



1) not included in scope of delivery, 2) Distance to tape, 3) Tape, 4) Cable length, 5) Active measurement surface



Basic features

Additional features 03	Real-time capable
Application	linear/rotary motion
Approval/Conformity	CE UKCA cURus WEEE
Measuring principle	incremental measuring system
Series	S2C

Electrical connection

Bending radius min., fixed cable	7.5 x D
Bending radius min., flexible cable	15 x D
Cable diameter D	4.9...5.2 mm
Cable length L	5 m, drag chain compatible
Conductor cross-section	0.08 mm ²
Connection	Cable, 5 m, PUR
Connection type	Cable, 5 m, PUR
Connection version	axial
Number of conductors	12
Polarity reversal protected	no

Electrical data

Current consumption max. at 5 V DC	100 mA
Operating voltage Ub	4.75...5.25 VDC
Overvoltage protection	no
Switch-on delay max.	500 ms

Environmental conditions

Altitude max.	2000 m
Ambient temperature	-20...80 °C
Cable temperature, drag chain	-25...85 °C
Cable temperature, fixed routing	-40...85 °C
Cable temperature, flexible routing	-25...85 °C
EN 55016-2-3, Radiation	Industrial areas
EN 60068-2-27, Continuous shock	100 g, 2 ms
EN 60068-2-27, Shock	100 g, 6 ms
EN 60068-2-6, Vibration	12 g, 10...2000 Hz
EN 61000-4-2, ESD	Severity Level 3
EN 61000-4-3, RFI	Severity Level 2
EN 61000-4-4, Burst	Severity Level 3
EN 61000-4-5, Surge	Severity Level 2
EN 61000-4-6, High-frequency fields	Severity Level 3
EN 61000-4-8 Magnetic fields	Severity Level 4
Ext. magnetic fields max., in operation	1 mT (no effect)
IP rating	IP67
Overall system temperature coefficient	10.5 ppm/K
Relative humidity	≤ 90 %, non-condensing
Storage temperature	-30...85 °C

Functional safety

MTTF (40 °C)	1409 a
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Magnetically Coded Sensors
BML-S2C0-Q61G-M600-R0-KA05
Order Code: BML09RE

BALLUFF

Interface

Differential signals	yes
Error signal	no
Interface	Digital A/B (RS422)
Reference signal	without reference signal
Signal sequence	A before B = rising

Material

Cable flame-resistant	UL94 V0 and IEC 60332/2
Housing material	PBT
Material jacket	PUR

Mechanical data

Dimension	10 x 25 x 35 mm
Lateral offset (Y)	±4 mm
Mounting part	Through-hole 3.5 mm
Pitch max.	±1.0 °
Pole width	10 mm
Procedure direction	Lengthwise to tape
Roll max.	±3.0 °
Weight	11 g (excluding cable)
Yaw max. ±	3.0 °

Range/Distance

Edge separation min.	100 µs
Interpolation factor	1000
Non-linearity max.	±400 µm (z=1...5 mm, y=±2 mm)
Non-linearity typ.	±550 µm (z=0.01...6.5mm, y=±4mm)
Read distance	0.01...6.5 mm
Repeat accuracy	≤ 10 µm
Resolution	10 µm (edge separation A/B)
Traverse speed max.	0.08 m/s

Wiring Diagrams

Color	
WH	+A
BN	-A
GN	+B
YE	-B
GY	NC
PK	NC

Color	
BU	GND
RD	U _B
BK	GND Sense
VT	U _B Sense
GY-PK	NC
RD-BU	NC
TR	PE