Instruction Manual

G5 Rocket Flex/Pocket System

Document: 66068
Revision: A
Language: English

scanreco
Quality starts from within.

Contents

Document information

Attribute	Information
Document Type	Instruction Manual
Title	SCANRECO G5 Rocket Flex/Pocket System
Document No.	66068
Language	English
Release date	2016-01-25
Original	English
Release date (original)	2016-01-25
Author	SCANRECO
Company	SCANRECO AB, SWEDEN

Revision history

Revision	Date	Note
A	2016-01-25	First release

Abbrevations

LED	Light Emitting Diode
EMC	Electromagnetic Compatibility
ISM	Industrial, Scientific and Medical (radio band)
MOSFET	Metal Oxide Semiconductor Field Effect Transistor

1 General information

This instruction manual describes the SCANRECO G5 Pocket & G5 Rocket Flex system, this instruction manual should be seen as a complement to the instruction manual for the application which the SCANRECO G5 Rocket Flex is intended to operate with.

The SCANRECO G5 system is a complete remote control system for mobile and stationary applications where durability and functionality is in high demand, the SCANRECO G5 system offers the system installer a flexible and configurable remote control system.

To ensure the safety of the remote control system and the application you should carefully study this instruction manual. This will ensure that you are familiar with the system and ready to use it in it's intended application.

Notice to reader:

TO THE SYSTEM INSTALLER:

Pay special attention to the chapters Safety Information, Installation recommendations and Programming.

TO THE OPERATOR:

Pay special attention to the chapters Safety Information, Product description and Product Care.

TO THE SERVICE TECHNICIAN:

Pay special attention to the chapters Safety Information, Product Care, Trouble Shooting and Spare Parts.

The following labels are used throughout this document to create awareness about important recommendations or warnings. It is important that these recommendations or warnings are considered by the installer, operator and service personnel.

IMPORTANT!
This information must be followed, potential hazards for the operator and environment if instructions are not followed.

ATTENTION!
General recommendation. If not followed may cause the system not to perform at full capacity.

NOTE!
General notice.

2 Safety information

2.1 General

READ THE SAFETY INSTRUCTIONS CAREFULLY BEFORE INSTALLING, CONFIGURATING AND OPERATING THIS PRODUCT!

MAKE SURE THAT YOU, THE OPERATOR OR SERVICE TECHNICIAN, HAVE FULLY UNDERSTOOD THE SAFETY INSTRUCTIONS BEFORE PROCEEDING

IMPORTANT!
The system installer is responsible for producing an instruction manual for the application where the SCANRECO G5 system has been installed and intended to control.
The system installer is responsible for producing a product approval, if such is required, for the application where the SCANRECO G5 system has been installed.
Prior to operation, the system installer is required to train the operator on all functions available using the SCANRECO G5 system.
Prior to operation, the system installer is required to inform the operator of all potential hazardous situations that may appear when operating the application with the SCANRECO G5 system.
The system installer must take into account the specific installations instructions declared in this instruction manual.

Due to the unlimited variety of applications (cranes, machines, objects, vehicles and other equipment) on which the remote control system is used, and the numerous standards which are frequently the subject of varying interpretation, it is impossible for the personnel at SCANRECO to provide expert advice regarding the suitability of a given remote control for a specific application. It is the responsibility of the purchaser and system installer to determine the suitability of any SCANRECO remote control product for an intended application and to ensure that it is installed and guarded in accordance with all country, federal, state, local, and private safety and health regulation, codes, standards and the SCANRECO instructions in this document.

If the SCANRECO G5 system will be used in a safety critical application, the purchaser / system installer must undertake appropriate testing and evaluation of the final application to prevent injury to the end user.

SCANRECO does not take responsibility for any damage or injury.

Unauthorized tampering with any of the products will automatically void the SCANRECO guarantee and product responsibility.

2.2 Pre-operational

In order to ensure safety of the operator, bystanders and the machine, the user should study and learn all provided instructions regarding how to use the SCANRECO G5 system as well as all safety instructions and the location of all emergency stop controls. This will enable the user to quickly get familiar with the new remote control system and how to safely utilize it.

The operator must understand and follow the below instructions at all times!

Prior to operation, the operator must ensure that: he/she:

- is fully trained by the system installer in proper use of the application and knows all functions available in the SCANRECO G5 system.
- is responsible to ensure that non-qualified personnel **never** gains control of the SCANRECO G5 system.
- has fully understood this instruction manual.
- has fully understood the instruction manual given by the system installer.
- is well aware of the positioning of the emergency stop arrangements.
- uses the correct transmitter with the correct receiver unit.
- has at all times full view of the work area where the application is used.
- always keeps the SCANRECO G5 system deactivated if not used.
- never leaves the SCANRECO G5 system unsupervised.
- stores the SCANRECO G5 system in such a way that unauthorized personnel cannot gain control of it.
- on a daily basis ensure that all safety related functions and emergency stop functions works accordingly(or immediately if suspicion of malfunction).
- always report faults that may have appeared during operation to the system installer.
- is aware of, and obey, any local rules applied regarding operation of the application that the SCANRECO G5 system is operating.

3 System information

3.1 System overview

The SCANRECO G5 system system has been especially developed for hydraulically driven mobile machinery. The system is a digital remote control system based on advanced microprocessor technology which can cope with the roughest of environments. The system is highly resistant against electromagnetic and radio frequency radiation. The G5 system is comprised of a Pocket or Rocket Flex Transmitter with pushbuttons. The Receiver provides the connection points for connecting to the electro-hydraulic valves or controller. Digitally coded control information is sent in both directions via radio between the Transmitter and the Receiver.

