

# Incremental-Encoder IEV58:2 2...10000 Imp

[Click Here](#) for Quick Delivery Stock Options



Ref.: K-IEV58:2-INC-1

27.03.2020

0101010582

## Advantages

- \_ Flexible programming
- \_ Imp./Rev. 1-step from 2...x
- \_ Modular mechanical design
- \_ Modular product line
- \_ Programmable output stages
- \_ Wide range power supply

## General Data

Nominal voltage	
- Specific value	24 VDC
- Limit values, min/max	4.75/27 VDC
Nominal current, typically	
- Specific value	50 mA
- Condition	unloaded
Current consump. no load, 5 V	<= 95 mA
Signal form	Square
Incremental signals, square	
- Channels	K1+, K1-, K2+, K2-
- Phase position, electrically	90 °
Zero pulse, square	
- Channel (Channels)	K0+, K0-
- Number of revolutions	1x
Impulses, square wave	>= 2...<= 10000
Output stages	
- Programmable	TTL or HTL
Output driver, TTL	
- Output level	RS-422, 5 VDC
- Load current	<= 35 mA
- Load current	per Channel
- Output frequency	<= 900 kHz

Subject to change.

## Incremental-Encoder IEV58:2 2...10000 Imp

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### General Data continuation

- Output frequency	with 2 m cable
- Output frequency	with 20 mA load
- Short-circuit proof	yes
Output driver, HTL	
- Short-circuit proof	yes
- Output level	Push-Pull, supply voltage
- Load current	<= 35 mA
- Load current	per Channel
- Output frequency	<= 900 / 700 / 250 kHz
- Output frequency	with 2 m / 5 m / 10 m cable
- Output frequency	with 20 mA load
- Minimum voltage of the supply	> 8 VDC
Parameter/Function, changeable	Number of pulses
	0-Pulse KO: Pulse length
	Phase position: KO/K1/K2
	Preset parameter
	Counting direction
	Output stage (TTL/HTL)
Type of parametrization	programmable
Programming - Tool	TR-Soft: TRWinProg
External inputs	
- F/R	Count direction
- Preset	electronic adjustment
- Logic level	"0" < +2V, "1" = Supply
External outputs	
- Status output	Speed
- Output level	<= 40 VDC, <= 35 mA
- Output stages	Open Collector
- Short-circuit proof	yes
Maximum Speed, mechanically	<= 12000 1/min
Shaft load, axial/radial	<= 50 N, <= 100 N
Bearing life time	>= 3.9E+10 revolutions
Bearing life time - Parameter	
- Speed	6000 1/min
- Operating temperature	60 °C
- Shaft load, axial/radial	= 60 %
Point of origin, shaft load	Mounting flange + 10 mm
Shaft type	
- Shaft diameter [mm]	6

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## General Data continuation

- Shaft diameter [mm]	8
- Shaft diameter [mm]	10
- Shaft diameter [mm]	12
- Shaft diameter [mm]	14
- Shaft diameter ["]	1/4
- Shaft diameter ["]	3/8
- Shaft diameter ["]	1/2
Angular acceleration	$\leq 10E+4 \text{ rad/s}^2$
Moment of inertia, typically	$2.5E-6 \text{ kg m}^2$
Start-up torque, 20 °C	0.5 Ncm
Mass, typically	0.3...0.5 kg

## Environmental conditions

Vibration	
- Specific value	$\leq 100 \text{ m/s}^2$
- Sine	50...2000 Hz
Shock	
- Specific value	$\leq 1000 \text{ m/s}^2$
- Half sine	11 ms
Immunity to disturbance	DIN EN 61000-6-2
Transient emissions	DIN EN 61000-6-3
Working temperature	
- Standard	-40...+75 °C
Storage temperature, dry	-30...+80 °C
Relative humidity	98 %, non condensing
Protection class	
- Standard	IP65 shaft side
- Standard	IP67 housing side

Subject to change.

