23). EV Charger is able to complete energisation and deenergisation sequence.				
D	Applicable for high-powered chargers with thermal management using liquid-cooled cables				
D1	Door interlock test – open respective door of the charger and all its peripherals and the system shall show that the charger is unavailable.				
D2	Emergency stop check – Start charging the EV, press open one of the doors during charging. Did the charge session stop immediately and did the system display an error screen?				
D3	Insulation monitoring device for DC – EVSE OEM to provide system status/report on site and shall comply to 6.4.3.106 of IEC 61851-23.				
D4	Surge protection device – Test/confirm that Type 1 or Type 2 protection is still active and available.				

D5	Cooling unit – Are the inlet and outlet of the cooling unit connected in the right order to the cable?				
D6	Cooling unit – via visual inspection of the cooling unit, no coolant/oil shall be leaking.				
D7	Verify that all connections of CCS cables are tightened.				
E	Additional items not listed but required in the manufacturer’s instructions <i>(Please list accordingly or indicate as NA where appropriate)</i>				
E1					
E2					
E3					

^Measured values where required shall be recorded in this report

If there are more tests carried out on the EV Charger than indicated in this form — for instance, functionality test for three or more connectors or under more test required by manufacturer’s instruction — please append the results of these tests separately as annexes to this certificate.

Requirements for the emergency main isolation shut-off switch (to be completed by the Equipment Specialist)

*First Schedule of the Electric Vehicles Charging (Electric Vehicle Chargers) Regulations 2023
(Applicable only for EV Charger’s installed in non-restricted access locations)*

	Description	C	NC	NA	Remarks
2.	Requirements relating to emergency main isolation shut-off switch as found in the First schedule of the <i>Electric Vehicles Charging (Electric Vehicle Chargers) Regulations 2023</i>				

To be conducted by the Licensed Electrical Worker¹⁶ (LEW)

Adapted from TR 25: 2022 Part 3: Annex D High Powered Charging with permission from Enterprise Singapore

	Description	Compliance			Remarks/ measurement value [^]
		C	NC	NA	
F	Electrical checks and tests				
F1	Perform earth loop impedance test and record value complies with SS 638 (For TT and TNS system).				Ohm
F2	Record the incoming power supply and charging cable insulation resistance value is more than 1 M-ohm.				M-Ohm
F3	Tripping time of 30 mA RCCB type A (min) as measured by an RCCB tester using AC and DC injection curve is acceptable according to SS 97 tripping time . For mode 4 charger, the trip setting should comply with 411.5.3L of SS 638:2018.				0 deg: _____ ms 180 deg: _____ ms
F4	EV Charger installation tally with single line diagram (SLD) provided by the RRP or operator who has charge and control of the EVSE. Means of isolation, lockable at OFF position (2P for 1 Phase and 3P/4P for 3 Phase), is provided for maintenance switching.				
F5	Rating of incoming cable from source DB and charging cable are adequate for max rated charging current.				

[^]Measured values where required shall be recorded in this report

Note: Any EV Charger installed in petrol kiosks shall comply with SCDF’s requirements

General remarks:

¹⁶ LEWs are the prescribed persons under section 24 of the Electric Vehicles Charging Act (EVCA) that ensure that the installation of a fixed charger is compliant with the relevant safety standards.

Please note the following:

Inspection and maintenance checks must be carried out based on the following frequencies:

Location of EV Charger	Competent Persons Required	Type of Check	Frequency
Non-restricted access locations [#]	Equipment Specialists	Maintenance	6 months
	Equipment Specialists and LEWs	Inspection	12 months
Restricted access locations*	Equipment Specialists	Maintenance	24 months

[#]Refers to any other location besides restricted access locations

*Refers to bungalows, detached and semi-detached houses, terrace houses that are not strata titled

Date of next inspection : _____

Endorsed by LEW

The results obtained in F (Electrical checks and tests) is acceptable to the best of my knowledge and the EV charger has been installed together with the apparatus and fittings required by TR25:2022.

Name of LEW: _____ Licence No.: _____

Date signature of LEW: _____ Date of installation: _____

Endorsed by ES

I have inspected and tested the EV Charger. To the best of my knowledge, I declare that the EV Charger is *fit and safe / unfit and unsafe for charging EVs.

(Please delete as appropriate)

Name of ES: _____

Company: _____ Designation: _____

Dated signature of ES: _____ Date of safety check: _____

Please ensure that the LEW and ES have endorsed this checklist.

