

24 mm diameter - up to 7500 pulses/turn  
 up to 30000 counts



Also as Absolute SSI - Section 14 page 1 to 2

## CHARACTERISTICS

ENCODER TYPE	Hollow shaft encoder (blind end)
SMD - TECHNOLOGY	Strong compact electronics
HIGH IP-RATING	Std. IP 64 (option; Ribbon cable + IDC connector = IP50)
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

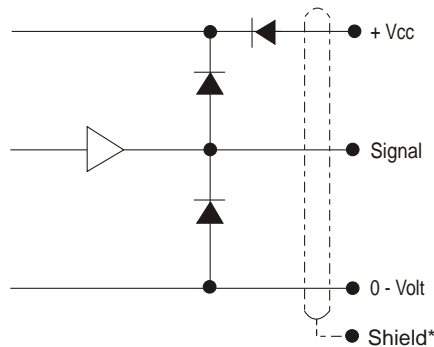
## ELECTRICAL SPECIFICATIONS

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

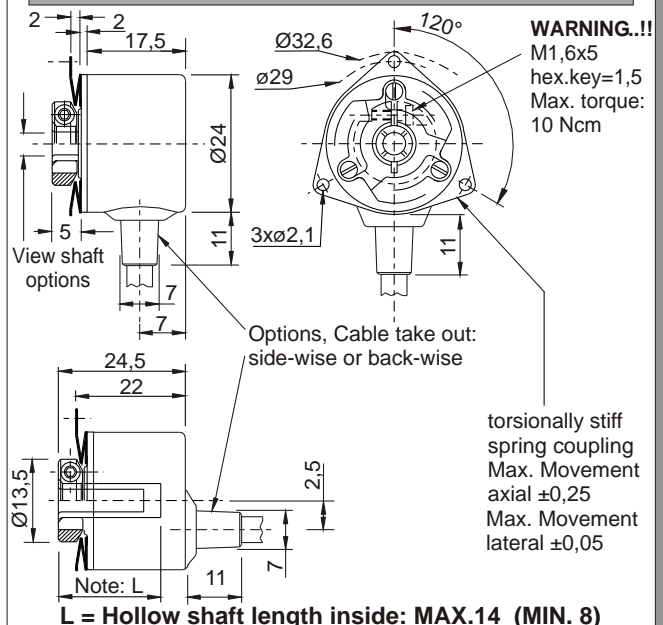
Weight	About 35 g (+cable = 0,040 Kg/meter)
Materials: Housing	Electroplated steel and brass
Shaft	Brass
Bearings	Lifetime lubricated ball-bearings
Fix. clamp	Brass
H.-Shaft dimensions	View Ordering Code, next page
H.-Shaft loads	Axial max. 20 N Radial max. 20 N
Max. rev.	12,000 rev./min.
IP-rating	IP 64
Start torque	<0,005 Nm at 25°C
Mass moment of inertia	1,0 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

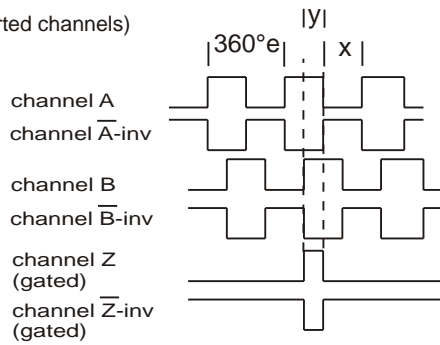
## MECHANICAL DIMENSIONS



## 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.

4	30	100	250	600	2048
10	36	125	256	1000	2500
11	50	128	300	1024	3000
12	60	150	360	1250	3600
15	75	180	400	2000	5000
25	90	200	500	2500	7500

## ORDERING CODES

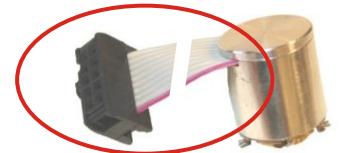
	Options	Order code
Pulses pr.rev.:	No. of pulses	XXXX
Output signal:	Normal (TP-Standard) 3 channel = A, B, Z	N
	TP-Differential, 6 channel A, B, Z and A-inv, B-inv, Z-inv	D
Hollow Shaft	Ø3 mm	03
Dimensions:	Ø4 mm	04
(Tolerance G7)	Ø5 mm	05
	Ø6 mm	06
	Ø1/4"	1/4
IP-rating:	IP 64	64
Round Cable	Standard 1 meter	01
Length of cable:	No. of meters	XX
Round Cable	Side	S
take out:	Back	B
Cable and connector options:	View section 15 page 10 to 14	
Anti rotation spring coupling or Flange / Plate:	View Section 8 page 9 to 13	

## Flat Ribbon Cable and/or Connector

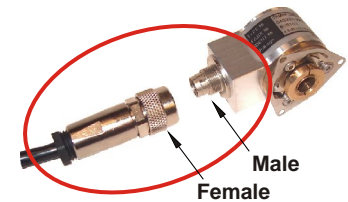
View section 15 page 10 to 14

### Options

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



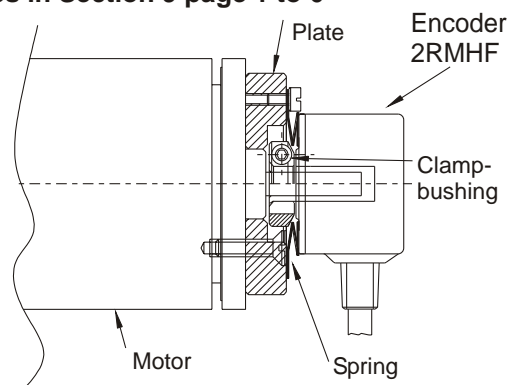
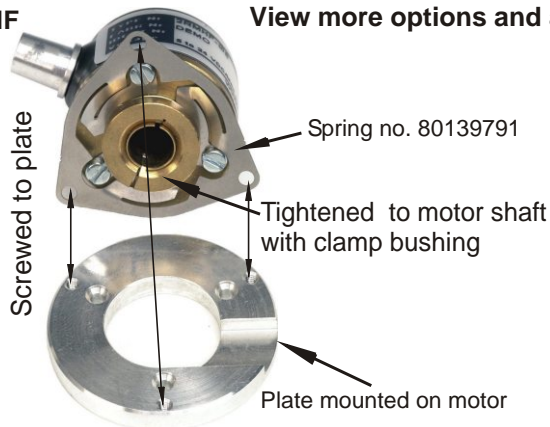
Connector on Encoder:  
(only IP64)



## CHARACTERISTICS; For montage on motor or other unit.

2RMHF

View more options and accessories in Section 9 page 1 to 6



2RMHF

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Pulses

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Output signal

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Hollow Shaft

6	4
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IP-rating

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Length of round cable

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Cable take out

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Anti Rotation Spring Coupling

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Flange / Plate Order Number