



(Customized overlay)

Specifikation		Specification	
Matningsspänning	Power supply	9-36	VDC
Drivspänning	Operating voltage	2 rechargeable AA batteries	
Strömförbrukning	Power consumption	< 150	mA
CAN protokoll	CAN protocol	2.0B	150Kbit
CAN drivkrets	CAN driver	PCA82C251	Philips
CPU	CPU	MC9S08DZ60	Freescale
Kapsling	Housing	Black	Plastic
IP-klass	IP-class	IP41	IP65 (optional)
Vikt	Mass	0,3	Kg
Omgivningstemp.	Operating temp.	-20 - +50	Celcius
Lagringstemp.	Storage temp.	-20 - +50	Celcius
Lagringstemp. Batt	Storage temp. Batt	-20 - +35	Celcius *
Laddningstemp	Charging temp	0 - +45	Celcius *
Mått	Dimensions	188x73x42	mm
* Batteries are model GP270AAHC			
Radio		Radio	
Räckvidd	Range	100-300	meter
Radiotyp	Radio type	Hi power (FM transmitter)	
Uteffekt radio	Radio power output	25 *	mW
Effective Radiated Power (ERP)		max +10dBm	(10mW)
Frekvens	Frequency	433,92	MHz
Radiokod	Radio code	Programmable	
Gränssnitt		Interface	
1 x CAN-buss	1 x CAN-bus	2.0 B	CanCom
10 x knappar	10 x buttons	digital	Membrane type
1 x joystick**	1 x joystick	XY	
Antenn	Antenna	inbyggd	built-in
LED	LED	2	green+red
Stoppfunktion	Stop function		
** optional 2 x potentiometers			
EMC			
EN 301 489-3			
ETSI EN 300 220-3 (for ERP @ 10mW)			
EN 61000-4-6		0,15-80Mhz 3V/m 80%aM 300Hz	
EN 61000-4-3		80-1000Mhz 3V/m 80%aM 300Hz	
EN 61000-4-4		1KV Capacitive injection	
EN 61000-4-2		8KV air, 4KV contact	

From version 009 the radio transmitter has a programmable timeout function!  
The transmitter will go into power saving mode after set time if no activity occurs.  
Read more about this below.

### **Starting the radio transmitter:**

The radio transmitter has a boot block, to check that the joystick is not actuated in any direction or any button is pressed. This is indicated by that red and green LED is flashing. When starting the transmitter the joystick has to be centred, ie it must have the centre value 127 with a tolerance of +/- 10 bits. If the radio transmitter do not start, you can try to manually centre the joystick and try again.

From version 003: The radio transmitter does not start until button 1 and 2 is pressed simultaneously and then released.

Radio code, article no and S/N are placed under the batteries.

### **LED indications and warnings:**

#### **Red LED:**

- 0,1s on, 1,9s off: Batteries need charging
- 0,1s on, 0,1s off: Battery level is critically low!
- Steady light: Charging. When battery is full charging terminates and the LED goes out

#### **Green LED:**

- 0,9s on, 0,1s off: CAN is active, radio off
- 0,1s on, 1,9s off:Radio is active, CAN off

#### **Both red and green LED simultaneously:**

- 0,5s on, 0,5s off:Analog input values out of limits
- Steady light: The transmitter is waiting for the start commando (from version 003).

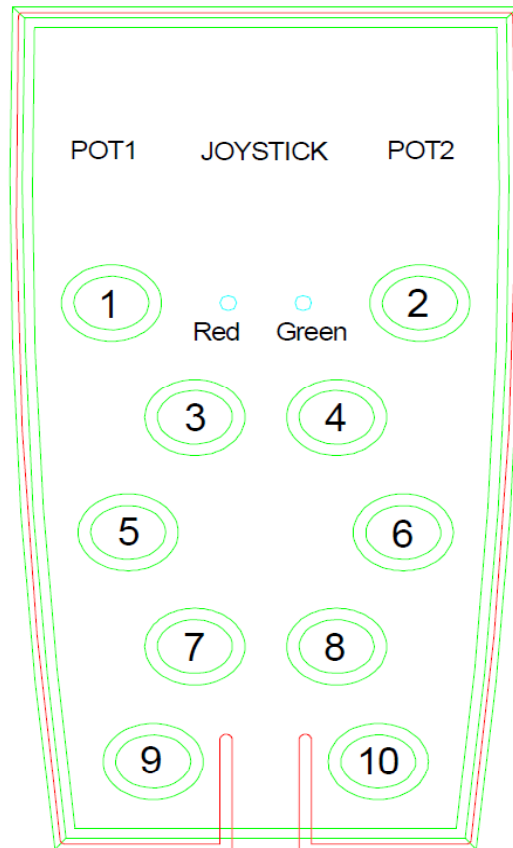
## Button numbering in rubber keyboard.

