

RADIO REMOTE SYSTEMS



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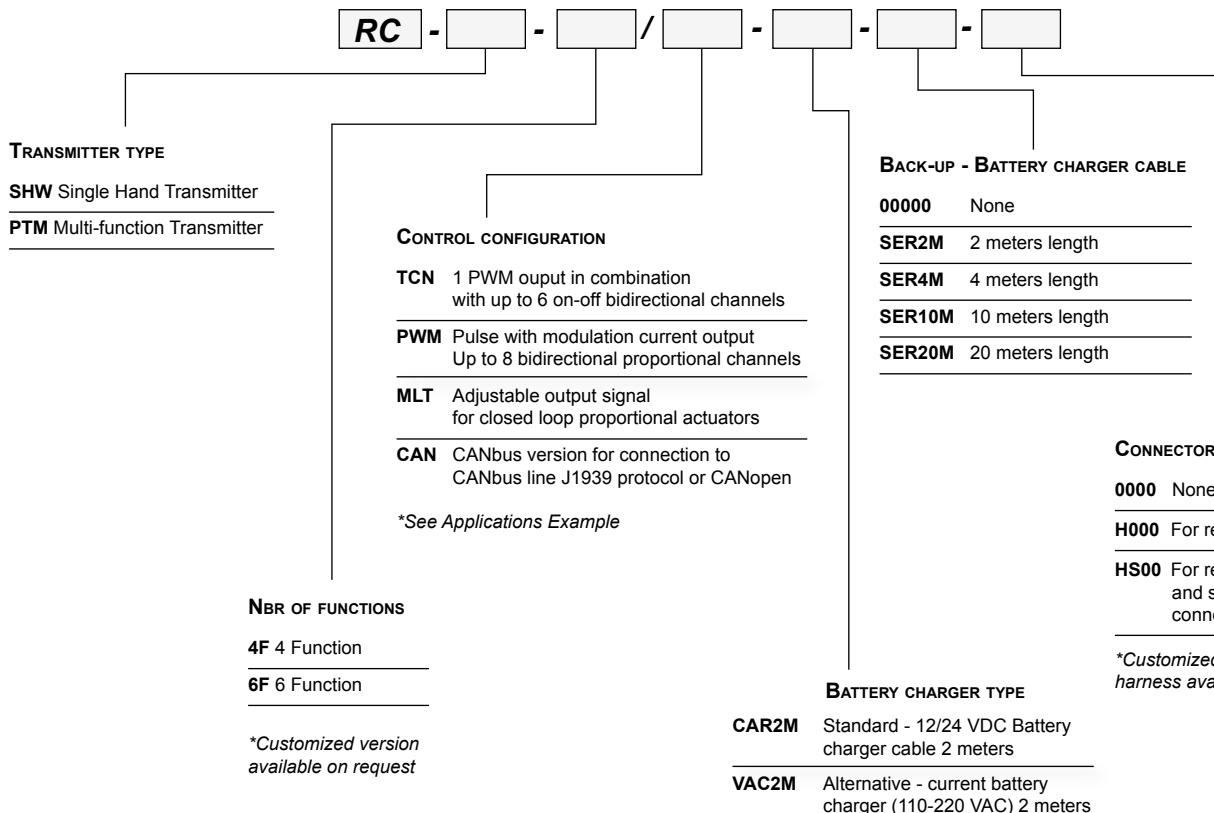
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ORDERING INFORMATION



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RC-PTM-4F 4-FUNCTIONS PTM RADIO TRANSMITTER**DESCRIPTION**

Compact multi-function shoulder strap radio remote controller, for use with Tecnord radio receivers / transceivers. Four proportional paddle levers (JLP type) and toggle switches for auxiliary functions. RC-PTM radio remote controller is designed to allow remote operation of machines. It is best suited for machines equipped with a CAN-based control system. Its multi-function structure allows simultaneous operation of all the available functions.

