SCANRECO
Radio Remote Control

Instruction Manual

G5 CU M

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Document information

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Revision history

Revision	Date	Note
A	2013-05-20	First release

G5 receiver

Product description

The Central Unit (CU) is manufactured in robust plastic housing and provides contacts for the connection of power supply and electro-hydraulic valves. Several of the outputs can also be used as digital inputs. Depending on the version of the G5 Central unit, it can either be equipped with MOSFET outputs and Deutsch connectors or can have relay outputs with terminal block.

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

The Central unit has short circuit protected inputs and outputs and has protection against reverse polarity, over-voltage, large incoming voltage transients and EMC/RF.

MOSFET Digital Output

The MOSFET digital outputs are designed to control electro-hydraulic valves but can also be used to load other accessories such as lamps or motors.

Digital inputs

The digital inputs can be used as a switch to control different functions on the central unit or on the HCU. The maximum input voltage shall not exceed the supply voltage.

Estop

The Estop function works as a safety function.
The output is active each time the HCU is active and communication has been established with the Central unit. This output is normally connected to a dump valve. It is required for the system installer to use this or similar function for the operator safety.
The Estop digital output shares the same properties as the other digital outputs.

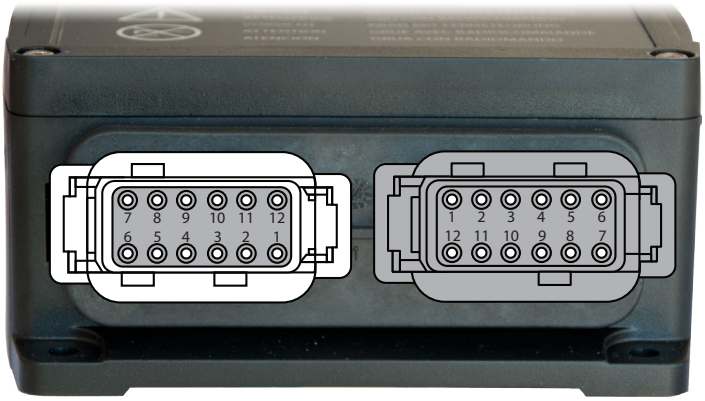
Exspansion boards

The main board may be used stand alone or together with one expansion board.
There are several different expansion boards.
All expansions boards have the same mechanical outline.
They may have different funcionalities depending on customers application.

The differnt functions are exemplified in the table below:

Description of expansion functions	Number of exspansion function
Analof inputs	1-10
Analog outputs	1-5
Digital I/O	1-20
PWM	1-5

Terminal schematics G5-CU M19

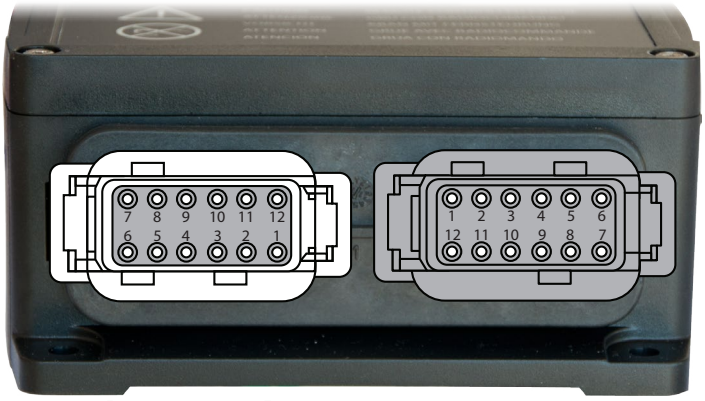


Main board

1 = Output/input 16
2 = Output/input 15
3 = GND
4 = Output/input 14
5 = Estop
6 = Power Supply +
7 = Output 1
8 = Output 2
9 = Output 3
10 = Output 5
11 = Output 4
12 = Output/input 6

1 = Output/input 7
2 = Output/input 8
3 = Output/input 9
4 = Output/input 10
5 = Output/input 11
6 = Output/input 12
7 = RS232 TX
8 = RS232 RX
9 = Output/input 13
10 = Output/input 17
11 = Output/input 18
12 = Output/input 19

Terminal schematics G5-CU M21



Main board with expansion board (49837)

1 = Output/input 16
2 = Output/input 15
3 = GND
4 = Output/input 14
5 = Estop
6 = Power Supply +
7 = Output 1
8 = Output 2
9 = Output 3
10 = Output 5
11 = Output 4
12 = Output/input 6

1 = Output/input 7
2 = Output/input 8
3 = Output/input 9
4 = Output/input 10
5 = Output/input 11
6 = Output/input 12
7 = Mosfet output or 4 - 20 mA input
8 = Mosfet output or 4 - 20 mA input
9 = Output/input 13
10 = Output/input 17
11 = Output/input 18
12 = Output/input 19

Technical Data Central Unit

Attribute	Information
Housing material	Plastic PC
IP-class	IP67 (for versions with cable glands IP65)
Ambient temperature	-25˚C to +70˚C
Supply voltage	9-36VDC
Fuse	Not required.
Current consumption at idle	<30mA
MOSFET Output load	3 A, Max simultaneously load for each CU is 10A.
Relay Output load	Max 10 A
Housing screw torque	0,8 Nm
Weight	Approx. 0,5Kg

Size: approx. ~
127 x 117 x 57 mm / ~ 5,0 x 4,6 x 2,2 in.

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 switching takes place multiple times per second following a pseudorandom sequence. This ensures that transmission takes place on 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 Pocket is approved to transmit on the ISM band.
The radio is license free for the end user.

Technical information

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

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.

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.

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