Absolute rotary Encoder

Discontd.w/replacemt

CES58M*4096/4096 V000 PBS SHW12/KERBN

Order No.:CES58M-00098
18.5.2023 / 010102005802020203

Technical data

NO.OF STEPS/REV	4.096,000
NO. OF REVOLUTIONS	4.096,000
INTERFACE	PROFIBUS DP
CODE	PROGRAMABLE
SUPPLY VOLTAGE	11-27V
OUTPUT LEVEL	RS485
PROTECTION Class	IP65
OPERATING TEMPERATURE	-20+70°C
SHAFT TYPE	12H7/KERBNUT SACK-HW
CONNECTOR TYPE	2XM16X1,5/1XM12X1,5
CONNECTOR-POSITION	RADIAL
PINOUT NO.	TR-ECE-TI-GB-0065
MATING PLUG	NO
OPTIONS ENC	12MBAUD
OPTIONS ENC	ADAPTER
OPTIONS ENC	CLAMPING RING FRONT SIDE
OPTIONS ENC	MOMENT SUPPORT SPRING 1 WING
OPTIONS ENC	PNO-PROFILE CLASS.2
DRAWING NO.	04-CES58M-M0068
VERSIONNO	000
FIRMWARE NO	437A73
DOCUMENTATION NO	DOKUMENTE
AL:	N
ECCN:	N

GL	Wellenausführung glatt / shaft type cylindrical
FL	Wellenausführung mit Fläche / shaft type with flat surface
N	Wellenausführung mit Nut / shaft type with slot
Hohlw	Hohlwelle / hollow shaft
Klemme	mit Klemmring / with clamping ring
Grundw	Grundwelle / fundamental shaft
SLG	Seillängengeber / cable retractor
ZB	Zentrierbund / centre ring
Tachofl	Tachoflansch / tachometer flange
DAG	DAG-Schutzgehäuse / DAG protective housing
TK	Teilkreis / pitch circle

Subject to change.

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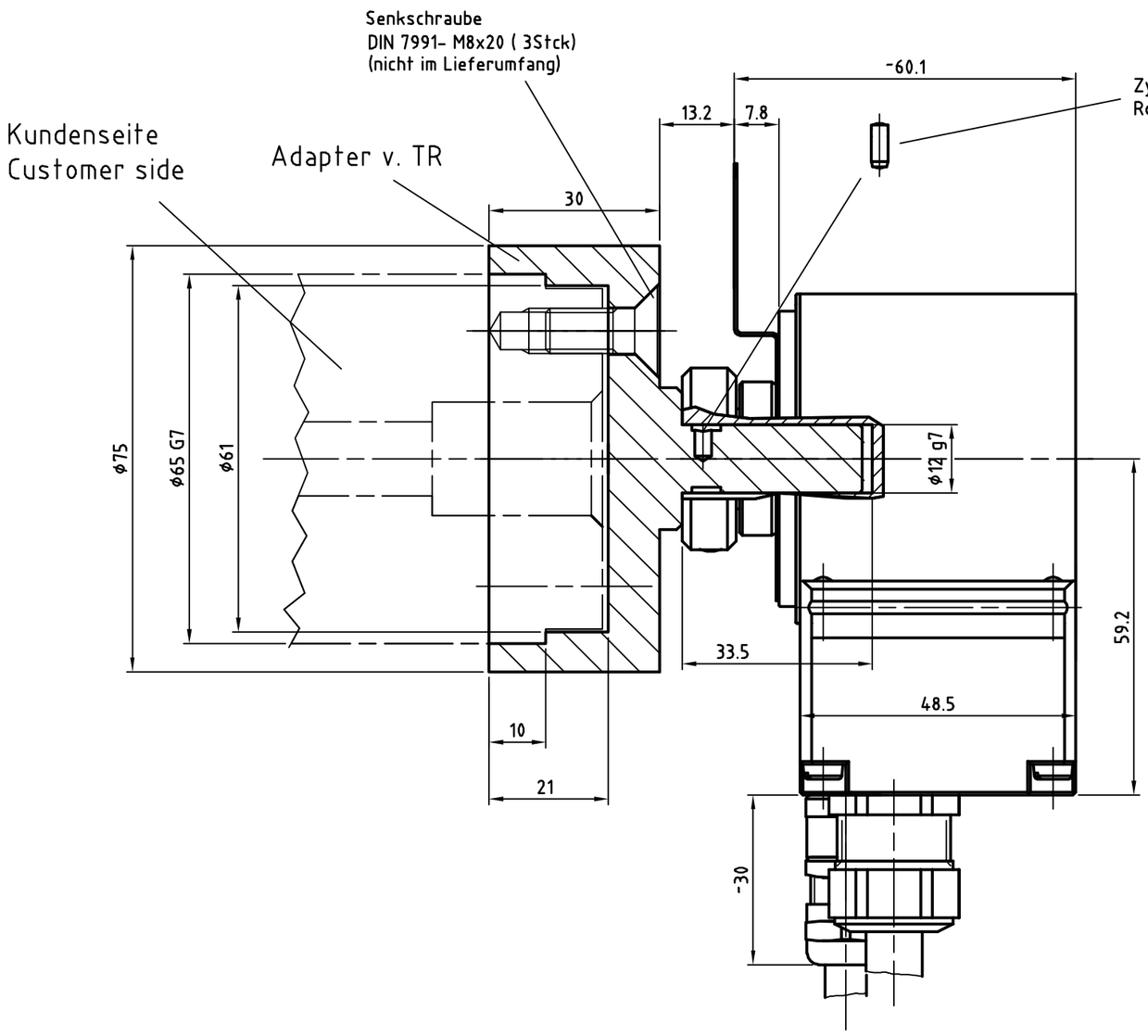

