

RADIO REMOTE SYSTEMS



Section / Description	page
<b>4-FUNCTIONS PTM RADIO TRANSMITTER</b> .....	RC4
<b>6-FUNCTIONS PTM RADIO TRANSMITTER</b> .....	RC5
<b>4/6-FUNCTIONS METER-IN SHW RADIO TRANSMITTER</b> .....	RC6
<b>CANBUS RADIO RECEIVER</b> .....	RC7
<b>APPLICATION EXAMPLE</b> .....	RC8
<b>ACCESSORIES</b> .....	RC12

W7 / 2017

**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.



4484 Boeing Drive Rockford, IL 61109 • USA • Phone +1 (815) 397-6628 • Fax +1 (815) 397-2526  
mail: delta@delta-power.com • www.delta-power.com



Via Malavolti, 36 • 41122 Modena • ITALY • Phone +39 (059) 254895 • Fax +39 (059) 253512  
mail: tecnord@tecnord.com • www.tecnord.com

<b>MODEL</b>	<b>DESCRIPTION</b>	<b>PAGE</b>
<b>Ordering Information</b>		RC3
<b>RC-PTM-4F</b>	4-Functions PTM Radio Transmitter	RC4
<b>RC-PTM-6F</b>	6-Functions PTM Radio Transmitter	RC5
<b>RC-SHW-_F</b>	4/6-Functions Meter-IN SHW Radio Transmitter	RC6
<b>RX-CAN-2G4</b>	CANbus Radio Receiver	RC7
<b>Application Example</b>		RC8

**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.



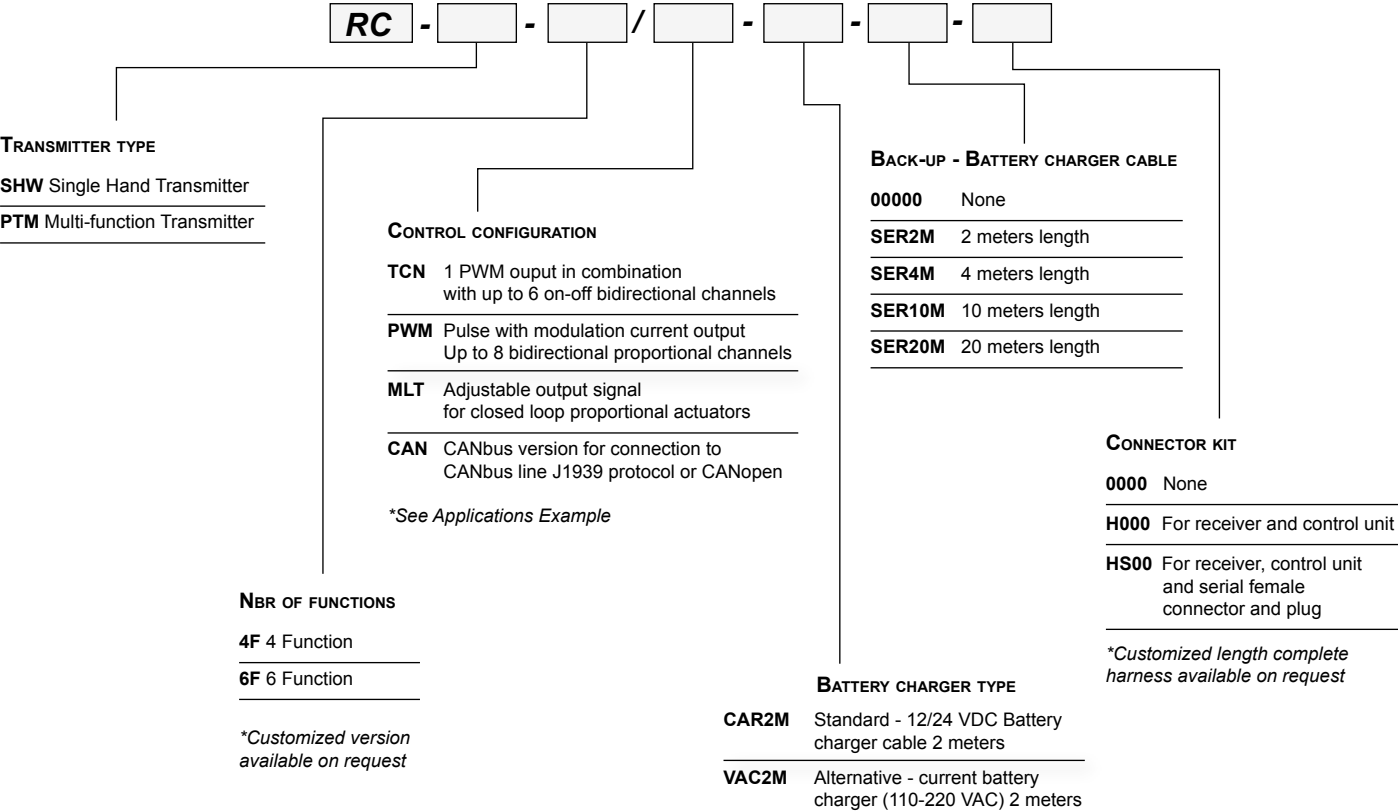
4484 Boeing Drive Rockford, IL 61109 • USA • Phone +1 (815) 397-6628 • Fax +1 (815) 397-2526  
 mail: delta@delta-power.com • [www.delta-power.com](http://www.delta-power.com)