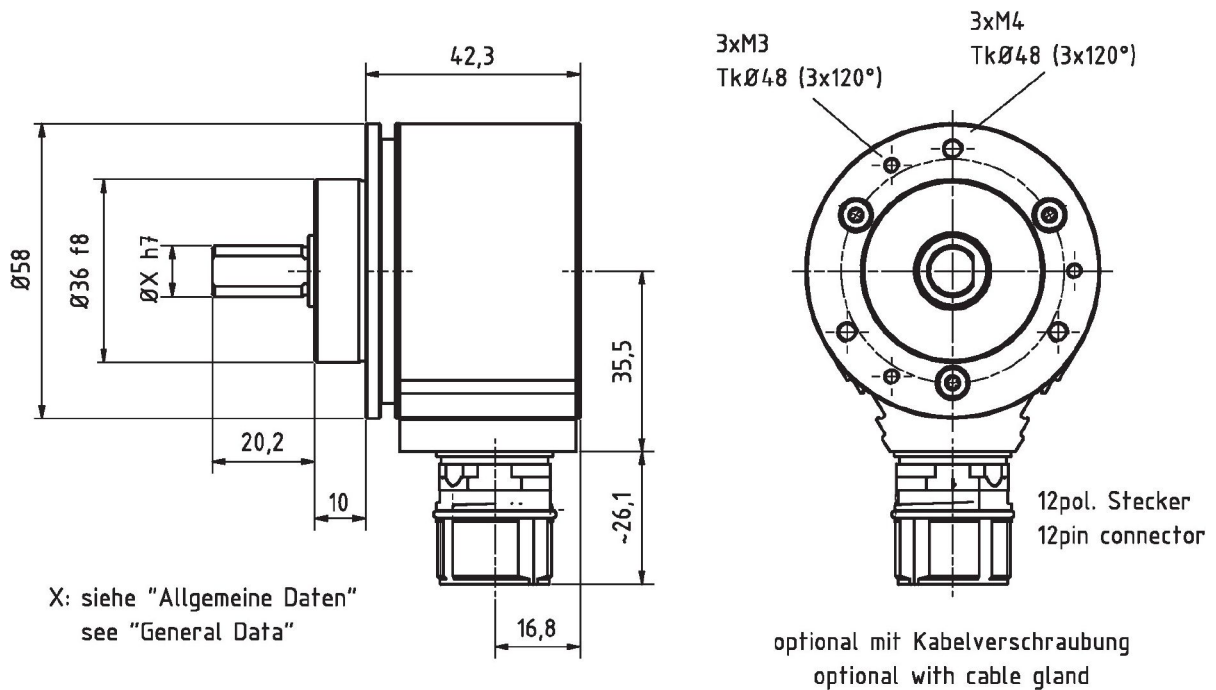
# Incremental-Encoder IEV58:2 2...10000 Imp

Ref.: K-IEV58:2-INC-1

27.03.2020

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## Dimensional drawing



Fehlende Abmaße, siehe Art-Nr. bezogene Zeichnung /  
Missing dimensions, see drawing related to the order number

Subject to change.

## Incremental-Encoder IEV58:2 2...10000 Imp

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### Quick Delivery Stock Options (Click Article Number for Data Sheet)

Please note: These are programmable encoders. TR can change Pulse Counts and Voltage Level at no cost - Same Day

Article Number	Pulses/Revolution	Voltage Level	Mounting Flange	Shaft
<a href="#"><u>IEV582-00001</u></a>	10000 (Programmable)	HTL (TTL Prog)	36mm Pilot	10x20mm w/Flat
<a href="#"><u>IEV582-00003</u></a>	10000 (Programmable)	HTL (TTL Prog)	50mm Pilot	6x10mm Round
<a href="#"><u>IEV582-00065</u></a>	10000 (Programmable)	HTL (TTL Prog)	36mm Pilot	3/8"x22.3mm w/Flat

Subject to change.