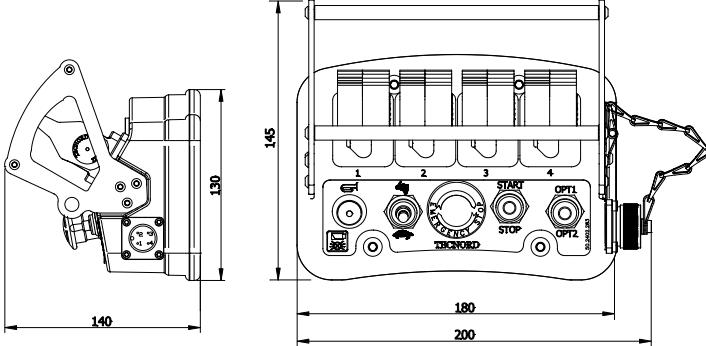
OPERATION

RC-PTM-4F Compact Controller is equipped with 4 proportional paddle levers (Tecnord JLP type). Additional operators are available for radio enable, reduced speed selection and auxiliary functions.

A STOP pushbutton is available to immediately stop the machine in case of hazard. Battery and battery charger are internal; a connector is provided for battery charging and backup cable communication. The transmission technology used allows high immunity to interference and long operating range. Co-existence between multiple RC-PTM units is also allowed. A unique code allows the RC-PTM controller to operate only with its coupled radio receiver.

FEATURES

- Battery power supply: NiMH rechargeable cells.
- Cable power supply: from vehicle's battery, for battery charge.
- CANbus line (standard J1939, option CANopen) is provided for backup cable communication.
- Standard battery charge cable with cigarette-lighter plug.
- Optional serial cable (CANbus + battery charge).
- Vibration and shock resistant.
- CE, FCC, IC certifications available.
- Shoulder strap provided as standard.

DIMENSIONS**SPECIFICATIONS**

Operating voltage (internal battery):	4.7÷6 VDC
Operating voltage (serial cable):	8÷32 VDC
Max current consumption:	200 mA
Operating temperature:	-40 ÷ +85°C
Operating Frequency Band:	2402÷2480 MHz
Transmission type:	BT 2.1 + EDR
Antenna:	Built-in (internal)
Diagnostics:	1 LED for the controller's status (more LEDs available as option)
CANbus physical layer:	ISO 11898
CANbus protocol:	J1939 (standard) CANopen (option)
Connector type:	IT connector, 4 poles female
Housing material:	Polycarbonate
Weight:	< 1Kg (4F)
Environmental protection:	IP 65

RC ORDERING INFORMATION: see page RC3

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RC-PTM-6F 6-FUNCTIONS PTM RADIO TRANSMITTER

DESCRIPTION

Compact multi-function shoulder strap radio remote controller, for use with Tecnord radio receivers / transceivers. Six proportional paddle levers (JLP type) and toggle switches for auxiliary functions. RC-PTM radio remote controller is designed to allow remote operation of machines. It is best suited for machines equipped with a CAN-based control system. Its multi-function structure allows simultaneous operation of all the available functions.

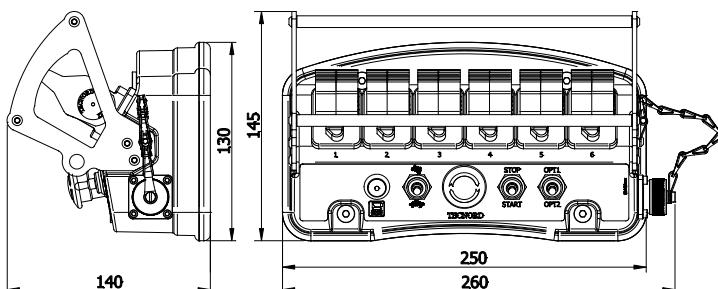
OPERATION

RC-PTM-6F Standard Controller is equipped with 6 proportional paddle levers (Tecnord JLP type). Additional operators are available for radio enable, reduced speed selection and auxiliary functions. A STOP pushbutton is available to immediately stop the machine in case of hazard. Battery and battery charger are internal; a connector is provided for battery charging and backup cable communication. The transmission technology used allows high immunity to interference and long operating range. Co-existence between multiple RC-PTM units is also allowed. A unique code allows the RC-PTM controller to operate only with its coupled radio receiver.

