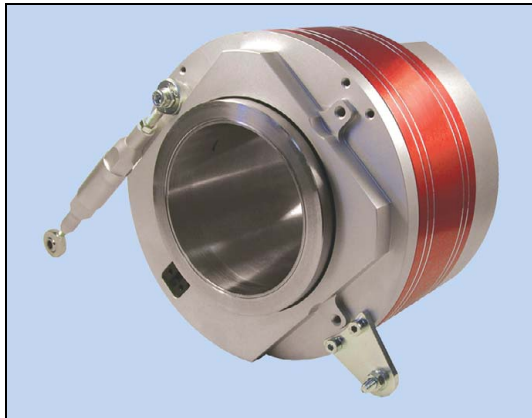
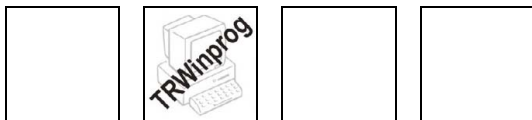


Absolute-Encoder CEH 160 S/M - ETC/SSI

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Germany



- **EtherCAT / SSI - interface**
- **Type with hollow through shaft**
- **Hollow shaft Ø up to max. 80 mm**
- **Measuring system with Multi-Interface-Technique for different closed-loop control concepts**
- **SIN/COS signals for motor commutation and speed control**
- **SSI absolute position data for position control**
- **Industrial Ethernet for PC based closed-loop and system control**
- **Customized adaptations upon request**

5.A

Characteristics

Supply voltage.....	11...27 VDC
Current consumption without load	< 300 mA
Total resolution ¹⁾	Multi-Turn: ≤ 27 Bit, Single-Turn: ≤ 15 Bit
Number of steps/revolution ¹⁾	≤ 32.768
Number of revolutions ¹⁾	Multi-Turn: ≤ 4.096, Single-Turn: 1
EtherCAT	IEC 61158-1 – 6, IEC 61784-2
- Physical Layer	EtherCAT 100Base-TX, Fast Ethernet, ISO/IEC 8802-3
- Output code	Binary
- Transmission rate	100 MBit/s
- Transmission	CAT-5 cable, shielded (STP), ISO/IEC 11801
SSI	Synchronous-Serial-Interface
Clock input	Optocoupler
Data output.....	RS-422, 2-wire
Clock frequency	80 kHz – 1 MHz
Mono time t _M	16 µs ≤ t _M ≤ 25 µs, typically 20 µs
Output code ¹⁾	Binary, Gray, BCD
Output format ¹⁾	Standard, Tree format, SSI+CRC, 26-bit repeat
Negative values ¹⁾	Sign + Value, Two's complement
SSI- or parallel special bits ¹⁾	Cams, Overspeed, Direction, Moving, Error, Parity
F/R ¹⁾	Count direction
Preset ¹⁾	electronic adjustment
Logic level	"0" < + 2 VDC, "1" = Supply voltage
Mechanically permissible speed	≤ 3.000 min ⁻¹
Shaft load.....	Own mass
Bearing life time	≥ 3.9 * 10 ¹⁰ revolutions at
- Speed	≤ 1.500 min ⁻¹
- Operating temperature	≤ 60 °C
Shaft diameter in mm	80H7, optional with reducing bush
Optional	
- SIN/COS signals.....	SIN+, COS+ with 1 V _{ss} ; Ref_SIN, Ref_COS with 2.5 reference voltage or SIN+, COS+, SIN-, COS-
- Alternative with incremental signals	K1+, K1-, K2+, K2- with 4096 periods/revolution

¹⁾ programmable parameter

Environmental conditions

Vibration, DIN EN 60068-2-6: 1996..... $\leq 100 \text{ m/s}^2$, sine 50-2000 Hz
Shock, DIN EN 60068-2-27: 1995..... $\leq 1000 \text{ m/s}^2$, half-sine 11ms
EMC
- Discharge of static electricity, DIN EN 61000-4-2: 2001
- Burst, DIN EN 61000-4-4: 2004
- Immunity to disturbance, DIN EN 61000-6-2: 2001
Working temperature..... $0 \text{ }^\circ\text{C} \dots +70 \text{ }^\circ\text{C}$
Storage temperature..... $-30 \text{ }^\circ\text{C} \dots +80 \text{ }^\circ\text{C}$, dry
Relative humidity, DIN EN 60068-3-4: 2002 98 %, non condensing
Protection class, DIN EN 60529: 1991 ²⁾..... IP 65, without adjusting opening

²⁾ valid with screwed on mating connector and / or screwed together cable gland

Dimension drawing

