

User's Manual

Product Name: Electronically Scanning Radar
(ESR2.5)

Model Number: L2C0051TR

Please print this document in A4 size.

KOMATSU

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1 PREFACE

1.1 DISCLAIMER

Komatsu Ltd. reserves the right to make modifications, additions, and deletions to this document due to typographical errors, inaccurate information, or improvements to programs and/or equipment at any time and without notice. Such changes will, nevertheless, be incorporated into new editions of this document.

1.2 INTENDED USAGE

This manual is intended for anyone who attempts to operate Electronically Scanning Radar version 2.5 (ESR2.5) 'L2C0051TR' in the first place and provides appropriate procedures for anyone who is engaged in handling/building them in a safe manner.

1.3 COMPLIANCE NOTICE

Please read the section "Compliance Notice" for locale-specific information regarding labelling, safety related statements.

2 Document Information

Revision History

Revision	Date	Author(s)	Description/comment
1.0	2024/10/22	Y. Abe	Publication of the First Edition

3 Specification of Hardware

3.1 Outline Dimensions and Mass

(1) Dimensions of Outline (Dimensions are in millimeters)

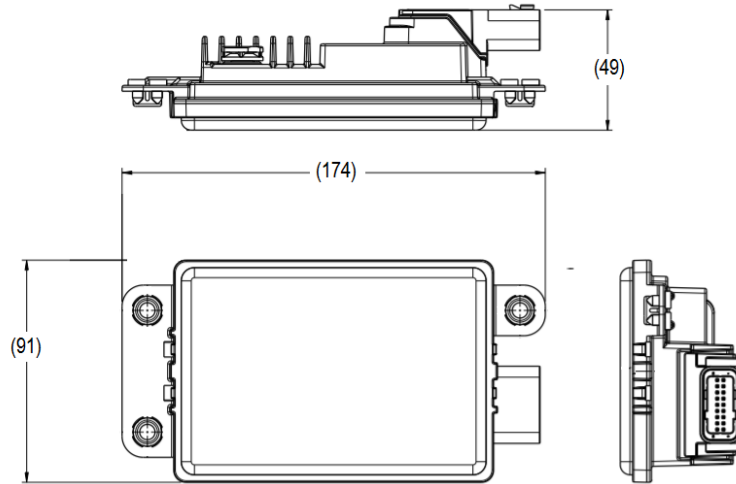


Figure.1 L2C0051TR for 12V Dimensions

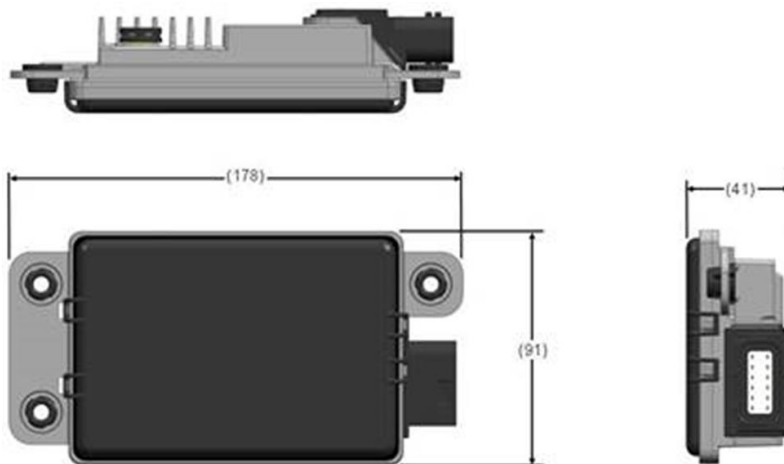


Figure.2 L2C0051TR for 24V Dimensions

(2) Mass

L2C0051TR for 12V: 0.484 [kilograms]

L2C0051TR for 24V: 0.449 [kilograms]

3.2 Maximum Radio-Frequency Power

Frequency [GHz]	Max Output Power [dBm]
76 - 77	<55

4 Compliance Notice

4.1 European Union



- Manufacturer/Importer

Hereby, the Manufacturer/Importer:

The Manufacturer	The Importer
APTIV 2151 East Lincoln Road Kokomo, Indiana 46902 United States of America • APTIV •	KOMATSU EUROPE INT. Mechelsesteenweg 586 B-1800 Vilvoorde, Belgium KOMATSU

- Safety

Please refer to the vehicle manual for information on safety.

