



# RTM75

Product Specifications



## PRODUCT SPECIFICATIONS

ITEM	SPECIFICATION	
<b>SUPPLY INPUT</b>	3ø AC see last page for regional details	
<b>OUTPUT POWER</b>	50kW (2 x DC:DC modules) 75kW (3 x DC:DC modules)	
<b>OUTPUT VOLTAGE</b>	CCS: CHAdeMO: NACS:	150-920 V DC 150-500 V DC 150-920V DC
<b>OUTPUT CURRENT</b>	50kW: 75kW:	135A * 200A *
<b>SUPPORTED CABLES</b>	CCS: CHAdeMO: NACS:	200A 125A 200A
<b>CABLE LENGTHS</b>	3.6m (11ft 9in) / 6m (19ft 8in) with cable management	
<b>OUTLET CONFIGURATIONS</b>	CCS   CCS CHAdeMO   CCS NACS   CCS	
<b>SIMULTANEOUS CHARGING</b>	Yes	
<b>IP RATING</b>	IP65 NEMA TYPE 3R	
<b>IK RATING</b>	IK10 (Including HMI)	
<b>EFFICIENCY</b>	95%	
<b>POWER FACTOR</b>	>0.99	
<b>TOTAL HARMONIC DISTORTION</b>	<5% THD	
<b>MAXIMUM OPERATING ALTITUDE</b>	3000m (9842ft)	
<b>ACOUSTIC NOISE</b>	Variable under load: < 65dB @ 1m max.	
<b>OPERATING TEMPERATURE</b>	50kW: 75kW:	-35°C to +50°C (-31°F to +122°F) -35°C to +50°C (-31°F to +122°F) (with de-rating)
<b>STORAGE TEMPERATURE</b>	-35°C to +70°C (-31°F to +158°F)	
<b>ELECTRICAL PROTECTION</b>	Over current, over voltage, under voltage, short circuit, surge protection, protective earth continuity monitor.	
<b>ENCLOSURE CONSTRUCTION</b>	Aluminium double skin	
<b>DIMENSIONS</b>	Footprint: Maximum points:	1998 (H) x 783 (W) x 309 (D) mm (78.6" x 30.8" x 12.1") 1998 (H) x 898 (W) x 450 (D) mm (78.6" x 35.3" x 17.7")
<b>WEIGHT</b>	Installation: Shipping:	Up to 294kg with cable management (649lbs) Up to 380kg depending on configuration (822lbs)
<b>CONNECTIVITY</b>		
<b>COMMUNICATION PROTOCOL</b>	V2G Application Protocols: EVSE to CSMS:	DIN 70121:2012, ISO 15118:2:2013 OCPP v1.6J (OCPP 2.0.1 capable in future)
<b>NETWORK CONNECTION</b>	Cellular: Wired:	3G/4G Ethernet
<b>USER INTERFACES</b>		
<b>AUTHENTICATION METHODS</b>	RFID: MI-FARE ISO/IEC14443A/B, ISO/IEC15693, ISO/IEC18000-3, FeliCa, NFC Plug & Charge (ISO15118-2) Mobile application Free mode / AutoStart	
<b>DISPLAY</b>	10.1" display with 4 control buttons	

\*Unless limited by cable type

## SAFETY &amp; CERTIFICATION

ITEM	SPECIFICATION	
SAFETY FEATURES	Tilt sensor, door ingress sensors, safety trip loop, external emergency stop button interface	
SAFETY COMPLIANCE	EUROPE CE:	<b>IEC 61851-1</b> – Electric vehicle conductive charging system general requirements  <b>IEC 61851-23</b> – Electric vehicle conductive charging system DC electric vehicle charging station  <b>IEC 61851-24</b> – Digital communications between a DC electric vehicle charging station and an electric vehicle for control of DC charging
	NORTH AMERICA:	<b>UL 2202, CSA-C22</b>
ELECTROMAGNETIC COMPATIBILITY CERTIFICATION (EMC)	EUROPE CE:	<b>IEC 61851-21-2</b> – EMC requirements for off board electric vehicle charging Emissions: Class B (Residential) Immunity: Non-residential  <b>IEC 61000-6-4</b> – Emissions for industrial environments Emissions: Class B (Residential)  <b>IEC 61000-6-2</b> – Immunity for industrial environments
	NORTH AMERICA:	USA – <b>FCC 47 CFR Part 15 B</b> CANADA – <b>ICES-003</b>
RADIO EQUIPMENT DIRECTIVE (RED)	EUROPE:	<b>ETSI EN 301 489-1</b> – Standard for radio equipment and services Part 1: Common technical requirements  <b>ETSI EN 301 489-3</b> – Standard for radio equipment and services Part 3: Specific conditions for short-range devices (SRD) operating on frequencies between 9 kHz and 246 GHz  <b>ETSI EN 301 489-52</b> – Standard for radio equipment and services Part 52: Specific conditions for cellular communication user equipment
ELECTROMAGNETIC FIELD (EMF)	EUROPE	<b>EC 62311</b> – Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz to 300 GHz)
ENERGY ACCURACY	GLOBAL	California – CTEP – NIST Handbook 44: – Class 5 Germany – MessEV / MessEG / Eichrecht † Europe – MID † USA National – NTEP – NIST Handbook 44 †
OTHER	SINGAPORE:	<b>TR25: 2016</b> – Electrical vehicle charging system †
ACCESSIBILITY	Height requirements: US Americans with Disabilities Act and EN 301 549	
WARRANTY	Standard 3-year warranty	
OPTIONS		
BRANDING	Customer branded vinyls	
PAYMENT OPTIONS	Credit card reader contactless or 3-in-1 (region dependent), field upgradeable (optional)	
CABLE LENGTH	3.6m (11ft 10in) charging cables with no cable management	
WARRANTY EXTENSION	+1YR / +2YR / +3YR	