## Incremental Encoder

# IEV58:2\*10000 INC\_HTL 36ZB10FL

[Click Here](#) to go back to Stock Options

Order No.: IEV582-00001

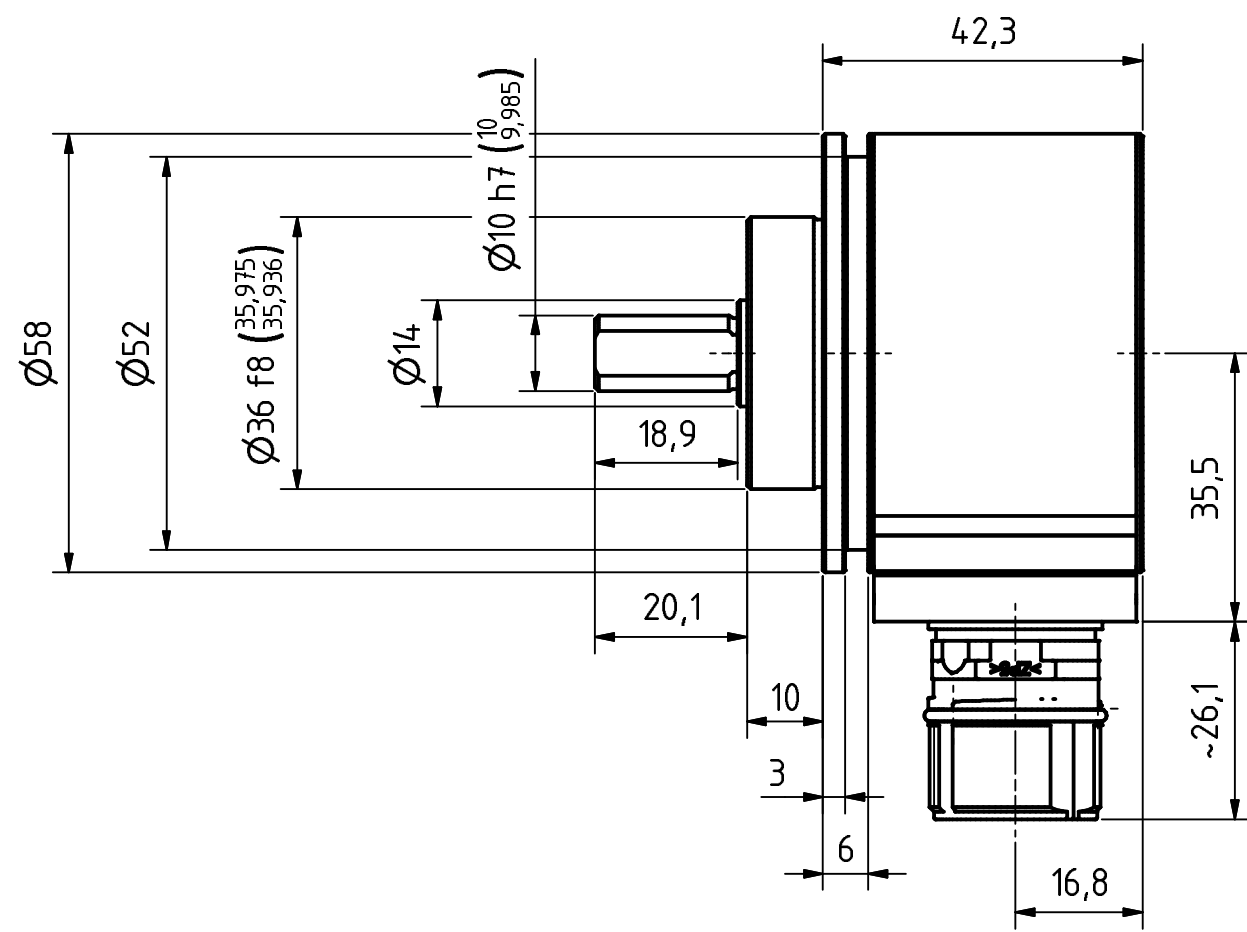
[Click Here](#) for a Quote - [customercare@trelectronic.com](mailto:customercare@trelectronic.com)

### Technical data

NO. OF PULSES	10000	GL	Wellenausführung glatt / shaft type cylindrical
PROGRAMMABLE	PROG.	FL	Wellenausführung mit Fläche / shaft type with flat surface
INTERFACE	INCREMENTAL	N	Wellenausführung mit Nut / shaft type with slot
NO. OF CHANNELS	K1-K2 NEG	Hohlw	Hohlwelle / hollow shaft
ZERO-PULSE	K0 NEG	Klemme	mit Klemmring / with clamping ring
SUPPLY VOLTAGE	4,75V..27V	Grundw	Grundwelle / fundamental shaft
OUTPUT LEVEL	HTL	SLG	Seillängengeber / cable retractor
PROTECTION Class	IP65	ZB	Zentrierbund / centre ring
TEMPERATURE RANGE	-40+75°C	Tachofl	Tachoflansch / tachometer flange
FLANGE TYPE	ZB36 3XM3+3XM4	DAG	DAG-Schutzgehäuse / DAG protective housing
SHAFT TYPE	10FL/19,5	TK	Teilkreis / pitch circle
CONNECTOR TYPE	CONTACT 12P		
CONNECTOR-POSITION	CONNECTOR RADIAL ON HOUSING		
PINOUT NO.	ST10296		
MATING PLUG	NO		
OPTIONS ENC	F/R		
OPTIONS ENC	PRESET 1		
OPTIONS ENC	PROGRAMMABLE		
DRAWING NO.	04-IEV58:2-M0001		
VERSIONNO	000		
FIRMWARE NO	437E00		
DOCUMENTATION NO	DOKUMENTE		

