

Control Unit

Hardware-Description

G 61430-A

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1 Mounting

This device is to be mounted onto a 35 mm DIN top-hat rail according to standard EN50022.

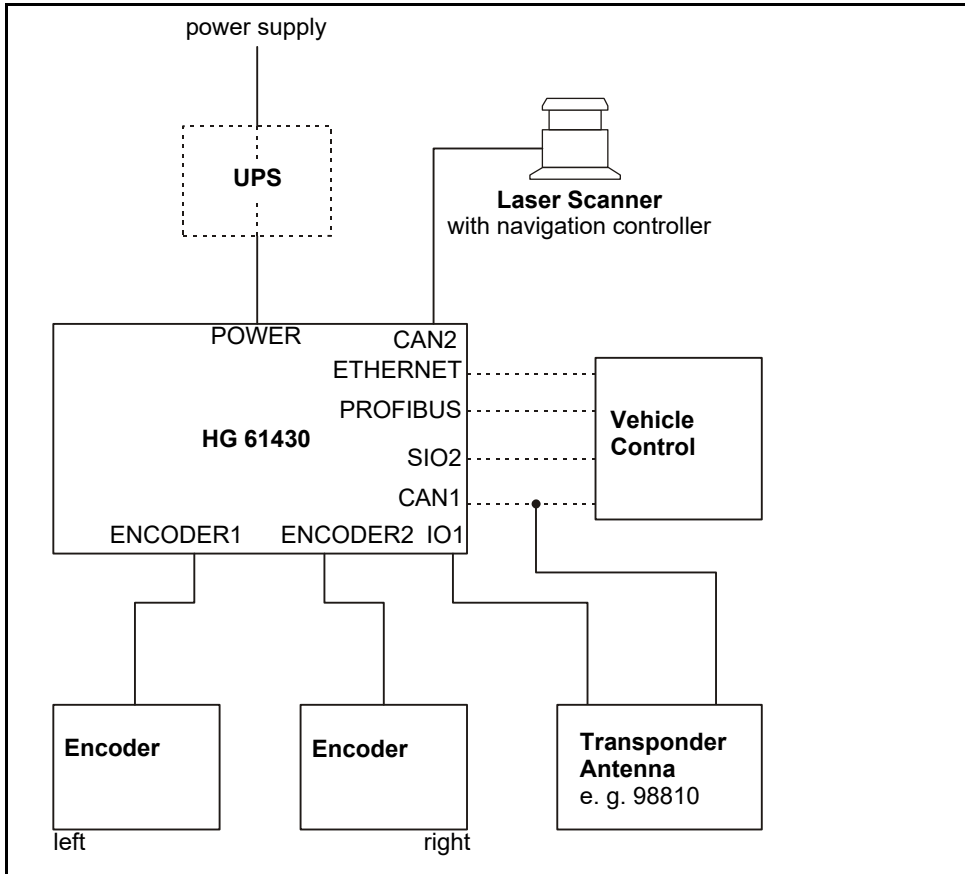


Figure 1 Overview of possible components

2 Hardware

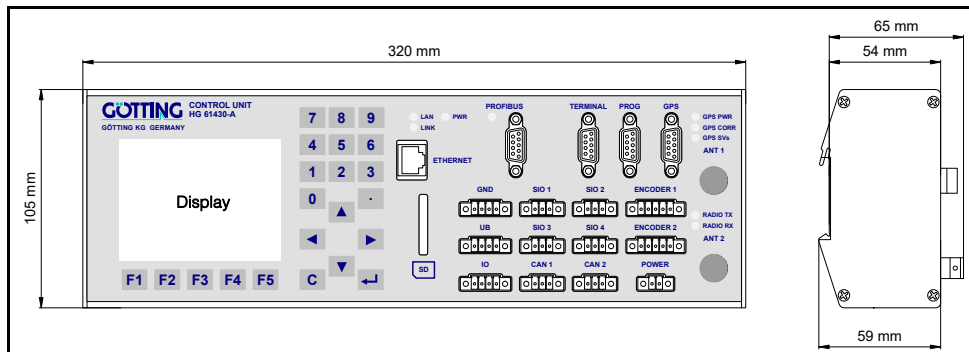


Figure 2 Dimensions, LEDs and connectors

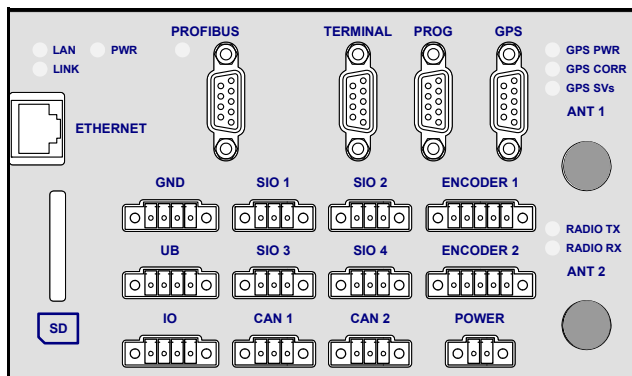


Figure 3 Detailed view of interface section

2.1 Operating Elements

- ◆ membrane keypad with 22 keys.
- ◆ Slot for SD Card.

2.2 Display Elements

- ◆ 320x240 pixel, graphics-capable, LED background light.

LED	Status when LED is lit/blinking	LED	Status when LED is lit/blinking
PWR	power supply OK	GPS CORR	reception of DGPS correction data
LAN	Ethernet communication	GPS SVs	reception of GPS satellites
LINK		RADIO TX	transmission via RF modem
PROFIBUS	Profibus communication	RADIO RX	reception via RF modem
GPS PWR	power supply GPS receiver OK		

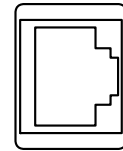
Table 1 LED Status

2.3 Connectors

2.3.1 ETHERNET

Figure 4 Outline of ETHERNET connector

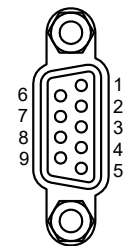
Function: communication with superior control and/or PC
 Interface: Ethernet
 Connector: RJ-45



2.3.2 PROFIBUS

Figure 5 Outline of PROFIBUS connector