The safety check was witnessed by the RRP of the EV Charger.

Name and dated signature of the RRP of the EV Charger:

Name: _____ Dated Signature: _____

Note 1 – It is the responsibility of the RRP person who has charge and control of the EV Charger to perform the necessary maintenance routines as recommended by the equipment specialist or manufacturer to ensure the safe use of the EV Charger and any potential hazard due to lack of maintenance.

Note 2 – Fault reporting procedure

If any EV Charger is found to be unsafe or unsuitable for operation, the following steps shall be taken:

- a. The supply to the equipment shall be switched off;
- b. The means of isolation shall be off and locked to prevent re-connection of supply;
- c. A clear label notifying users that the equipment is out of service shall be displayed prominently; and
- d. The RRP or person who has charge and control of the EV Chargers shall be informed immediately.

Annex A (Optional)

This annex is optional. It may be appended to the main certificate if there are more tests carried out on the EV Charger than indicated on the main certificate, for instance, functionality test for three or more connectors or under most test required by manufacturer's instruction.

	Description	Compliance			Remarks/ measurement value^
		C	NC	NA	
1					
2					
3					

Form 3A:
**Checklist for the safety check of a modified non-
fixed EV Charger**

Form 3A: Checklist for the safety check of a modified non-fixed EV Charger

Purpose of use: Safety checks for any modified non-fixed EV Charger before it is first used to charge an Electric Vehicle

Details of the EV Charger

- a. EV Charger brand and model: _____
- b. EV Charger manufacturer serial number: _____
- c. EV Charger type-approval ID (if applicable): _____
- d. Name of the registered responsible person (RRP) of the EV Charger:

- e. Address where EV Charger is installed:
(Please indicate the carpark lot number and the floor level where applicable)

To be conducted by the Equipment Specialist¹⁷ (ES)

Adapted from TR 25: 2022 Part 1: Annex B Electrical safety and general requirements with permission from Enterprise Singapore

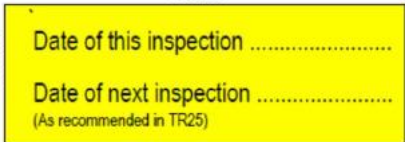
C – Compliant


NC – Not Compliant

NA – Not Applicable

	Description	Compliance			Remarks/ measurement value [^]
		C	NC	NA	
A	Authority Requirement				
A1	LTA Alteration Approval Label affixed to the EV charger. Please provide Alteration Approval Code found on the respective label under Remarks.				
A2	For building with Energy Market Authority Electrical Installation License, letter of consent is obtained from building Licensed Electrical Worker (LEW).				
B	External and environmental checks (with EV Charger power TURNED-OFF at isolator)				
B1	Installed outside hazardous zones where flammable or combustible gas or material may be present.				

¹⁷ Equipment Specialists are the prescribed competent persons under section 23 of the Electric Vehicles Charging Act (EVCA) that certifies that the chargers are fit for use.

B2	Enclosure is not dented, damaged, corroded or in any rusty condition.				
B3	Space around the EV Charger is adequate for easy access and maintenance work.				
B4	Sealing rubber of all doors are in order, and doors including lockset (if any) can be opened and closed easily.				
B5	No sign of insects inside EV Charger. Openings or vents are not blocked, no excess foreign particles.				
B6	Detachable parts are not loose or falling off and not in a rusty condition.				
B7	No visible moisture, waterlogging or burnt marks at the EV Charger and connector charging pins.				
B8	Floor or wall mounting of EV Charger remains rigid and strong.				
B9	Vehicle connector cable, mounting and support is secured and not damaged.				
B10	Electrical warning labels is clear and prominent.				
B11	Source of Distribution Box (DB) for EV Charger is clearly labelled and electrical source DB is accessible for operation.				
B12	Bollards or continuous kerb(s) or other means of crash protection is installed to provide adequate protection against moving vehicles.				
B13	Charger specification plate is clear, legible, and prominent according TR25 requirement.				
B14	RRP or Operator (where applicable) of EV Charger contact details label is legible, and prominent				
B15	Fail-safe emergency stop button (in red and yellow) is prominent and not damaged. For outdoor installation it shall be weatherproof. Clear directional signs shall be provided for multiple charger installations.				
B16	Adequate lighting for charging operation.				
B17	<p>Inspection label provided as below.</p> 				Last inspection date:
B18	EV Charger's display and all User Interface accessories (e.g. press button, RFID reader etc.) are not damaged and are working properly.				
B19	Incoming power supply cable including circuit protective conductor connections and termination(s) are properly made and tightened.				
B20	Measurement of Proximity Pin (PP) – Protective Earth (PE) resistance value and to be compared with the given value in the IEC Standard.				PP-PE : (Ohm)

