CanCom

4 + 4 PWM output

JÖRGENSEN ••

PWM-64 HAWE   V4.50 CE

PROPORTIONAL PWM OUT

			CAN HI			CAN HI
CAN HI	1		CAN LO	1		CAN LO
CAN LO	2		+ BAT	2		+ BAT
+ BAT	3			3		
- BAT	4		33V	4		- BAT

(nc)	1	
(nc)	2	
PWM +	3	sens
PWM	4	0.82Ω

Specifikation	Specification		
Matningsspänning	Power supply	10-30	VDC
Spänningsrippel	Voltage ripple	<3	V t-t
CAN protokoll	CAN protocol	2.0B	150Kbit
CAN drivkrets	CAN driver	82C251	Philips
Antal utgångar	Number of outputs	4+4	PWM
I/O adress	I/O address	1-25	ID
Modulkontaktdon	Module connectors	G4A5M (IP65)	Hirschmann
Kabelkontaktdon	Cable connectors	G4W1F (IP65)	Hirschmann
Operativsystem	Operating system	CanCom	CanPro
CPU	CPU	98AZ60	Motorola
Flashminne	Flash memory	60	kB
Kapsling	Housing	Black painted	Aluminium
Egenförbrukning	Internal consumtion	60	mA
Vikt	Mass	0.75	Kg
Omgivningstemp.	Operating temp.	-30 - +50	Celcius
Förvalsinställningar	Preselections	3	(3x4)
Modul IP-klass	Module IP-class	IP67	IP67
PWM Utgångar	**PWM Outputs**		
Belastbarhet	Maximum load	2700*	mA
Strömåterkoppling	Current fedback	100-1800	mA
Ramptid	Ramptime	0.0 - 9.9	s
Övertemp skydd.	Overtemp protected	+150	Celcius
Kortslutningsskydd	Short circuit protect	5	A
Återställning av skydd	Reset protection	Interupt power	>2s
Avbrottsdetektering	Open Circuit	Time	>1s
Återställning av skydd	Protection reset	Input signal to	Centervalue
Aktiveringstid	Response time	50	ms
Rippelfrekvens	shopperfrequency	30 - 200	Hz
Funktionsval	Function mode	3	driver selections
Spolresistans	Coilresistance	4-254	ohm
Upplösning	Resolution	8	bit
Feldetektering	Error detection	>,< 1-254	bit
Återställning av skydd	Protection reset	Input signal to	Center value
EMC	**EMC**		
Emission CISPR 25	Emission CISPR 25	30-1000MHz	Broad, Narrow
Immunitet	Immunity		
ISO 11452-4 95/54/EG	Conducted immunity	100mA /80%	0.15-200MHz
ISO 11452-2 95/54/EG	Radiated immunity	100V/m 80%	200-2000MHz
EN61000-4-2	ESD	Air/Contact	8/4 kV
ISO/TR 10605	ESD	Air/Contact	14/7kV
EN61000-4-8	Magnetic field	30A/m	50Hz
ISO 7637-1	12V system	Pulse	4
ISO 7637-2 -3	24V system	Pulse	1a,1b,3a,3b

