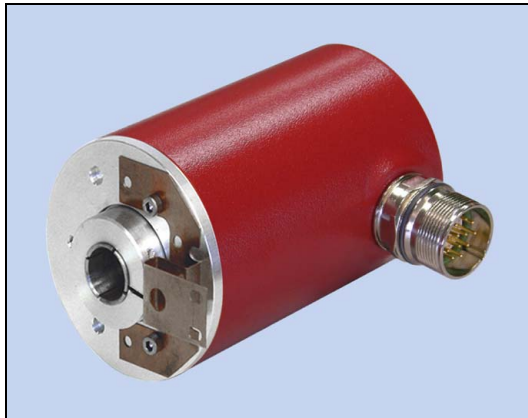
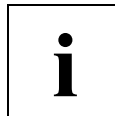
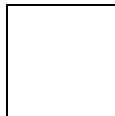
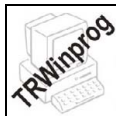


Absolute-Encoder CES 65 M - A

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D-78647 Trossingen
Tel. +49 - (0) 74 25 / 228 - 0
Fax +49 - (0) 74 25 / 228 - 33
<http://www.tr-electronic.de>
Germany



- **Analog / SSI - interface**
- **Type with blind shaft**
- **Alternative with current- or voltage output, delivery setting**
- **Analog value can be adjusted as speed- or position value**
- **Modular product line**
- **Extensive parameter setting possibilities**
- **Special parameters upon request**
- **Modular construction for mechanical customizations**

5.A

Characteristics

Supply voltage.....	22...27 VDC
Current consumption without load	< 180 mA
Total resolution ¹⁾	≤ 28 Bit
Number of steps/revolution ¹⁾	≤ 8.192
Number of revolutions ¹⁾	≤ 32.768
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
Number of data bits ¹⁾	8...32
Output format	Tree format
A.....	Analog interface
Analog voltage / Analog current.....	defined by factory setting
Resolution	14 bit D/A converter
Voltage output ¹⁾	-10 VDC...+10 VDC
- Load resistance	≥ 500 Ω
Current output ¹⁾	0...20 mA
- Load resistance	≤ 500 Ω
Preset 1 and 2.....	electronic adjustment
Latch	Intermediate storage of the analog data
Logic level	"0" < + 2 VDC, "1" = Supply voltage
Mechanically permissible speed	≤ 6.000 min ⁻¹
Shaft load	Own mass
Bearing life time	≥ 3.9 * 10 ¹⁰ revolutions at
- Speed	≤ 3.000 min ⁻¹
- Operating temperature	≤ 60 °C
Shaft diameter in mm	8H7, 10H7, 12H7, 14H7
Permissible angular acceleration	≤ 10 ⁴ rad/s ²
Moment of inertia	typically 2.5 * 10 ⁻⁶ kg m ²
Start-up torque at 20°C	typically 2 Ncm
Mass.....	typically 0.7 kg
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..... $0 \text{ }^\circ\text{C} \dots +60 \text{ }^\circ\text{C}$, optional $-20 \text{ }^\circ\text{C} \dots +70 \text{ }^\circ\text{C}$

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

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

Dimension drawing

