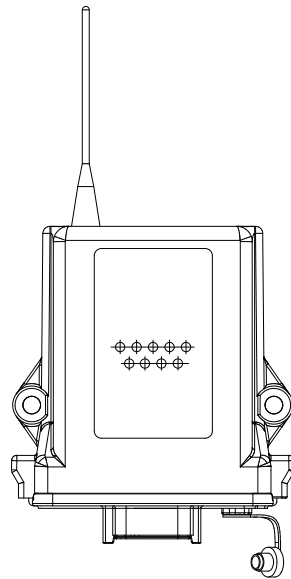


User Manual

Remote Control MPCAN Receiver



Revision history

Table of revisions

Date	Changed	Rev
January 2019	Rebranded to Danfoss Power Solutions	0101

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Safety instructions

MPCAN general safety

The following safety instructions must be read carefully in order to install and use the product properly and to keep it in perfect working condition and to reduce the risk of misuse.

Potential damage to operator and product.

Do not use this product on machines in potentially explosive atmospheres unless the model is ATEX/RATEX certified to do so.

- Strictly adhere to the installation instructions contained in this document.
- Make sure that professional and competent personnel carry out the installation.
- Ensure that all site and prevailing safety regulations are fully respected.
- Make sure that this document is permanently available to the operator and maintenance personnel.
- Keep the transmission key when the set is not in use.
- On starting each working day, check to make sure that the STOP button and other safety measures are working.
- When in doubt, press the STOP button.
- Whenever several sets have been installed, make sure the transmitter is the right one. Identify the machine controlled on the label for this purpose on the transmitter or by using the display (in case it has one).
- Service the equipment periodically.
- When carrying out repairs, only use spare parts from Danfoss.

MPCAN safety warnings

Potential damage to operator and product.

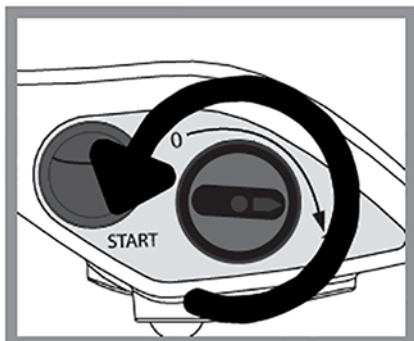
Follow the guidelines below to reduce risk of injury to the operator and the product.

- Use the device with the manufacturer's battery and battery charger (if applicable).
- Only allow qualified personnel to operate the equipment.
- Always set the STOP button in the off position when not in use.
- Always press STOP before plugging in tether cable (if applicable).
- Do not operate product when visibility is limited.
- Make sure product is compatible with the machine.
- Avoid knocking or dropping the product.
- Do not use the product if a failure is detected.

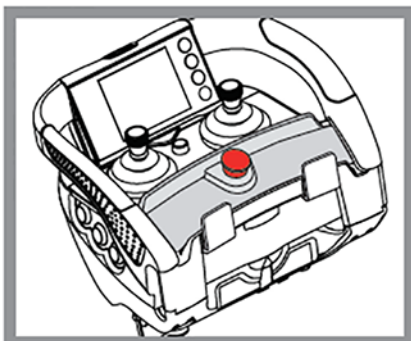
Changes or modifications not approved by Danfoss can void the user's authority to operate this product.

Safety instructions

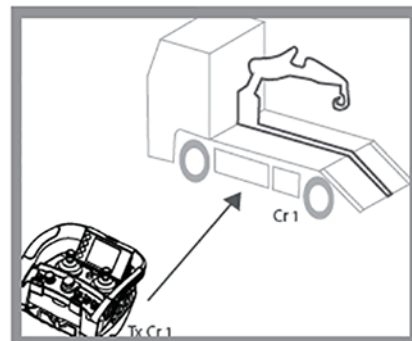
Quick reference precautions



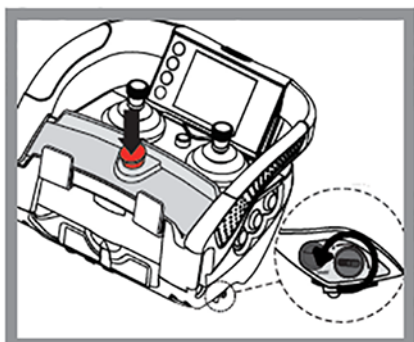
Remove the transmission key only when the set is not in use or to deny the access