Via Malavolti, 36 • 41122 Modena • ITALY • Phone +39 (059) 254895 • Fax +39 (059) 253512  
 mail: tecnord@tecnord.com • [www.tecnord.com](http://www.tecnord.com)

W 7 / 2017

ORDERING INFORMATION



W7 / 2017

**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.



4484 Boeing Drive Rockford, IL 61109 • USA • Phone +1 (815) 397-6628 • Fax +1 (815) 397-2526  
 mail: delta@delta-power.com • www.delta-power.com



Via Malavolti, 36 • 41122 Modena • ITALY • Phone +39 (059) 254895 • Fax +39 (059) 253512  
 mail: tecnord@tecnord.com • www.tecnord.com

**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.

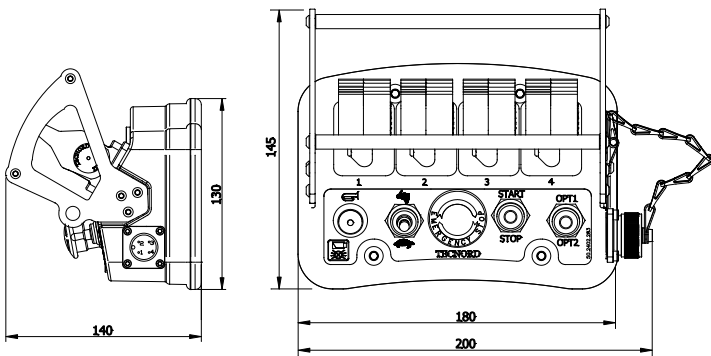
**OPERATION**

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**

**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.



4484 Boeing Drive Rockford, IL 61109 • USA • Phone +1 (815) 397-6628 • Fax +1 (815) 397-2526  
mail: delta@delta-power.com • www.delta-power.com



Via Malavolti, 36 • 41122 Modena • ITALY • Phone +39 (059) 254895 • Fax +39 (059) 253512  
mail: tecnord@tecnord.com • www.tecnord.com

**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.

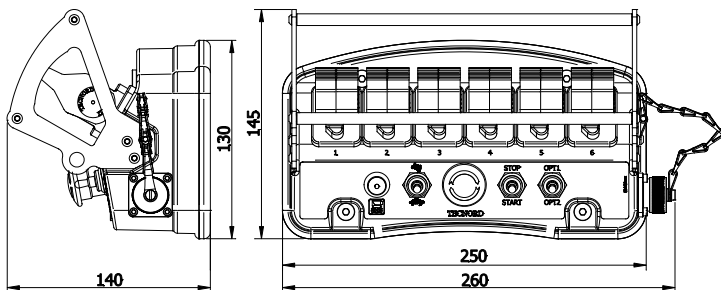
**OPERATION**

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

**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.

W 7 / 2017



4484 Boeing Drive Rockford, IL 61109 • USA • Phone +1 (815) 397-6628 • Fax +1 (815) 397-2526  
mail: delta@delta-power.com • www.delta-power.com