† Pending certification completion

**NOTE** Tritium DC Fast Chargers employ industry standard IoT communication devices. It is important for deployment of these devices to have a detailed understanding of factors affecting their operations.

## AC GRID INTERFACE

ITEM	WORLDWIDE (400VAC / 415VAC)		USA (480VAC)	
POWER LEVEL	50kW	75kW	50kW	75kW
VOLTAGE	400VAC 3ph (no neutral) +/-10%		480VAC 3ph (no neutral) +/-10%	
FREQUENCY	50Hz +/- 10%		60Hz +/- 10%	
NOMINAL CURRENT AT NOMINAL VOLTAGE LEVEL	76A	114A	63A	95A
MAXIMUM CURRENT AT LOW LINE LEVEL (NOMINAL VOLTAGE - 10%) AND PF>0.99	84A	120A	70A	105A
OVERCURRENT PROTECTION DEVICE REQUIRED (OCPD) IN SITE DISTRIBUTION BOARD	100A breaker recommended (required for supply cable protection)	160A breaker recommended (required for supply cable protection)	80A breaker recommended (required for supply cable protection)	125A breaker recommended (required for supply cable protection)
FAULT CURRENT LIMITING FUSES IN SITE DISTRIBUTION BOARD	Current limiting fuses or a UL/CE certified current limiting circuit breaker MUST be installed if available fault current exceeds 37.5kA.			
RESIDUAL CURRENT MONITORING IN SITE DISTRIBUTION BOARD (OPTIONAL)	If local regulation requires a residual current monitoring device, it must feature adjustable time delay and adjustable threshold.			
UNDER-VOLTAGE RELAY/SHUNT TRIP RELAY IN SITE DISTRIBUTION BOARD (OPTIONAL)	<p>The RTM range includes options for circuitry to locally isolate the charger's power circuit if the safety loop monitor connected to the door switches, tilt sensor, leak sensor or protective earth continuity monitor is triggered.</p> <p>Additionally, the charger can also include options to allow upstream isolations in the event of a safety loop trigger event by including an under-voltage relay coil or shunt trip module on the feeder circuit breaker in the site distribution board.</p> <p>Tritium chargers should only be installed by a licensed contractor and a licensed electrician, in accordance with all local and national codes and standards. This may include additional, lockable disconnect mechanisms within line of sight of the supplied equipment.</p>			
REFERENCE CALCULATION OF BURIED CABLE SIZE FOR AC SUPPLY	Single cores in buried duct:		Single cores in buried duct:	
(LENGTH OF AC CABLES AND SYSTEM EFFICIENCY SHOULD BE CONSIDERED WHEN SIZING CABLE)	25mm2 Cu for L1,2,3	50mm2 Cu for L1,2,3	6AWG Cu for L1,2,3	3AWG Cu for L1,2,3
	16mm2 Cu for PE	25mm2 Cu for PE	8AWG Cu for PE	4AWG Cu for PE
	Multicore cable in buried duct:		Multicore cable in buried duct:	
	25mm2 Cu	50mm2 Cu	4AWG Cu	2AWG Cu
	Multicore cable direct buried:			
	25mm2 Cu	35mm2 Cu		
AC SUPPLY CABLE SIZE	Cable sizes must be calculated on a per site basis as length, burial/conduit method, insulation rating, soil type will all affect correct sizing.			