G5 Rocket Flex

G5 Pocket

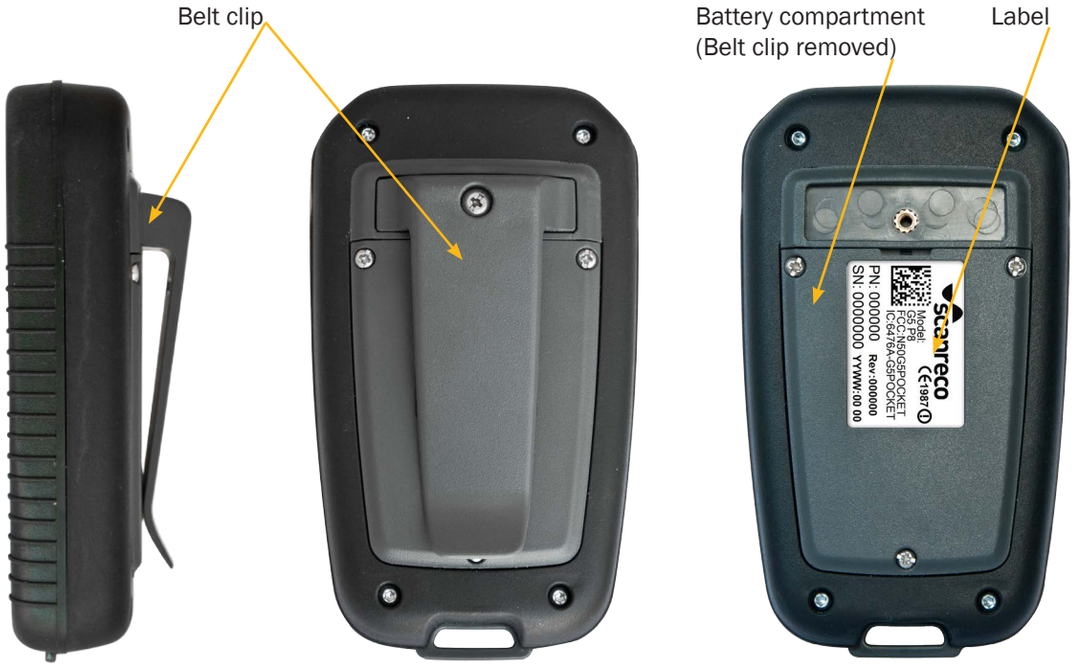
G5 Receiver M19

G5 Receiver CAN

4 G5 Pocket Transmitter

4.1 Product description

The G5 Pocket Transmitter is a light weight, impact and water resistant handheld unit equipped with up to eight pushbuttons. It has five configurable Light Emitting Diodes (LED) for machine and status feedback. The buttons and the LED's can be configured for a variety of different operations. The unit is powered with 3 standard AAA batteries and the backside has a belt clip for convenient attachment on the operator's belt.



4.2 Versions

The G5 Pocket Transmitter comes in the following versions:

Model	Button configuration
G5 P3	3 one-step pushbuttons
G5 P4	4 one-step pushbuttons
G5 P6	6 one-step pushbuttons
G5 P8	8 one-step pushbuttons

The models may have the different printed symbols on the buttons, colors, scripts, pictures etc.

4.3 Functionality

The G5 Pocket systems are normally delivered with the default settings. Default start button is button number 7 and default stop button is button number 8. Button number 1-6 has a momentary activation of output 1-6. (Pocket Transmitters with 6 buttons or less needs to be configured before they can be started.) If any other functions are required they need to be configured prior to operation. The pushbuttons are easily programmed to activate any output or function. Button definitions include momentary, interlocked or latched output. Please have a look at chapter 15 if any description of the functionality is declared.

There are two ways of configuring the functionality. With On-Site programming or with WinSCI software. Neither of them are described in this manual as it is intended for the installer and end user. Please contact Scanreco in case of programming is required.

Another Pocket or Rocket transmitter can be configured to work as a repeater to extend the working range. Please contact Scanreco in case of repeater function is required.

4.4 Installing/changing battery

The G5 Pocket Transmitter is equipped with 3 standard AAA cell batteries; to change batteries follow the instructions below

1. Remove the belt clip by unscrewing the top middle screw.
2. Unscrew the three screws holding the lid.
3. Remove the batteries.
4. Remove all dirt/dust to ensure no water can enter the unit.
5. Insert new batteries, mind the polarity!
6. Reassemble the lid and the belt clip.
   Tighten the screws according to chapter 8.3.