FEATURES

- Battery power supply: NiMH rechargeable cells.
- Cable power supply: from vehicle's battery, for battery charge.
- CANbus line (standard J1939, option CANopen) is provided for backup cable communication.
- Standard battery charge cable with cigarette-lighter plug.
- Optional serial cable (CANbus + battery charge).
- Vibration and shock resistant.
- CE, FCC, IC certifications available.
- Shoulder strap provided as standard.

DIMENSIONS



SPECIFICATIONS

Operating voltage (internal battery):	4.7±6 VDC
Operating voltage (serial cable):	8±32 VDC
Max current consumption:	200 mA
Operating temperature:	-40 ÷ +85°C
Operating Frequency Band:	2402÷2480 MHz
Transmission type:	BT 2.1 + EDR
Antenna:	Built-in (internal)
Diagnostics:	1 LED for the controller's status (more LEDs available as option)
CANbus physical layer:	ISO 11898
CANbus protocol:	J1939 (standard) CANopen (option)
Connector type:	IT connector, 4 poles female
Housing material:	Polycarbonate
Weight:	< 1.2Kg (6F)
Environmental protection:	IP 65

RC ORDERING INFORMATION: see page RC3

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RC-SHW_F 4/6-FUNCTIONS METER-IN SHW RADIO TRANSMITTER**DESCRIPTION**

Single-hand radio controller (transmitter/transceiver) with CANbus interface. For use with Tecnord RX-CAN radio receivers or as stand-alone controller for CANbus based systems. RC-SHW_F radio controller is designed to allow radio remote operation of machines equipped with a CAN-based control system. Its compact and ergonomic design allows easy operation: with a single hand all operators, on-off and proportional, are available. RC-SHW_F standard configuration includes 4 or 6 toggle switches for on-off selection of the function(s) and one proportional trigger for proportional speed control. Additional operators are available for radio enable and auxiliary functions. A STOP push button is available to immediately stop the machine in case of hazard. Battery and battery charger are internal; a connector is provided for battery charging and backup cable communication. The transmission technology used allows high immunity to interference and long operating range. Co-existence between multiple radio units is also allowed. A unique code allows the RC-SHW_F controller to operate only with its coupled radio receiver. Standard cable communication protocols include CANopen and J1939. Customized protocols are available for OEMs.

FEATURES

- Standard power supply from internal battery pack (rechargeable).
- Power supply line from the cable is protected against reversed polarity and overvoltage.
- CANbus line is protected against short circuits to GND and supply.
- Microprocessor based.
- Robust plastic enclosure.
- CE, FCC, IC certifications available
- Electro Magnetic Compatibility (EMC): EN 61000-6-2 (Immunity)
EN 61000-6-3 (Emissions)

SPECIFICATIONS

Operating voltage (internal battery):	4.7÷6 VDC
Operating voltage (serial cable):	8÷32 VDC
Max current consumption:	250 mA
Operating temperature:	-40 ÷ +85°C
Operating Frequency Band:	2402÷2480 MHz
Transmission type:	BT 2.1 + EDR
Antenna:	Built-in (internal)
Diagnostics:	1 LED for the controller's status (more LEDs available as option) 1 buzzer
CANbus physical layer:	ISO 11898
CANbus protocol:	J1939 (standard) CANopen (option)
Connector type:	M12, 4 pins
Housing material:	thermoplastic POM (different colours available)
Weight:	< 1Kg (4F)
Environmental protection:	IP 65

**DIMENSIONS****APPLICATIONS**

- Remote control of aerial platforms, telehandlers, agricultural machines and lift equipment equipped with CANbus systems.
- Stand-alone CANbus controller in both 12 VDC and 24 VDC systems.

RC ORDERING INFORMATION: see page RC3

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RX-CAN-2G4 CANBUS RADIO RECEIVER**DESCRIPTION**

Compact radio receiver / transceiver with CANbus interface. For use with Tecnord single-hand or multifunction Radio Transmitters.

OPERATION

RX-CAN radio transceiver is designed to allow radio remote operation of machines equipped with a CAN-based control system. Its compact and rugged design allows easy installation, even in weather-exposed locations on the machine. Standard communication protocols include CANopen and J1939.