PROPORTIONAL PWM OUT

CAN HI 1   1 CAN HI
CAN LO 2   2 CAN LO
+ BAT   3   3 + BAT

33V

- BAT   4   4 - BAT

(nc)   1

(nc)   2

PWM +   3

PWM -   4   →sens

0.82Ω

CC 50

90

115

CC 127

139

ø 5

55

20
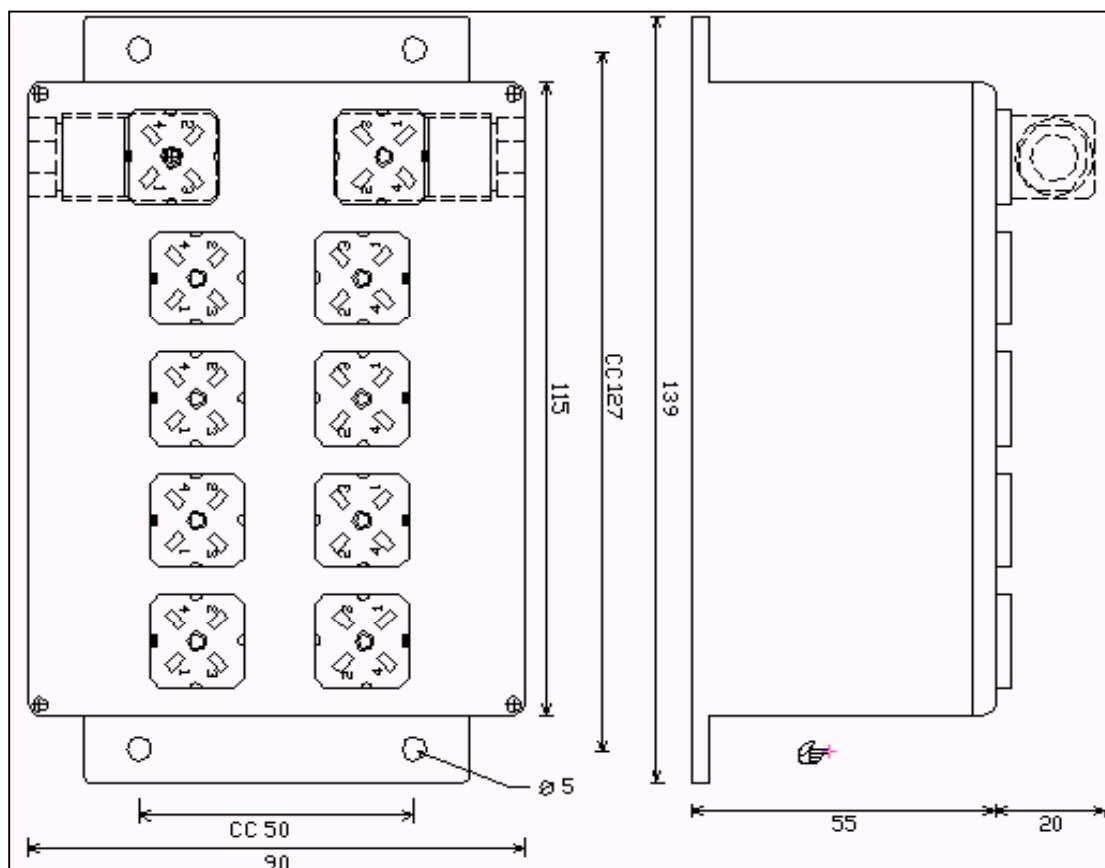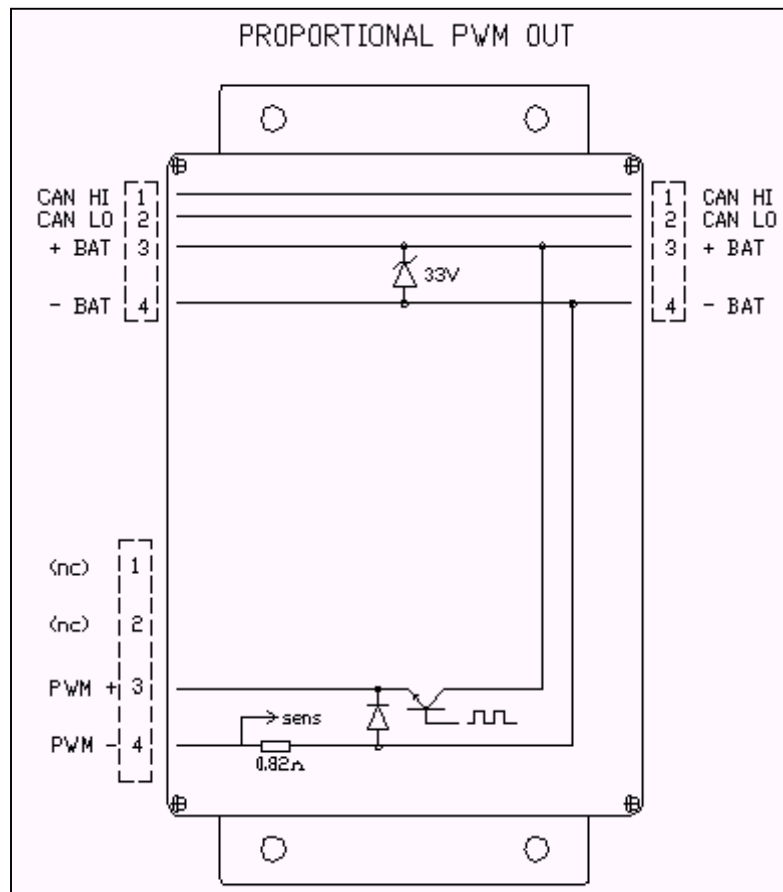
Specialflags V3.5 and higher

PWM moduls version 3.5 and higher have the possibility to several driver choices controlled by the moduls internal flags 30,31,32. To make the flags work as driver choice flags, flag 30 must have the comment ABC. Otherwize the flags 30, 31 and 32 will work as ordinary flags.

