

RM22 series non-contact rotary encoders

EMC compliance



This encoder system conforms to the relevant harmonised European standards for electromagnetic compatibility as detailed below.

BS EN 61326

Further information

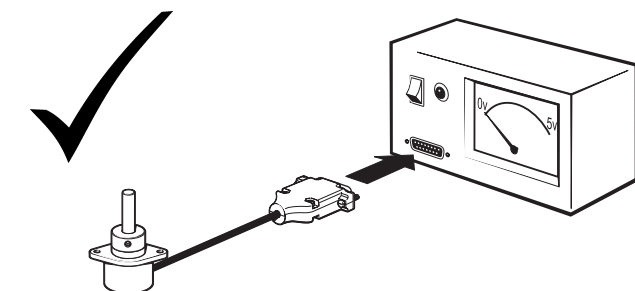
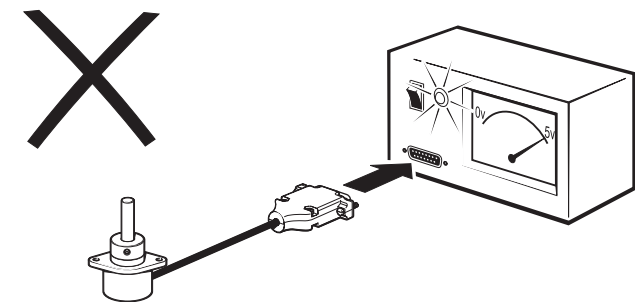
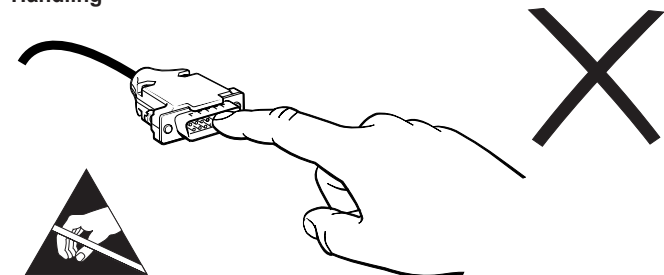
For further information relating to the installation of RM22 encoders see also the RM22 data sheet (part number RM22D01). This can be downloaded from our website www.rls.si and is also available from your local representative.

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Handling



General specifications

Power supply 5 V $\pm$ 5%

RM22 A/B/P/V 20 mA
RM22 I/S 23mA - 9bit. 35mA for all other resolutions

NOTE: Current consumption figures refer to unterminated encoders. When terminated with 120 Ω , RM22 S will draw an additional 25 mA, while RM22 I will draw an additional 25 mA per channel pair (A+, A-).

Sealing

IP64 (IP68 option available)

Operating temperature

RM22 IB -25 °C to +85 °C
RM22 S/P/V/A -40 °C to +125 °C

Humidity storage

95% maximum relative humidity (non-condensing) (BS EN 61010-1)

operating

80% maximum relative humidity (non-condensing) (BS EN 61010-1)

Acceleration operating

500 m/s² BS EN 60068-2-7:1993 (IEC 68-2-7:1983)

Shock non-operating

1000 m/s², 6 ms, 1/2 sine
BS EN 60068-2-27:1993 (IEC 68-2-27:1987)

Vibration operating

100 m/s², 55 Hz to 2000 Hz
BS EN 60068-2-6:1996 (IEC 68-2-6:1995)

Mass

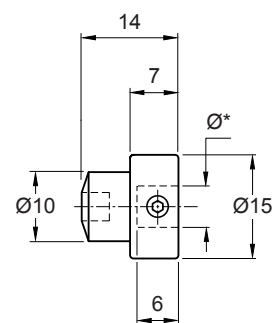
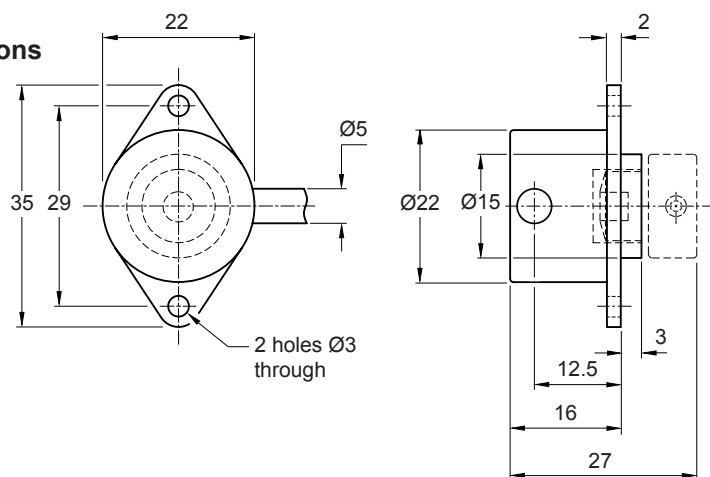
RM22 inc. 1 m cable no connector 48 g
magnetic actuator 12 g

