

# Incremental-Encoder IOV58:2 2...65536 Imp

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



Ref.: K-IOV58:2-INC-1

06.04.2020

0101010582

## Advantages

- \_ Flexible programming
- \_ High resolution system
- \_ 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...<= 65536
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.

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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 kg m <sup>2</sup>
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.

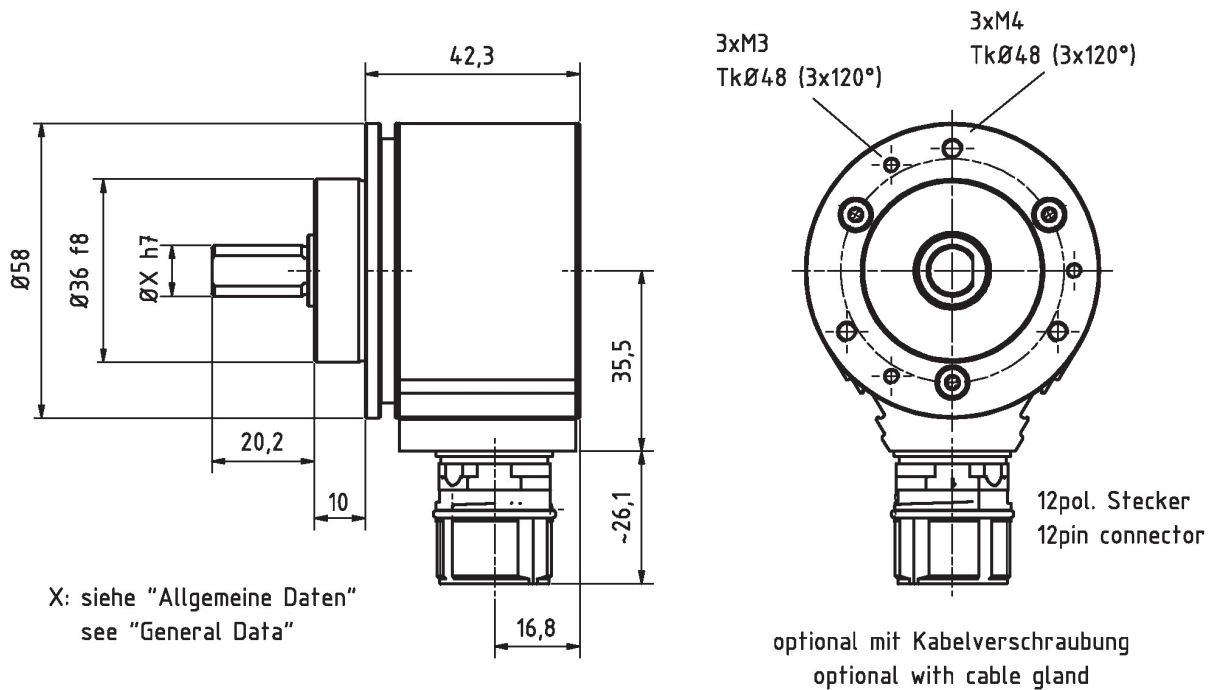
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## Dimensional drawing



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

Subject to change.

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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
<u>IOV582-00054</u>	32768 (Programmable)	HTL (TTL Prog)	1-1/4 Inch Square Pilot	3/8"x22.3mm w/Flat

Subject to change.

