

## Serial output (Variant E) - SSI

The absolute angle information derived by the encoder is converted into serial information by an internal parallel-serial converter and then transmitted to a receiving

electronic circuit in synchronism with a clock. Important advantages are: Low number of data lines and high reliability.

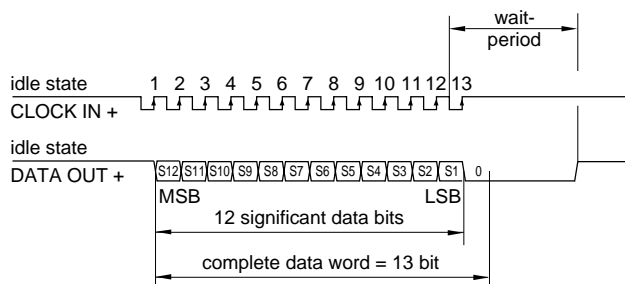


### Electrical data

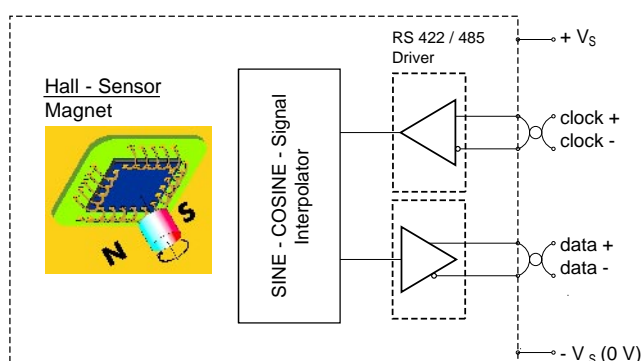
- Output code: Natural binary
- Resolution (standard): 4096 positions / 360° (12 Bits) CW \*
- Code sense: CW \*
- Measuring position deviation:
  - ± 1 LSB (RBW 22)
  - ± 1.5 LSB (RBM 22)
- Repeatability:
  - ≤ 0.1 LSB (RBW 22)
  - ≤ 0.15 LSB (RBM 22)
- Serial output SSI: Differential data output to RS 422/485
- Clock SSI: Differential data input to RS 422/485
- Monoflop time: 25 ± 10 µs
- Clock frequency: ≤ 1 MHz
- Operating voltage: + 5 ± 0.25 VDC
- Operating current: 50 mA typ. / 60 mA max.

\* Increasing signal when turning clockwise with view on flange side.

### Interface profile SSI - 12 Bits / natural binary

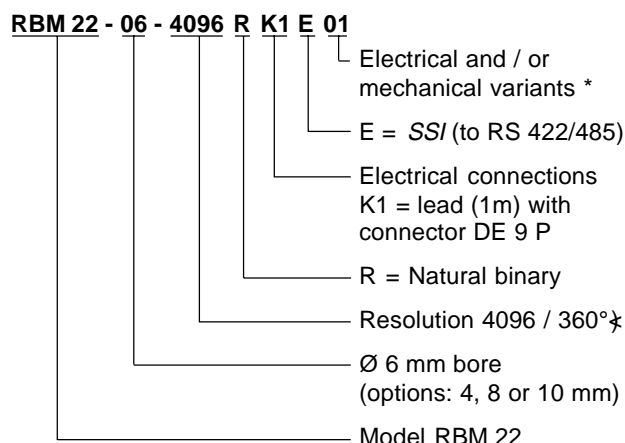


### Block diagram



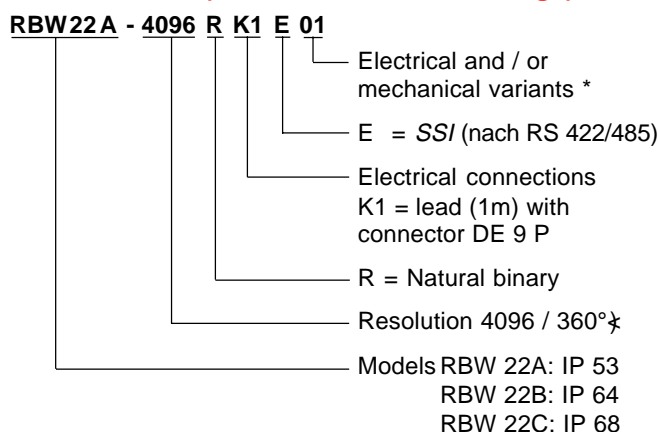
### Order code format

#### Model RBM 22 (with external magnetic actuator)



### Order code format

#### Model RBW 22 (with shaft and ball bearings)



\* The basic versions in accordance with the data sheet bear the code number 01. Variations of the basic version are indicated by a consecutive number and are documented in our works.

Counter plugs to be ordered separately.

Mechanical data, environmental data, dimensions and accessories to data sheet R 11367 (page 2 and 7).