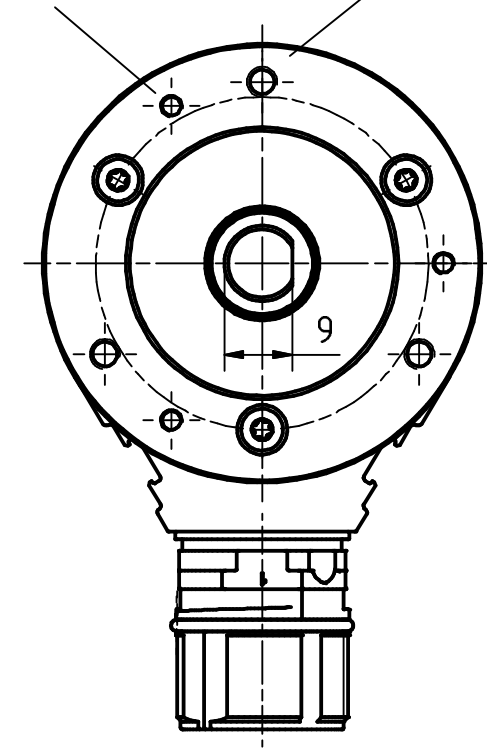
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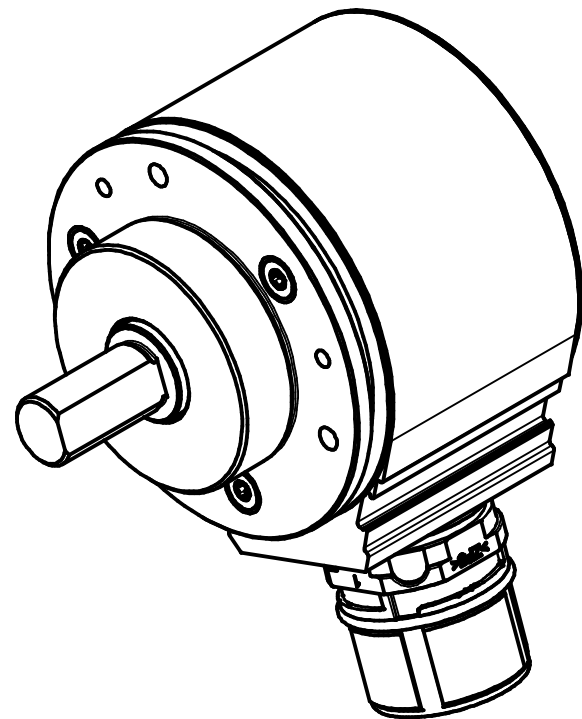


3xM3, 3tief/deep  
TK $\varnothing$ 48 $\pm$  0.2 (3x120°)


3xM4, 3tief/deep  
TK $\varnothing$ 48 $\pm$  0.2 (3x120°)



12pol. Stecker  
12pin. connector



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

	TR-Electronic GmbH Eglisshalde 6 D-78647 Trossingen phone +49 7425 228.0 www.tr-electronic.de		Maßstab 1:1 DIN A3	Projekt-Nr.:
	Zeichnungs-Nr. nur für diese Ausführung gültig Drawing-No. only for this type valid			
			Datum Name	IEV-58:2, 36er Zentr.
		Erstellt 01.11.2014 FLAIG		
		Bearb. 11.01.2017 FLAIG		
		Gepr. 12.01.2017 NEMECZ		
			Norm	
			www.tr-electronic.de DXF+Info: info@tr-electronic.de	Zeichnungs-NR./Drawing-No.: 04-IEV58:2-M0001
1 Überarbeitung Zustf. Änderungen	11.01.17 Datum	Flaig Name		Blatt 1 1 BU

## Pin assignment

Pin assignment number: 10296

Index:

02.08.2016

Connector name: 12-pol CONTACT

Pin-count: 12

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Pin	Designation	Description	Level	Driver	NC	Colour
1	CH_A_OUT	Channel A	5...27V	HTL		white
2	/CH_A_OUT	Channel A inverted	5...27V	HTL		brown
3	Direction IN	Change of counting direction	Supply Voltage		0	green
4	CH_B_OUT	Channel B	5...27V	HTL		yellow
5	/CH_B_OUT	Channel B inverted	5...27V	HTL		gray
6	Set CH_I_IN		Supply Voltage		0	pink
7	CH_I_OUT	Channel Reference	5...27V	HTL		blue
8	/CH_I_OUT	Channel Reference inverted	5...27V	HTL		red
9	Ser.Program+_IN/OUT	Ser. programming interface RS485	RS 485	RS 485		black
10	Ser.Program-_IN/OUT	Ser. programming interface RS485	RS 485	RS 485		violet
11	Supply Voltage IN	Supply voltage	4,75...27V			gray/pink
12	Ground IN	Ground	0V			red/blue

### WARNING

'De-energize the system before carrying out wiring work or opening and closing electrical connections !

Short-circuits, voltage peaks, etc. can cause operating failures and uncontrolled operating states, as well as serious personal injuries and damage to property.

Verdrahtungsarbeiten, Öffnen und Schließen von elektrischen Verbindungen nur im spannungslosen Zustand durchführen ! Kurzschlüsse, Spannungsspitzen etc. können zur Fehlfunktion und unkontrollierten Zuständen der Anlage bzw. zu erheblichen Personen- und Sachschäden führen.