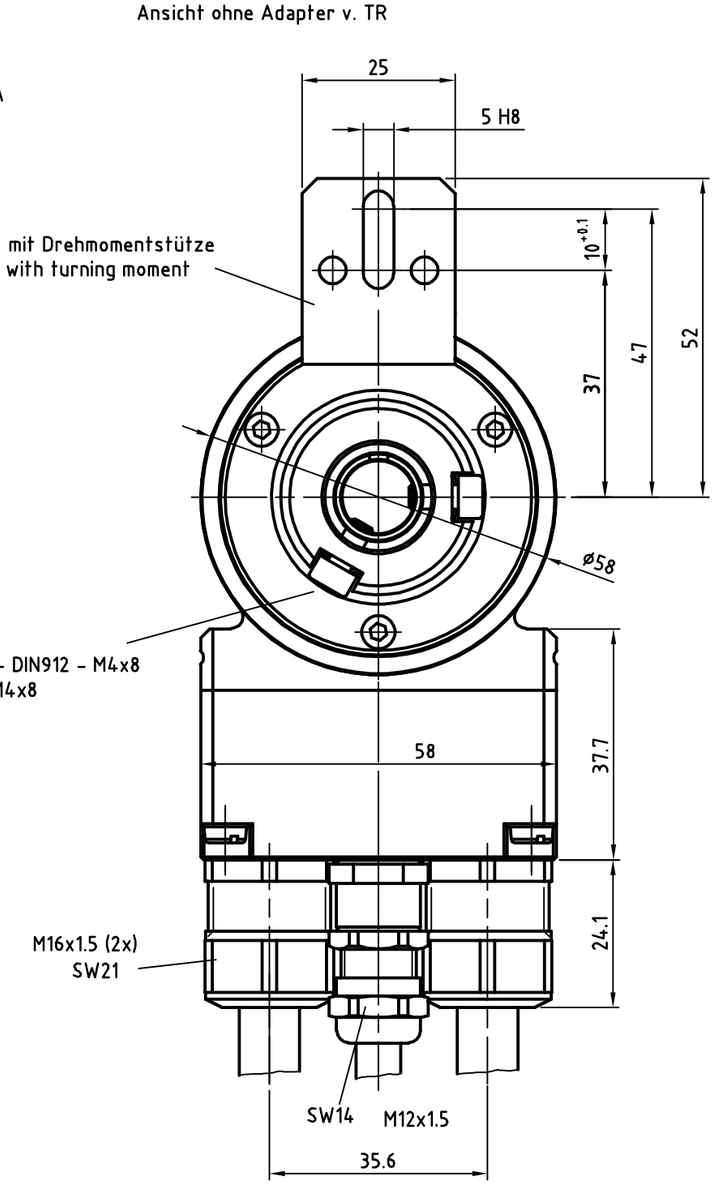

Mechanische Kenndaten für Hohlwellenencoder (Wellenstumpf-Montage)	Mechanical data for hollow shaft encoder with stub-shaft mounting	
mechanisch zulässige Drehzahl	Maximum rotational speed	12.000 min^{-1}
zul. Belastung der Wellenlagerung	Maximum load on shaft	Eigenmasse (self-mass)
min. Lagerlebensdauer (Drehzahl 6.000 min^{-1}, Temperatur 60°C)	Min. lifetime on bearings (speed 6.000 min^{-1} temperature 60°C)	min. $3.9x10^{10}$ Umdr. (revol.)
Masse (ohne Kabel)	Weight (without cable)	ca. 0.3...0.5kg
zulässige Winkelbeschleunigung	Maximum angular acceleration	max. 10^4 rad/s^2
Trägheitsmoment	Momentum of inertia	ca. $2,5x10^{-6}$ kgm^2
Anlaufdrehmoment bei 20°C	Startup momentum at 20°C	ca. 2 Ncm
Schutzart DIN40050/ICE 529	Protection ratings DIN 40050/ICE 529	IP65
Zul. Vibrationsbelastung nach DIN IEC 68-2-6 (Sinus f= 50Hz...2kHz)	Vibration DIN IEC 68-2-6 (sinusoidal f= 50Hz...2kHz)	max. 100 m/s^2 (10g)
Zul. Stossbelastung nach DIN IEC 68-2-27 (Halbsinus, Dauer t= 11ms)	Shock DIN IEC 68-2-27 (half sinusoidal, time t= 11ms)	max. 1.000 m/s^2 (100g)

Artikel-Nr. und Steckerbelegung: siehe Datenblatt
Article-No. and pin connections: see data sheet

ø65	G7	+0.04 +0.01 / 65.04 65.01
ø12	g7	-0.006 -0.024 / 11.994 11.976
5	H8	+0.018 0 / 5.018 5
Dimensions	Tolerances	

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Zust.	Änderung	Datum	Name

	Datum	Name
Erstellt	19.05.2009	FLAIG
Bearb.	19.05.2009	FLAIG
Gepr.		
Norm		

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DXF+Info:
info@tr-electronic.de

Maßstab DIN A3 | Projekt-Nr.:

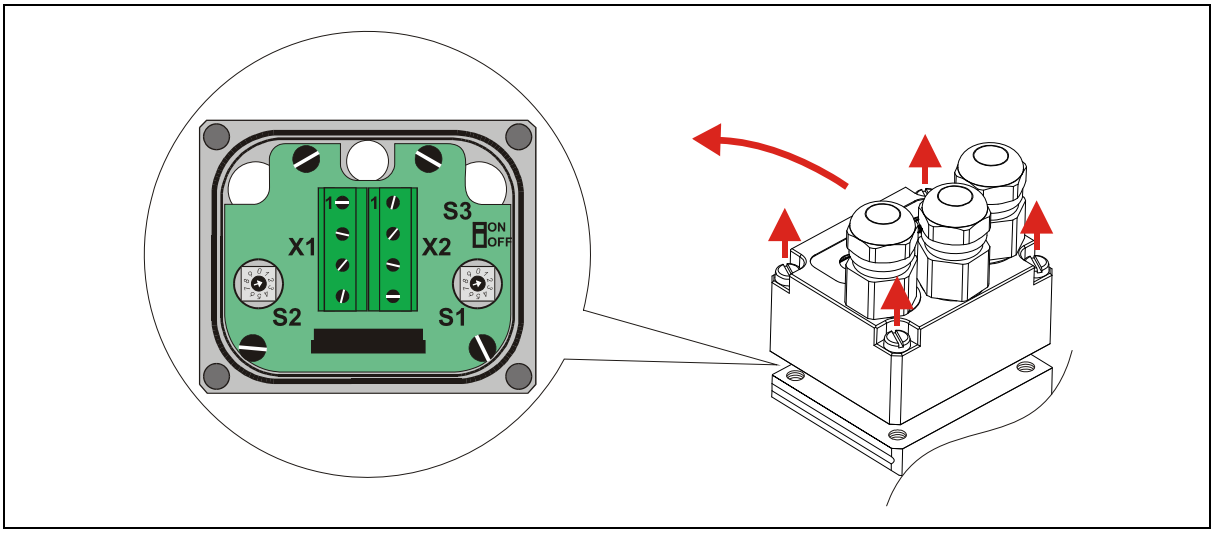
Zeichnungs-Nr. nur für diese Ausführung gültig
Drawing-No. only for this type valid

CES-58-M, Ø12H7

Zeichnungs-NR../Drawing-No.:
04-CES58M-M0068

Blatt 000 Bl

58 / 80 Profibus-DP PNO Class 2



X1	Screw clamp 4 pin	
Pin 1	Profibus, Data A	Profibus_IN
Pin 2	Profibus, Data B	
Pin 3	US, 11-27 V DC	
Pin 4	GND, 0V	

X2	Screw clamp 4 pin	
Pin 1	Profibus, Data A	Profibus_OUT
Pin 2	Profibus, Data B	
Pin 3	US, 11-27 V DC	
Pin 4	GND, 0V	

Print clamp, MKDSN 1,5/ 4-5,08: (not connected clamps must be tightened securely!)

- Nominal current: 13.5 A
- nominal voltage: 250 V
- grid spacing: 5.08 mm
- number of poles: 4
- connection angle: 0°
- nominal cross-section (flexible) max. 1.5 mm²
- nominal cross-section AWG/kcmil max. 16

Pin assignment

● = ON ○ = OFF ◉ = 1 Hz ◉ = 10 Hz

BUS FAIL (red)	BUS RUN (green)	Cause
○	○	No supply voltage, hardware error
●	◉	Parameter- or configuration error (Preset value 1/2 or limit switch out of range, wrong GSD file) Memory error, position error
○	◉	Blink mode is supported only in case of older measuring system generations. Unrecoverable measuring system defect (memory error, position error)
◉	●	No allocation to a master, no data exchange
○	◉	Parameter- or configuration error in PNO compatible target configuration (number of revolutions is not a power of two)
○	●	operational, no error, bus in cycle

General note:

If the measuring system is the last station in the Profibus segment, the DIP switch *S3* for the Profibus terminator (switching-on of the terminal resistance) must be switched on. Otherwise the terminator must be switched off. With the add-on connection of the terminal resistance the Profibus signals DataA_OUT and DataB_OUT will be switched off and following slaves are separated from the bus.

The Profibus also operates, if the device is separated from the connection cap, however with one exception: **If the measuring system is the last station in the Profibus segment, the termination isn't fully active because the reference potential of the terminator resistance is missing!**

In order to enable a separate wiring of incoming and outgoing signals the Profibus terminals and the terminals for the supply voltage have two connection possibilities.

TR-Electronic recommends for the operation to use only bus cables certified by the Profibus User Organization (PNO).

With the BCD address switches *S1 (10^0)* and *S2 (10^1)* the station address for the Profibus is set from 3 to 99.