Via Malavolti, 36 • 41122 Modena • ITALY • Phone +39 (059) 254895 • Fax +39 (059) 253512  
mail: tecnord@tecnord.com • www.tecnord.com

**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**

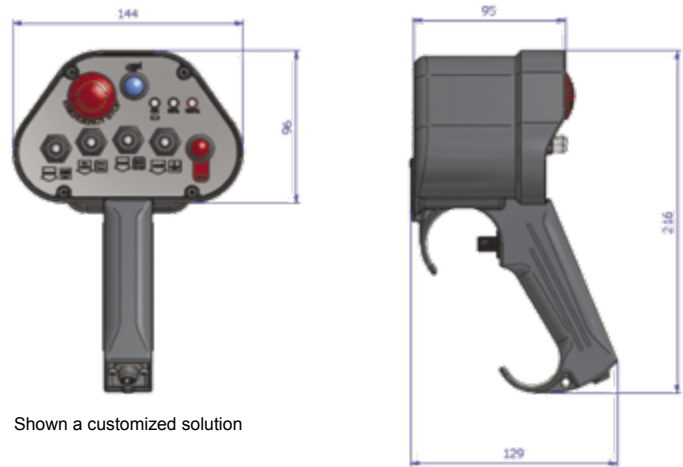
- Standard power supply from internal battery pack (rechargeable).
- Power supply line from the cable is protected against reversed polarity and overvoltage.
- CANbus line is protected against short circuits to GND and supply.
- Microprocessor based.
- Robust plastic enclosure.
- CE, FCC, IC certifications 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

**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.



4484 Boeing Drive Rockford, IL 61109 • USA • Phone +1 (815) 397-6628 • Fax +1 (815) 397-2526  
mail: delta@delta-power.com • www.delta-power.com



Via Malavolti, 36 • 41122 Modena • ITALY • Phone +39 (059) 254895 • Fax +39 (059) 253512  
mail: tecnord@tecnord.com • www.tecnord.com

**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**

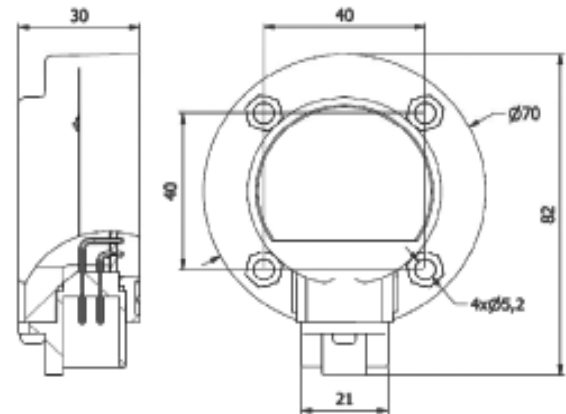
Operating voltage:	6.5 ÷ 30 VDC
Max current consumption:	200 mA
Operating temperature:	-40 ÷ +85°C
Environmental protection:	IP 68
Operating Frequency Band:	2402 ÷ 2480 MHz
Transmission type:	BT 2.1 + EDR
Antenna:	Built-in (internal)
Diagnostics:	1 LED for the radio link status 1 LED for the CANbus status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

**APPLICATIONS**

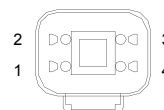
- 12 VDC and 24 VDC systems.
- Remote control of aerial platforms, telehandlers, agricultural machines and lift equipment equipped with CANbus systems.