Cable

Outside diameter 5 mm
Maximum cable length 3 m (RM22A), 20 m (RM22B), 20 m (RM22V), 30 m (RM22P), 50 m (RM22I), 100 m (RM22S at 1MHz).

IMPORTANT: Power to RM22 encoders must be supplied from a DC SELV supply complying with the essential requirements of EN (IEC) 60950 or similar specification.

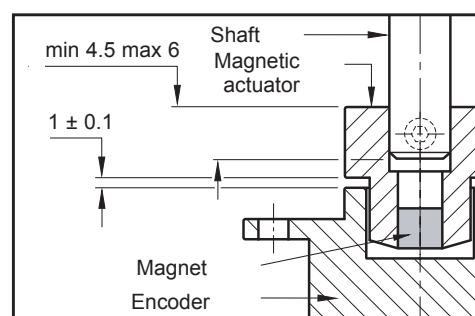
The RM22 series encoders have been designed to the relevant EMC standards, but must be correctly integrated to achieve EMC compliance. In particular, attention to shielding arrangements is critical.



*Hole diameter for nominal shaft size

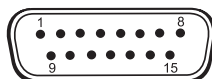
Technical drawing of a mechanical assembly. The drawing shows a vertical rod with a threaded section. A nut is shown on the rod, and a grub screw is shown securing the nut. The rod has a diameter of $\varnothing 15 \text{ h7}$. The grub screw is labeled "M3 x 4 grub screw". The nut is labeled "A". The rod has a bend radius of $>R40$ Static bend radius. The drawing includes a table with surface finish requirements:

Ra	0.1	A
Rz	0.5	A

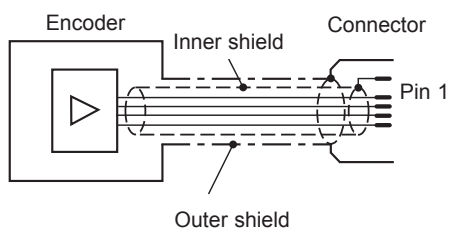


**Nominal shaft size with tolerance h7

RM22 P

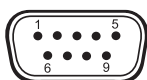


15 pin D plug



Pin Nr.	Function	Wire colour	Pin Nr.	Function	Wire colour
1	Shield - see connection diagram		9	D2	Black
2	D8	White	10	D1	Violet
3	D7	Brown	11	D0	Orange
4	D6	Green	12	NC	–
5	D5	Yellow	13	NC	–
6	D4	Grey	14	LE	Clear
7	D3	Pink	15	GND	Blue
8	V _{dd}	Red			

RM22 S/I/A



9 pin D plug

Pin Nr.	RM22 S		RM22 I		RM22 A		RM22 B		RM22 V	
	Function	Wire colour	Function	Wire colour	Function	Wire colour	Function	Wire colour	Function	Wire colour
1	Shield-see connection diagram		Shield-see connection diagram		Shield-see connection diagram		Shield-see connection diagram		Shield-see connection diagram	
2	Clock	White	Z	White	V _A	Green	V _A +	Green	NC	–
3	Clock-	Brown	B	Green	V _B	Brown	V _B +	Brown	V _{out}	Green
4	NC	–	A	Grey	NC	–	NC	–	NC	–
5	V _{dd}	Red	V _{dd}	Red	V _{dd}	Red	V _{dd}	Red	V _{dd}	Red
6	Data	Green	Z-	Brown	NC	–	V _A -	Yellow	NC	–
7	Data-	Yellow	B-	Yellow	NC	–	V _B -	White	NC	–
8	NC	–	A-	Pink	NC	–	NC	–	NC	–
9	GND	Blue	GND	Blue	GND	Blue	GND	Blue	GND	Blue