## Incremental Encoder

# IEV58:2\*10000 INC\_HTL 50ZB6GL

Order No.:IEV582-00003

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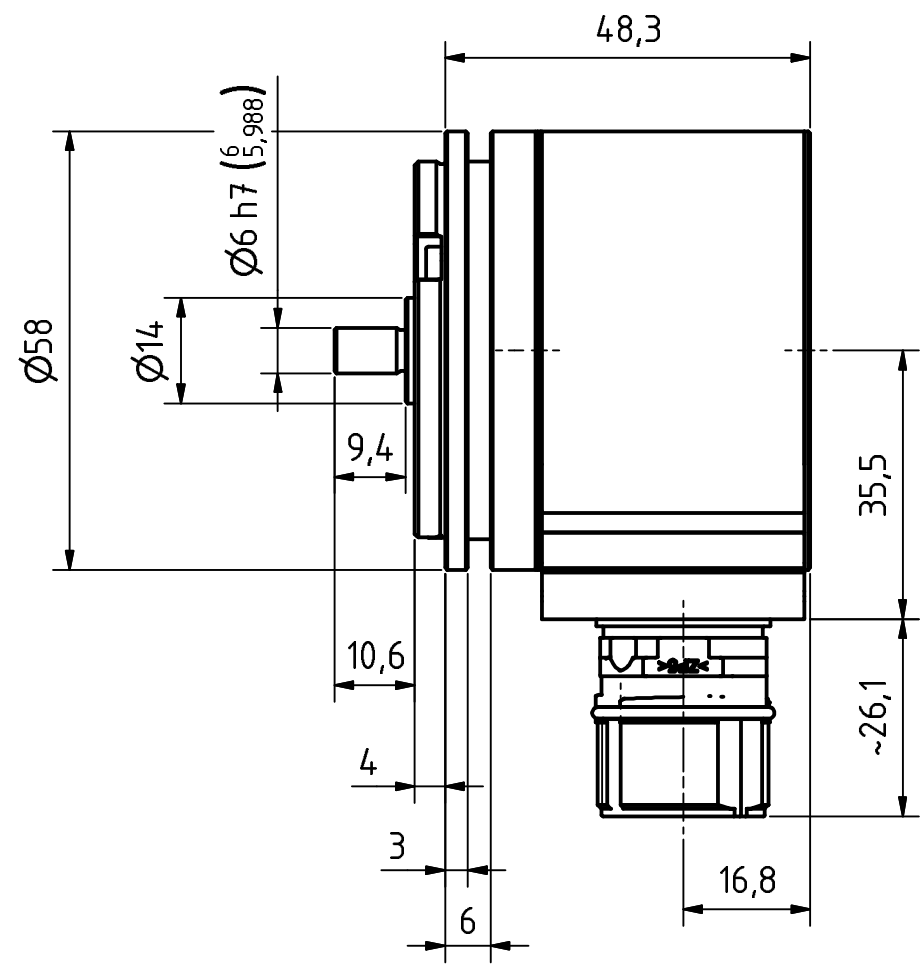
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### Technical data

NO. OF PULSES	10000	GL	Wellenausführung glatt / shaft type cylindrical
PROGRAMMABLE	PROG.	FL	Wellenausführung mit Fläche / shaft type with flat surface
INTERFACE	INCREMENTAL	N	Wellenausführung mit Nut / shaft type with slot
NO. OF CHANNELS	K1-K2 NEG	Hohlw	Hohlwelle / hollow shaft
ZERO-PULSE	K0 NEG	Klemme	mit Klemmring / with clamping ring
SUPPLY VOLTAGE	4,75V..27V	Grundw	Grundwelle / fundamental shaft
OUTPUT LEVEL	HTL	SLG	Seillängegeber / cable retractor
PROTECTION Class	IP65	ZB	Zentrierbund / centre ring
TEMPERATURE RANGE	-40+75°C	Tachofl	Tachoflansch / tachometer flange
FLANGE TYPE	ZB50	DAG	DAG-Schutzgehäuse / DAG protective housing
SHAFT TYPE	6RD/10	TK	Teilkreis / pitch circle
CONNECTOR TYPE	CONTACT 12P		
CONNECTOR-POSITION	CONNECTOR RADIAL ON HOUSING		
PINOUT NO.	ST10296		
MATING PLUG	NO		
OPTIONS ENC	F/R		
OPTIONS ENC	PRESET 1		
OPTIONS ENC	PROGRAMMABLE		
DRAWING NO.	04-IEV58:2-M0003		
VERSIONNO	000		
FIRMWARE NO	437E00		
DOCUMENTATION NO	DOKUMENTE		

