Magnetic pulse encoder type MIG Nova

Mechanical information

ver. : 09.2010

max. speed	6.000 rpm (1024 pulses), or 3.000 rpm (2048 pulses)
Temperature range	-30°C to +85°C
Flange- / Hub materials	aluminium / stainless steel (others on request)
Connection cable	PUR-sheath 6 x 0,14 screened (A+B, A+B inv.)
Cable length	Standard 2 m or other lengths on request max. 100 m at 5V DC max. 20 m at 24 V DC max. 50 m at 24 V DC and pulsesfrequency max. 50 KHz
Protection	Standard IP 55 max. IP 66 Depending on the sealing between motor and machine flange
Tolerance for the motor shaft	radial 0,05 mm axial 0,2 mm

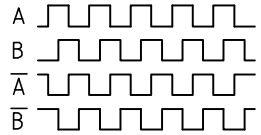
Electrical information

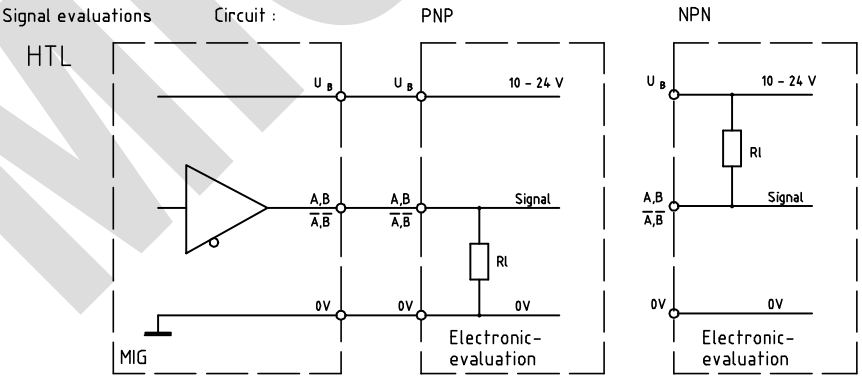
Voltage supply U_B	5 to 24 V DC
max. frequency pulses	≤ 100 kHz
Output signals	Square-wave pulses, A 90° B and A 90° B inv.
pulses / rotation	32 …. 512 , 1024 , 2048
Signal level	$U_{HIGH} \geq U_B - 0,7$ V at $I_{Last} \leq 10$mA $U_{LOW} \leq 0,7$ V at $I_{Last} \leq 10$mA
Output loading capability	≤ 30mA at U_B= 10 V DC ≤ 20mA at U_B= 24 V DC
Output Circuits	Line-Driver (Push-Pull)
Signal evaluations	NPN, PNP, RS 422
Short-circuit-proof	Yes
Reverse polarity protection	Yes

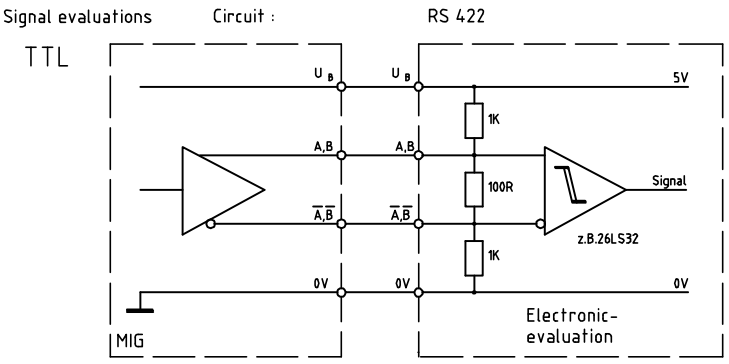
Terminals

Terminal	U_b	0 V	A	B	A`	B`
cable	brown	white	yellow	green	pink	grey
Attention: please isolate not required connection lacings and protect them from short-circuits!						

Output signals :
For determining the direction of rotation, the two recangular pulse signals A and B are offset by 90°. Marke-to-space ratio 1 : 1







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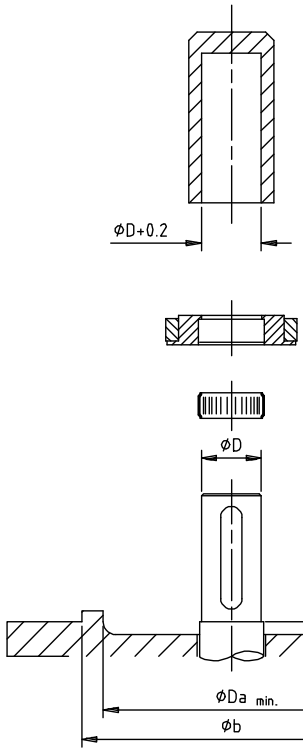


Attention!
Magnet rings are to be used carefully

- do not use magnetised tools
- protect external cylinder surface against damage
- prevent touch with other magnetised parts
- please use for the cleaning of the stainless steel hub and the magnet only alcohol or acetone based cleaner!

Mounting:

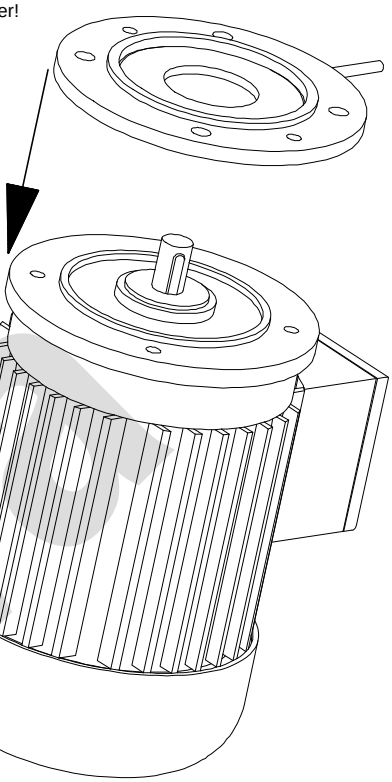
1. Dismount the key
2. Check measures of ta and Da
3. Push tolerance ring up to the shoulder of the shaft
4. Push the magnetic ring on
5. Mount magnetic ring with fitting liner
   Do not tilt the magnetic ring!
6. Shorten the key and mount
7. Encoder has to be sealed on both sides of the flange (motor and machine flange sides) with appropriate sealing compound

Protection -Standard: IP55
-Depending on the sealing between motor and machine flang max. IP66 (f. e. sealing with silicone and sealing the cable of the encoder)

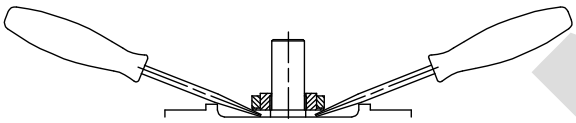
Mounting liner will be delivered on request

D	ta_{min}
<20	2
>20	3

b	Da
50	43
60	43
70	60
80	60
95	60
110	60
130	60
180	105
230	105
250	105



Dismounting



Please assure the following mounting procedure to avoid damages for magnet ring and the sensor:
1st step: mounting the encoder to the motor flange
2nd step: mounting the motor-encoder unit to the gear / machine flange