- Simplified Declaration of Conformity

[EN] English	Hereby, APTIV declares that the radio equipment type L2C0051TR is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: https://www.komatsu.eu/komtrax-radio-equipment-directive
[BG] Bulgarian	С настоящото APTIV декларира, че този тип радиосъоръжение L2C0051TR е в съответствие с Директива 2014/53/ЕС. Цялостният текст на ЕС декларацията за съответствие може да се намери на следния интернет адрес: https://www.komatsu.eu/komtrax-radio-equipment-directive
[HR] Croatian	APTIV ovime izjavljuje da je radijska oprema tipa L2C0051TR u skladu s Direktivom 2014/53/EU. Cjeloviti tekst EU izjave o sukladnosti dostupan je na sljedećoj internetskoj adresi: https://www.komatsu.eu/komtrax-radio-equipment-directive
[CS] Czech	Tímto APTIV prohlašuje, že typ rádiového zařízení L2C0051TR je v souladu se směrnicí 2014/53/EU. Úplné znění EU prohlášení o shodě je k dispozici na této internetové adrese: https://www.komatsu.eu/komtrax-radio-equipment-directive
[DA] Danish	Hermed erklærer APTIV, at radioudstyrstypen L2C0051TR er overensstemmelse med direktiv 2014/53/EU. EU-overensstemmelseserklæringens fulde tekst kan findes på følgende internetadresse: https://www.komatsu.eu/komtrax-radio-equipment-directive
[NL] Dutch	Hierbij verklaar ik, APTIV, dat het type radioapparatuur L2C0051TR conform is met Richtlijn 2014/53/EU. De volledige tekst van de EU-conformiteitsverklaring kan worden geraadpleegd op het volgende internetadres: https://www.komatsu.eu/komtrax-radio-equipment-directive
[ET] Estonian	Käesolevaga deklareerib APTIV, et käesolev raadioseadme tüüp L2C0051TR vastab direktiivi 2014/53/EL nõuetele. ELi vastavusdeklaratsiooni täielik tekst on kättesaadav järgmisel internetiaadressil: https://www.komatsu.eu/komtrax-radio-equipment-directive
[FI] Finnish	APTIV vakuuttaa, että radiolaitetyyppi L2C0051TR on direktiivin 2014/53/EU mukainen. EU-vaatimustenmukaisuusvakuutuksen täysimittainen teksti on saatavilla seuraavassa internetosoitteessa: https://www.komatsu.eu/komtrax-radio-equipment-directive

[FR] French	Le soussigné, APTIV, déclare que l'équipement radioélectrique du type L2C0051TR est conforme à la directive 2014/53/UE. Le texte complet de la déclaration UE de conformité est disponible à l'adresse internet suivante: https://www.komatsu.eu/komtrax-radio-equipment-directive
[DE] German	Hiermit erklärt APTIV, dass der Funkanlagentyp L2C0051TR der Richtlinie 2014/53/EU entspricht. Der vollständige Text der EU-Konformitätserklärung ist unter der folgenden Internetadresse verfügbar: https://www.komatsu.eu/komtrax-radio-equipment-directive
[EL] Greek	Με την παρούσα ο/η APTIV, δηλώνει ότι ο ραδιοεξοπλισμός L2C0051TR πληροί την οδηγία 2014/53/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης ΕΕ διατίθεται στην ακόλουθη ιστοσελίδα στο διαδίκτυο: https://www.komatsu.eu/komtrax-radio-equipment-directive
[HU] Hungarian	APTIV igazolja, hogy a L2C0051TR típusú rádióberendezés megfelel a 2014/53/EU irányelvnek. Az EU-megfelelőségi nyilatkozat teljes szövege elérhető a következő internetes címen: https://www.komatsu.eu/komtrax-radio-equipment-directive
[GA] Irish	Dearbhaíonn APTIV leis sin, go bhfuil an cineál trealaimh raidió L2C0051TR i gcomhréir le Treoir 2014/53/AE. Tá téacs iomlán de Dhearbhú Comhréireachta AE ar fáil ag an seoladh idirlín seo a leanas: https://www.komatsu.eu/komtrax-radio-equipment-directive
[IT] Italian	Il fabbricante, APTIV, dichiara che il tipo di apparecchiatura radio L2C0051TR è conforme alla direttiva 2014/53/UE. Il testo completo della dichiarazione di conformità UE è disponibile al seguente indirizzo Internet: https://www.komatsu.eu/komtrax-radio-equipment-directive
[LV] Latvian	Ar šo APTIV deklarē, ka radioiekārta L2C0051TR atbilst Direktīvai 2014/53/ES. Pilns ES atbilstības deklarācijas teksts ir pieejams šādā interneta vietnē: https://www.komatsu.eu/komtrax-radio-equipment-directive
[LT] Lithuanian	Aš, APTIV, patvirtinu, kad radijo įrenginių tipas L2C0051TR atitinka Direktyvą 2014/53/ES. Visas ES atitikties deklaracijos tekstas prieinamas šiuo interneto adresu: https://www.komatsu.eu/komtrax-radio-equipment-directive
[LU] Luxembourgish	Heimat deklaréiert APTIV, datt de Radio vum Geräit L2C0051TR d'd'Viraussetzung vum der Riichtlinn 2014/53/EU erfüllt. De ganzen Text vun der EU Konformitéitserklärung ass op der follgender Internetadress verfügbar: https://www.komatsu.eu/komtrax-radio-equipment-directive
[MT] Maltese	B'dan, APTIV, niddikjara li dan it-tip ta' tagħmir tar-radju L2C0051TR huwa konformi mad-Direttiva 2014/53/UE. It-test kollu tad-dikjarazzjoni ta' konformità tal-UE huwa disponibbli f'dan l-indirizz tal-Internet li ġej: https://www.komatsu.eu/komtrax-radio-equipment-directive
[PL] Polish	APTIV niniejszym oświadcza, że typ urządzenia radiowego L2C0051TR jest zgodny z dyrektywą 2014/53/UE. Pełny tekst deklaracji zgodności UE jest dostępny pod następującym adresem internetowym: https://www.komatsu.eu/komtrax-radio-equipment-directive
[PT] Portuguese	O(a) abaixo assinado(a) APTIV declara que o presente tipo de equipamento de rádio L2C0051TR está em conformidade com a Diretiva 2014/53/UE. O texto integral da declaração de conformidade está disponível no seguinte endereço de Internet: https://www.komatsu.eu/komtrax-radio-equipment-directive
[RO] Romanian	Prin prezenta, APTIV declară că tipul de echipamente radio L2C0051TR este în conformitate cu Directiva 2014/53/UE. Textul integral al declarației UE de conformitate este disponibil la următoarea adresă internet: https://www.komatsu.eu/komtrax-radio-equipment-directive
[SK] Slovak	APTIV týmto vyhlasuje, že rádiové zariadenie typu L2C0051TR je v súlade so smernicou 2014/53/EÚ. Úplné EÚ vyhlásenie o zhode je k dispozícii na tejto internetovej adrese: https://www.komatsu.eu/komtrax-radio-equipment-directive
[SL] Slovenian	APTIV potrjuje, da je tip radijske opreme L2C0051TR skladen z Direktivo 2014/53/EU. Celotno besedilo izjave EU o skladnosti je na voljo na naslednjem spletnem naslovu: https://www.komatsu.eu/komtrax-radio-equipment-directive
[ES] Spanish	Por la presente, APTIV declara que el tipo de equipo radioeléctrico L2C0051TR es conforme con la Directiva 2014/53/UE. El texto completo de la declaración UE de conformidad está disponible en la dirección Internet siguiente: https://www.komatsu.eu/komtrax-radio-equipment-directive