B2 1	Manufacturer handbook and instruction manuals given to the RRP and Operator (where applicable) of the EV Charger				
C	Functionality checks and tests (with EV Charger power TURN-ON at isolator)				
C1	Inspect Residual Current Circuit Breaker(s) (RCCB(s)) protecting connecting points shall be at least type A 30mA of symbol  and perform manual trip test to all RCCB(s) for Mode 2/2A*/2B*/3 chargers. For mode 4 chargers, earth leakage protection device trip setting should comply with requirements in 411.5.3L of SS 638:2018. <i>*Modes 2A and 2B chargers with galvanic isolation shall be at least type AC</i>				
C2	Perform the sequence of normal start and stop on every charging point.				
C3	While charging, check EV ventilation fan (if any) is working.				
C4	While charging, test all the fail-safe emergency stop button(s) to ensure it is functioning. (EVSE shall reset to state A upon releasing)				
C5	Perform control pilot short fault simulation for every charging point. (EVSE shall reset to state A when fault is cleared)				
C6	(For AC charger) – connector 1 Perform functionality test for mode 2/2A/2B/3 charging point. EV Charger is able to complete energisation and deenergisation sequence.				
C7	(For AC charger) – connector 2 (if any) Perform functionality test for mode 2/2A/2B/3 charging point. EV Charger is able to complete energisation and deenergisation sequence.				
C8	(For DC charger) – connector 1 Perform functionality test for mode 4 charging point (refer to IEC 61851-23). EV Charger is able to complete energisation and deenergisation sequence.				
C9	(For DC charger) – connector 2 (if any) Perform functionality test for mode 4 charging point (refer to IEC 61851-23). EV Charger is able to complete energisation and deenergisation sequence.				
D	Additional items not listed but required in the manufacturer's instructions (Please list accordingly or indicate as NA where appropriate)				
D1					
D2					
D3					

^Measured values where required shall be recorded in this report

If there are more tests carried out on the EV Charger than indicated in this form — for instance, functionality test for three or more connectors or under most test required by manufacturer’s instruction — please append the results of these tests separately as annexes to this certificate.

General remarks:

Please note the following:

Inspection and maintenance checks must be carried out based on the following frequencies:

Location of EV Charger	Competent Persons Required	Type of Check	Frequency
Restricted access locations*	Equipment Specialists	Maintenance	24 months

*Refers to bungalows, detached and semi-detached houses, terrace houses that are not strata titled

Date of next inspection : _____

(Based on Inspection Frequency as per the table above)

Endorsed by ES

I have inspected and tested the EV Charger. To the best of my knowledge, I declare that the EV Charger is *fit and safe / unfit and unsafe for charging EVs.

(Please delete as appropriate)

Name of ES: _____

Company: _____ Designation: _____

Dated signature of ES: _____ Date of safety check: _____

Please ensure that the ES has endorsed this checklist.

The safety check was witnessed by the RRP of the EV Charger.

Name and dated signature of the RRP of the EV Charger:

Name: _____ Dated Signature: _____

Note 1 – It is the responsibility of the RRP or person who has charge and control of the EV Chargers to perform the necessary maintenance routines as recommended by the equipment specialist or manufacturer to ensure the safe use of the EV Charger and any potential hazard due to lack of maintenance.

Note 2 – Fault reporting procedure

If any EV Charger is found to be unsafe or unsuitable for operation, the following steps shall be taken:

- a. The supply to the equipment shall be switched off;
- b. The means of isolation shall be off and locked to prevent re-connection of supply;
- c. A clear label notifying users that the equipment is out of service shall be displayed prominently; and
- d. The RRP or person who has charge and control of the EV Chargers shall be informed immediately.

Annex A (Optional)

This annex is optional. It may be appended to the main certificate if there are more tests carried out on the EV CHARGER than indicated on the main certificate, for instance, functionality test for three or more connectors or under most test required by manufacturer's instruction.

	Description	Compliance			Remarks/ measurement value^
		C	NC	NA	
1					
2					
3					