

Magnetic absolute multi-turn shaft encoder

BMMV – MAGRES

SSI

features

- multi-turn encoder / SSI
- magnetic sensing principle
- resolution: single-turn 12 bit and multi-turn 13 bit
- high resistance against shock and vibration
- zero setting input
- clamping or servo flange



58K

58S

general data

voltage supply	5 VDC $\pm 10\%$ (05C) 10 - 30 VDC (24C)
max. supply current no load	typ. 100 mA (at 5 VDC) (05C) typ. 50 mA (at 24 VDC) (24C)
output circuit	SSI, RS 422
signal code	Gray and binary code
max. resolution single-turn	12 bit (1 step = 5' 16")
multi-turn	13 bit (8'192 revolutions)
max. error limit	$\pm 1^\circ$
repeatability	0,3°
max. clock frequency	1 MHz
input signal	clock input, zero (zero setting: < 0,4 V, > 2 ms off state: 3,3 V or open)
counter buffering	with Lithium cell typ. 19 years
direction of rotation	looking at the flange, position counts up as the shaft rotates clockwise (CW)

mechanical data

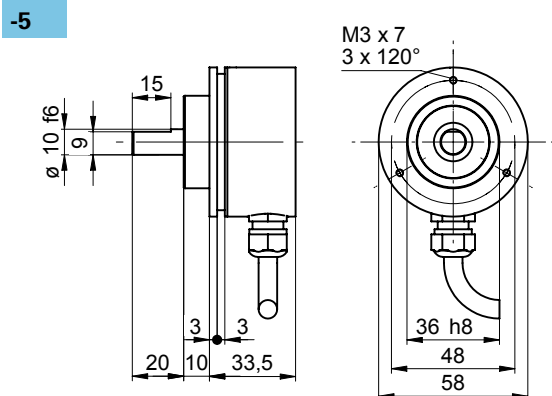
max. revolutions	12'000 rpm (mech.) 6'000 rpm (electr.)
moment of inertia C6	typ. $11,8 \times 10^{-7}$ kgm ²
C0	typ. $17,8 \times 10^{-7}$ kgm ²
torque	typ. 2,3 cNm (3'000 rpm / 20 °C)
max. shaft load C6	axial: 10 N radial: 20 N
C0	axial: 40 N radial: 60 N
product life	depending on ambient conditions (typ. 10^9 revolutions.)
max. protection class	IP 65
material	housing: steel flange: aluminum
weight	approx. 300 g