Function: communication with superior control unit
 Interface: Profibus-DP
 Connector: Sub-D 9pin (DE9) female



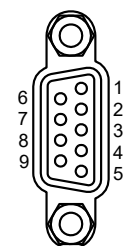
Pin	Allocation	Direction
1		
2		
3	conductor B	I/O
4	RTS	O
5	GND	O
6	+5V	O
7		
8	conductor A	I/O
9		

Table 2 Pin allocation PROFIBUS

2.3.3 TERMINAL

Figure 6 Outline of TERMINAL connector

Function: communication with PC (commissioning and service)
 Interface: EIA-232 (ANSI/EIA/TIA-232-F-1997)
 Connector: Sub-D 9pin (DE9) female



Pin	Allocation	Direction
1		
2	TxD output data	O
3	RxD input data	I
4		
5	GND	
6		
7		
8		
9		

Table 3 Pin allocation TERMINAL

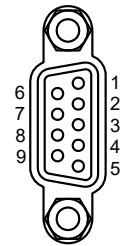
2.3.4 PROG

Figure 7 Outline of PROG connector

Function: programming interface from PC to HG61430

Interface: EIA-232 (ANSI/EIA/TIA-232-F-1997)

Connector: Sub-D 9pin (DE9) female



Pin	Allocation	Direction
1		
2	TxD output data	O
3	RxD input data	I
4		
5	GND	
6		
7		
8		
9		

Table 4 Pin allocation PROG

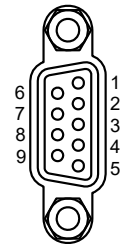
2.3.5 GPS

Figure 8 Outline GPS connector

Function: communication with GPS receiver (software update and parameter setting)

Interface: EIA-232 (ANSI/EIA/TIA-232-F-1997)

Connector: Sub-D 9pin (DE9) female



Pin	Allocation	Direction
1		
2	TxD output data	O
3	RxD output data	I
4		
5	GND	
6		
7		
8		
9		