If no conditions are fulfilled in any of the flags, the driver choice will automatically be set to driver **A**
If more than one flag have fulfilled conditions the driver choice will be set to driver **A**

Fulfilled conditions i flag 30 sets the driver choice to **A**
Fulfilled conditions i flag 31 sets the driver choice to **B**
Fulfilled conditions i flag 32 sets the driver choice to **C**

Specialflags V3.6 and higher

Flag 29 can be used to make a total sum for up to four chosen PWM-outputs from the own modul or from an external modul. To activate the function the comment in flag 29 shall be SUM
The flag value is the total sum of the chosen ports variation from center * a scale value. The scale value is individual for each PWM-port to compensat for the need of individual inlet flow. Which ports that will be summerized is chosen in the picture below. Up to four ports can be summerized.


The value in flag 29 in this example will be: (Deviation from 127 in ID1:1 * 1.00) + (Deviation from 127 in ID2:2 * 1.40) + (Deviation from 127 in ID1:2 * 0.95).

This feature is useful when an inlet valve is used as a flow regulator for several functions. By following the flag 29 "in the conditions of the PWM output. Examples of configuration of this port is seen in the picture below.
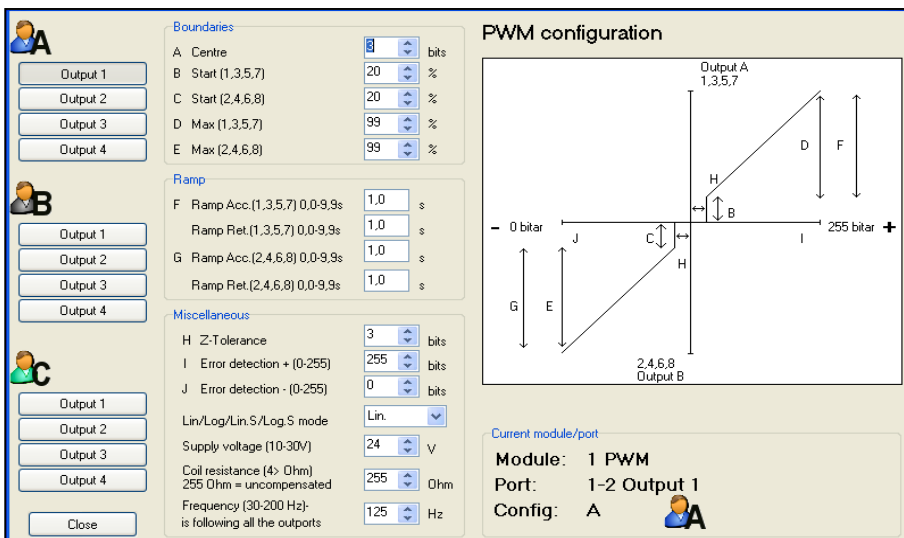
Note: The singel functions can not be used with the HAVE-module. This applies to Lin S, Log S, Lin S Inv and Log S Inv.
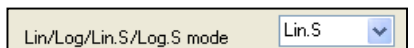
Specialflags V3.8 and higher (PWM-64)
Flag 28 can be used to mulitply two optional values from the CAN-bus.
After that the product can be divided to not make the result to large.
To activate the function the comment in flag 28 shall be MULDIV

F28=(1:7*1:8)/255

Port simulator:
8 flags can be sent to the CAN-bus for analysis, or to be used as global conditions.

To activate the function the PWM-64 module must have the comment ¤SIM,mm,ff
mm is the simulated CAN-bus ID and ff the start flag and 7 subsequent flags.
Always state two numbers for ID and Flag, e.g. ID1 Flag 5 is written ¤SIM,01,05
In the example below: ¤SIM,20,28 flag 28-35 will be sent to ID20 as port 1-8.

To be able to use the ports as conditions, a module need to be entered in the module
configuration, in this case ID20. Set chosen ports as inputs and add port comments if desired.

Special function V39 and higher:

