

## RM36 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

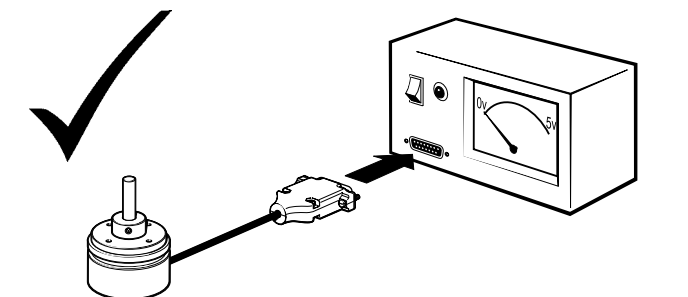
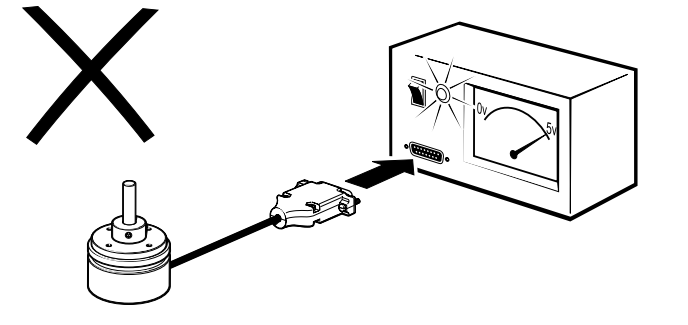
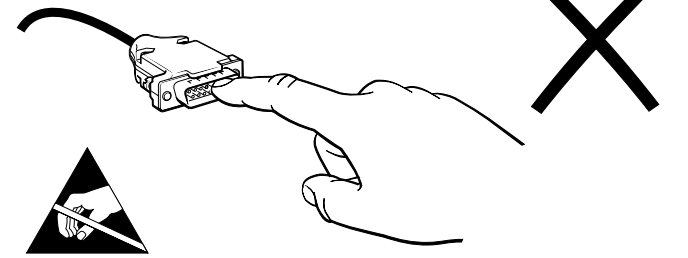
### Further information

For further information relating to the installation of RM36 encoders see also the RM36 data sheet (part number RM36D01). This can be downloaded from our website [www.rls.si](http://www.rls.si) and is also available from your local representative.

### Disclaimer

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### Handling



### General specifications

<b>Power supply</b> 5 V ± 5%	RM36 I 35 mA RM36 S 35 mA
<b>Power supply</b> 24 V ± 10% (9-bit versions only)	RM36 P 40 mA variant A, 25 mA variant B <b>RM36 P variant A requires heat sink -typ. 3 W</b> RM36 I 50 mA variant A (30 mA – 9bit) <b>RM36 I variant A requires heat-sink typ 1W</b> RM36 I 25 mA variant B RM36 V 40 mA RM36 C 50 mA

**NOTE:** Current consumption figures refer to unterminated encoders.

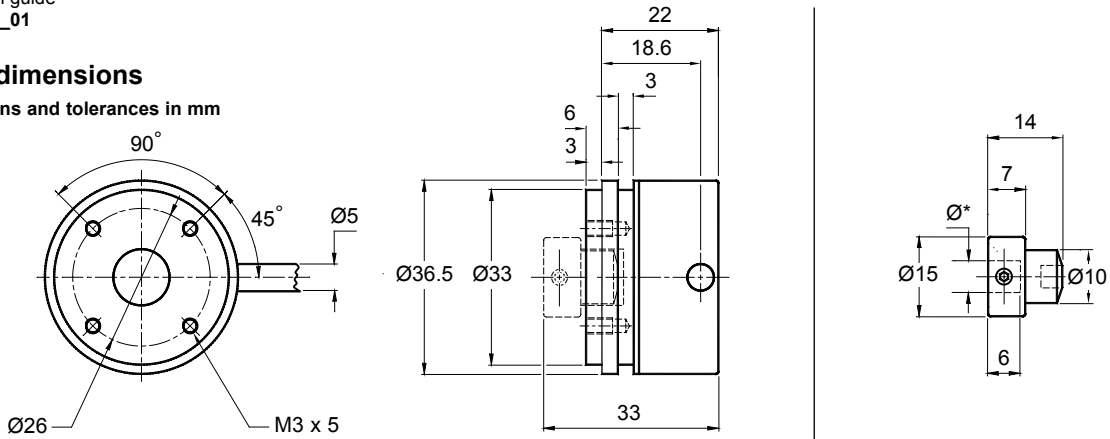
<b>Sealing</b>	IP64 (IP68 option available)
<b>Temperature</b>	5 V versions RM36 I -25 °C to +85 °C RM36 S -40 °C to +125 °C 24 V versions RM36 I/V/C -25 °C to +70 °C (0 °C to +70 °C variant IB) RM36 P -25 °C to +125 °C (0 °C to +70 °C variant PB)
<b>Humidity</b>	Storage 95% maximum relative humidity (non-condensing) (BS EN 61010-1) Operating 80% maximum relative humidity (non-condensing) (BS EN 61010-1)
<b>Acceleration</b>	operating 500 m/s <sup>2</sup> BS EN 60068-2-7:1993 (IEC 68-2-7:1983)
<b>Shock</b>	non-operating 1000 m/s <sup>2</sup> , 6 ms, ½ sine BS EN 60068-2-27:1993 (IEC 68-2-27:1987)
<b>Vibration</b>	operating 100 m/s <sup>2</sup> , 55 Hz to 2000 Hz BS EN 60068-2-6:1996 (IEC 68-2-6:1995)
<b>Mass</b>	RM36 inc. 1 m cable no connector 85 g magnetic actuator 12 g RM36 stainless steel variant 160 g
<b>Cable</b>	Outside diameter 5 mm Maximum cable length 10 m (RM36 P), 20 m (RM36 I/S/V/C)