## Incremental Encoder

# IOV58:2\*32768 INC\_HTL 31,75ZB9,51

OrderNo.:IOV582-00054

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

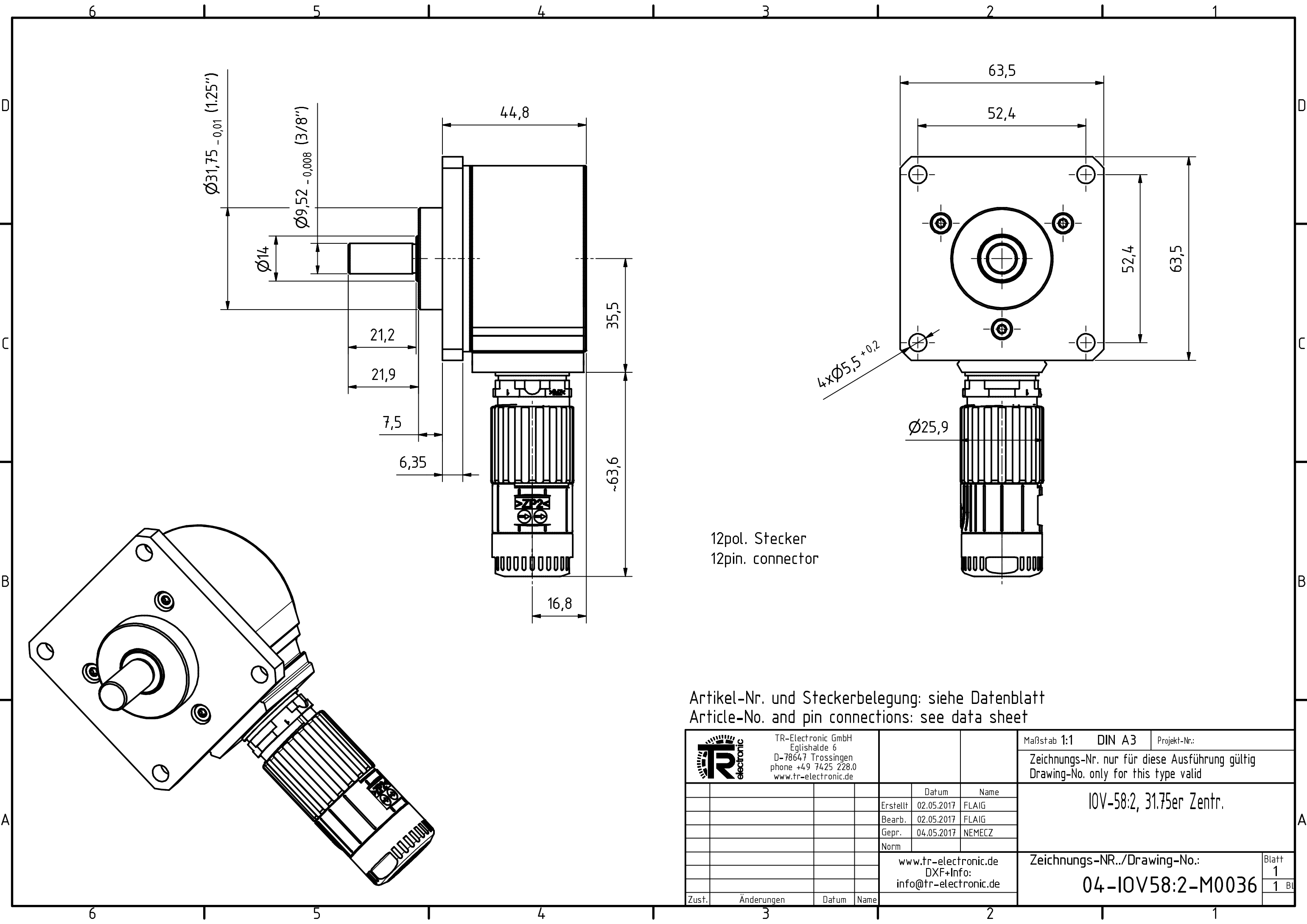
[Click Here](mailto:customer@tr-electronic.com) for a Quote - [customer@tr-electronic.com](mailto:customer@tr-electronic.com)

### Technical data

NO. OF PULSES	32768	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	ZB31,75SQR	DAG	DAG-Schutzgehäuse / DAG protective housing
SHAFT TYPE	9,51GL/22,3	TK	Teilkreis / pitch circle
CONNECTOR TYPE	CONTACT 12P		
CONNECTOR-POSITION	CONNECTOR RADIAL ON HOUSING		
PINOUT NO.	ST10296		
MATING PLUG	YES		
OPTIONS ENC	F/R		
OPTIONS ENC	PRESET 1		
OPTIONS ENC	PROGRAMMABLE		
DRAWING NO.	04-IOV58:2-M0036		
VERSIONNO	000		
FIRMWARE NO	437F00		
DOCUMENTATION NO	DOKUMENTE		


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12pol. Stecker  
12pin. connector

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

 TR-electronic 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	IOV-58:2, 31.75er Zentr.	
	Erstellt 02.05.2017	FLAIG		
	Bearb. 02.05.2017	FLAIG		
	Gepr. 04.05.2017	NEMECZ		
	Norm			
www.tr-electronic.de DXF+Info: info@tr-electronic.de			Zeichnungs-NR./Drawing-No.: <b>04-IOV58:2-M0036</b>	
Zustf.	Änderungen	Datum	Name	Blatt 1 1 BL

## Pin assignment

Pin assignment number: 10296

Index:

02.08.2016

Connector name: 12-pol CONTACT

Pin-count: 12

Page: 1/1

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.