Diagnostic tools

Analyzer for encoders HENQ 1100 B

with integrated battery

Article number: 11075880

Overview

- Analyzer for encoders
- Continuous monitoring and display of encoder data (speed, angular position, position of the zero pulse, phase shift, pulse/pause ratio, voltage range etc.)
- Continuous error monitoring (elimination of signal disturbances, comparison of the nominal/actual number of pulses per turn, check of the quadrature coding)
- Individual error messages
- Windows applications software for the PC, for graphical display and statistical evaluation of the measurements
- Recording of measurements and error messages

Technical data

For the encoder

Voltage supply	Encoder supply from the HENQ 1100: Possibility 1) U1 = UB - 1 VDC Possibility 2) U2 = 5 VDC External power supply for the encoder: Possibility 1) U1 = UREG1 = 9...30 VDC Possibility 2) U2 = UREG2 = 5 VDC (with measuring signal looped through)
Consumption typ.	300 mA (encoder supply from the HENQ 1100, limited by polymer fuse) 500 mA (external power supply for the encoder and encoder signal looped through, limited by polymer fuse)

For the HENQ 1100

Voltage supply	9...30 VDC
Ambient temperature	-10...+50 °C
Inputs	D-SUB connector (female) 15-pin
Outputs	D-SUB connector (male) 15-pin RS485 female 9-pin Option: RS232 female 9-pin
Battery	Accumulator voltage: 12 V nominal, sub-threshold warning: 10 V, charging time: 5 hours, operating time: ~5 hours

Description

The Baumer **H**übner **EN**coder **Q**uality Measurement System **HENQ 1100 B** is a hand-held testing instrument for incremental encoders with HTL/TTL or sin/cos signal output. Fast signal processing enables quick tracking of sporadic errors, for example caused by interference in the signal leads or short voltage drop-outs in power supply. In addition, both angular position and speed are continuously shown in the display. Besides the Baumer encoders, also those of other brands with TTL/HTL or sin/cos signals can be utilized. Encoder supply is either by the HENQ 1100 or an external source. This way, the encoder allows for independent operation offline the standard supply and also eavesdropping on a running system. Device operation is by the integrated, user-friendly keypad and a 4-line LCD display with backlight. Measured values of several encoders can be compiled and saved in the memory for further evaluation. User-defined profiles can be used to program various thresholds as parameters, for instance:
- permissible phase deviation
- permissible pulse/pause ratio

Besides visual error messages on the LCD display, the integrated buzzer will give an acoustic alarm.
HENQ 1100 B will come with a power pack (12 V power pack with integrated charging circuitry) to enable mains-independent operation for up to 5 hours. Encoder supply by HENQ 1100 is also enabled when battery-powered.

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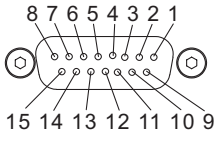
Terminal assignment

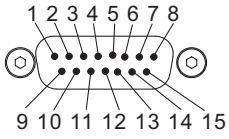
Input D-SUB



D-SUB,
15-pin,
female contacts

Pin	Assignment
1	A+ (K1)
2	A- ($\overline{K1}$)
3	B+ (K2)
4	B- ($\overline{K2}$)
5	R+ (K0)
6	R- ($\overline{K0}$)
7	dnu
8	dnu
9	U1 = 9...30 VDC
10	U1 = 9...30 VDC
11	U2 = 5 VDC
12	U2 = 5 VDC
13	0V (GND)
14	0V (GND)
15	0V (GND)

Output D-SUB



D-SUB,
15-pin,
male contacts

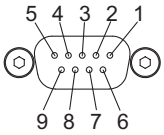
Pin	Assignment
1	A+ (K1)
2	A- ($\overline{K1}$)
3	B+ (K2)
4	B- ($\overline{K2}$)
5	R+ (K0)
6	R- ($\overline{K0}$)
7	dnu
8	dnu
9*	UREG1 = 9...30 VDC
10*	UREG1 = 9...30 VDC
11*	UREG2 = 5 VDC
12*	UREG2 = 5 VDC
13	0V (GND)
14	0V (GND)
15	0V (GND)

* From control unit

Terminal assignment

RS485 interface

The output signals of the HENQ 1100 are always differential! It is not possible to make a daisy-chain signal loop with sinewave signals.



Pin	Assignment
1	B (D-)
2	A (D+)
3	B (D-)
8	A (D+)

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Accessories	
Connectors and cables	
11064248	USB → RS485 converter
11117345	USB → RS485 converter with connecting cable for DSL

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