**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**

**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.

W 7 / 2017



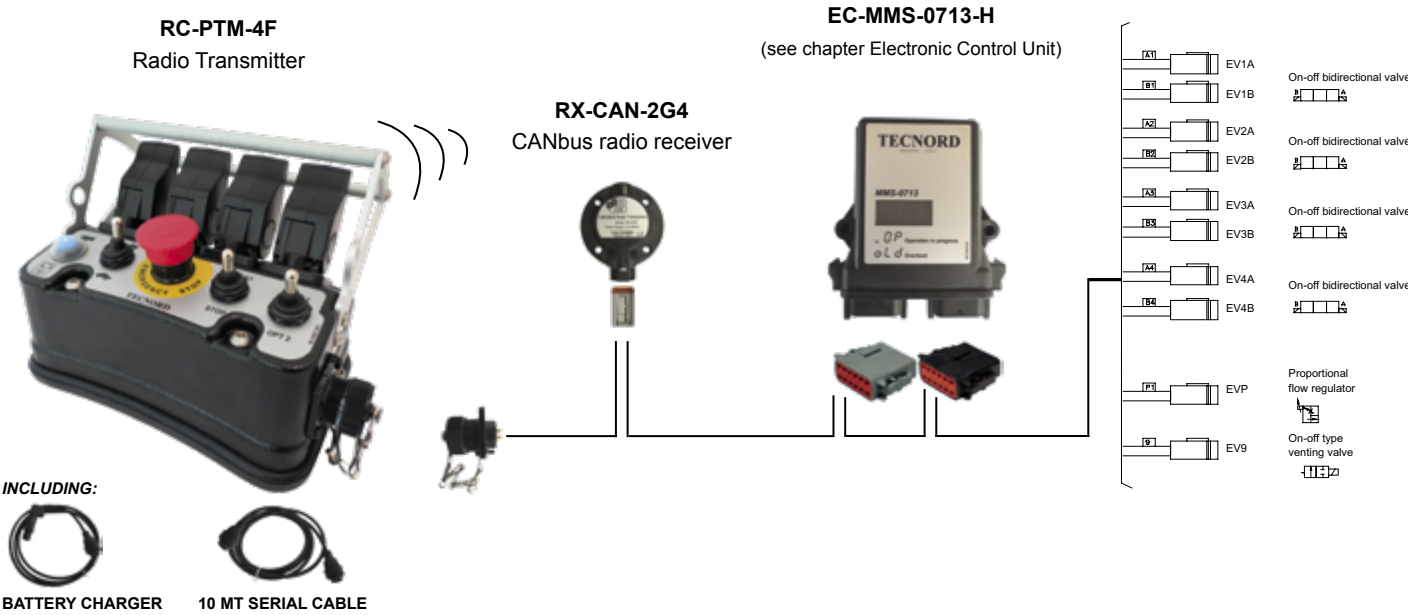
4484 Boeing Drive Rockford, IL 61109 • USA • Phone +1 (815) 397-6628 • Fax +1 (815) 397-2526  
mail: delta@delta-power.com • www.delta-power.com



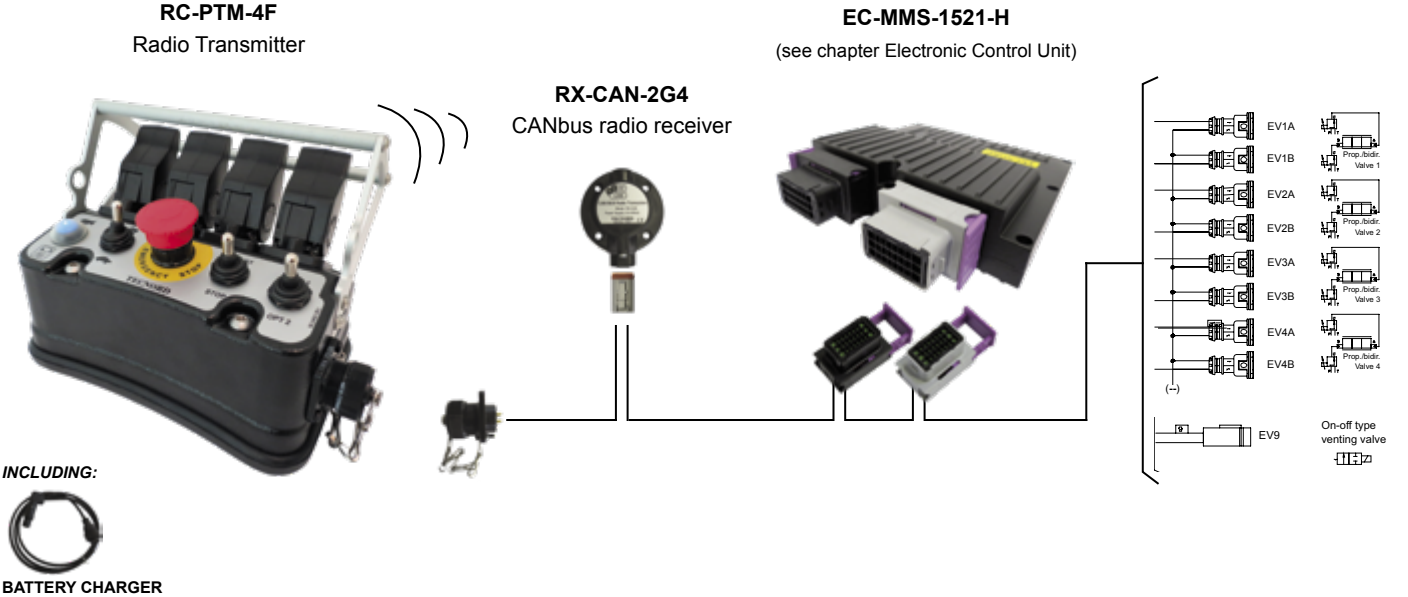
Via Malavolti, 36 • 41122 Modena • ITALY • Phone +39 (059) 254895 • Fax +39 (059) 253512  
mail: tecnord@tecnord.com • www.tecnord.com

