



## Rotary Encoders

**R35i**  
**RCML15**

# RENCO R35i and RCML15 Rotary Encoders

The **RENCO R35i** is an incremental rotary encoder without integral bearing and with optical scanning. Its special properties are its **compact design** with 35 mm outside diameter and only 14 mm height as well as its **easy, self-centering mounting** thanks to a patented slide lock. With its OPTO-ASIC technology, the RENCO R35i offers **the greatest possible functionality with the smallest possible dimensions.**

The **RCML15 rotary encoder** with a height of only **8.9 mm** offers an alternative to the R35i with a very low mounting profile.

Both encoders are available with output signals for controlling motors with block commutation.



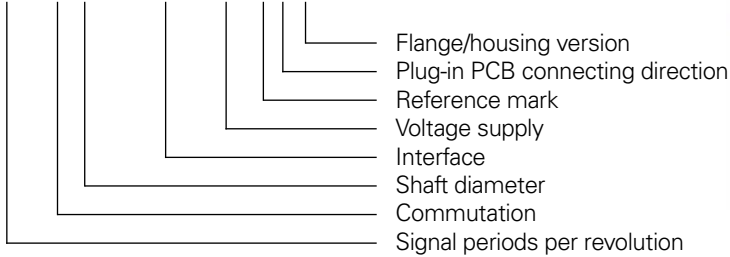
*This brochure supersedes all previous editions, which thereby become invalid. The basis for ordering from HEIDENHAIN is always the edition of this brochure valid when the contract is made.*

*Standards (ISO, EN, etc.) apply only where explicitly stated in the brochure.*

# Selection guide for R35i

## Order key

R35i-10000/4-6mm-LD/LD-5/0-1-R-C



**Note:** Special versions are identified with an **-S** at the end of the ordering key. These encoders are configured for customer-specific applications, and are to be used only after consultation with your distributor. For special versions, the data in the specific documentation apply, not those in the catalog!

## Selection table

<b>Signal periods per revolution</b>	100, 200, 250, 256, 400, 500, 512, 625, 800, 1000, 1024, 1250, 2000, 2048, 2500, 4000, 4096, 5000, 8000, 8192, 10000
<b>Commutation</b>	0 Without commutation 2, 3, 4 Number of commutation signal periods per revolution (= number of pairs of poles)
<b>Shaft diameter</b>	Metric 4 mm, 5 mm, 6 mm, 8 mm Inch 1/8, 1/8+, 3/16, 3/16+, 1/4, 1/4+, 5/16, 5/16+, 3/8, 3/8+
<b>Interface</b>	LD Square-wave signals with differential line driver as per RS 422 PP Square-wave signals with push-pull single-ended driver output
<b>Voltage supply</b>	5/0 +5 V ±5 %
<b>Reference mark</b>	1 <i>Width: 90° ±45° elec. Position: U<sub>a1</sub> High and U<sub>a2</sub> High</i> 6 <i>Width: 90° ±45° elec. Position: U<sub>a1</sub> Low and U<sub>a2</sub> Low</i> 7 <i>Width: 270° ±45° elec. Position: U<sub>a1</sub> High and U<sub>a2</sub> High</i> 8 <i>Width: 270° ±45° elec. Position: U<sub>a1</sub> Low and U<sub>a2</sub> Low</i>
<b>PCB connector</b>	R Radial A Axial
<b>Flange and housing versions</b>	C, SC* Flange with Ø 32.5 mm mounting screw circle, closed housing H, SH* Flange with Ø 32.5 mm mounting screw circle, housing with central hole C4, SC4* Flange with Ø 46.0 mm mounting screw circle, closed housing H4, SH4* Flange with Ø 46.0 mm mounting screw circle, housing with central hole CR, SCR* Synchro flange resolver size15, closed housing HR, SHR* Synchro flange resolver size15, housing with central hole

\* Housing with connections for strain relief on encoder cable

Combination possibilities for interface and voltage supply

**Without commutation**

Interface	Voltage supply
LD/0	5/0
PP/0	5/0

**With commutation**

Interface	Voltage supply
LD/LD	5/0
LD/PP	5/0
PP/PP	5/0

**Packaging unit**

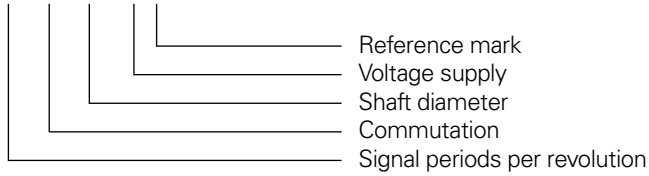
The **R35i** rotary encoder is available only in a package size with **10 units**. Rotary encoder housing and mounting material (flange mounting screws and offset screwdriver for shaft fastening) are included in the packaging.

ID number	For ordering key, see <i>Selection cable</i>
<b>788619-xx</b>	<i>Signal periods: 250, 256, 500, 512, 1 000, 1024, 2000, 2048, 4000, 4096, 8000, 8192</i> <i>Flange and housing versions: C, SC, H, SH</i>
<b>764590-xx</b>	<i>Signal periods: 100, 200, 400, 625, 800, 1250, 2500, 5000, 10000</i> <i>Flange and housing versions: C, SC, H, SH</i>
<b>725894-xx</b>	<i>Signal periods: See Selection table</i> <i>Flange and housing versions: C4, SC4, H4, SH4, CR, SCR, HR, SHR</i>

# Selection guide for RCML15

## Order key

RCML15-2048/3-6mm-5-1



**Note:** Special versions are identified with an **-S** at the end of the ordering key. These encoders are configured for customer-specific applications. To be used only after consultation with your distributor. *For special versions, the data in the specific documentation apply, not those in the catalog!*

## Selection table

<b>Signal periods per revolution</b>	100, 200, 250, 256, 400, 500, 512, 625, 800, 1000, 1024, 1250, 2000, 2048, 2500, 4000, 4096, 5000		
<b>Commutation</b>	0 2, 3, 4	Without commutation Number of commutation signal periods per revolution (= number of pairs of poles)	
<b>Shaft diameter</b>	Metric Inch	5 mm, 6 mm, 8 mm 1/8+, 3/16, 3/16+, 1/4, 1/4+, 5/16, 3/8, 3/8+	
<b>Voltage supply</b>	5	+5V ±5 %	
<b>Reference mark</b>	1 6 7 8	Width: 90° ±45° elec. Width: 90° ±45° elec. Width: 270° ±45° elec. Width: 270° ±45° elec.	Position: U <sub>a1</sub> High and U <sub>a2</sub> High Position: U <sub>a1</sub> Low and U <sub>a2</sub> Low Position: U <sub>a1</sub> High and U <sub>a2</sub> High Position: U <sub>a1</sub> Low and U <sub>a2</sub> Low

**Packaging unit**

The **RCML15** rotary encoder is available only in a package size with **15 units**. The mounting material (flange mounting screws and offset screwdriver for shaft fastening) are included in the packaging.

<b>ID number</b>	For ordering key, see <i>Selection cable</i>
<b>841174-xx</b>	+5 V power supply <i>Signal periods:</i> 250, 256, 500, 512, 1000, 1024, 2000, 2048, 4000, 4096
<b>886065-xx</b>	+5 V power supply <i>Signal periods:</i> 100, 200, 400, 625, 800, 1250, 2500, 5000