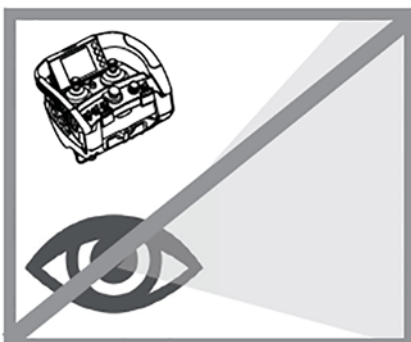
When in doubt, press the STOP button



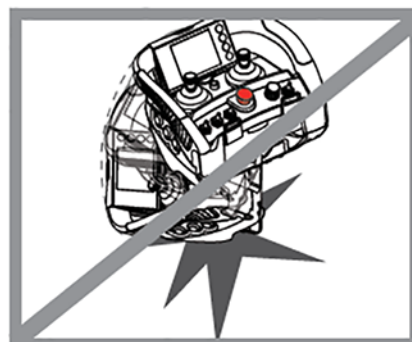
Make sure the transmitter works with the machine to be handled



After use set the contact key and the STOP button



Do not use the set when visibility is limited

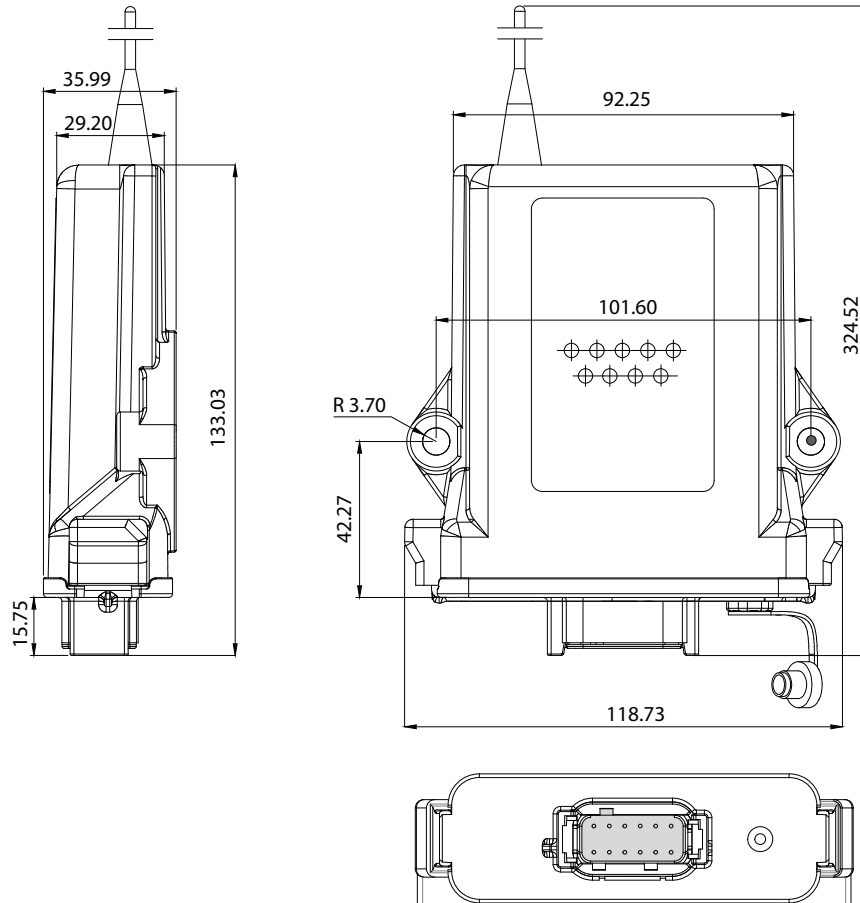


Avoid knocking or dropping the set

Technical description

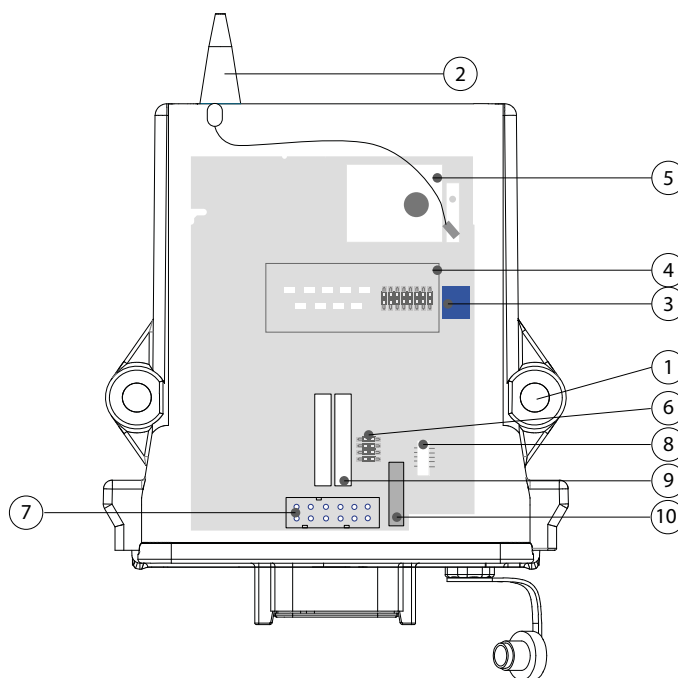
MPCAN dimensions

Dimensions in mm



Technical description

MPCAN hardware description



1. Fixing slots (fixed assembly or anti-vibration)
2. External antenna (optional)
3. Removable internal EEPROM
4. External LEDs
5. TR800-CE MCX radio
6. CAN bus termination
7. DEUTSCH connector pinout
8. Tether connection
9. STOP relays
10. Internal fuse, 7.5A

Installation

MPCAN receiver installation

The below information describes hazards to be aware of during installation and steps to locate the receiver.

Risk of shock

Completely shut down the machine when installing the receiver.

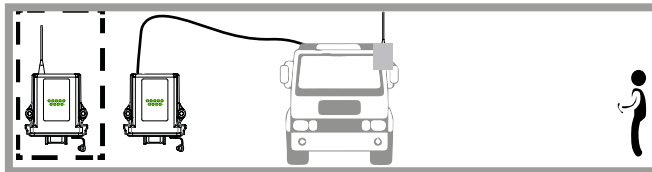
Check the power supply and shut off the main switch to disconnect the interface cable between the receiver and the machine's electrical box.

1. Find an easily accessible and clear location with a direct vision between the receiver's antenna and the transmitter's working area.

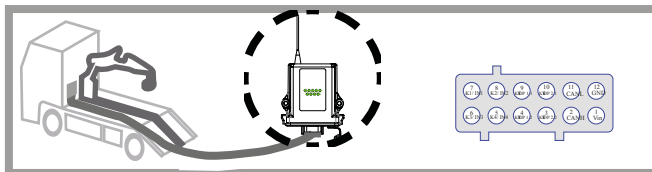


2. Optional: If it is difficult to achieve direct vision between the receiver's antenna and the transmitter's working area, it is recommended to use an extended antenna in a clear location (only for models that allow an antenna).

In areas of high vibration, the use of dampers is advised.



3. Proceed to connect the power supply. Use the connection block diagram provided with the system, where the correspondence between the transmitter maneuvers and the receiver's outputs are detailed.



4. Check if the electrical installation and verify if there's an option to connect the neutral or the ground cable. In that case, don't forget to connect the ground cable.

The use of fireproof or flame retardant cables are recommended for the connection.

