

INCREMENTAL ENCODER



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Series B36

Key-Features:

- Incremental output: Linedriver RS422 (TTL-compatible), Push-Pull
- Shaft types: solid shaft or hollow shaft
- Flange types: synchro flange, clamping flange, flange with spring element, flange with stator coupling
- Protection class shaft IP50, housing IP65
- Temperature range -20 up to +85 °C
- Output frequency up to 300 kHz
- Rotation speed up to 12000 r/min
- Material: solid shaft stainless steel, hollow shaft brass

TECHNICAL DATA

Shaft type		solid shaft	hollow shaft
Shaft dimensions	[mm]	($\varnothing \times L$): 4 x 10 / 5 x 10 / 6 x 12.5 / 6.35 x 12.5	(\varnothing): 6 / 6.35 / 8
Flange type	[mm]	synchro flange \varnothing 36,5 clamping flange \varnothing 36,5	with spring element stator coupling \varnothing 46
Impulses		25 / 100 / 200 / 360 / 500 / 512 / 600 / 1000 / 1024 / 1250 / 1500 / 2000 / 2048 / 2500	
Output signal		see electrical data below	
Connection		cable output or connector M12, 8 pin	
Mechanical speed	[min ⁻¹]	12000	6000
Mass moment of inertia	[kgm ²]	ca. 0.2×10^{-6}	
Starting torque (at 20 °C)	[Nm]	<0.05	
Shaft load capacity	[N]	radial: 40 / axial: 20	
Protection class		shaft IP50, housing IP65	
Temperature	[°C]	-20...+85	
Shock resistance		1000 m/s ² , 6 ms (according to EN 60068-2-27)	
Vibration resistance		100 m/s ² , 55...2000 Hz (according to EN 60068-2-6)	
Shaft material		stainless steel	brass
Housing material		aluminium	
Weight	[g]	ca. 80	

ELECTRICAL DATA

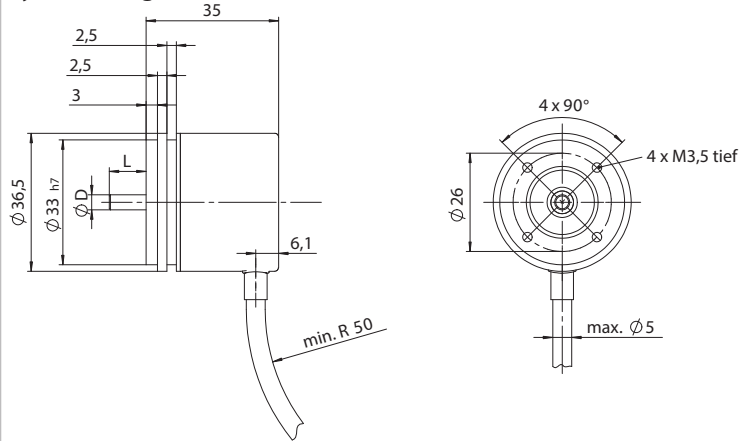
		Linedriver RS422 (TTL-compatible)		Push Pull HTL ¹⁾ (7272-compatible)	
		L	L2	G	G2
Order code					
Power supply	[VDC]	5 ±5%	8...30	8...30	5...18
Power consumption (no load)	[mA]	typical: 40, max.: 90		max.: 40	
Permissible load / channel	[mA]	max. ±20			
Impulse frequency max.	[kHz]	300		200	
Signal level HIGH	[V]	min. 2.5		min. +V -3	min. +V -2.5
Signal level LOW	[V]	max. 0,5			
Rising edge time t _r	[ns]	max. 200		max. 1000	
Falling edge time t _f	[ns]	max. 200		max. 1000	
Short circuit proof outputs ²⁾		yes			
Reverse polarity protection of power supply		yes			
UL approval		File-No. E224618			
CE compliant		according to EMC guideline 2014/30/EU and RoHS guideline 2011/65/EU			