APPLICATION EXAMPLE

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



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



**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.



4484 Boeing Drive Rockford, IL 61109 • USA • Phone +1 (815) 397-6628 • Fax +1 (815) 397-2526  
mail: delta@delta-power.com • www.delta-power.com

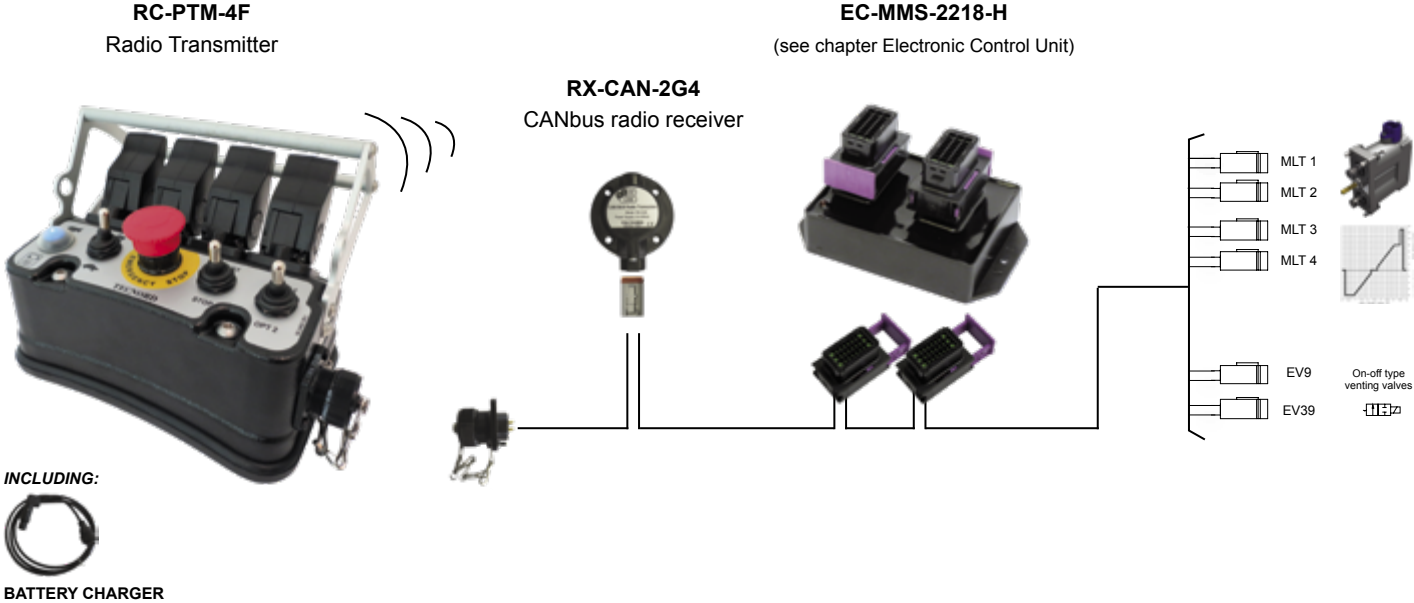


Via Malavolti, 36 • 41122 Modena • ITALY • Phone +39 (059) 254895 • Fax +39 (059) 253512  
mail: tecnord@tecnord.com • www.tecnord.com