Customized protocols are available for OEMs. Each Tecnord Radio is produced with a unique identifier (System ID). In case of lost Transmitter, a simple self-learning procedure allows to match a new spare transmitter. The transmission technology used allows high immunity to interference and long operating range. Co-existence between multiple units is also allowed. A unique code allows the RX-CAN transceiver controller to operate only with its coupled radio transmitter.

FEATURES

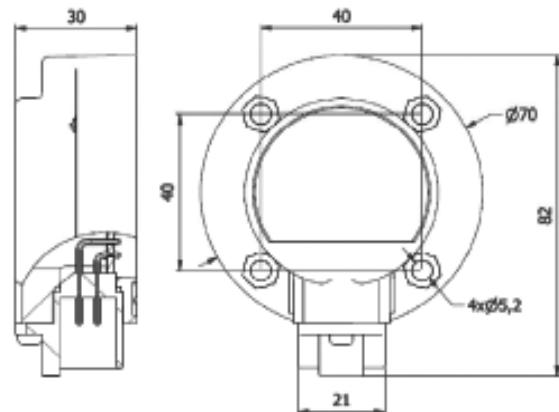
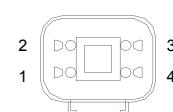
- Supply line is protected against reversed polarity and overvoltage.
- CANbus line is protected against short circuits to GND and supply.
- Microprocessor based.
- Vibration and shock resistant.
- Easy installation with 4 screws (option: magnet).
- CE, FCC, IC certifications available
- Electro Magnetic Compatibility (EMC): EN 61000-6-2 (Immunity)
EN 61000-6-3 (Emissions)

SPECIFICATIONS

Operating voltage:	6.5 ÷ 30 VDC
Max current consumption:	200 mA
Operating temperature:	-40 ÷ +85°C
Environmental protection:	IP 68
Operating Frequency Band:	2402 ÷ 2480 MHz
Transmission type:	BT 2.1 + EDR
Antenna:	Built-in (internal)
Diagnostics:	1 LED for the radio link status 1 LED for the CANbus status
CANbus physical layer:	ISO 11898
CANbus protocol:	J1939 (standard) CANopen (option)
Connector type:	Deutsch DT04-4P

APPLICATIONS

- 12 VDC and 24 VDC systems.
- Remote control of aerial platforms, telehandlers, agricultural machines and lift equipment equipped with CANbus systems.