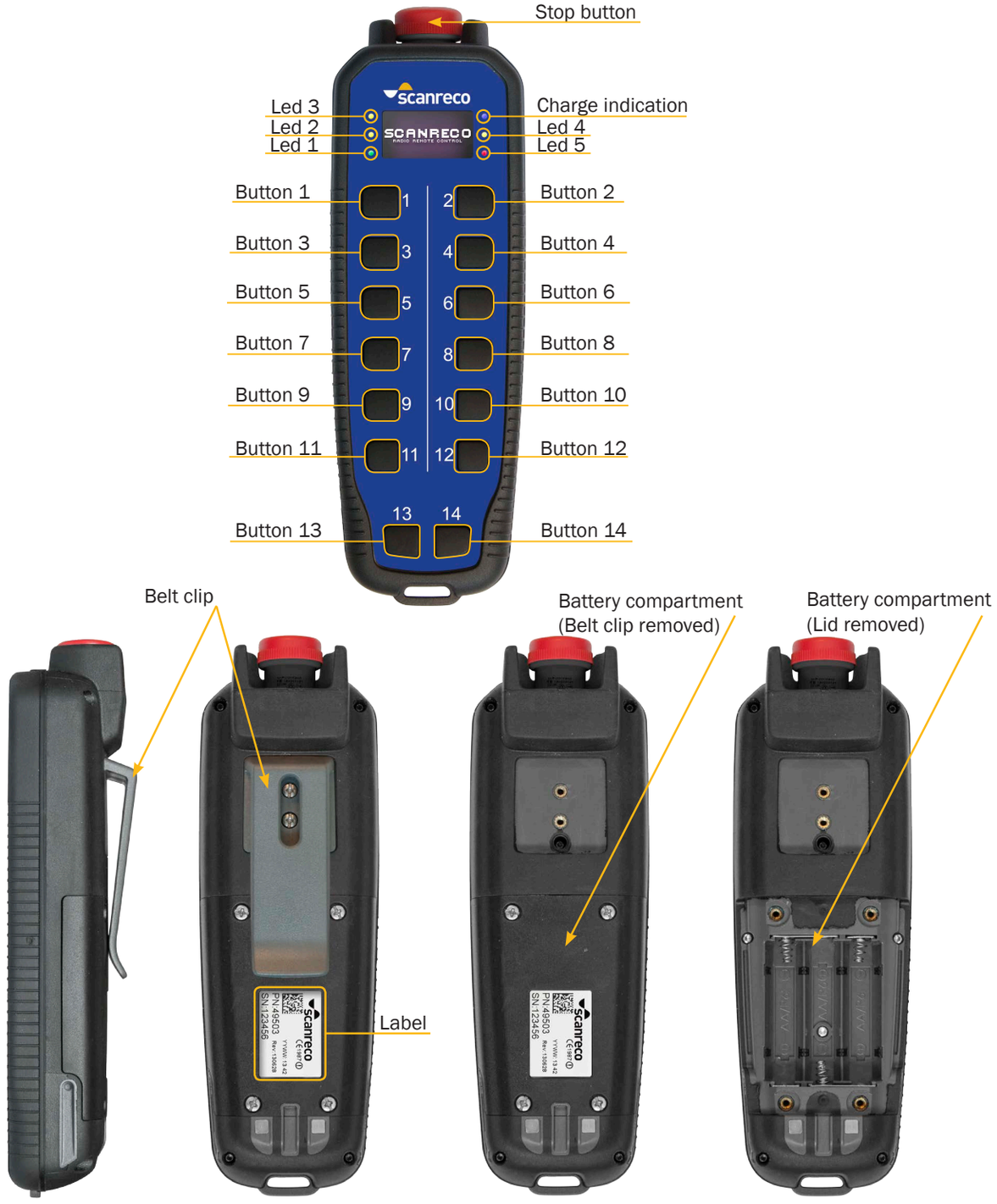
4.5 Technical data

Attribute	Information	
Housing material	Plastic PC-ABS	
IP-class	IP67	
Ambient temperature	-25˚C to +70˚C	-15°F to 160°F
Supply	3 x AAA battery	
Operating time	Several months (depending of usage and application)	
Weight	160 g (0,35lb.) including battery	

5 G5 Rocket Flex Transmitter

5.1 Product description

The G5 Rocket Flex Transmitter is a light weight, impact and water resistant handheld unit equipped with up to fourteen ON/OFF function pushbuttons. The pushbuttons can have a two-step function. It has five configurable Light Emitting Diodes(LED) for machine and status feedback as well as a charge indication LED. A 128x64 pixel monochrome OLED display is optional. The buttons and the LED's can be configured for a variety of different operations. The unit is powered with three re-chargeable AA batteries which is included separately in the delivery. The associated battery charger is recommended to be used with the unit. The backside has a belt clip for convenient attachment on the operator's belt.



5.2 Versions

The G5 Rocket Flex Transmitter comes in the following versions:

G5 RF 14

G5 RF 14 Display

Model	Button configuration
G5 RF 14A	12x2-step, 2x1-step pushbuttons
G5 RF 14B	14x1-step pushbuttons
G5 RF 14E	14x2step pushbuttons
G5 RF 14A Display	12x2-step, 2x1-step pushbuttons
G5 RF 14B Display	14x1-step pushbuttons
G5 RF 14E Display	14x2-step pushbuttons

5.3 Functionality

The G5 Rocket systems are normally delivered with the default settings. Default start button is button number 7(red stop button must be released) and default stop button is button number 8 or the red stop button. Button number 1-6 has a momentary activation of output 1-6 (button 9-14 are not mapped to any output). If any other functions are required they need to be configured prior to operation. The pushbuttons are easily programmed to activate any output or function. Button definitions include momentary, interlocked or latched output. Please have a look at chapter 15 if any description of the functionality is declared.

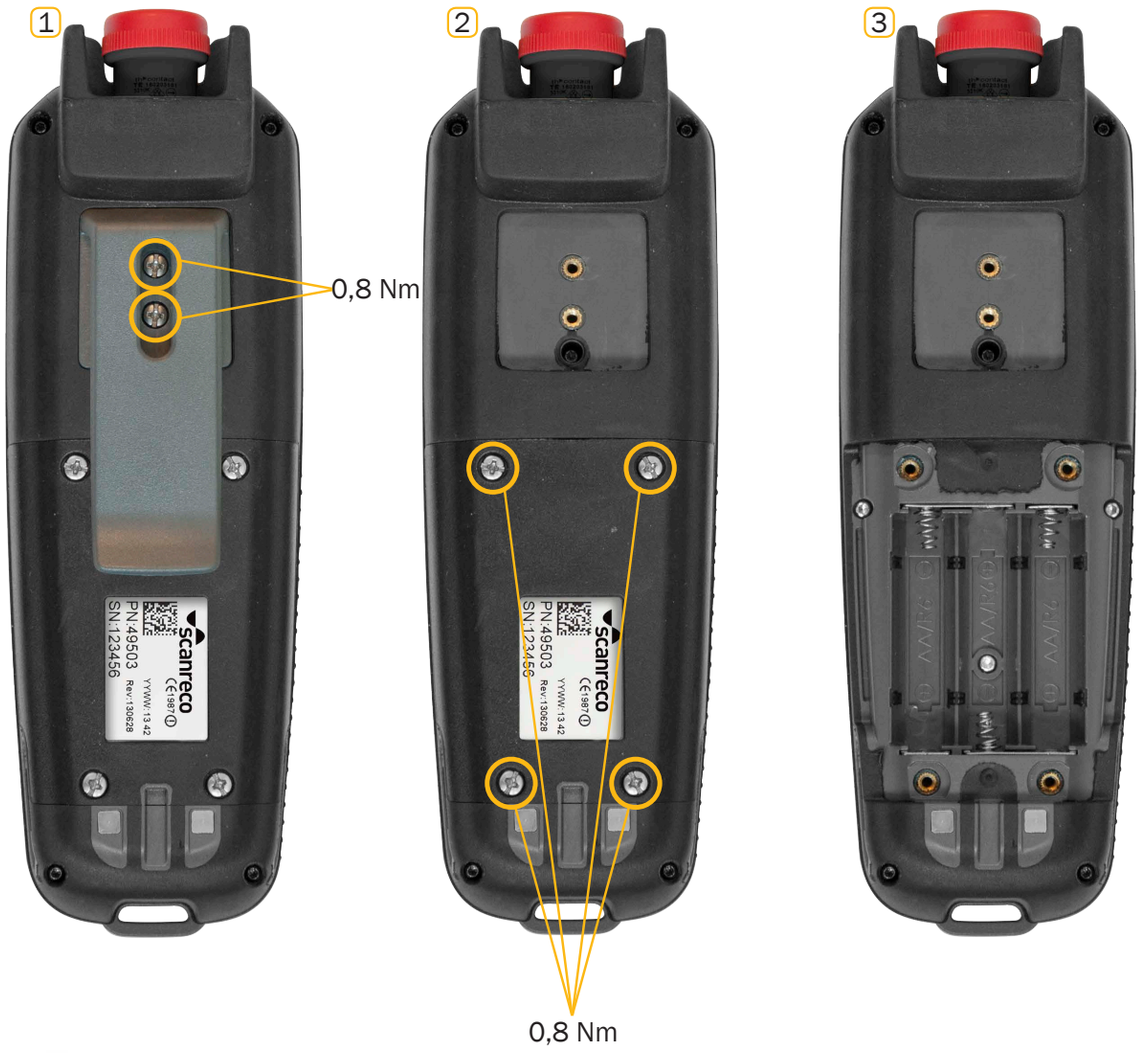
There are two ways of configuring the functionality. With On-Site programming or with WinSCI software. Neither of them are described in this manual as it is intended for the installer and end user. Please contact Scanreco in case of programming is required.