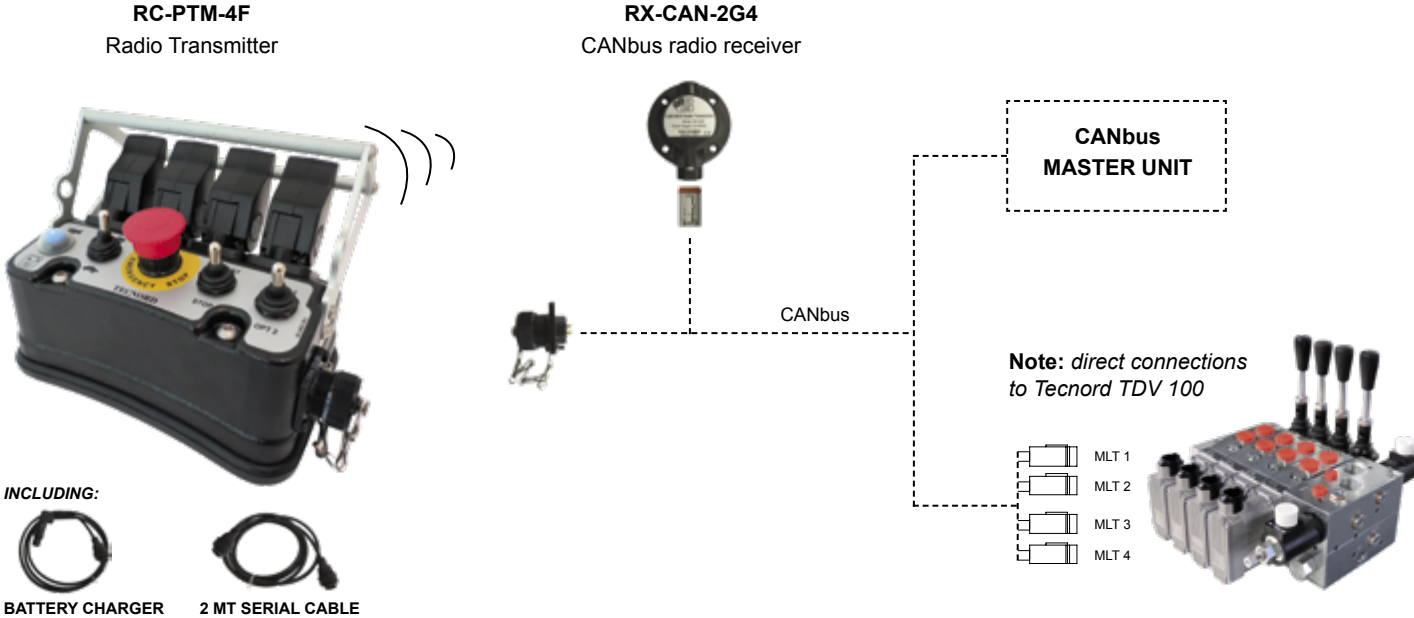


APPLICATION EXAMPLE

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



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



W7 / 2017