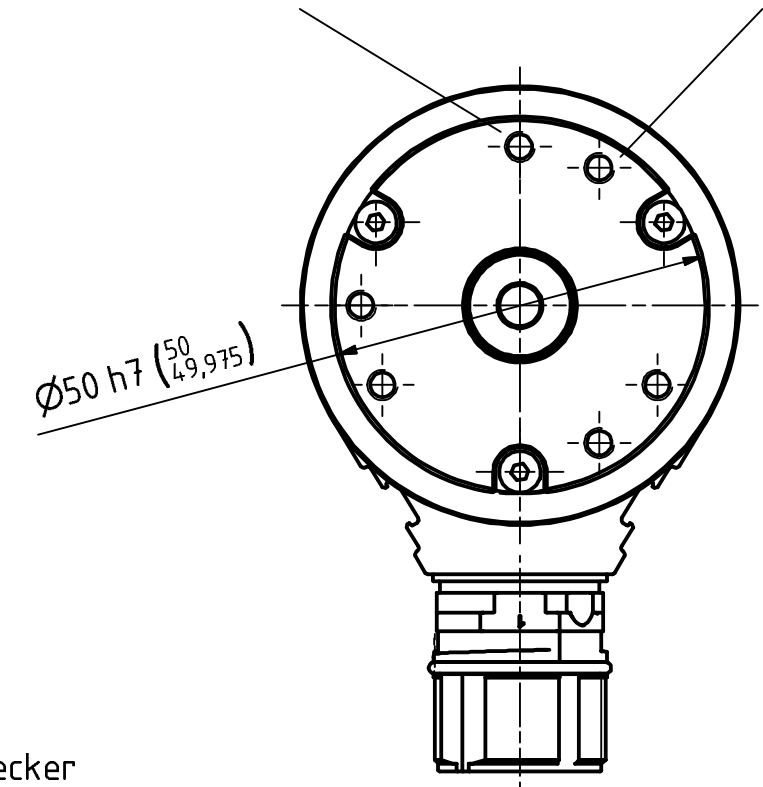
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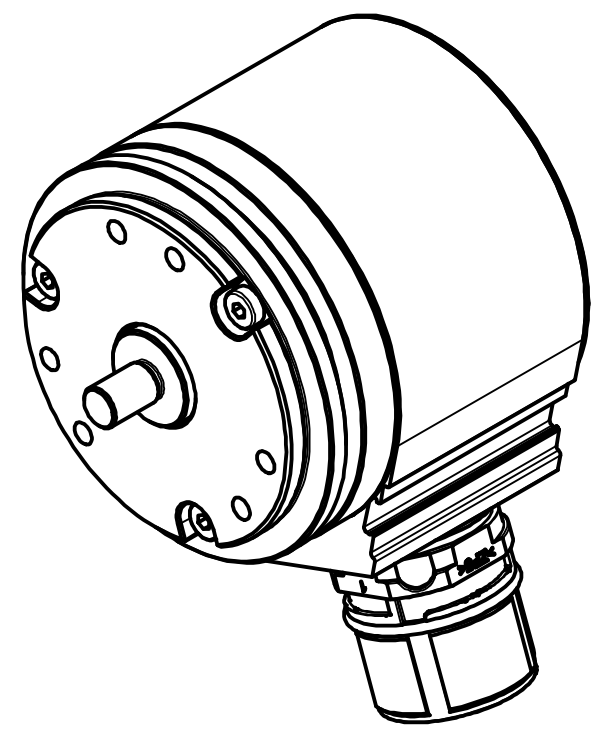


3xM4, 6tief/deep  
TKØ42± 0.2 (3x120°)


3xM4, 6tief/deep  
TKØ42± 0.2 (3x120°)



12pol. Stecker  
12pin. connector



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

	TR-Electronic GmbH Eglisshalde 6 D-78647 Trossingen phone +49 7425 228.0 www.tr-electronic.de		Maßstab 1:1    DIN A3    Projekt-Nr.:		
	Zeichnungs-Nr. nur für diese Ausführung gültig Drawing-No. only for this type valid				
			Datum	Name	IEV-58:2, 50er Zentr.
		Erstellt	02.11.2014	FLAIG	
		Bearb.	10.01.2017	FLAIG	
		Gepr.	11.01.2017	NEMECZ	
			Norm		
			www.tr-electronic.de DXF+Info: info@tr-electronic.de		Zeichnungs-NR./Drawing-No.: <b>04-IEV58:2-M0003</b>
1	Überarbeitung	10.01.17	Flaig		
Zustf.	Änderungen	Datum	Name		1 BU

## Pin assignment

Pin assignment number: 10296

Index:

02.08.2016

Connector name: 12-pol CONTACT

Pin-count: 12

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Pin	Designation	Description	Level	Driver	NC	Colour
1	CH_A_OUT	Channel A	5...27V	HTL		white
2	/CH_A_OUT	Channel A inverted	5...27V	HTL		brown
3	Direction IN	Change of counting direction	Supply Voltage		0	green
4	CH_B_OUT	Channel B	5...27V	HTL		yellow
5	/CH_B_OUT	Channel B inverted	5...27V	HTL		gray
6	Set CH_I_IN		Supply Voltage		0	pink
7	CH_I_OUT	Channel Reference	5...27V	HTL		blue
8	/CH_I_OUT	Channel Reference inverted	5...27V	HTL		red
9	Ser.Program+_IN/OUT	Ser. programming interface RS485	RS 485	RS 485		black
10	Ser.Program-_IN/OUT	Ser. programming interface RS485	RS 485	RS 485		violet
11	Supply Voltage IN	Supply voltage	4,75...27V			gray/pink
12	Ground IN	Ground	0V			red/blue

