



## CHARACTERISTICS

ENCODER TYPE	Hollow through shaft encoder
SMD - TECHNOLOGY	Strong compact electronics
HIGH IP-RATING	Std. IP 65
LOW CURRENT CONSUMPTION	To be connected directly to PLC'S and counters
SHORT CIRCUIT PROTECTION	Thermal shut down at 155°C
WIDE SUPPLY RANGE	Min. 4,5V to max 30V
STRONG CONSTRUCTION	Based on 2 precision ball bearings, for industrial environments

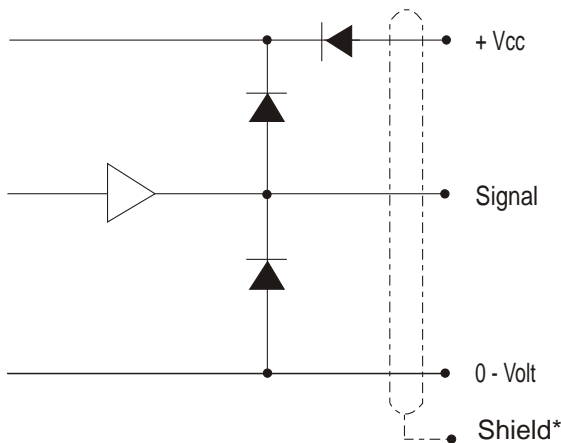
## ELECTRICAL SPECIFICATIONS

At +25°C	
Output	Totempole
Output waveform	Incremental (A, B)
Zero or index pulse	(Z) one pr./rev.
Supply-voltage (Vin)	Min 4,5V to Max. 30V * Reverse polarity protection
Current (no load)	35mA
Max. load pr. output	20mA (Short circuit protected)*
V out low	Max. 500 mV @ I = 10 mA
Operating temp.	-40°C to +85° C
Storage temp.	-40° C to +85°C
Max. pulse frequency	200 kHz *
V out high	Min. (Vin -0,6) @ I = -10mA Min. (Vin -1,3) @ I = -25mA
Cable data	5(0,14 mm <sup>2</sup> ) or 8-leads(0,05mm <sup>2</sup> ) shielded
Output signals	Standard, Inverted Differential (RS-422A compatible)
Certified acc. to	EN 50081-1 and EN 50082-2
* = It is not recommended to combine max value for all 3 parameters	

## MECHANICAL SPECIFICATIONS

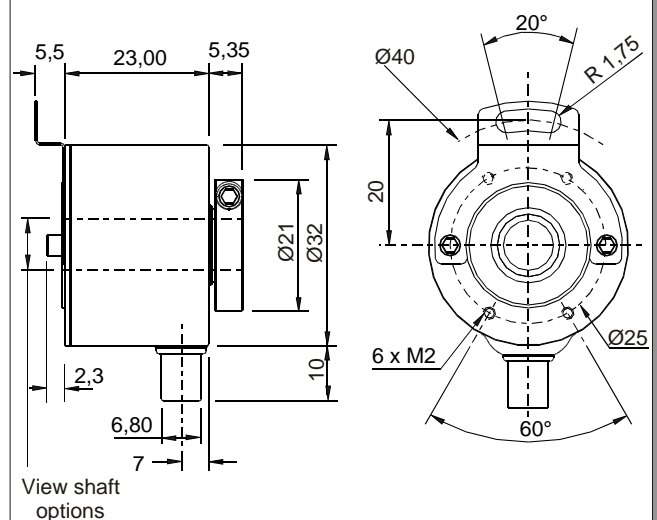
Weight	About 50 g (+cable = 0,040 Kg/meter)
Materials: Housing	Aluminium
Shaft	Brass
Bearings	Lifetime lubricated ball-bearings
Fix. clamp	Brass
H.-Shaft dimensions	View Ordering Code, next page
H.-Shaft loads	Axial max. 20 N Radial max. 20 N
Max. rev.	6000 rev./min.
IP-rating	IP 65
Start torque	<0,005 Nm at 25°C
Mass moment of inertia	3 gcm <sup>2</sup>
Max. shock	100 G/11 ms.
Bump	10 G - 16 ms (1000 x 3axis)
Vibration	(10 - 2000 Hz )/10 G

## OUTPUT CIRCUIT




\*Shield connected to housing

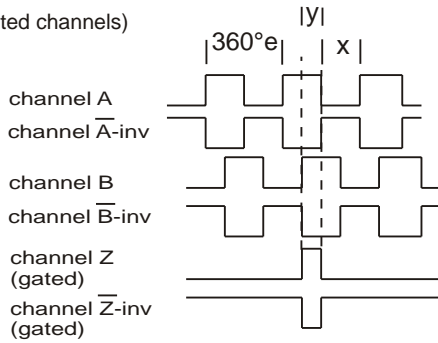
## MECHANICAL DIMENSIONS



## OUTPUT WAVEFORM

 Rotation: Clockwise (cw) from shaftside

(inv = inverted channels)



$X = 180^\circ e \pm 36^\circ e$  and  $Y = 90^\circ e \pm 18^\circ e$   
Z puls: Gated with A and B (standard)

Options: TTL or HTL compatible. Open Collector NPN or PNP  
Gated Z-puls or none-gated Z-puls.  
View more Output options in section 16 - page 1 to 2

## CONNECTIONS

Color code	Standard	Color code	Differential
Green	Ch A	Pink	Ch A
Yellow	Ch B	Grey	Ch A inv
Grey	Ch Z	Green	Ch B
Brown	Vcc	Yellow	Ch B inv
White	0-Volt	White	Ch Z
		Brown	Ch Z inv
		Red	Vcc
		Blue	0-Volt

## PULSES/REV.

96	200	1024	2000
100	250	1000	3600
	500	1500	4096

Other pulses are under construction

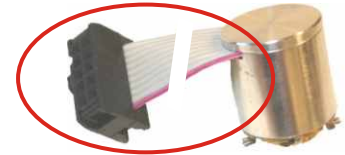
## ORDERING CODES

	Options	Order code
Pulses pr.rev.:	No. of pulses	XXXX
Output signal:	Normal, Standard, A, B, Z (3 channel)	N
	Differential: A, B, Z and A-inv, B-inv, Z-inv (6 channel)	D
	Line driver OL 7272 for extra long cable, up to 100 meters (Differential)	M
	Line driver chip 26C31 (V out low < 0,4 V) (RS-422A compatible @ 5V) Only 5 Volt (Differential)	L
Hollow Shaft Dimensions: (Tolerance G7)	ø6 mm	06
	ø1/4" (ø6,35mm)	1/4
	ø8 mm	08
	3/8" (ø9,525mm)	3/8
IP-rating:	IP 65	65
Round Cable Length of cable:	Standard 1 meter	01
	No. of meters	XX
Round Cable take out:	Side	S
Cable and connector options:	View section 15 page 10 to 14	
Anti rotation spring coupling or Flange / Plate:	View Section 8 page 14	

## Flat Ribbon Cable and/or Connector

### Options

Flat Cable (only IP 50)  
Ribbon + IDC or AMP



View section 15 page 10 to 14

SCH32B



Pulses



Output signal



Hollow Shaft

6 5

IP-rating



Length of round cable

S

Cable take out



Anti Rotation Spring Coupling