¹⁾ max. recommended cable length 30 m

²⁾ if power supply is applied correctly

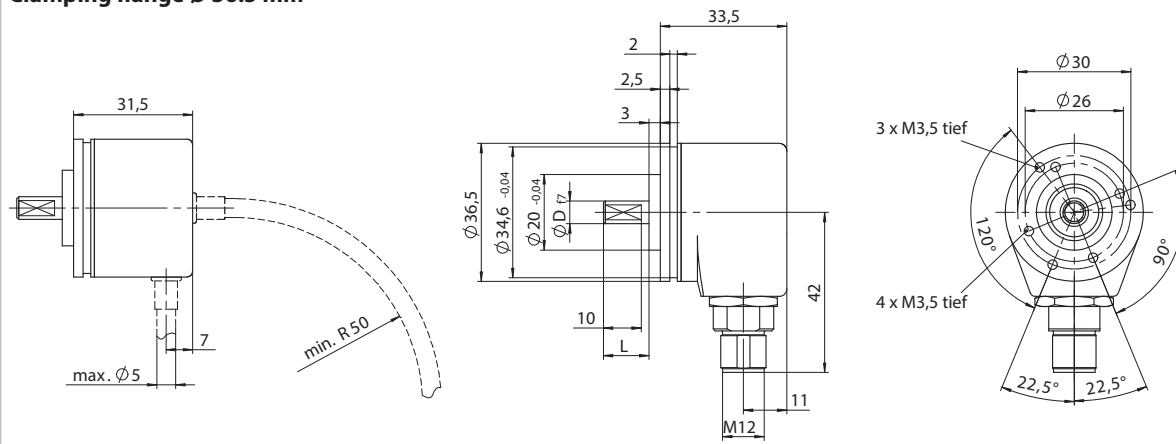
TECHNICAL DRAWING SOLID SHAFT

Synchro flange Ø 36.5 mm



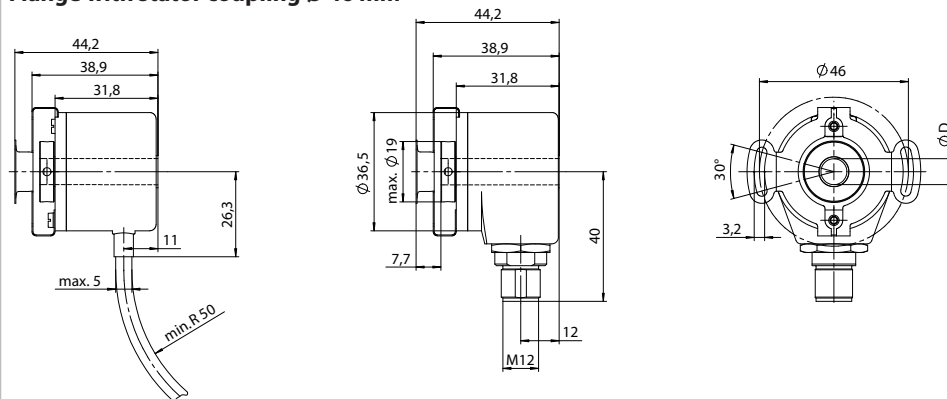
D	Fit	L
4	f7	10
5	f7	10
6	f7	12.5
6.35	f7	12.5