**IMPORTANT:** Power to RM36 encoders must be supplied from a DC SELV supply complying with the essential requirements of EN (IEC) 60950 or similar specification.

The RM36 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.

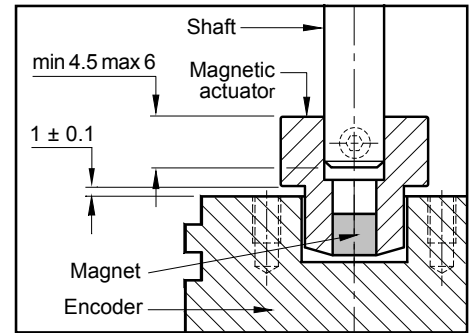
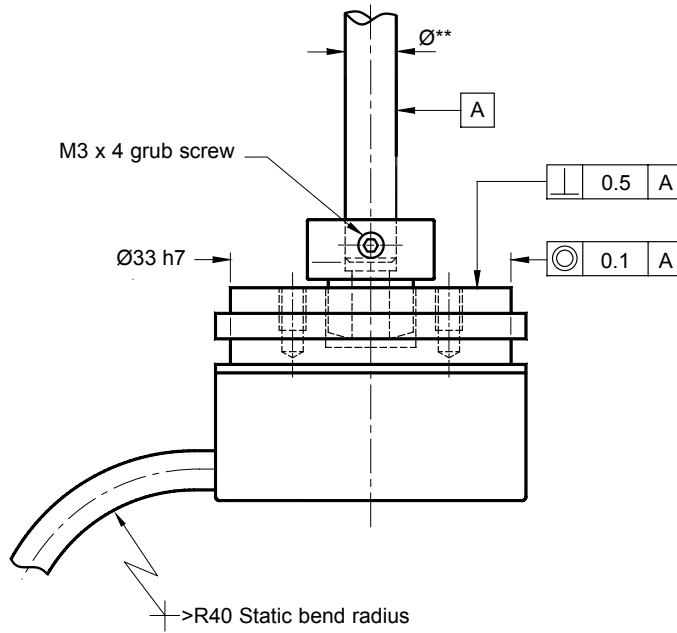
## RM36 dimensions

Dimensions and tolerances in mm



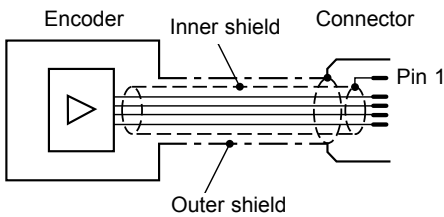
\*Hole diameter for nominal shaft size

## RM36 installation drawing

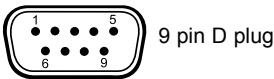


\*\*Nominal shaft size with tolerance h7

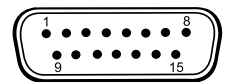
## Connections



### RM36 S/I/V/C



### RM36 P



15 pin D plug

Pin Nr.	RM36 S		RM36 I		RM36 V		RM36 C	
	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	
2	Clock	White	Z	White	NC	-	NC	-
3	Clock-	Brown	B	Green	$V_{OUT}$	Green	$I_{OUT}$	Green
4	NC	-	A	Grey	NC	-	NC	-
5	$V_{dd}$	Red	$V_{dd}$	Red	$+V_{dd}$	Red	$V_{dd}$	Red
6	Data	Green	Z*	Brown	$-V_{dd}^{\dagger}$	Brown	NC	-
7	Data-	Yellow	B*	Yellow	NC	-	NC	-
8	NC	-	A*	Pink	NC	-	NC	-
9	GND	Blue	GND	Blue	0V	Blue	0V	Blue

\* Not available for IB variant † For variants VM, VN, VP, VQ, VR, VS, VT, and VV only

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