Table 5 Pin allocation GPS

2.3.6 ANT1

not connected

2.3.7 ANT2

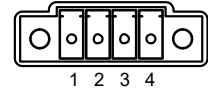
not connected

2.3.8 GND

Figure 9 Outline of GND connector

Function: GND connections for IO's

Connector: Phoenix-Contact MCV1,5/4-GF-3,5



Pin	Allocation	Direction
1	GND	
2	GND	
3	GND	
4	GND	

Table 6 Pin allocation GND

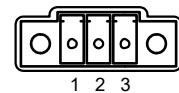
2.3.9 SIO1

Figure 10 Outline of SIO1 connector

Function: Serial interface for option: external correction data RF modem

Interface: EIA-232 (ANSI/EIA/TIA-232-F-1997)

Connector: Phoenix-Contact MCV1,5/3-GF-3,5



Pin	Allocation	Direction
1	GND	
2	TxD output data	O
3	RxD input data	I

Table 7 Pin allocation SIO1

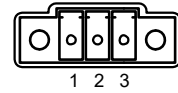
2.3.10 SIO2

Figure 11 Outline of SIO2 connector

Function: communication with superior control unit

Interface: EIA-232 (ANSI/EIA/TIA-232-F-1997)

Connector: Phoenix-Contact MCV1,5/3-GF-3,5



Pin	Allocation	Direction
1	GND	
2	TxD output data	O
3	RxD input data	I

Table 8 Pin allocation SIO2

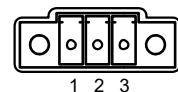
2.3.11 SIO3

Figure 12 Outline of SIO3 connector

Function: Serial interface for option: Inertial System / Gyro

Interface: EIA-232 (ANSI/EIA/TIA-232-F-1997)

Connector: Phoenix-Contact MCV1,5/3-GF-3,5



Pin	Allocation	Direction
1	GND	
2	TxD output data	O
3	RxD input data	I

Table 9 Pin allocation SIO3

2.3.12 SIO4

NOTE! Do not connect! For internal use only!

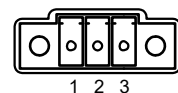


Figure 13 Outline of SIO4 connector

Function: internal interface with GPS receiver, **do not use!**

Interface: EIA-232 (ANSI/EIA/TIA-232-F-1997)

Connector: Phoenix-Contact MCV1,5/3-GF-3,5



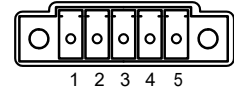
2.3.13 ENCODER1

Figure 14 Outline of ENCODER1 connector

Function: interface for encoder input from one encoder

Interface: 5 Volt or 24 Volt

Connector: Phoenix-Contact MCV1,5/5-GF-3,5



Pin	Allocation	Direction
1	GND	
2	UB (Power Supply)	
3	+5 Volt (max. 100 mA)	
4	circuit A1	
5	circuit B1	

Table 10 Pin allocation ENCODER1

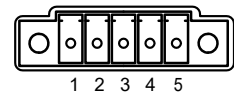
2.3.14 ENCODER2

Figure 15 Outline of ENCODER2 connector

Function: Interface for encoder input from one encoder

Interface: 5 Volt or 24 Volt

Connector: Phoenix-Contact MCV1,5/5-GF-3,5



Pin	Allocation	Direction
1	GND	
2	UB (power supply)	
3	+5 Volt (max. 100 mA)	
4	circuit A2	
5	circuit B2	

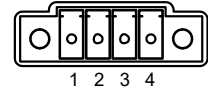
Table 11 Pin allocation ENCODER2

2.3.15 UB

Figure 16 Outline of UB connector

Function: Power supply for IO's

Connector: Phoenix-Contact MCV1,5/4-GF-3,5



Pin	Allocation	Direction
1	UB (power supply)	
2	UB (power supply)	
3	UB (power supply)	
4	UB (power supply)	