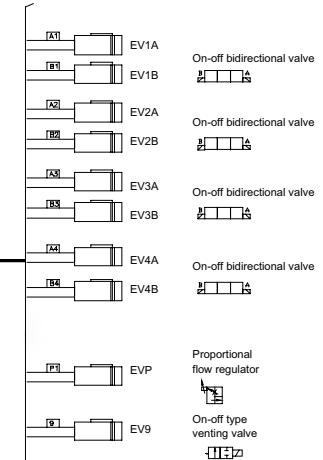
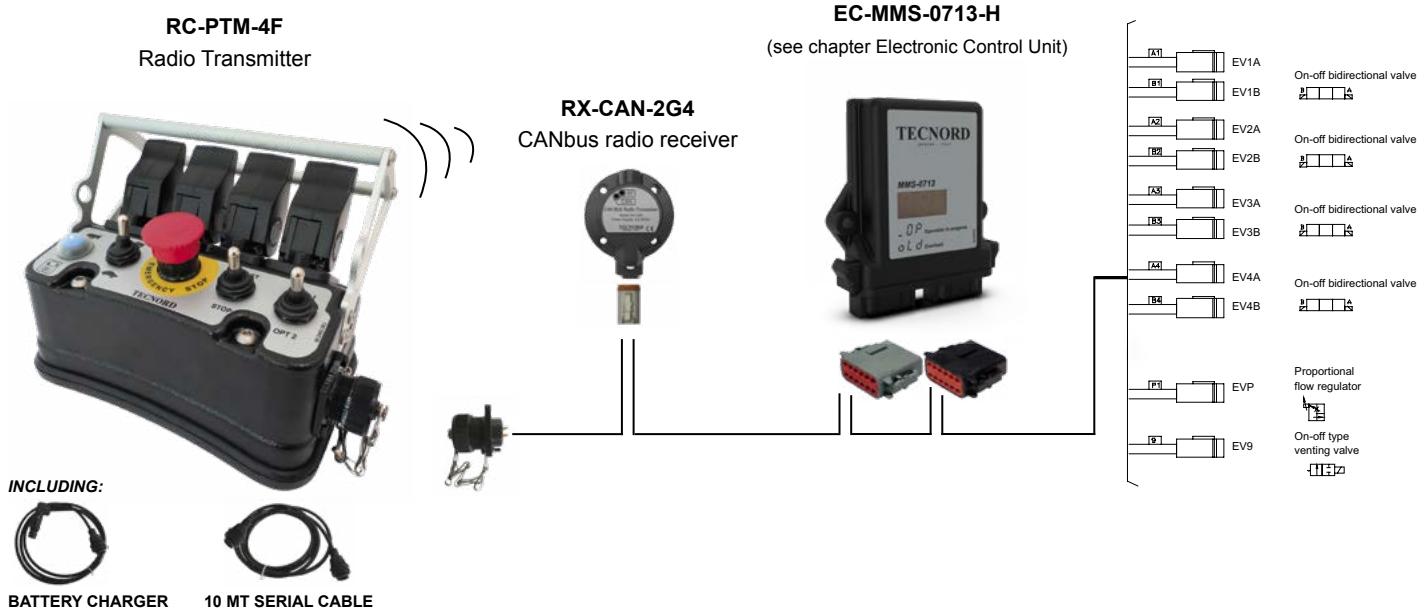
**DIMENSIONS****CONNECTIONS****Deutsch DT04-4P**

- 1 +V (POWER SUPPLY)
- 2 CAN - H
- 3 CAN - L
- 4 -V (POWER SUPPLY - GND)

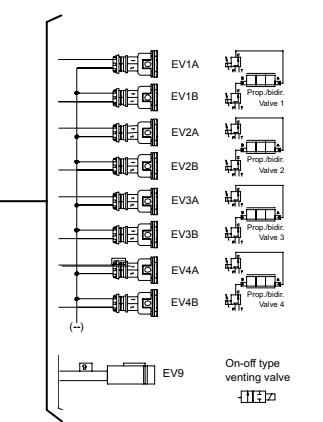
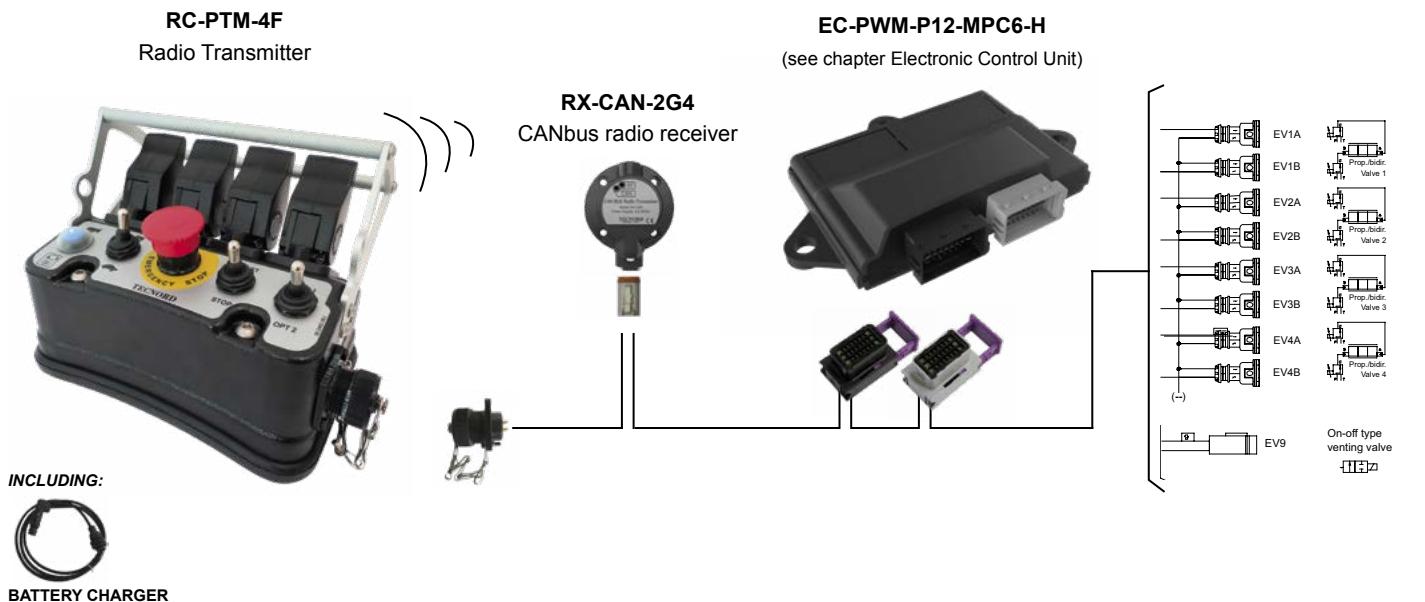
RX ORDERING INFORMATION: see page RC3

