

CANopen SERIES

CRANE
UNIT



CANmaster

General description

The **Crane unit** is an electronic control unit with CAN-bus/CANopen communication that is used in the CANmaster[®] control system to complement the basic system with more double acting PWM-outputs.

The unit contains 8 double-acting closed loop regulated PWM outputs and a total of 11 I/Os for analog and digital signals. The Crane unit is ideal for controlling multi-cylinder operated cranes and includes 5 analog I/Os that can be used to measure weight, length and monitor load limits.

The unit is provided with an internal error log that is automatically transferred to the **Master** units central error log via the CAN-bus line.

2 diagnostic LEDs on top shows the status for the CPU (green) and CAN-bus (yellow) communication.

The housing have a protection class IP65 and permits placement anywhere on the machine.

Application areas

- Mobile machinery; control of working hydraulics.



Technical Data

General data

Supply Voltage	11-30 VDC
Operating temp.	-40° C to +70° C
Max. current power output	15 A, total
Housing material	Aluminum
Housing breathing lter	Gore-Tex [®] membrane
Enclosure	IP65 (IEC 60529)
EMC class	Automotive
Shock	IEC 60068-2-27 Es, 30g
Bump	IEC 60068-2-29 Eb, 10g
Vibration	IEC 60068-2-64, Random 10-250 Hz
Test level, IEC-tests	IEC 60721-3-5 Class 5M3
Weight	0.95 kg
Connectors	AMPSEAL 35 + 14 pin

Data communication

CAN-1	CANopen/CAN 2.0B, 500 kbps
PC-communication	RS232, 9600 kbps

Unit addressing

Jumpers on address pins. Max 4 Crane units can be addressed when used in the CANmaster control system.

I/O data

I/O-type	Qty	Data
Analog input	5	Analog input 0-5V, A/D-10 bit resolution
Digital input	4	Digital input, +24V
Digital output	2	Digital output, +24V max 2 A
PWM-output	8	Double acting PWM output 0 - max 1600 mA, 10 bit
Supply output for sensors	1	+5VDC

Programming tool

Hydratronics CANmaster PC-TOOL[™] graphical programming tool.

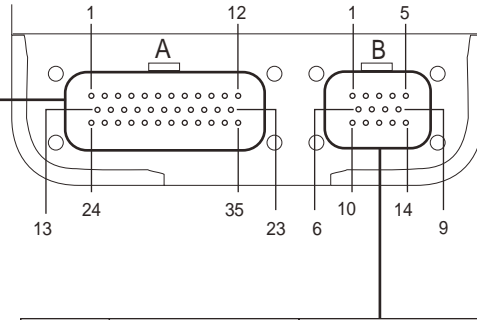
Comprehensive technical information:
User Manual Technical Data & Installation
Part No. 5011 0003-GB

Ordering Information

CRANE control unit compl. Part No. 5010 3500

Connector pin assignments

Pin No.	I/O function / designation
01	Analog IN 08
02	Analog IN 09
03	Digital IN 00
04	Digital IN 01
05	PWM-OUT 00(+)
06	PWM-OUT 01(+)
07	PWM-OUT 02(+)
08	PWM-OUT 03(+)
09	PWM-OUT 04(+)
10	PWM-OUT 05(+)
11	PWM-OUT 06(+)
12	PWM-OUT 07(+)
13	Analog IN 10
14	Digital IN 02
15	Digital IN 03
16	PWM-OUT 00 RET
17	PWM-OUT 01 RET
18	PWM-OUT 02 RET
19	PWM-OUT 03 RET
20	PWM-OUT 04 RET
21	PWM-OUT 05 RET
22	PWM-OUT 06 RET
23	PWM-OUT 07 RET
24	Analog IN 11
25	Analog IN 12
26	Digital OUT 00
27	Digital OUT 01
28	PWM-OUT 00(-)
29	PWM-OUT 01(-)
30	PWM-OUT 02(-)
31	PWM-OUT 03(-)
32	PWM OUT 04(-)
33	PWM OUT 05(-)
34	PWM OUT 06(-)
35	PWM OUT 07(-)