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## Incremental Encoder

# IEV58:2\*10000 INC\_HTL 36ZB3/8" FL

Order No.: IEV582-00065

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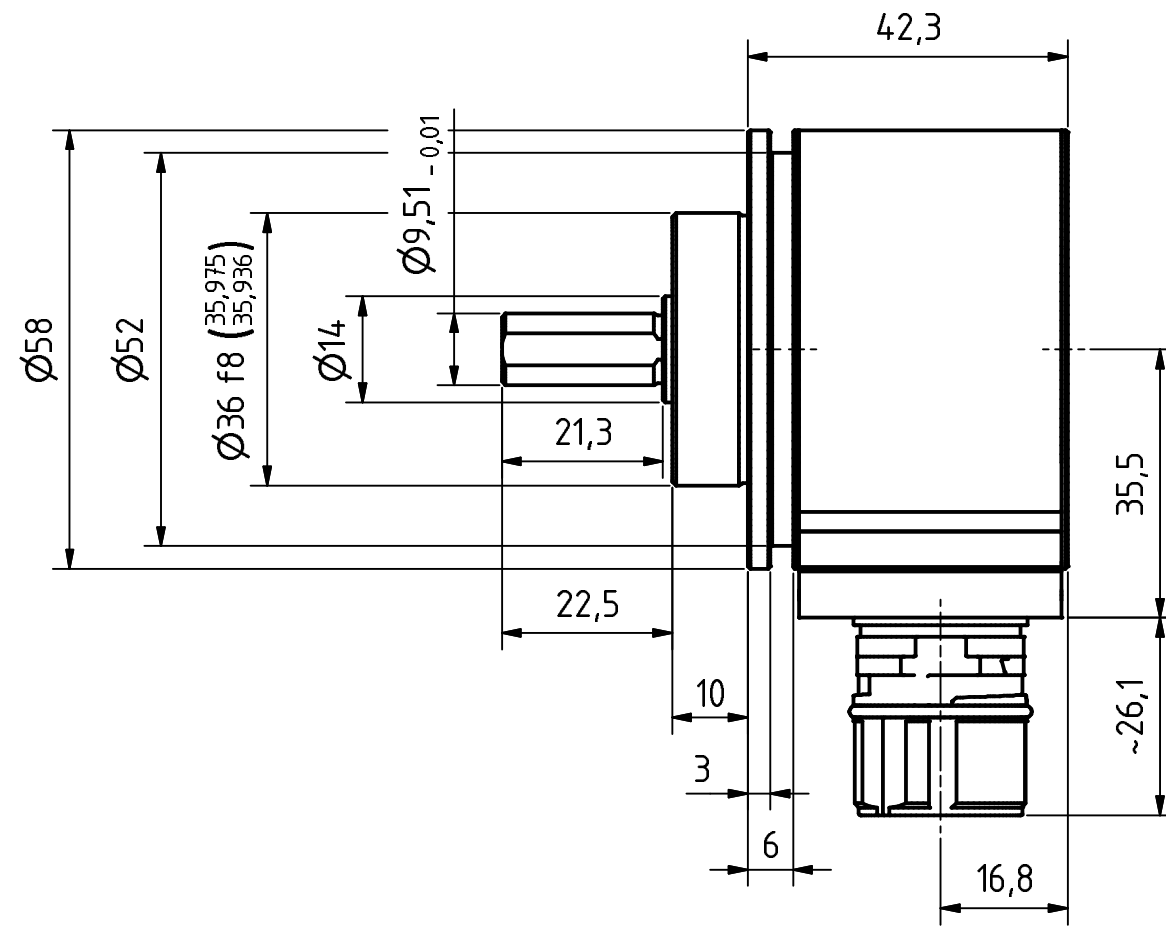
### Technical data

NO. OF PULSES	10000
PROGRAMMABLE	PROG.
INTERFACE	INCREMENTAL
NO. OF CHANNELS	K1-K2 NEG
ZERO-PULSE	K0 NEG
SUPPLY VOLTAGE	4,75V..27V
OUTPUT LEVEL	HTL
PROTECTION Class	IP65
TEMPERATURE RANGE	-40+75°C
FLANGE TYPE	ZB36 3XM3+3XM4
SHAFT TYPE	3/8" FL/22,3
CONNECTOR TYPE	CONTACT 12P
CONNECTOR-POSITION	CONNECTOR RADIAL ON HOUSING
PINOUT NO.	ST10296
MATING PLUG	NO
OPTIONS ENC	F/R
OPTIONS ENC	PRESET 1
OPTIONS ENC	PROGRAMMABLE
DRAWING NO.	04-IEV58:2-M0033
VERSIONNO	000
FIRMWARE NO	437E00
DOCUMENTATION NO	DOKUMENTE

