

# RM44 / 58DC – Absolute Encoder with BiSS-C interface



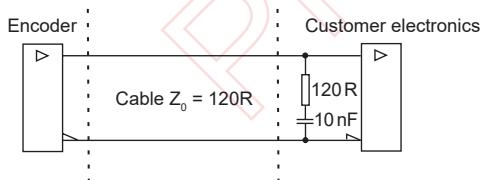
Engineering samples available.

## Absolute Encoder with BiSS-C interface

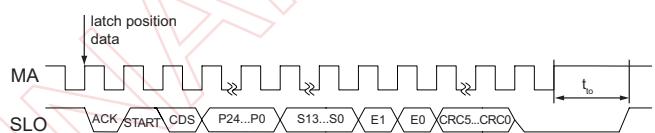
<b>Output code</b>	Natural binary
<b>Power supply</b>	$V_{dd} = 5 \text{ V} \pm 5 \%$
<b>Current consumption</b>	Max. 50 mA
<b>Clock input</b>	MA (RS422)
<b>Data output</b>	SLO (RS422)
<b>Accuracy</b>	Typ. $\pm 0.5^\circ$
<b>Hysteresis</b>	0.18°
<b>Resolution</b>	320, 400, 500, 512, 800, 1,000, 1,024, 1,600, 2,000, 2,048, 4,096, 8,192 positions per revolution
<b>Maximum speed</b>	30,000 rpm
<b>Operating temperature</b>	-40 °C to +125 °C (IP64) -40 °C to +85 °C (IP68)
<b>Max MA frequency</b>	8 MHz

### Recommended signal termination

For data output lines only



### Timing diagram – BiSS-C



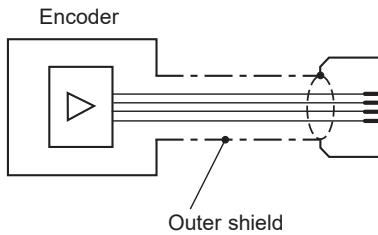
Data	Length	Description
P24 – P0	0 to 24 bit	Revolution counter value (length depends on the settings chosen)
S12 – S0	3 to 13 bit	Position inside the revolution (length depends on the resolution)
E1 – E0	2 bit	Error data
CRC5 – CRC0	5 to 6 bit	Cyclic redundancy check data; polynomial 0x43; inverted bit output

Error	E0	E1
No error	1	1
Amplitude error	0	1
Too high velocity	1	0
Undervoltage; Configuration; System error	0	0

For more information on BiSS-C protocol please visit [www.biss-interface.com](http://www.biss-interface.com).

## Connections

RM44/RM58DC	
Function	Wire colour
Shield - see connection diagram	
V <sub>dd</sub>	Red
GND	Blue
MA+	White
SLO+	Green
MA-	Brown
SLO-	Yellow



**NOTE 1:** The product dimensions and installation drawing are available on the RM44/RM58 data sheet ([RM44D01](#)).

**NOTE 2:** The RM44DC can be used with all standard magnetic actuators.

## Part numbering

RM44	DC	00	13B	10	F	2	E	10
Series								
RM44 - Ø44 mm body								
RM58 - Ø58 mm body								
Output type								
DC - BiSS, RS422, 5 V								
Shaft size								
00 - n/a								
Resolution								
Decimal		Binary						
D32 - 320		07B - 128						
D40 - 400	1D0 - 1000	08B - 256	11B - 2048					
D50 - 500	1D6 - 1600	09B - 512	12B - 4096					
D80 - 800	2D0 - 2000	10B - 1024	13B - 8192					

**Special requirements**  
10 - No special requirements (standard)  
1M - Cable length in meters

**Environment and material**  
E - IP64, die-cast body (Zinc alloy), standard EMC grade (standard)  
F - IP68, die-cast body (Zinc alloy), standard EMC grade

**Body style and cable exit**  
2 - Cylindrical body, radial cable exit

**Connector options**  
F - Flying lead (no connector)

**Cable length**  
10 - 1.0 meter (or 10 meters if 1M special requirement is chosen)

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## Document issues

Issue	Date	Page	Amendments done
3	8. 8. 2019	1	Current consumption amended

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