AAM 38 F BISS

BLIND HOLLOW SHAFT MULTITURN ABSOLUTE ENCODER

MAIN FEATURES

Miniaturized optical multiturn absolute encoder for high end application. Thanks to BiSS-C interface and high resolution it can be used in robotics, motor feedback and CNC machines.

- Optical sensor technology (OptoASIC + Energy Harvesting)
- 39 bit total resolution (23 bit single turn + 16 bit multiturn)
- Power supply +5 VDC with BiSS-C as electrical interface
- Cable output
- Blind hollow shaft diameter up to 8 mm
- Mounting by stator coupling
- Operating temperature -20° ... +105°C (-4° ... +221°F)

ORDERING CODE

AAM	38F	16	/	23	B	5	B	8	X	X	PR	.XXX

SERIES
absolute multiturn encoder AAM

MODEL
blind hollow shaft with stator coupling 38F

MULTITURN RESOLUTION
bit 16

SINGLETURN RESOLUTION
bit 23

CODE TYPE
binary B

POWER SUPPLY
5 V DC 5

ELECTRICAL INTERFACE
BiSS-C B

BORE DIAMETER
mm 6
(1/4") mm 6,35
mm 8

ENCLOSURE RATING
IP 50 X

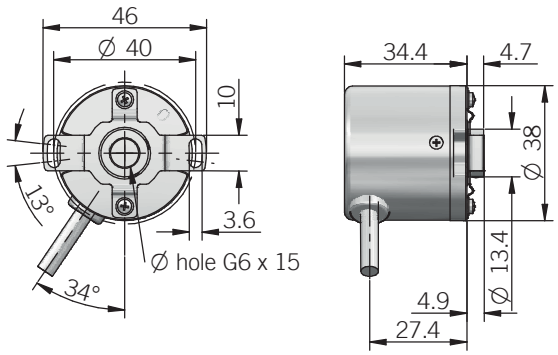
OPTIONS
to be reported X

OUTPUT TYPE
radial cable (standard length 0,2m) PR

VARIANT
custom version XXX

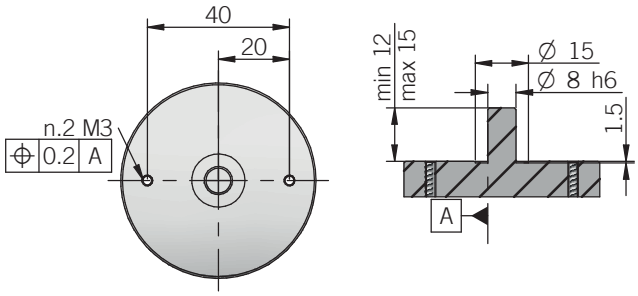
eltra.it@broadcom.com

AAM 38F



dimensions in mm

RECOMMENDED INTERFACE FLANGE DESIGN



ELECTRICAL SPECIFICATIONS

Multiturn resolution	16 bit
Singleturn resolution	23 bit
Fault status	8 bit
CRC	8 bit
Power supply[1]	4,75 ... 5,25 V DC
Current consumption without load	< 120 mA
Output type[2]	BiSS-C (SN65LBC179Q or similar)
Code type	binary
Clock frequency (MA)	80 kHz ... 10 MHz
Position calculation Time	Refer to BiSS-C $T_{busy\ time}$
Counting direction	decreasing clockwise (shaft view)
Start-up time	500 ms
Accuracy	± 80 arc-sec
Mean time to dangerous failure ($MTTF_d$)[3] **according to EN ISO 13849-1**	481 years
Mission time (Tm)[3]	20 years
Diagnostic coverage (DC)[3]	0%
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2011/65/EU directive

CONNECTIONS

Function	Cable
+ V DC	red
GROUND	black
SERIAL DATA (SLO) +	orange
SERIAL DATA (SLO) -	blue
SERIAL CLOCK (MA)+	brown
SERIAL CLOCK (MA) -	white

MECHANICAL SPECIFICATIONS

Shaft diameter	ø 6 / 6,35 (1/4") / 8 mm
Enclosure rating	IP 50 (IEC 60529)
Max rotation speed	6000 rpm continuous
Shock	200 G, 6 ms (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Shaft material	brass
Housing material	steel
Bearing stage material	aluminum
Bearings	n.2 ball bearings
Bearings life	10^9 revolutions
Operating temperature[4, 5]	-20° ... +105°C (-4° ... +221°F)
Storage temperature[5]	-20° ... +105°C (-4° ... +221°F)
Shaft radial play allowed	± 0,05 mm
Shaft axial play allowed	± 0,1 mm
Fixing torque for shaft grains	1 Nm (142 Ozin) recommended
Fixing torque for spring screws	0,35 Nm (49,5 Ozin) recommended for M3 screws (not provided)
Weight	150 g (5,29 oz)

[1] as measured at the transducer without cable influences
[2] for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section
[3] this product is not a safety component, for further details refer to TECHNICAL BASICS section
[4] measured on the transducer flange
[5] condensation not allowed