Specifications

Singleturn absolute magnetic encoder size 50 mm with solid shaft

- Resolution up to 13 bit (8192 ppr)
- Power supply up to +30 VDC with SSI or Bit Parallel as electronic interface
- Code reset for easy setup
- Cable or M12 output, other connectors available on cable end
- Sturdy construction (separated chambers)
- Solid shaft diameter up to 10 mm
- IP 67 enclosure rating
- Mounting by synchronous flange

| ORDERING CODE | EMA | 50B | 1024 | G | 8/30 | N | N | X | 6 | X | 3 | P | R | . XXX |
|---------------|-----|-----|------|---|------|---|---|---|---|---|---|---|---|---|-------|
| SERIES        | magnetic singleturn absolute encoder EMA |
| MODEL         | synchronous flange ø 25 mm 50A |
|               | synchronous flange ø 30 mm 50B |
|               | synchronous flange ø 25 mm anodized 50BY |
| RESOLUTION    | (N / C / R / U / P interface) ppr from 2 to 4096 |
|               | (S interface) ppr from 2 to 8192 |
| CODE TYPE     | binary B |
|               | gray G |
|               | (no powers of 2) binary offset code (0-XXX) BC |
|               | (no powers of 2) gray offset code (0-XXX) GC |
| POWER SUPPLY  | 5 V DC 5 |
|               | 8 ... 30 V DC 8/30 |
| ELECTRONIC INTERFACE | NPN N |
|               | NPN open collector C |
|               | PNP R |
|               | PNP open collector U |
|               | push pull P |
|               | Serial Synchronous Interface - SSI S |
| LOGIC         | negative N |
|               | positive P |
| OPTIONS       | to be reported if not used X |
|               | reset ZE |
|               | (with binary or offset binary code) strobe S |
|               | (with binary or offset binary code) strobe and code reset SZE |
| SHAFT DIAMETER | mm 6 |
|               | mm 8 |
|               | 9,52 (3/8”) mm 10 |
| ENCLOSURE RATING | IP 65 X |
|               | IP 67 S |
| MAX ROTATION SPEED | 3000 rpm 3 |
| OUTPUT TYPE   | cable (standard length 0,5 m) P |
|               | (S interface) M12 connector M12 |
|               | female connector included, without female please add 162 as variant code |
| DIRECTION TYPE | axial A |
|               | radial R |
| VARIANT       | custom version XXX |

Specifications

www.eltra-encoder.eu

www.eltra-trade.com

tel: +421 552 601 099
e-mail: info@eltra-trade.com
ELECTRICAL SPECIFICATIONS

Resolution
from 2 to 4096 ppr with N / C / P / R / U interface from 2 to 8192 ppr with S interface

Power supply
5 = 4,5 ... 5,5 V DC
8/30 = 7,6 ... 31,5 V DC

Current consumption without load
< 100 mA

Max load current
29 mA / channel (push pull)
40 mA / channel (NP/NPN)

Output type*
NP/NPN / NPN open collector / PNP / PNP open collector / push pull / RS-422

Auxiliary inputs (U/0 - Reset)
active high (+Vdc)
connect to 0V if not used / Reset tmin 150 ms

Max frequency
output: 25 kHz LSB (Bit parallel)
clock input: 100 kHz ... 1 MHz (SSI)

SSI monostable time (1m)
20 µs

SSI pause time (Tp)
> 35 µs

Strobe time
20 µs

Accuracy
± 0.35° typical

SSI frame
(MSB ... LSB) 13 bit data length

Counting direction
decreasing clockwise (shaft view)

Start-up time
150 ms

Electromagnetic compatibility
IEC 61000-6-2
IEC 61000-6-4

*output levels according to power supply, for further details please see under Technical basics section

MECHANICAL SPECIFICATIONS

Shaft diameter
ø 6 / 8 / 9,52 (3/8") / 10 mm

Enclosure rating
X = IP 65 (IEC 60529)
S = IP 67 (IEC 60529)

Max rotation speed
3000 rpm continuous / 5000 rpm instantaneous

Max shaft load
30 N axial / 50 N radial

Shock
50 G, 11 ms (IEC 60068-2-27)

Vibration
20 G, 10 ... 2000 Hz (IEC 60068-2-6)

Moment of inertia
0,5 x 10^-6 kgm²

Starting torque
< 0,03 Nm

Starting torque
(at +20°C / +68°F)

Body material
EN-AW 2011 aluminum

Shaft material
1.4305 / AISI 303 stainless steel

Housing material
EN-AW 2011 aluminum

Bearings
2 ball bearings

Bearings life
10^5 revolutions

Operating temperature
-25° ... +85°C (-13° ... +185°F)

Storage temperature
-25° ... +85°C (-13° ... +185°F)

Weight
200 g (7,05 oz)

ACCESSORIES

set n.3 fixing clamps
P/N 94080001

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