

RE36 series rotary encoders

EMC compliance



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

BS EN 61326

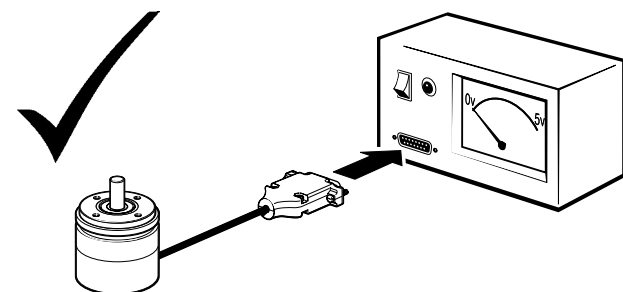
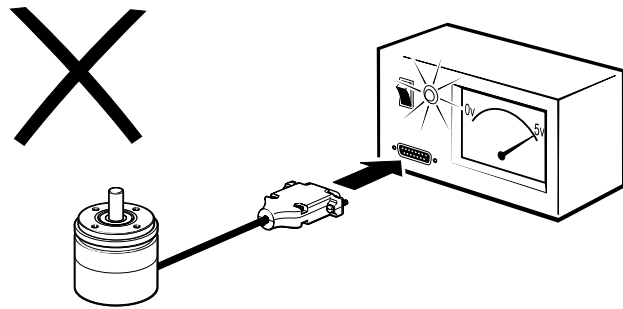
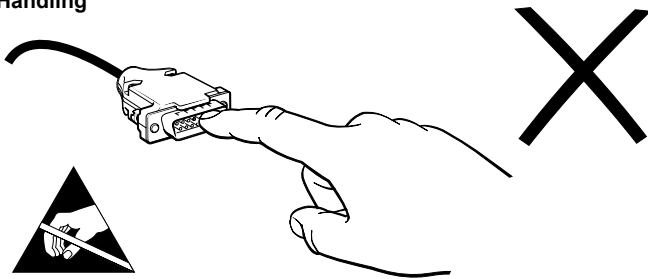
Further information

For further information relating to the installation of RE36 encoders see also the RE36 data sheet (part number RE36D01). This can be downloaded from our website www.rls.si and is also available from your local representative.

Disclaimer

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Handling



IMPORTANT: Power to RE36 encoders must be supplied from a DC SELV supply complying with the essential requirements of EN (IEC) 60950 or similar specification.

The RE36 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.