The function **SERVO** in flag 26 & 27 is activated with SERVO in the comment for the flag.
The flags value is 127 - (Error * gain-factor) where the error is actual value - required value
Conditions in CanPro is written as in the picture below.
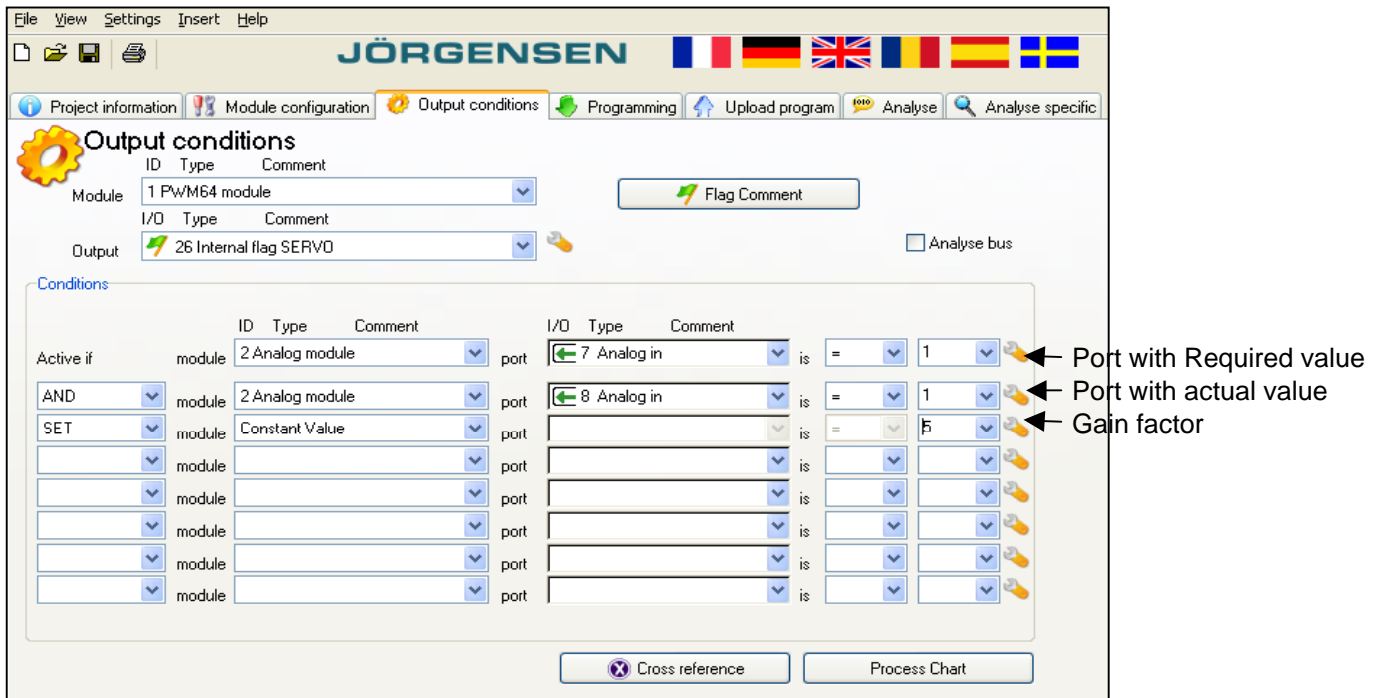
Special function V41 and higher:

Counter function in flag 20. Activate the function with COUNT in the comment for flag 20.
Each time the flag is true, the flag value will be enumerated.
The value will maximum be 255, then it will automatically be set to zero again.
It is possible to set the counter to zero with flag 21.

Instruction for installation:

Assembly:
The module can be assembled in any optional position.
When installing the module, the casing of the module shall have
good electrical contact with the base frame of the vehicle.

Electrical installation:
Secure the module with maximum 10 Ampere fuse.
The connectors is made for maximum 10 Ampere.
The module has no built-in CAN termination.

Other:
The module is hermetically moulded in PUR.
The enclosure is made of powder coated aluminium.
The module enclosure is potential free.

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Declaration of Conformity according to the EMC directive 2004/108/EG

Försäkran om överensstämmelse enligt EMC direktivet 2004/108/EG

By signing this document the undersigned declares as manufacture that the equipment in question complies with the protection requirements of directive(s)

Genom att underteckna detta dokument försäkrar undertecknad såsom tillverkare att angiven utrustning uppfyller skyddskraven i rubricerade direktiv

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CanCom PWM-64 HAWE module

EN 61000-6-4	**Radiated RF emission**
CISPR 25:2002	**Conducted RF emission**
EN 61000-6-2	**Industrial immunity**
ISO 11452-2 (95/54/EG)	**Conducted RF immunity**
ISO 11452-4 (95/54/EG)	**Radiated RF immunity**
ISO 7637-1 puls 4	**Conducted transients on power lines**
ISO 7637-2 puls 1-5	**Conducted transients on power lines**
ISO 7637-3 puls 3a, 3b	**Conducted transients on signal lines**
EN 61000-4-2	**ESD (4kV contact, 8kV Air)**
ISO/TR 10605	**ESD (7kV contact, 14kV Air)**
EN 61000-4-8	**Magnetic field (50Hz 30A/m)**

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