ambient conditions

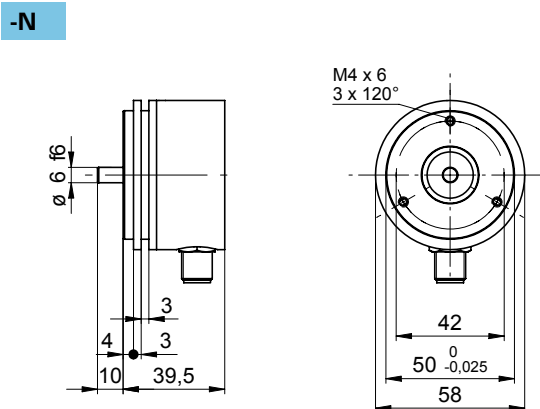
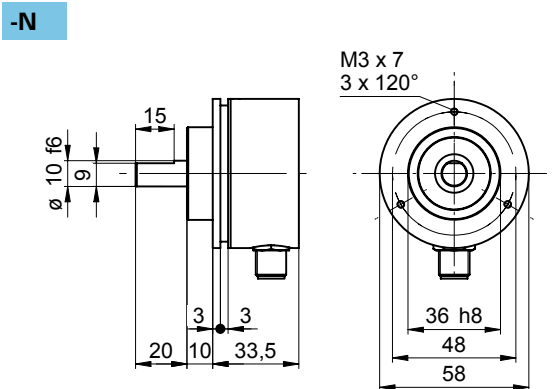
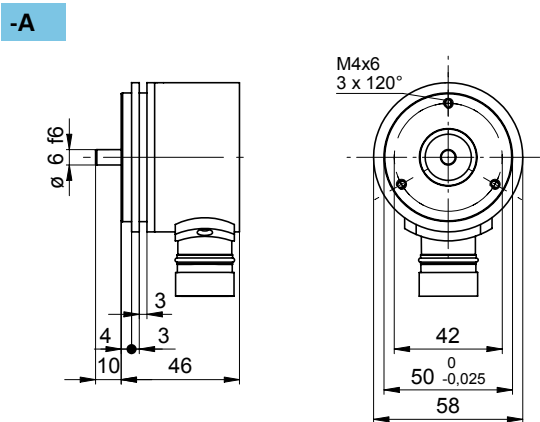
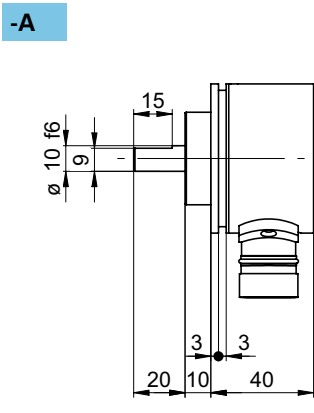
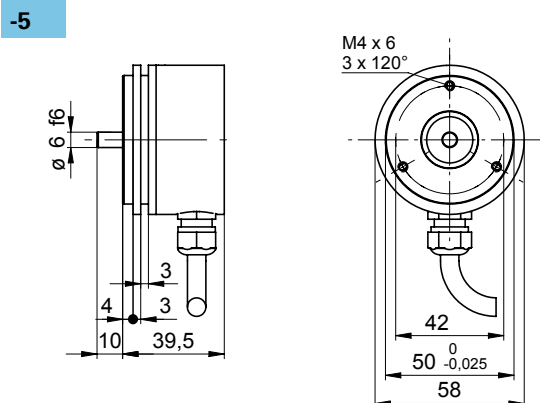
temperature range	-20...+85 °C
relative humidity	max. relative humidity 95%
vibration	IEC 60068-2-6 (≤ 300 m/s ² / 10 - 2'000 Hz)
shock	IEC 60068-2-27 ($\leq 1'000$ m/s ² / 6 ms)
noise immunity	EN 61000-6-2
emitted interference	EN 61000-6-3



dimensions clamping flange (K)



dimensions servo flange (S)

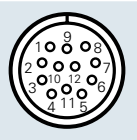


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Magnetic absolute multi-turn shaft encoder BMMV 58 – MAGRES SSI

assignment cable / connector M23 male

for connection reference **-A** and **-5**

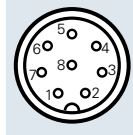


view on
encoder

pin	color	signal	description
1	yellow	clock-	clock signal
2	green	clock+	clock signal
3	grey	data+	data signal
4	pink	data-	data signal
5	blue	zero	zero setting input
6	-	n.c.	-
7	-	n.c.	-
8	-	n.c.	-
9	red	d.u.	do not use
10	-	n.c.	-
11	brown	+Vs	voltage supply
12	white	0 V	voltage supply
cable data			12 x 0,14 mm ²

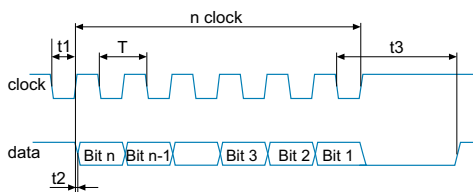
assignment connector M12 male

for connection reference **-N**



pin	signal	description
1	0 V	voltage supply
2	+Vs	voltage supply
3	clock+	clock signal
4	clock-	clock signal
5	data+	data signal
6	data-	data signal
7	zero	zero setting input
8	d.u.	do not use

read out of position values



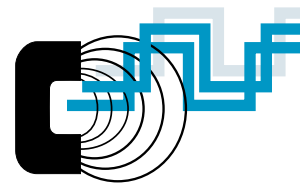
pulse times:

$T = 1 \mu\text{s}$ to $10 \mu\text{s}$ / $t_1 = 0,5 \mu\text{s}$ to $5 \mu\text{s}$

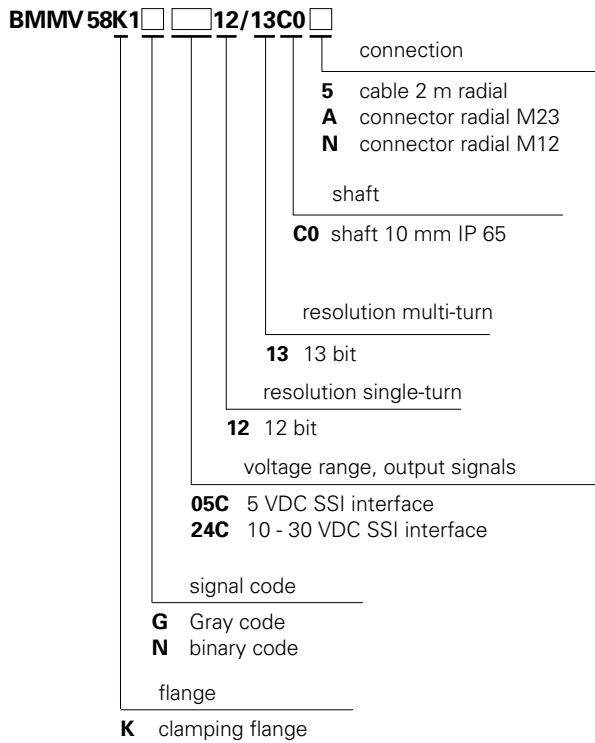
$t_2 < 0,2 \mu\text{s}$ / $t_3 > 12 \mu\text{s}$ to $25 \mu\text{s}$

SSI-data output and clock input

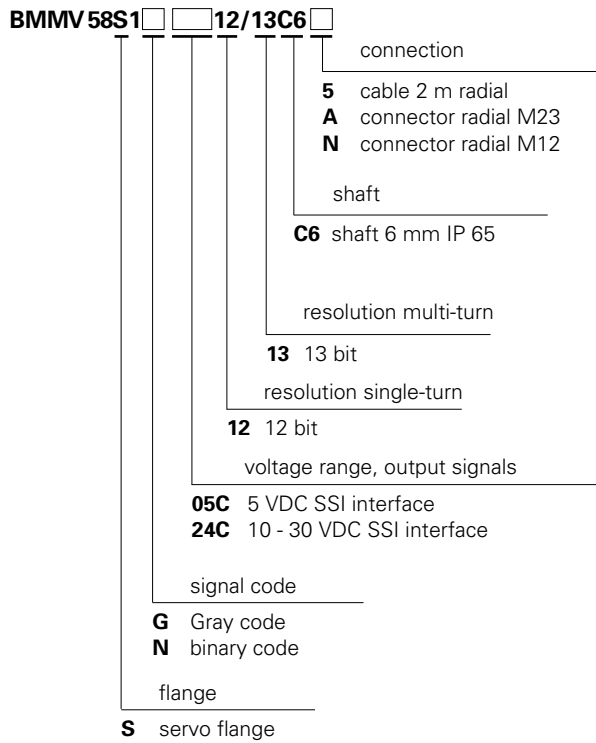
see page 2.03 chapter absolute singleturn encoder



order designation BMMV 58K



order designation BMMV 58S



accessories

connector M23 12-pin	part nr. 116717
cable with connector M23 (pre-assembled)	
2 m	part nr. 153334
5 m	part nr. 153335
connector M12 8-pin	part nr. 146775
cable with connector M12 (pre-assembled)	
2 m	part nr. 127844
5 m	part nr. 129332
clamping ring set	part nr. 252773
couplings	see chapter accessories