APPLICATION EXAMPLE

Model: RC-PTM-4F/TCN-CAR2M-SER10M-0000



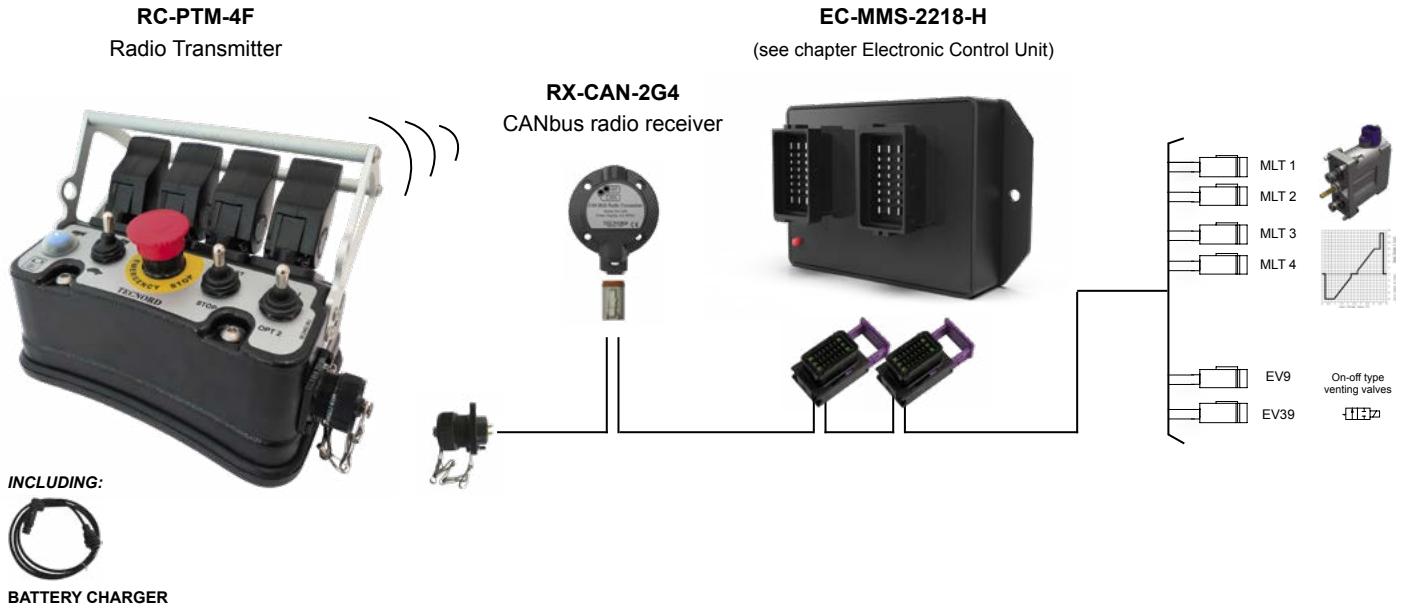
Model: RC-PTM-4F/PWM-CAR2M-00000-0000



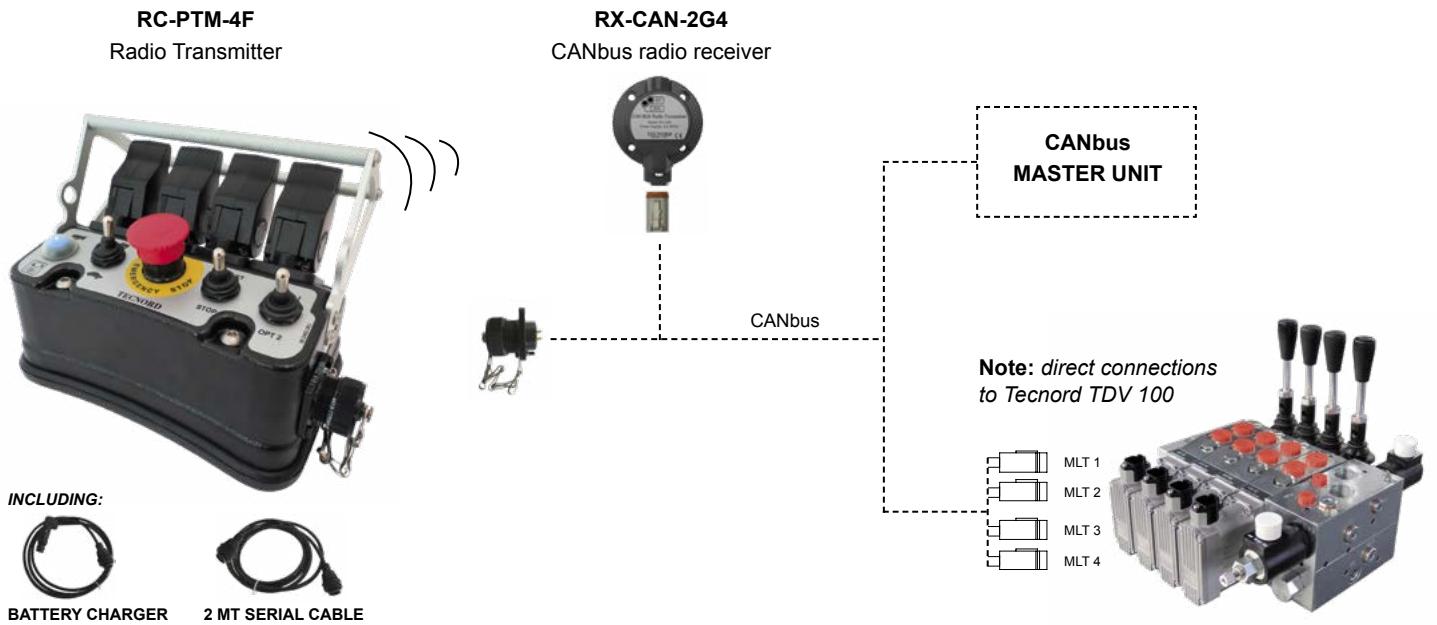
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APPLICATION EXAMPLE

Model: RC-PTM-4F/MLT-CAR2M-00000-0000



Model: RC-PTM-4F/CAN-CAR2M-SER2M-H000



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APPLICATION EXAMPLE

Model: RC-SHW-4F/TCN-CAR2M-SER2M-0000

RC-SHW-4F
Radio Transmitter

INCLUDING:



BATTERY CHARGER 2 MT SERIAL CABLE

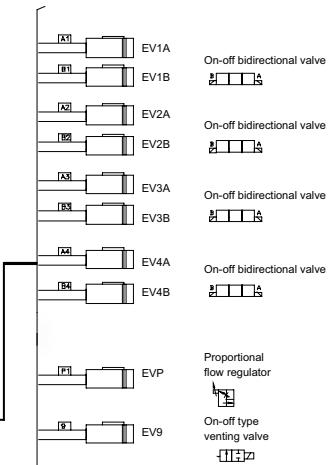
RX-CAN-2G4
CANbus radio receiverEC-MMS-0713-H
(see chapter Electronic Control Unit)