**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.



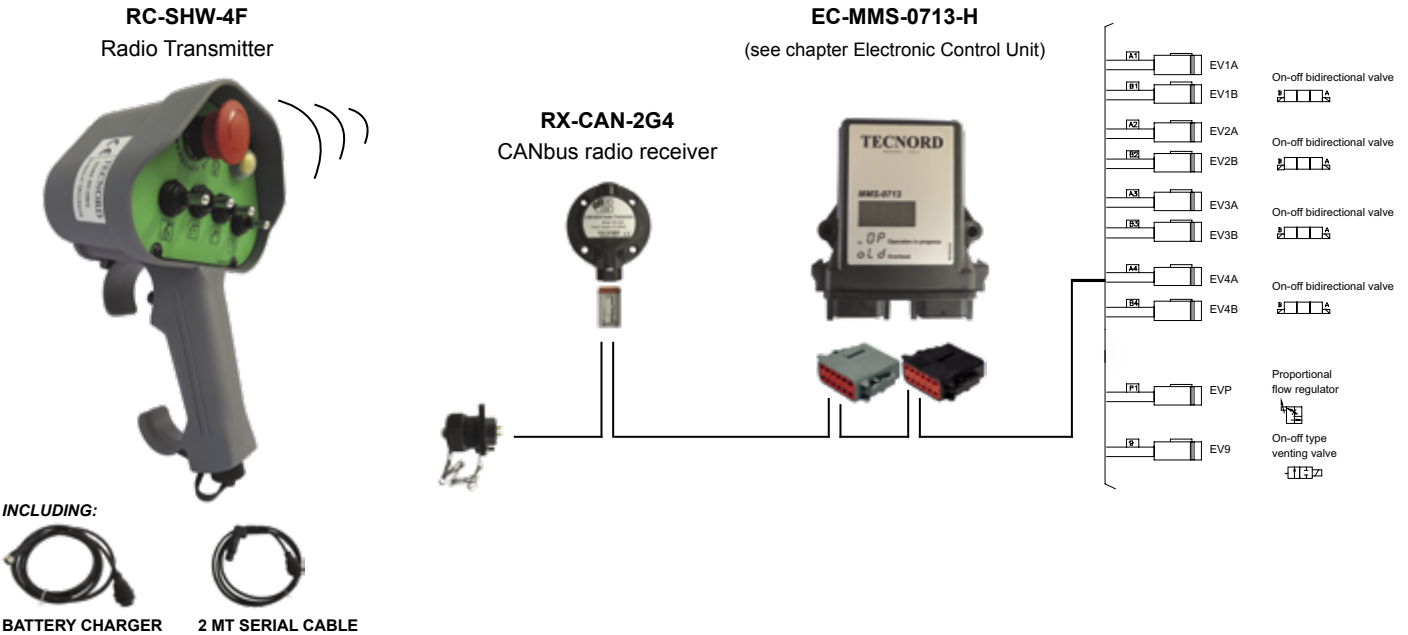
4484 Boeing Drive Rockford, IL 61109 • USA • Phone +1 (815) 397-6628 • Fax +1 (815) 397-2526  
mail: delta@delta-power.com • www.delta-power.com