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

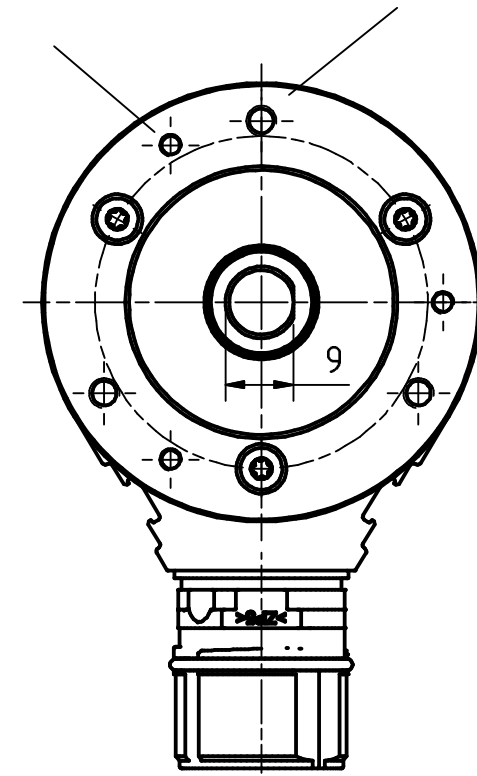
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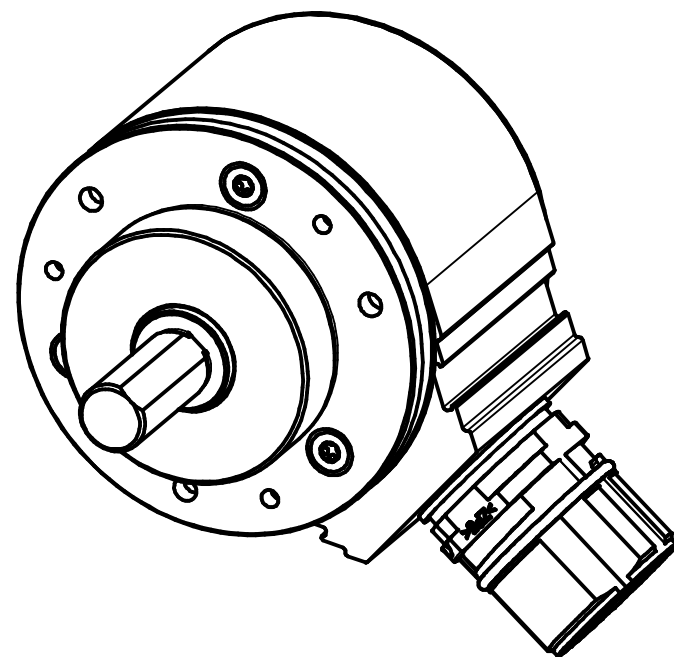


3xM3, 3tief/deep  
TK $\varnothing$ 48 $\pm$ 0.2 (3x120°)


3xM4, 3tief/deep  
TK $\varnothing$ 48 $\pm$ 0.2 (3x120°)



12pol. Stecker  
12pin. connector



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

	TR-Electronic GmbH Eglisshalde 6 D-78647 Trossingen phone +49 7425 228.0 www.tr-electronic.de		Maßstab 1:1 DIN A3	Projekt-Nr.:
	Zeichnungs-Nr. nur für diese Ausführung gültig Drawing-No. only for this type valid			
			Datum Name	IEV-58:2, 36er Zentr.
		Erstellt 18.02.2016 Bearb. 15.12.2016 Gepr. 16.12.2016	Name FLAIG FLAIG NEMECZ	
		Norm		
			www.tr-electronic.de DXF+Info: info@tr-electronic.de	Zeichnungs-NR./Drawing-No.: 04-IEV58:2-M0033
1 Überarbeitung Zustf. Änderungen	15.12.16 Datum	Flaig Name		Blatt 1 1 BU

## Pin assignment

Pin assignment number: 10296

Index:

02.08.2016

Connector name: 12-pol CONTACT

Pin-count: 12

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Pin	Designation	Description	Level	Driver	NC	Colour
1	CH_A_OUT	Channel A	5...27V	HTL		white
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7	CH_I_OUT	Channel Reference	5...27V	HTL		blue
8	/CH_I_OUT	Channel Reference inverted	5...27V	HTL		red
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