RS232 connector
9-pin D-sub female



Communication port for boot software download. No permanent connection required. (Not supplied with unit)

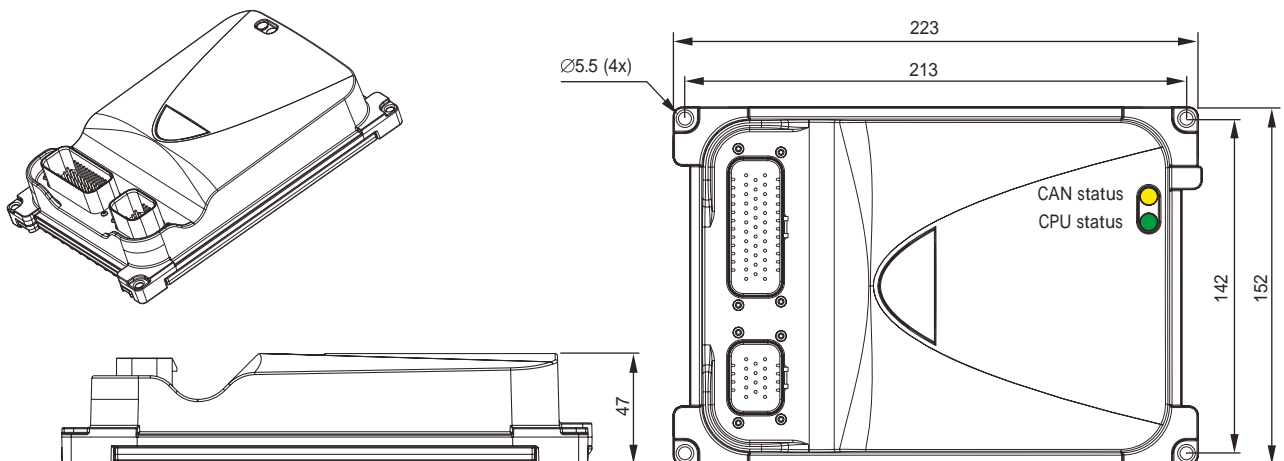
Pin No.	Designation	Function
01	Vbatt POWER	+24V powersupply CRANE-unit
02	Vbatt GND	0 V CRANE-unit
03	-Vref sensor GND	0 V reference for sensors
04	+Vref sensor	+5V supply for sensors
05	(not used)	
06	CAN1_L	CAN-bus signal L, CANopen
07	CAN1_H	CAN-bus signal H, CANopen
08	CAN1_L	CAN-bus signal L, CANopen
09	CAN1_H	CAN-bus signal H, CANopen
10	Address 1	Unit address pin 1 for CAN-bus
11	Address 2	Unit address pin 2 for CAN-bus
12	RS232 GND	Ground terminal RS232. RS232 Pin 5
13	RS232 Rx	Receive data RS232 from PC. RS232 Pin 3
14	RS232 Tx	Transmit data RS232 to PC. RS232 Pin 2

Mating connector specification

Mating connectors	A	B
AMPSEAL , Part No.	776164-1	776273-1
Hydratronics Part No.	5015 1000	5015 1001
Contacts AMP, type	Cu-Sn, 0.5-1.5 mm ² 16-20 AWG	Gold plated 0.5-1.5 mm ² 16-20 AWG
Loose contacts, AMP Part No.	770854-1	770854-3
Hydratronics Part No.	5015 1002	5015 1007
Contacts on strap AMP Part No.	770520-1	770520-3
Crimp tool, AMP Part No.	0-0058529-1	
Hydratronics Part No.	5015 1008	

(Mating connectors not supplied with unit)

Dimensions (mm)



Supported by a worldwide network



CONTACT INFORMATION

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