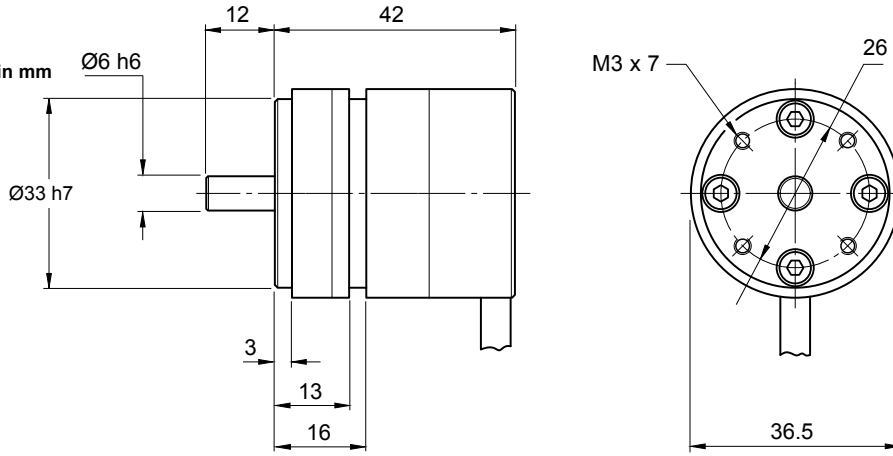
General specifications

Power supply 5 V ± 5%	RE36 I 35 mA RE36 S 35 mA
Power supply 24 V ± 10% (9-bit versions only)	RE36 P 40 mA variant A, 25 mA variant B RE36 P variant A requires heat sink-typ. 3 W RE36 I 50 mA variant A (30 mA – 9bit) RE36 I variant A requires heat-sink typ 1W RE36 I 25 mA variant B RE36 V 40 mA RE36 C 50 mA
Sealing	NOTE: Current consumption figures refer to unterminated encoders. IP53 (IP64/68 options available)
Temperature	5 V versions RE36 I/S -25 °C to +85 °C 24 V versions RE36 I/V/C -25 °C to +70 °C (0 °C to +70 °C variant IB) RE36 P -25 °C to +125 °C (0 °C to +70 °C variant PB)
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/s ² BS EN 60068-2-7:1993 (IEC 68-2-7:1983)
Shock	non-operating 1000 m/s ² , 6 ms, ½ sine BS EN 60068-2-27:1993 (IEC 68-2-27:1987)
Vibration	operating 100 m/s ² , 55 Hz to 2000 Hz BS EN 60068-2-6:1996 (IEC 68-2-6:1995)
Mass	Encoder unit 1 m cable (no connector) IP53 side cable 105 g. IP64/68 side cable 128 g
Cable	Outside diameter 5 mm Maximum cable length 10 m (RE36 P), 20 m (RE36 I/S/V/C)

RE36 dimensions

Dimensions and tolerances in mm

IP64/68



IP53

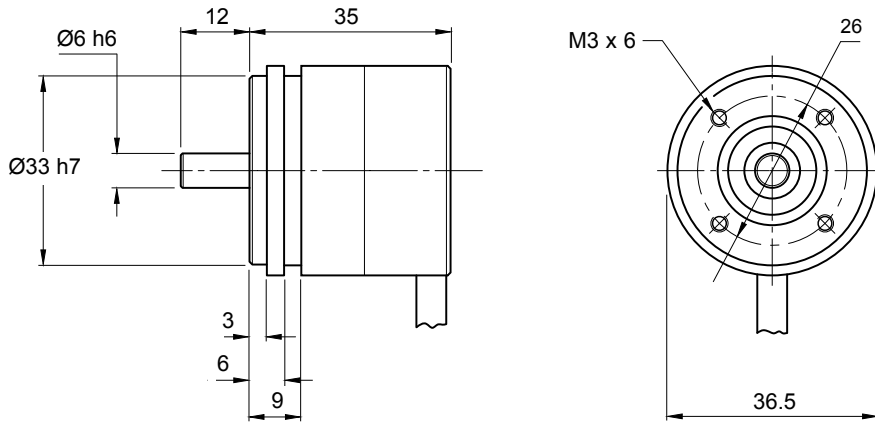
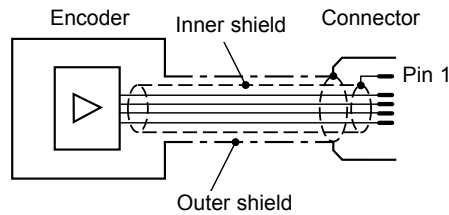
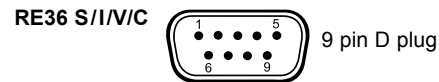


Table of expected bearing life rating in hours

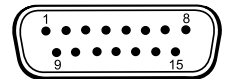
Speed (rpm)	Rad. load 15N	Rad. load 20N	Rad. load 25N	Rad. load 30N
500	296,282	227,542	178,523	142,631
1,000	148,142	113,767	89,267	71,317
2,000	74,071	56,883	44,633	35,658
5,000	29,628	22,753	17,853	14,263
10,000	14,814	11,377	8,927	7,131
15,000	9,876	7,584	5,951	4,754
20,000	7,407	5,688	4,463	3,566

Maximum recommended shaft loads: radial 30N, axial 15N

Connections



RE36 P



15 pin D plug

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

Pin Nr.	RE36 S		RE36 I		RE36 V		RE36 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} †	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