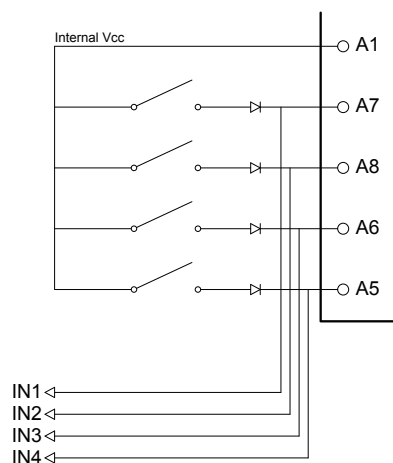
Installation

MPCAN input and output configuration

This receiver has four digital outputs or four digital inputs. The hardware is shared by these inputs and outputs and they are chosen by EEPROM configuration.

Each input and output cannot be configured together at the same time.

The MPCAN includes a 7.5A internal fuse.

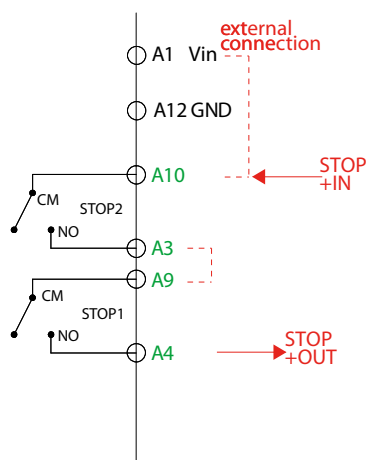


MPCAN STOP category 3 PLd

Stop function is performed by two relays in serie or parallel.

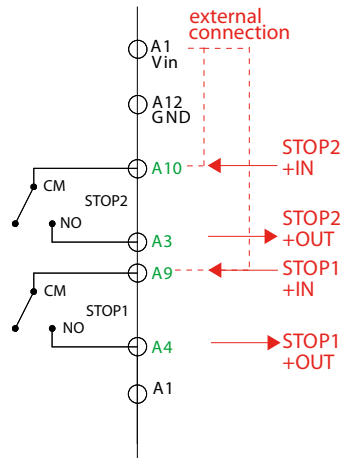
A10 and A9 pins should not be connected directly to GND.

Serie

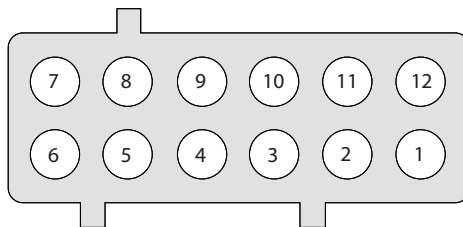


Installation

Parallel



MPCAN pinout



Pin	Description
1	Vin
2	CANH
3	KSTOP 2.2
4	KSTOP 1.2
5	K4/IN4
6	K3/IN3
7	K1/IN1
8	K2/IN2
9	KSTOP 1.1
10	KSTOP 2.1
11	CANL
12	GND

Troubleshooting

MPCAN troubleshooting

LED	Characteristic	Description	Action
POWER	Green; pulsing	Receiver is starting up	Wait until start-up process is finished
HARDOK	Green; continuous	Receiver hardware OK	Operate
	Red; pulsing	EEPROM error; data corruption; CAN bus error (if CANERR activates)	Reprogram EEPROM
	Red; other	Electronic board hardware breakdown	Replace electronic board
SIGNAL	LED off	No radio signal detected	-
	LED on + transmitter switched off	Radio channel occupied	Change transmitter's frequency channel
	LED on + DATA switched off	Radio channel occupied by non Danfoss system	Change transmitter's frequency channel
DATA	LED off + SIGNAL LED on	Radio error	Replace radio
	Green; pulsing	Receiving good frames	OK
ID	LED off + DATA LED on	No valid ID; Danfoss system nearby	If channel not occupied, check chosen ID in the transmitter or reset the receiver
	LED on + SIGNAL LED on + DATA LED on	Valid frames received from the transmitter; correct link	OK
RELAY	Green	STOP relay activated	-
ORDER	Green	-	-
CAN_RUN	Green; switched on	Operational state	OK
	Green; pulsing	Activating operational state	-
CAN_ERR	Red; switched on	CAN bus error	Check CAN connection
	Red; pulsing	No bus connection	Check bus termination resistance
	LED off	Correct communication	OK

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