



## Product description

### Characteristics

- Supplies high resolution signals to an external decoder and control unit
- Embedded in the rotor bearing
- Cannot be combined with an electromagnetic brake

### Applications

- For applications which require control of speed, direction, and position of the Motorized Pulley belt or load



### Technical data

<b>Power supply</b>	$V_{dd} = 5\text{ V} \pm 5\%$
<b>Power consumption</b>	35 mA
<b>Output signals</b>	A, B, Z, A-, B-, Z- (RS422A)
<b>Max cable length</b>	16.40 ft
<b>Operating temperature</b>	-13 °F to +185 °F
<b>Ext. operat. temp.</b>	-40 °F to +257 °F (IP64)
<b>Edge separation</b>	1 $\mu\text{s}$ minimum

### The INC resolution

The INC resolution (number of increments per pulley revolution) depends on encoder type and can be calculated as follows:

$$\text{INC} = \text{Z} \times \text{i}$$

**i** Gear ratio of the Motorized Pulley (except for model 80LS). Gear ratio of 80LS equals one because encoder is mounted on end housing and not on motor rotor.

**Z** Number of encoder increments per rotor revolution

### Product range

Motorized Pulley	Encoder type	Rated voltage VDC	Max. operating current mA	Increments per rotor revolution p	Max.cable length ft	Precision °
80LS - 165LS	RS422A 5V	5	50	1024	16.4	0.5

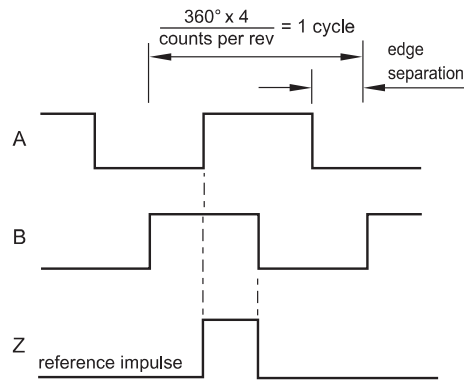
**Note:** Other resolutions are available on request.



# Encoders: RLS Magnetic Shaft Encoder

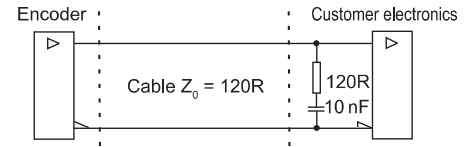
## Timing diagram

(complementary signals not shown)



B leads A for clockwise rotation of magnetic actuator.

## Recommended signal termination



## Data sheet

RM44D01\_04

RM44IC - Incremental, RS422A, 5V

Resolution options (increments per rev)	Maximum speed (rpm)	Accuracy	Hysteresis
1024	20000	±0.5°	0.18°
4096	5000	±0.5°	0.18°

\* Worst case within operational parameters including magnet position and temperature.

## Connections

Pin Nr.	Function	Wire color
1	Shield	-
2	Z	White
3	B	Green
4	A	Grey
5	V <sub>dd</sub>	Red
6	Z-	Brown
7	B-	Yellow
8	A-	Pink
9	GND	Blue