Another Pocket or Rocket transmitter can be configured to work as a repeater to extend the working range. Please contact Scanreco in case of repeater function is required.

5.4 Installing/changing battery

The G5 Rocket Flex Transmitter requires 3 re-chargeable AA cell batteries. Batteries are included in the delivery but needs to be installed, follow the instructions below:

1. Remove the belt clip by unscrewing the top middle screws.
2. Unscrew the four screws holding the lid.
3. Remove the batteries.
4. Remove all dirt/dust to ensure no water can enter the unit.
5. Insert new batteries, mind the polarity!
6. Reattach the lid and the belt clip. Tighten the screws.



IMPORTANT!
If using standard non rechargeable batteries, do not use the charger.

5.5 Technical data

Attribute	Information	
Housing material	Plastic PC	
IP-class	IP 65	
Ambient temperature	-25 °C to 55 °C	-15°F to 130°F
Supply	3 x AA battery	
Operating time	Without display: up to 120 hours of operation With display: up to 40 hours of operation (depending on usage of LED and display)	
Weight	400g (0,88lb.) including battery	
ISO-13849 for stop function	Category 3, PL d	

5.6 Battery charger

The battery charger also works as a holder for the Rocket Flex. The charger can be assembled on the machine with a 1/4” UNC screw, same as RAM-Mount Size B holders. While the Rocket Flex is charging the blue LED is flashing. When charging is finished, the blue LED is lit. The charger is delivered with a 1.8 meter cable with open wires.

IMPORTANT!
During charing, the ambient temperature needs to be between +5° and +45°C.
~ -41°F to +113°F

Attribute	Information	
Power Supply	9-36 VDC	
IP-class	IP 21	
Overload Protection	Yes (still recommended to use a 3A fuse)	
Current consumption	<15 mA (idle) 200-900 mA during charging (depending on supply voltage)	
Charging time	2 hours and 20 minutes	
Cable length	1,8 m	
Assembly	1/4” UNC (Suited for RAM-Mount Size B)	
Ambient Temperature	-20°C to +70°C	~ -4°F to +160°F
Charging temperature	+5°C to +45°C	~ -41°F to +113°F
Dimensions	70 x 35,5 x 113 mm	2,75 x 1,4 x 4,45 in
Weight	70 g	~ 0.2 lbs.

6 G5 Receiver

6.1 Product description

The G5 Receiver is manufactured in plastic and is provided with contacts for connection of power supply and electro-hydraulic valves. Depending on the version the G5 Receiver can either be equipped with MOSFET outputs/inputs and Deutsch connectors, relay outputs with spring terminal block or CAN-Bus output.

Since the Receiver can be exposed to very tough environments, the box is encapsulated to give protection from damp, heat, cold, dust, vibration and corrosive environments.

The Receiver has short circuit proof inputs and outputs and has protection against polarity reverse, over-voltage, large incoming voltage transients and electromagnetic and radio interference.

6.2 Versions

The G5 Receiver exists in different versions. The main difference between the version types is the output type which can be either MOSFET output, Relay output or CAN-Bus output. Versions with MOSFET output have two 12-pin Deutsch connectors while versions with relay output have cable glands with spring terminal block. The CAN version have cables with M12 connectors.

G5-M19A

G5-R5/R10

G5-CAN

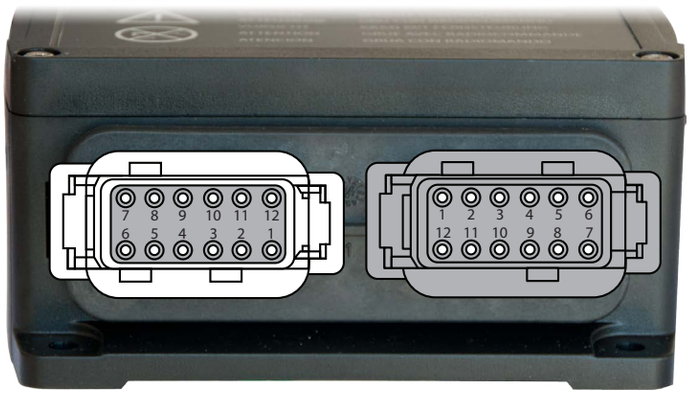
Model	Functions
G5-M19A	Two 12-pin Deutsch connectors. 19 Digital MOSFET outputs whereof 14 can be configured as digital inputs.
G5-R5	Two cable glands. 5 Relay outputs.
G5-R10	Two cable glands. 10 Relay outputs.
G5-CAN	CAN-Bus output

6.3 Functionality

The G5 system is required to be configured prior to operation, refer to programming section 10 in this document for further information.