EC-MMS-0713-H

(see chapter Electronic Control Unit)

EC-MMS-0713-H

(see chapter Electronic Control Unit)



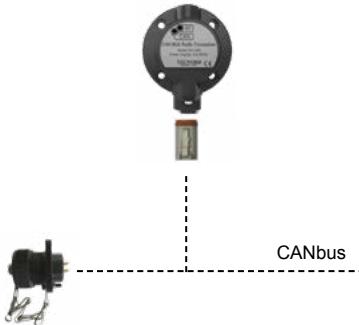
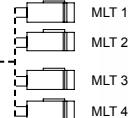
Model: RC-SHW-4F/CAN-CAR2M-SER4M-0000

RC-SHW-4F
Radio Transmitter

INCLUDING:



BATTERY CHARGER 4 MT SERIAL CABLE

RX-CAN-2G4
CANbus radio receiverCANbus
MASTER UNITNote: direct connections
to Tecnord TDV 100

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BATTERY CHARGER CABLE IT (standard)**Kit includes:** 12-24 VDC Battery charger cable - IT - 2 meters**Available for** PTM TransmitterCAR2M (2 meters) - ORDERING CODE: **22.0611.104****BATTERY CHARGER CABLE M12 (standard)****Kit includes:** 12-24 VDC Battery charger cable - M12 - cigarette lighter plug - 2 meters**Available for** SHW TransmitterCAR2M (2 meters) - ORDERING CODE: **22.0611.119****BATTERY CHARGER (110-220 VAC) CABLE IT****Kit includes:** 110-220 VAC Battery charger cable - IT - 1.5 meters**Available for** PTM TransmitterVAC2M (1,5 meters) - ORDERING CODE: **22.0611.134****BATTERY CHARGER (110-220 VAC) CABLE M12****Kit includes:** 110-220 VAC Battery charger cable - M12 - 1.5 meters**Available for** SHW TransmitterVAC2M (1,5 meters) - ORDERING CODE: **22.0611.135****SERIAL AND BATTERY CHARGER CABLE IT/IT****Kit includes:** serial and Battery charger cable IT/IT - 2, 4, 10, 20 meters**Available for** PTM TransmitterSER2M (2 meters) - ORDERING CODE: **22.0611.105**SER4M (4 meters) - ORDERING CODE: **22.0611.114/A**SER10M (10 meters) - ORDERING CODE: **22.0611.103**SER10M (20 meters) - ORDERING CODE: **22.0611.101****SERIAL AND BATTERY CHARGER CABLE IT/M12****Kit includes:** serial and Battery charger cable IT/M12 - 2, 4, 10, 20 meters**Available for** SHW TransmitterSER2M (2 meters) - ORDERING CODE: **22.0611.044**SER4M (4 meters) - ORDERING CODE: **22.0611.120**SER10M (10 meters) - ORDERING CODE: **22.0611.065**SER10M (20 meters) - ORDERING CODE: **22.0611.131**

CONNECTOR KITS

4 POLES DEUTSCH DT06-4S**Kit includes:** male connector, female contacts, secondary lock and fillers**Available for Radio receiver:** RX-CAN

ORDERING CODE: 13.0310.132

12 POLES "DEUTSCH DTM06-12SA & DTM06-12SB"**Kit includes:** male connector, female contacts, secondary lock and fillers.**Available for electronic control unit:** EC-MMS-0713-H.

ORDERING CODE: 13.0310.253

24 POLES SICMA BLACK COLOR**Kit includes:** male connector, female contacts, locking cam, fillers.**Available for electronic control unit:** EC-MMS-2218-H, EC-MMS-1521-H.

ORDERING CODE: 13.0310.150

24 POLES SICMA GREY COLOR**Kit includes:** male connector, female contacts, locking cam, fillers.**Available for electronic control unit:** EC-MMS-1521-H.

ORDERING CODE: 13.0310.634

HARNESS - IT SERIAL FEMALE CONNECTOR AND PLUG

IT female connector ORDERING CODE: 50.1005.118

IT4 Plug with chain ORDERING CODE: 50.1005.116



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