[SV] Swedish	Härmed försäkrar APTIV att denna typ av radioutrustning L2C0051TR överensstämmer med direktiv 2014/53/EU. Den fullständiga texten till EU-försäkran om överensstämmelse finns på följande webbadress: https://www.komatsu.eu/komtrax-radio-equipment-directive
[IS] Icelandic	Hér með lýsir APTIV því yfir að tegund fjarskiptabúnaðar L2C0051TR er í samræmi við tilskipun 2014/53/ESB. Fullur texti ESB samræmisýfirlýsingarinnar er fáanlegur á eftirfarandi netfangi: https://www.komatsu.eu/komtrax-radio-equipment-directive
[NO] Norwegian	APTIV erklærer herved at typen av radioutstyr L2C0051TR er i samsvar med direktiv 2014/53/EU. Den fullstendige teksten i EU-samsvarserklæringen er tilgjengelig på følgende internetadresse: https://www.komatsu.eu/komtrax-radio-equipment-directive
[AN] Albanian	Përmes kësaj, APTIV deklaron se lloji i pajisjes radio L2C0051TR është në përputhje me Direktivën 2014/53/BE. Teksti i plotë i deklaratës së konformitetit të BE-së është i disponueshëm në adresën e mëposhtme të internetit: https://www.komatsu.eu/komtrax-radio-equipment-directive
[ME] Montenegro	Ovim, APTIV izjavljuje da je tip radio opreme L2C0051TR u skladu sa Direktivom 2014/53/EU. Cijeli tekst EU deklaracije o poštovanju dostupan je na slijedećoj internet adresi: https://www.komatsu.eu/komtrax-radio-equipment-directive
[TR] Turkish	İşbu belgeyle, APTIV L2C0051TR radyo ekipmanı tipinin, 2014/53/EU Direktifi ile uyumlu olduğunu beyan eder. AB uygunluk beyanının tam metnini aşağıdaki internet adresinde bulabilirsiniz: https://www.komatsu.eu/komtrax-radio-equipment-directive

4.2 *The Federal Communication Commission*

FCC ID: L2C0051TR

FCC CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines. This equipment should be installed and operated keeping the radiator at least 5.6cm or more away from person's body.

4.3 *Canada*

IC : 3432A-0051TR

- English

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the ISED radio frequency (RF) Exposure rules. This equipment should be installed and operated keeping the radiator at least 5.6cm or more away from person's body.

- French

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes

1. L'appareil ne doit pas produire de brouillage
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'ISDE. Cet équipement doit être installé et utilisé en gardant une distance de 5.6 cm ou plus entre le radiateur et le corps humain.

4.4 *Brazil*

Model: L2C0051TR

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados

Este produto está homologado pela Anatel, de acordo com os procedimentos regulamentados pela Resolução nº 715/2019 e atende aos requisitos técnicos aplicados.

Site da ANATEL: <https://www.gov.br/anatel/pt-br>

4.5 *South Africa*