Clamping flange Ø 36.5 mm



TECHNICAL DRAWING HOLLOW SHAFT

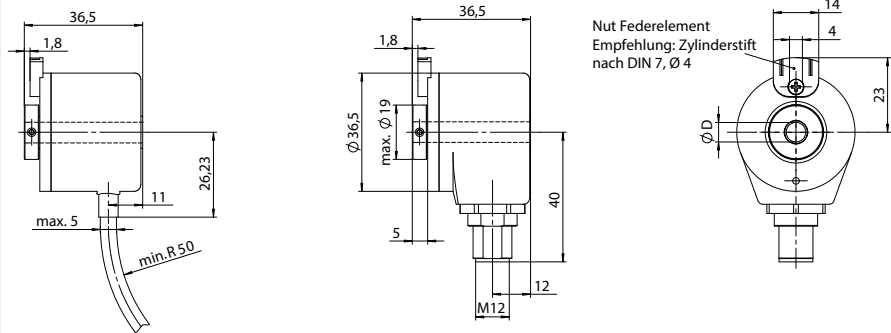
Flange with stator coupling Ø 46 mm



D	Fit
6	H7
6.35	H7
8	H7

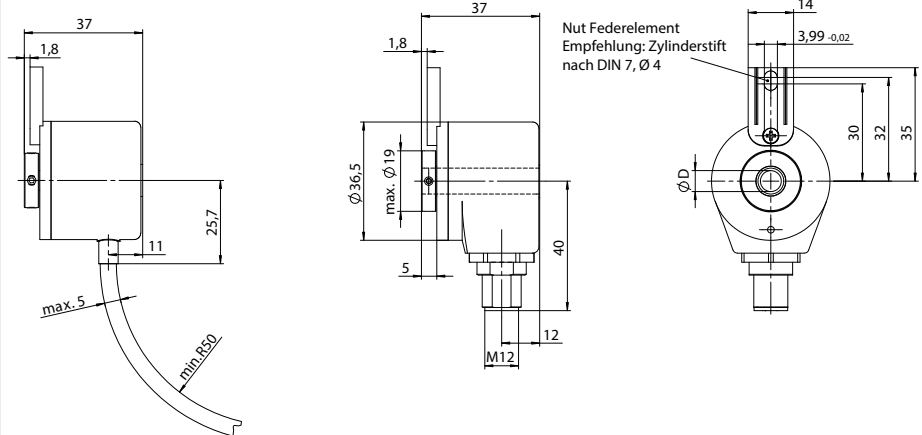
TECHNICAL DRAWING HOLLOW SHAFT

Flange with spring element, short



D	Fit
6	H7
6.35	H7
8	H7

Flange with spring element, long

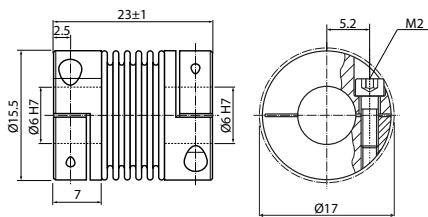


MOUNTING ACCESSORIES

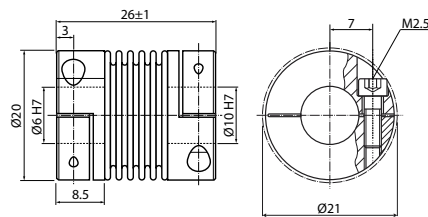
Bellow couplings for Encoder with solid shaft 6

Rotary transducers should never be connected to shafts or drives in an inflexible, stiff way. For this reason, we recommend using a coupling between the rotary transducer and the shaft. Bellow couplings are used for the free of backlash connection between an encoder and a shaft. The couplings are free of wear and compensate lateral, axial and angular shaft misalignment. The mounting on the shaft is done by clamping hubs. Never use force to align the rotary angle transducer!

MBK-15.5-23-06-06



MBK-20-26-06-10



ORDER CODE

Flange type [mm] Solid shaft <i>Clamping flange Ø 36.5</i> Synchro flange Ø 36.5	<i>W</i> S
Hollow shaft Flange with stator coupling Ø 46 <i>Flange with spring element, long</i> Flange with spring element, short	K <i>F</i> F2
Solid / hollow shaft diameter Solid shaft Ø x L [mm] 4 x 10 5 x 10 <i>6 x 12.5</i> 6.35 x 12.5	4 5 <i>6</i> 6.35
Hollow shaft Ø [mm] 6 6.35 8	6 6.35 8

KA02 <i>KR02</i> SA12 SR12	Connection Cable output, axial, 2 m ¹⁾ <i>Cable output, radial, 2 m</i> Connector M12, axial, 8-pins ¹⁾ Connector M12, radial, 8 pins
e. g. 25	Impulses 25 / 100 / <u>200</u> / 360 / <u>500</u> / 512 / 600 / 1000 / <u>1024</u> / 1250 / 1500 / 2000 / <u>2048</u> / <u>2500</u>
L L2 G G2	Output signal RS422 (TTL-compatible, 5 VDC) RS422 (TTL-compatible, 8...30 VDC) <i>Push Pull (7272-comp., 8...30 VDC)</i> Push Pull (7272-comp., 5...18 VDC)

¹⁾ Encoder with solid shaft only

Encoders that consist entirely of underlined italic options have a shortened delivery time.

ACCESSORIES

Cable with mating connector M12 (female), 8 poles, shielded

K8P2M-S-M12	2 m, straight connector
K8P5M-S-M12	5 m, straight connector
K8P10M-S-M12	10 m, straight connector
K8P2M-SW-M12	2 m, angular connector
K8P5M-SW-M12	5 m, angular connector
K8P10M-SW-M12	10 m, angular connector

Digital displays for encoders with Push Pull (HTL) output

WAY-DX-S	2 channel, power supply 18...30 VDC
WAY-DX-S-AC	2 channel, power supply 115...230 VAC

For more information and options please refer to the [WAY-DX data sheet](#).

Mating connector M12 (female), 8 poles, shielded

D8-G-M12-S	straight connector for self assembly
D8-W-M12-S	angular connector for self assembly

Couplings

MBK-15.5-23-06-06	2 x bore diameter Ø 6 mm
MBK-20-26-06-10	bore diameters Ø 6 mm and Ø 10 mm

Digital displays for encoders with Linedriver (RS422, TTL) output

WAY-DXM-S	2 channel, power supply 18...30 VDC
WAY-DXM-S-AC	2 channel, power supply 115...230 VAC

For more information and options please refer to the [WAY-DXM data sheet](#).

Subject to change without prior notice.

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