## Incremental output

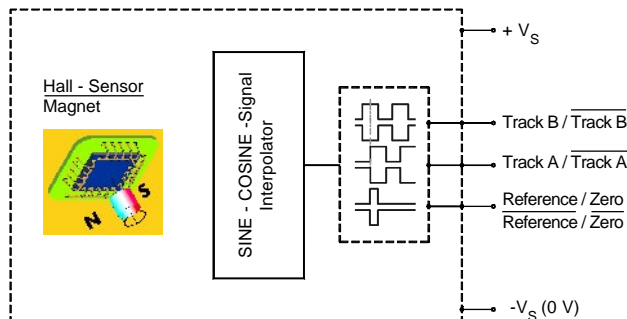
### Electrical data

- Counts per turn: 1024 max. (see table)
- Outputs: Channels A, B, zero and inversions
- Signal shape: Square
- Output frequency: 200 kHz max.
- Incremental output: To RS 422/485
- Phase shift A to B:  $90^\circ \pm 25^\circ$
- Pulse rate: 1 : 1  $\pm 15^\circ$
- Signal level:
  - $U_L(I_{sink} = 20 \text{ mA})$  0.3 V typ. / 0.5 Vmax.
  - $U_H(I_{source} = -20 \text{ mA})$  2.5 V min. / 2.8 V typ.
- Operating voltage:  $+5 \pm 0,25 \text{ VDC}$
- Operating current: 50 mA typ. / 60 mA max.
- Max. Cablelength: 50 m

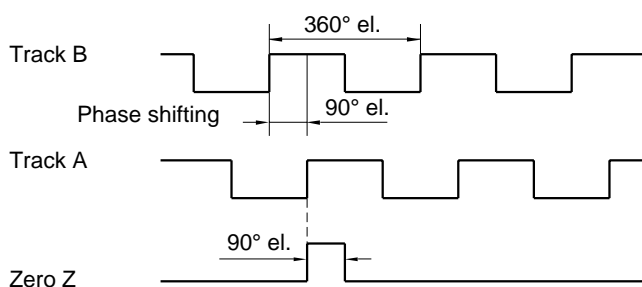
### Number of counts per turn

1	10	32	80	200	500
2	16	40	100	250	512
4	20	50	125	256	<b>1024</b>
8	25	64	128	400	

### Block diagram

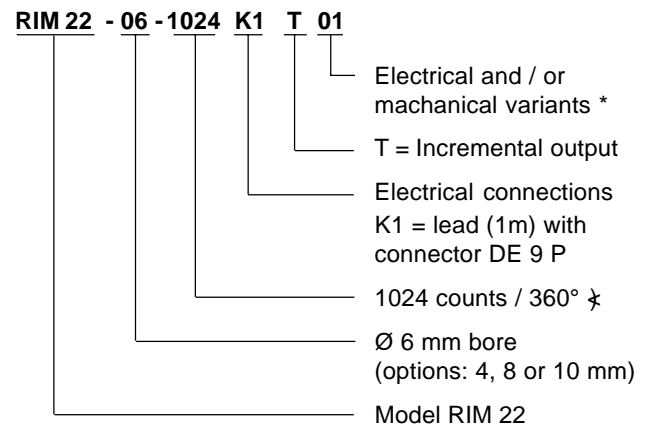


### Signal output when turning CW (view on shaft)



### Order code format

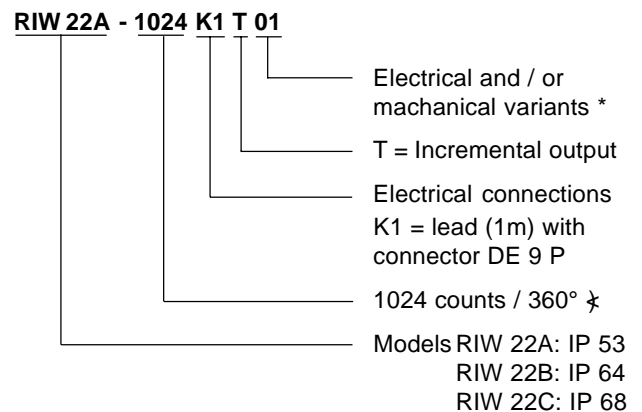
#### Model RIM 22 (with external magnetic actuator)



**Please note:** Standard magnetic actuators have an internal bore to accept shafts of 6 mm dia. Actuators with 4, 8 or 10 mm dia must be ordered **separately**, e.g. RBM-N08, for quantities up to 24 pieces. For larger quantities such actuators will become part of the standard item as per the order code, e.g. RAM 22 - 08 - 360 K1 W C01.

### Order code format

#### Model RIW 22 (with shaft and ball bearings)



\* The basic versions in accordance with the data sheet bear the code number 01. Variations of the basic version are indicated by a consecutive number and are documented in our works.

**Counter plugs to be ordered separately.**

**Mechanical data, environmental data, dimensions and accessories to data sheet R 11367 (page 2 and 7).**