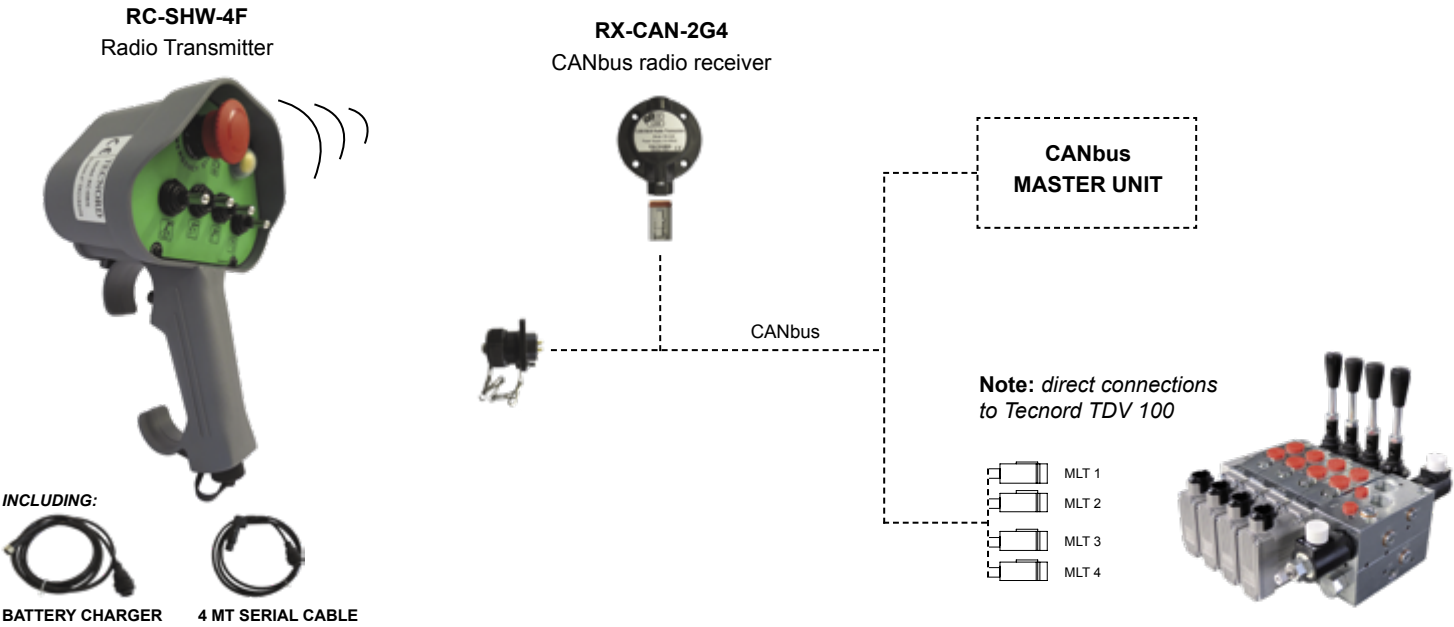
Via Malavolti, 36 • 41122 Modena • ITALY • Phone +39 (059) 254895 • Fax +39 (059) 253512  
mail: tecnord@tecnord.com • www.tecnord.com

APPLICATION EXAMPLE

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



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



**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.



4484 Boeing Drive Rockford, IL 61109 • USA • Phone +1 (815) 397-6628 • Fax +1 (815) 397-2526  
mail: delta@delta-power.com • www.delta-power.com



Via Malavolti, 36 • 41122 Modena • ITALY • Phone +39 (059) 254895 • Fax +39 (059) 253512  
mail: tecnord@tecnord.com • www.tecnord.com

**SERIAL AND BATTERY CHARGER CABLES**

**ACCESSORIES**

**BATTERY CHARGER CABLE IT (standard)**

**Kit includes:** 12-24 VDC Battery charger cable - IT - 2 meters

**Available for** PTM Transmitter

**CAR2M - 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 Transmitter

**CAR2M - 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 Transmitter

**VAC2M - 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 Transmitter

**VAC2M - 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 Transmitter

**SER2M - 2 meters**

**ORDERING CODE: 22.0611.105**

**SER4M - 4 meters**

**ORDERING CODE: 22.0611.114/A**

**SER10M - 10 meters**

**ORDERING CODE: 22.0611.103**

**SER20M - 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 Transmitter

**SER2M - 2 meters**

**ORDERING CODE: 22.0611.044**

**SER4M - 4 meters**

**ORDERING CODE: 22.0611.120**

**SER10M - 10 meters**

**ORDERING CODE: 22.0611.065**

**SER20M - 20 meters**

**ORDERING CODE: 22.0611.131**



**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.

W7 / 2017



4484 Boeing Drive Rockford, IL 61109 • USA • Phone +1 (815) 397-6628 • Fax +1 (815) 397-2526  
 mail: delta@delta-power.com • www.delta-power.com



Via Malavolti, 36 • 41122 Modena • ITALY • Phone +39 (059) 254895 • Fax +39 (059) 253512  
 mail: tecnord@tecnord.com • www.tecnord.com

**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 cum, 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 cum, 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**



**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.



4484 Boeing Drive Rockford, IL 61109 • USA • Phone +1 (815) 397-6628 • Fax +1 (815) 397-2526  
 mail: delta@delta-power.com • [www.delta-power.com](http://www.delta-power.com)



Via Malavolti, 36 • 41122 Modena • ITALY • Phone +39 (059) 254895 • Fax +39 (059) 253512  
 mail: [tecnord@tecnord.com](mailto:tecnord@tecnord.com) • [www.tecnord.com](http://www.tecnord.com)