6.4 Technical data Receiver G5 M19

Attribute	Information										
Power Supply	9-36 VDC										
IP-Class	IP67										
Connector Interface	2 x 12 pin Deutsch connectors										
Programming interface	RS232										
Overload Protection	Yes, maximum 36 VDC										
Current consumption	<30 mA (idle), 60 mA + External loads in operation										
Digital Inputs	14 (can also be used as digital outputs) Do not exceed supply voltage.										
Digital Outputs	19 MOSFET driven outputs, Short circuit proof, overload protected.										
E-Stop Output	Active when system is operational, short circuit proof, overload protected.										
Max output load	3A/output, 5A/bank, 10A/system										
	Bank	1	2	3	4	5	6	7	8	9	10
	Output	1,Estop	2,3	4,5	6,16	7,9	8,10	11,12	13,17	18,19	14,15
Housing screw torque	0.8 Nm										
Ambient Temperature	-25°C to +70°C				~ -15°F to +160°F						
Weight	0,5 Kg				~ 1.10 lbs						



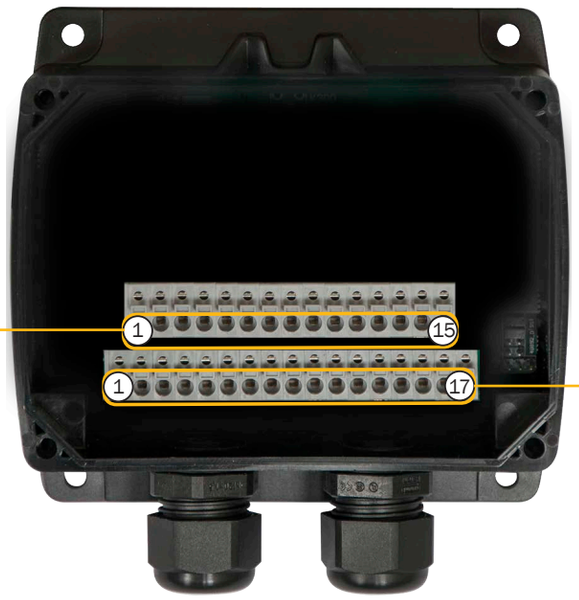
A1 = Output/input 16
A2 = Output/input 15
A3 = GND
A4 = Output/input 14
A5 = Estop
A6 = Power Supply +
A7 = Output 1
A8 = Output 2
A9 = Output 3
A10 = Output 5
A11 = Output 4
A12 = Output/input 6

B1 = Output/input 7
B2 = Output/input 8
B3 = Output/input 9
B4 = Output/input 10
B5 = Output/input 11
B6 = Output/input 12
B7 = RS232 TX
B8 = RS232 RX
B9 = Output/input 13
B10 = Output/input 17
B11 = Output/input 18
B12 = Output/input 19

6.5 Technical data Receiver G5 5R & R10

Attribute	Information	
Power Supply	9-36 VDC	
IP-Class	IP65	
Connector Interface	Spring terminal block (tool free assembly)	
Programming interface	RS232	
Overload Protection	Yes, maximum 36 VDC	
Current consumption	<30 mA (idle) 60 mA + External loads in operation	
Digital Outputs	5 or 10 digital outputs. Each output (relay) needs to be supplied with power through the terminal connector. External fuse is recomended. Not short circuit proof, not overload protected, max. 5 Ampere load/output. Each output is electrically isolated.	
Cable Glands	2, dimension 8-13mm (0,31-0,51 in.)	
Housing screw torque	0.8 Nm	
Ambient Temperature	-25°C to +70°C	~ -15°F to +160°F
Weight	0,35 Kg	~ 0.77 lbs

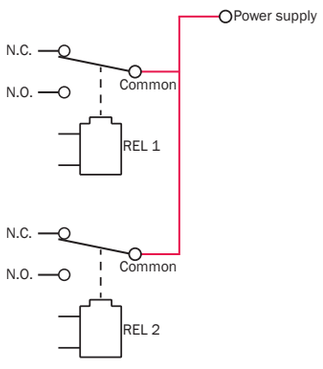
B1 = REL6, common
B2 = REL6, normally closed
B3 = REL6, normally open
B4 = REL7, common
B5 = REL7, normally closed
B6 = Rel7, normally open
B7 = REL8, common
B8 = REL8, normally closed
B9 = REL8, normally open
B10 = REL9, common
B11 = REL9, normally closed
B12 = REL9, normally open
B13 = REL10, common
B14 = REL10, normally closed
B15 = REL10, normally open



A1 = GND
A2 = Power Supply +
A3 = REL1, common
A4 = REL1, normally closed
A5 = REL1, normally open
A6 = REL2, common
A7 = REL2, normally closed
A8 = REL2, normally open
A9 = REL3, common
A10 = REL3, normally closed
A11 = REL3, normally open
A12 = REL4, common
A13 = REL4, normally closed
A14 = REL4, normally open
A15 = REL5, common
A16 = REL5, normally closed
A17 = REL5, normally open

NOTE!
Common pin needs to be wired. Normally, power supply needs to be connected according to the schematic to the right.

ATTENTION!
After assembly make sure you tighten the housing screws with 0,8 Nm to avoid any water ingression.



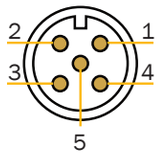
6.6 Technical data G5 Receiver CAN

Attribute	Information	
Power Supply	9-36 VDC	
IP-Class	IP67	
Connector Interface	3x M12 connectors with 3 meter cable each, see specification below	
Programming interface	RS232	
Overload Protection	Yes, maximum 36 VDC	
Current consumption	Idle: 65 mA (at 24V) Operational: 100 mA + External loads in operation (at 24V)	
Digital Outputs	Short circuit proof, overload protected, max. 2,7 Ampere load DV2 is active when radio link is active.	
Safety loops	Feed Loop-In with power supply. Once radio link is established, Loop-Out goes high. Short circuit proof. Max 2,7 Ampere load.	
CAN bus	CAN Open	
Ambient Temperature	-25°C to +70°C	~ -15°F to +160°F
Weight	1,2 Kg	~ 2.6 lbs

Cable A

Connection	
Pin no.	Colour /Function
1	Brown / Not used
2	White / Power supply + 12/24VDC
3	Blue / GND / CAN_GND
4	Black / CAN_HIGH
5	Grey / CAN_LOW

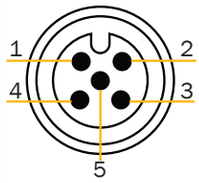
5-pole male
M12 connector



Cable B

Connection	
Pin no.	Colour /Function
1	Brown / Not used
2	White / GND
3	Blue / RS 232 TX
4	Black / RS 232 RX
5	Grey / Not used