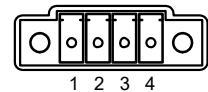
Table 12 Pin allocation UB

2.3.16 IO

Figure 17 Outline of IO connector

Function: switched input or output, depending on the application

Connector: Phoenix-Contact MCV1,5/4-GF-3,5



Pin	Allocation	Direction
1	IO1	I/O
2	IO2	I/O
3	IO3	I/O
4	IO4	I/O

Table 13 Pin allocation IO

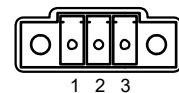
2.3.17 CAN1

Figure 18 Outline of CAN1 connector

Function: CAN Bus for communication with superior control unit

Interface: CAN Bus according to ISO 11898-1

Connector: Phoenix-Contact MCV1,5/3-GF-3,5



Pin	Allocation	Direction
1	CAN_GND	
2	CAN_HIGH	
3	CAN_LOW	

Table 14 Pin allocation CAN1

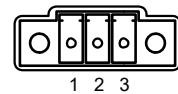
2.3.18 CAN2

Figure 19 Outline of the CAN2 connector

Function: CAN Bus communication with Laser Scanner G 43600

Interface: CAN Bus according to ISO 11898-1

Connector: Phoenix-Contact MCV1,5/3-GF-3,5



Pin	Allocation	Direction
1	CAN_GND	
2	CAN_HIGH	
3	CAN_LOW	

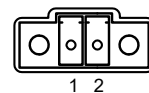
Table 15 Pin allocation CAN2

2.3.19 POWER

Figure 20 Outline of the POWER connector

Function: Connection of power supply

Connector: Phoenix-Contact MCV1,5/2-GF-3,5



Pin	Allocation	Direction
1	GND	
2	UB (Power supply)	

Table 16 Pin allocation POWER

3 Maintenance

This system is maintenance free.

4 Technical Data

G_61430-A	
Casing and dimensions	Aluminium, refer to Figure 2 on page 4
Weight	1350 g
Operating temperature	0 to 70° C
Storage temperature	-25 to 80° C
Protection class	IP30
Relative humidity at 25° C	95 % (without condensation)
Interfaces	refer to section 2.3 „Connectors“ on page 5
Power supply	nominal voltage 24 Volt (18 to 30 Volt)
Current consumption	250 mA at 24 Volt

Table 17 Technical Data G_61430-A

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7 Essential Information for Reading this Manual

In documentations of Götting KG the following symbols and assignments are being used at the time of printing this manual:

- ♦ Security advices have the following symbols, depending on the emphasis and the degree of exposure:

NOTE!



ATTENTION!



CAUTION!



WARNING!



- ♦ Continuative information and tips are identified as follows:

Tip!



- ♦ Program texts and variables are highlighted by using the font 'Courier'.
- ♦ Whenever input of key combinations is required for the operation of programs, the corresponding **K**ey combinations are **H**ighlighted (in Götting KG programs it is usually possible to use small and capitalized characters equally).
- ♦ Sections, figures and tables are automatically numbered consecutively throughout the entire document. In addition, each document has an index listed behind the front page, including pages and - whenever the document has more than 10 pages - following the actual system description a figure and table index in the back. In certain cases (for long and/or complicated documents) a subject index is added.
- ♦ Each document provides a table block with meta information on the front page, indicating the system designer, author, revision and date of issue. In addition, the information regarding revision and date of issue are included within the footer of each page, enabling the exact allocation of the information with a date and certain a system revision.
- ♦ Online-Version (PDF) and printed manual are generated from the same source. Due to the consistent use of Adobe FrameMaker for the generation of documentation, all directory entries (including page numbers and subject index) and cross references in the PDF file can be clicked on with the mouse and will lead to the corresponding linked contents.



8 Copyright and Terms of Liability

8.1 Copyright

This manual is protected by copyright. All rights reserved. Violations are subject to penal legislation of the Copyright.

8.2 Exclusion of Liability

Any information given is to be understood as system description only, but is not to be taken as guaranteed features. Any values are reference values. The product characteristics are only valid if the systems are used according to the description.

This instruction manual has been drawn up to the best of our knowledge. Installation, setup and operation of the device will be on the customer's own risk. Liability for consequential defects is excluded. We reserve the right for changes encouraging technical improvements. We also reserve the right to change the contents of this manual without having to give notice to any third party.

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