### Radio / CAN ID 20, I/O-ports:

1. Button 1
2. Button 2
3. Button 3
4. Button 4
5. Button 5
6. Button 6
7. Button 7
8. Button 8

### Radio ID 21, I/O-ports:

1. Button 9
2. Button 10
3. Joystick X / Pot 1 value (0 if not used)
4. Joystick Y / Pot 2 value (0 if not used)
5. Free
6. Free
7. Battery voltage
8. Free



## Programming - ID, Radio code, type of transmitter and timeout

The radio transmitter is programmed through CanPro v4.28 or later, to the flash memory. The procedure is as follows:

- Create an analogue module with for example ID 20 (or other)
- Set port 1 until port 4 as analogue out
- In the port comments the following should be written:

### **RADIO CODE**

Is written on row 1 and 2. If for example code L178 is to be programmed, you write **012** (L = letter no 12) on the first row and **178** on the second row.

### **JOY, POT or NON**

The third row is used for configuring the software for the right hardware; joystick, pots or neither joystick nor pots. If you have a joystick, you write **JOY** and if you have pots, you write **POT**. If you have neither you write **NON**. If nothing is written on row 3 in the module configuration in CanPro, it will be set to **NON** as default. If you have a joystick you **MUST** write **JOY**, otherwise the software will not work.

### **TIMEOUT010 (New from V009, Updated in V014)**

On row 4 a timeout value is written, e.g. TIMEOUT010. "TIMEOUT" tells the unit to use the timeout function and "010" is the number of seconds before the timeout. The value is adjustable between 000 - 999 seconds. If the value 000 is written, or if nothing at all is written on the fourth row, the timeout function is not used. Timeout means that the unit is set to stop mode and the unit will stop transmitting radio or CAN. It is restarted again only by switching the power button off and on again. Timeout happens if no button, joystick or pot is used within the set time.

Register the module as explained above. Go to the tab "Programming". Choose the ID you set for the module and press "Program" to program the transmitter (see pictures below).

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Project information Module configuration Output conditions Programming Upload program Analyse Analyse specific

### Module Configuration

Add to project

New Module

Type: Analog

ID 1-25: 20

Comment:

Port	Function	Port Comment
I/O 1	Analog out	017
I/O 2	Analog out	072
I/O 3	Analog out	JOY
I/O 4	Analog out	TIMEOUT01D
I/O 5	-Not Connected-	
I/O 6	-Not Connected-	
I/O 7	-Not Connected-	
I/O 8	-Not Connected-	

Registered modules

- 20 Analog module

Buttons: Delete Module, Danfoss settings, PWM settings, Servo settings, Saftey settings, 32/64 Convert, Special features

Radio ID: 1 (0-65535) Register Module

Timeout: 1 Sec (0,2-9,9) Cancel registration

GSM :

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### Programming

Download the program to the modules

ID Module: 20 Analog module

Program all available modules

Program specific modules: Eg. 2,3,5-8

Buttons: Program, Cancel

Module modification

- Lock module with PIN for upload PIN: \_\_\_\_\_
- Lock module with PIN for programming PIN: \_\_\_\_\_
- Change ID Current ID: 0

20 Analog

Status

Module	20
Status	Programming
Version	10
CAN-interface	30
Checksum	5902

12:29:03 Skickar paket 28  
 12:29:03 Stämmer ekot: True  
 12:29:03 Skickar paket 29  
 12:29:03 Stämmer ekot: True  
 12:29:03 Skickar paket 30  
 12:29:03 Stämmer ekot: True  
 12:29:03 Skickar paket 31  
 12:29:03 Stämmer ekot: True  
 12:29:03 Skickar paket 32  
 12:29:03 Stämmer ekot: True  
 12:29:03 Skickar paket 33  
 12:29:03 Stämmer ekot: True  
 12:29:03 Skickar paket 34  
 12:29:03 Stämmer ekot: True  
 12:29:03 Skickar paket 35  
 12:29:03 Stämmer ekot: True  
 12:29:03 Skickar paket 36

Email debug info

GSM : Programming

## **Accessories for the radio transmitter**

As accessories for the radio transmitter there is a bracket and cabling.

### **Bracket**

The bracket is made of plastic.

Art no: 83-80350



### **Cabling**

#### **Charging cable**

2 meter charging cable with cigarette plug.

Art no: 83-23135

#### **Data/charging cable**

This cable is used to communicate through the CAN-bus.

Available in two different lengths:

12 meter - Art no: 83-23112

10 meter - Art no: 83-23111