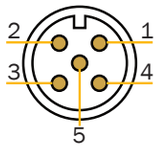
5-pole female
M12 connector



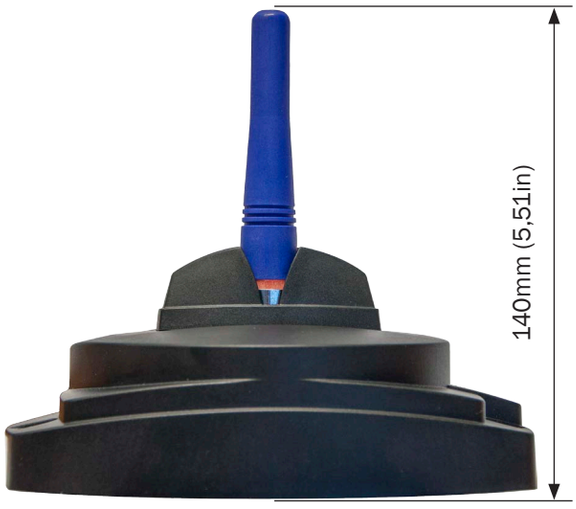
Cable C

Connection	
Pin no.	Colour /Function
1	Brown / DV2+
2	White / LOOP1_OUT
3	Blue / LOOP1_IN
4	Black / LOOP2_OUT
5	Grey / LOOP2_IN

5-pole male
M12 connector



6.7 Receiver dimensions



7 Radio information

The G5 system family incorporates an automated frequency jumping technology, a reliable radio transmission highly resistant to interference.

The radio transmission takes place within the ISM-band used at pre-defined channels. The channel switches takes place multiple times per second following a pseudorandom sequence order which ensures the operator that transmission takes place at an optimal frequency at all times!

No transmitter uses the same pseudorandom sequence order when switching channels; this minimizes the risk of two G5 systems interfering with each other. The G5 system is approved to transmit on the ISM band. The radio is license free for the end user.

Attribute	Information	
Frequency	2,400 - 2,4835 GHz	
Channels management	FHSS, DSSS, THSS	
Channel order	Pseudorandom	
Channel capacity	Duplex	
System address/ID	16777216 unique system addresses available	
Redundancy	CRC-16	
Range	> 100 meters	> ~ 330 feet

FCC information

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. This equipment has been tested and found to comply with the limits for a Class. A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates,uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Warning

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

Industry Canada Information

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie 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, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage
est susceptible d'en compromettre le fonctionnement.
CAN ICES-3 (A)/NMB-3(A)

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

When the device is stored on the operators belt it must be shut off. Pressing the buttons and operating the machine while the device is hanging from the belt or any other place it not allowed. It must be held in the hand.

L'antenne (s) utiliseé pour cet émetteur doit être installé pour fournir une distance de séparation d'au moins 20 cm de toute personne et ne doit pas être co-localisées ou opérant en conjonction avec une autre antenne ou émetteur.

Lorsque l'appareil est stocké sur la bande des opérateurs, il doit être arrêté. Appuyant sur les boutons et faire fonctionner la machine alors que l'appareil est accroché à la ceinture ou tout autre lieu il pas permis. Il doit être tenu à la main.

8 Installation recommendation

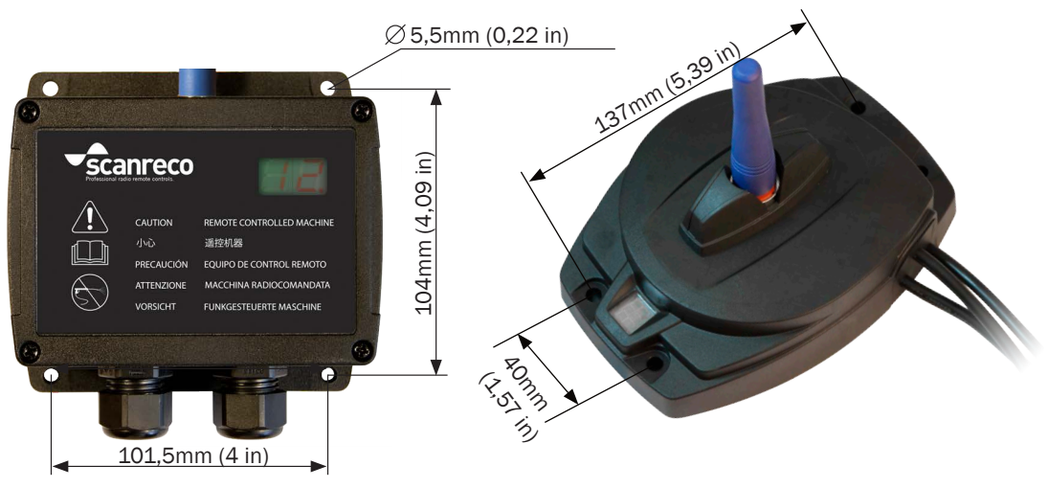
8.1 General information

This chapter covers general recommendations for assembling of the G5 system.

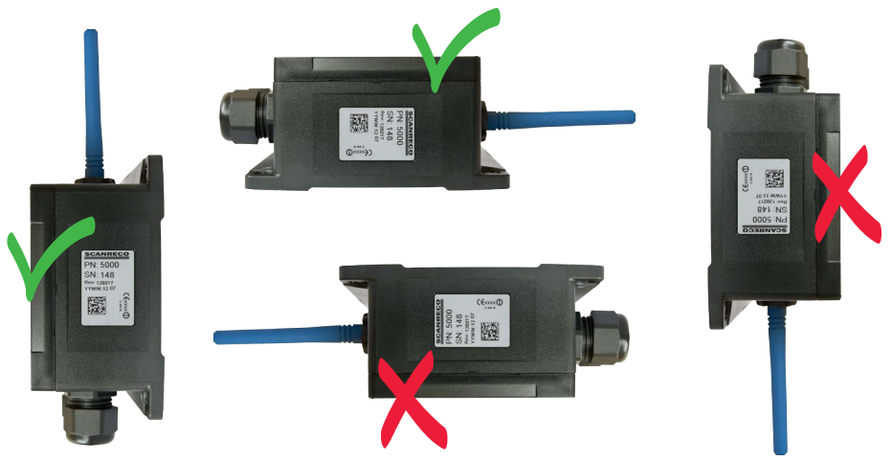
ATTENTION: Assembly of the system in other ways than recommended in this chapter may affect the systems performance and life-span and may void any warranties given.

8.2 Assembly of the Receiver

The Receiver should be installed using the mounting holes at the edges on the unit. Receivers equipped with Deutsch connectors require M4 screws in the two lower holes.

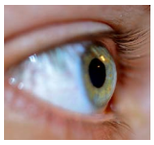


The Receiver should be installed vertically or horizontally with with antenna facing upwards or horizontally. The Receiver should never be assembled with cable glands / connectors facing upwards or where it is exposed to accumulation of water, moisture and other debris.



Engineering note: Receivers equipped with Deutsch connectors require M4 screws in the two lower holes.

The Receiver should be assembled in such way that the operator can easily check the indications given from the units LED-display.



The Receiver shall not be mounted in a place where the temperature can increase over max specified temperature.

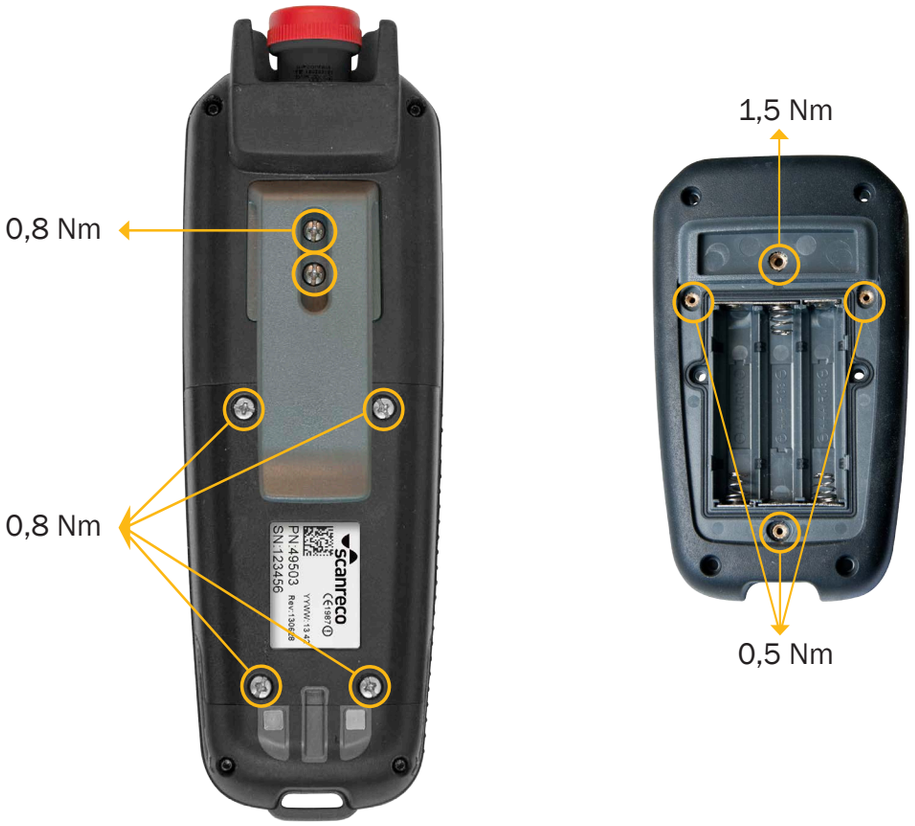
The antenna must never touch a metal object and should not be mounted in an area that is surrounded by metal as it causes reflections that significantly reduce range. Keep the antenna at a distance of at least 10 cm from metal objects if possible.

Optimal range is achieved if the Transmitter and antenna are within line-of-sight.

Important during welding!

During electrical welding on machine all connectors from the Receiver must be disconnected. Ignoring this may damage the Receiver and void warranty.

8.3 Torque values

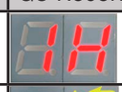


9 Startup and LED indication

After installation of the Receiver and the batteries have been inserted into the Transmitter, the system should be fully operational with the default settings.

The default setting use button number 7 to turn on the system. Buttons 1-6 are mapped to output 1-6. To turn off the Transmitter button 8 is used. The red stop button can also be used to turn off the unit. To change the turn-on and turn-off buttons please refer to the programming section.

The LED display on the Receiver is used to indicate radio link or output activation. The list below describes the different indications.

G5 Receiver	Meaning	G5 Receiver CAN
	Link is established	
	Standby	
	Output 1 Activated	
	Output 2 Activated	
	Output 3 Activated	
	Output 4 Activated	
	Output 5 Activated	
	Output 6 Activated	
	Output 7/15 Activated	
	Output 8/16 Activated	
	Output 9/17 Activated	
	Output 10/18 Activated	
	Output 11/19 Activated	
	Output 12 Activated	
	Output 13 Activated	
	Output 14 Activated	

10 Programming

10.1 General description

A G5 system is normally delivered with default settings, it is therefore required to configure the system prior to operation. There are two ways to do this; connecting the system to a computer using RS232 communication and WinSCI software or On-Site programming which is a simple method with less options. Please contact Scanreco and ask for G5 On-Site or WinSCI software configuration instructions.

IMPORTANT!
Changes and modifications not expressly approved by the responsible system installer will void the warranty and Scanreco will no longer take any responsibility for the system.

10.2 Safe paring of Transmitter to Receiver

Safe pairing is used to get a unique assignment between a single Transmitter and a single G5 Receiver. To exchange the Transmitter and Receivers ID's when replacing either the Receiver or Transmitter in a system follow the Safe Paring procedure below:

A. Remove power from Receiver (unplug the Grey connector for G5 24) and remove the cover

B. Install the "Paring" jumper into the positon indicated (for G5 CAN, assemble the paring plug in the B connector)

C. Simultaneously press button #1 and button #3. LED#3 will light indicating the Transmitter is ready for Safe Pairing

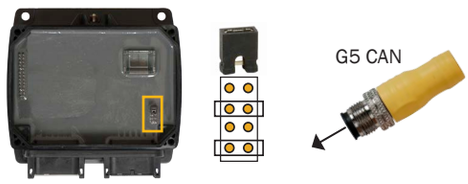
D. Re-apply power to the Receiver
(Step D must be done within 10 seconds of C)

E. The Transmitter will confirm the download is complete by flashing LED#3 eight times

F. The Receiver LED Display will flash Po-Id

G. Turn off the power to the Receiver. Restore the jumper to "Jumper Rest" position (for G5 CAN remove the paring plug), re-install the cover and power up the Receiver again.

B.



C.

E.

F.

G.

IMPORTANT!
If pairing is performed during low battery on the Transmitter it may look like the paring works but it does not. This is related to a safety precaution. Replace battery and repeat the paring procedure.

10.3 Set to factory defaults

If for any reason it is needed to reset all settings to factory defaults this is possible by setting the jumpers on "Pairing" and "Configuration" mode. Do this without power supply connected and restart unit.

11 Product care

11.1 Storage

Store the G5 Transmitter and Receiver in a dry environment where it is not exposed to unnecessary water/moist or extreme temperatures according to chapter 4.5, 5.5 and 6.4-6.6.

IMPORTANT!
Store the unit where it is safe! It is the operator's responsibility to ensure that the G5 system is kept out of unauthorized personnel's reach!

11.2 Maintenance

It is recommended that the following checks are done at regular intervals or when suspicion of malfunction is present:

- Check for damage on the Transmitter and Receiver chassis. Look for cracks, cavities, damaged gaskets or other damage that would compromise the integrity and allow water/moist to enter inside.
- Check wiring and cables for damage that could cause interruption or electrical disturbances.
- Check that the connector pins and the terminal block connections in the Receiver are covered with grease suitable for electronic applications. The grease will prevent oxidation of the connectors caused by water/humidity and will increase the life span of the unit. We recommend GreaseWay SG 32 W grease.

In the event of system failure, please refer to the troubleshooting chapter in this document.

IMPORTANT!
Never conduct maintenance without disconnecting power first! Any eventual defects found must be reported to the system installer for proper evaluation.

11.3 Cleaning

Only use a damp cloth to remove any mud, dirt, concrete or other debris from the Transmitter and Receiver when necessary.

ATTENTION!
Never use high-pressure to clean the Transmitter or Receiver, this will shorten the life span of the product or in worst case damage it.

Never use acids, alcohol or thinner when cleaning the Transmitter or Receiver as it dries up gaskets, significantly reducing its capability to prevent water/moist ingress.

12 Troubleshooting

12.1 General

This chapter contains measures the operator can or should take before a service technician is contacted in the unlikely event that you experience any problems with the Transmitter, the Receiver or the radio communication.

Browse through the Troubleshooting chapter for most common scenarios / symptoms.

Before contacting support please have all part numbers and serial numbers available.

12.2 Troubleshooting

Scenario / Symptoms	Typical reason – Action
Transmitter does not start.	Batteries depleted, check batteries. Receiver may not be powered, check Receiver display.
Nothing is shown on the Receiver display.	No power supply is connected, check power supply.
Some buttons on the Transmitter do not work.	Button is not connected to any output. Check if buttons are operational by following the instruction in chapter 12.3. Contact machine installer how to connect a button to an output.
Display on Receiver showing “Po-00” or “Po-Id”.	Jumper inside is set to Configuration mode or Pairing mode, set both the jumpers to the “Jumper rest”.
The Receiver does not give any output to the valve.	Check that the output is activated by looking at the LED display. See chapter 9. Next check possible short circuit in coil in solenoid. Measure the resistance in the coil.
Communication between Transmitter and Receiver cannot be established.	Transmitter and Receiver are not paired. Follow instructions in chapter 10.2.
Pairing has no effect.	Low battery. Change battery in the Transmitter.

12.3 Transmitter test mode

The Transmitter is equipped with a test mode to test the functionality of the buttons and LED's. Radio communication with the receiver is disabled while in test mode.

A. Simultaneously press button #1 and button #2. LED# 2, 3 & 4 will light indicating the Transmitter is in Test Mode. OLED display will light up and show test screen.

A.

B. Pressing any single button will illuminate LED#1. Test all buttons one at a time to ensure they function correctly. Firmware and serial number will be shown in the display.

B.

C. Pressing any 2-step button will make LED# 1 flash. Test all buttons one at a time to ensure they function correctly.

C.

D. Pressing any two buttons at a time will illuminate LED# 5. This ensures the red LED is functioning correctly.

D.

E. Releasing the red stop button will illuminate LED#4. Pushing the red stop button will darken LED#4. (Transmitter may restart during the stop button release)

E.

F. The Transmitter will automatically shut down if no buttons are pressed for 10 seconds.

13 Spare parts

IMPORTANT!

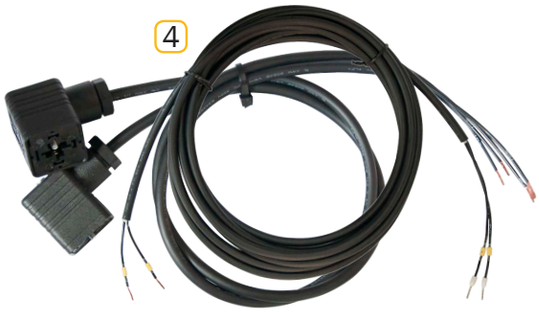
Use only spare parts manufactured by SCANRECO for the specific product, usage of spare parts manufactured by others may cause product damage and will void the warranty.

13.1 List of spare parts

	Part number	Description
1	49114	Battery AAA for Pocket (3 pcs are required)
1	46288	Re-chargeable AA battery Ni-MH 2000mAh for Rocket Flex(3 pcs are required)
2	49070	Antenna for Receiver G5 M19 and R5/10.
2	50250	Antenna for Receiver G5 CAN.
3	48118	Pairing plug for G5 CAN
4	52019	Belt clip Pocket (incl screws)
5	52018	Lid for battery Pocket (incl screws)
6	51162	Belt clip Rocket Flex (incl screws)
7	51161	Lid for battery Rocket Flex (incl screws)

14 Accessories

	Part number	Description
1	49963	Connector A Deutsch 1 x 12 incl crimp pins
2	49965	Connector B Deutsch 1 x 12 incl crimp pins
3	50265	Cable kit for G5 with Deutsch connectors, 3.24 m cable.
4	50258	Cable kit for G5 R5 & R10, 3.24 m power cable, 0.55m Hirshmann cable.
5	51070	Charger Rocket Flex (incl cable)
6	49587	Pouch for Rocket Flex (excl waist belt)
6	49812	Pouch for Rocket Flex (incl waist belt)
7	50763	Pouch for Pocket



15 Programmed assignment template

This section has been made available for system installer to provide final information to the operator on the programmed assignments.

Type of Transmitter	
Type of Receiver	

Input	Output	Interlock bank	On delay (ms)	Off delay (ms)	Logic Rule
Button 1					
Button 2					
Button 3					
Button 4					
Button 5					
Button 6					
Button 7					
Button 8					
Button 9					
Button 10					
Button 11					
Button 12					
Button 13					
Button 14					
Linked (DF35)					

LED	Function
LED 1	
LED 2	
LED 3	
LED 4	
LED 5	

Transmitter	Button
Start button	
Off button	

scanreco

Quality starts from within.