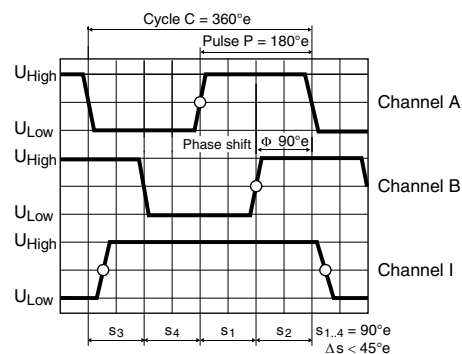


Encoder MR Type M, 32 CPT, 2/3 Channels



Direction of rotation cw (definition cw p. 60)

- Stock program
- Standard program
- Special program (on request)

Part Numbers

201935 201938

Type

Counts per turn	32	32
Number of channels	2	3
Max. operating frequency (kHz)	8	8
Max. speed (rpm)	15 000	15 000



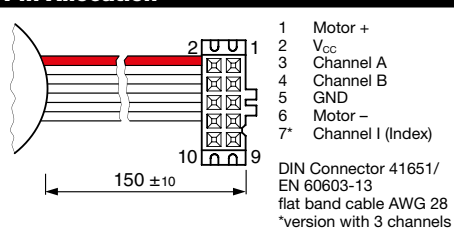
maxon Modular System

+ Motor	Page	+ Gearhead	Page	Ø Enc [mm]	Overall length [mm] / • see Gearhead	
RE 16, 2 W	120			16	28.0	28.0
RE 16, 2 W	120	GP 16, 0.1 - 0.6 Nm	320/321	16	•	•
RE 16, 2 W	120	GP 16 S	361/362	16	•	•
RE 16, 3.2 W	122			16	45.4	45.4
RE 16, 3.2 W	122	GP 16, 0.1 - 0.6 Nm	320/321	16	•	•
RE 16, 3.2 W	122	GP 16 S	361/362	16	•	•
RE 16, 4.5 W	124			16	48.4	48.4
RE 16, 4.5 W	124	GP 16, 0.1 - 0.6 Nm	320/321	16	•	•
RE 16, 4.5 W	124	GP 16 S	361/362	16	•	•
A-max 16	140/142			16	30.4	30.4
A-max 16	140/142	GS 16, 0.01 - 0.1 Nm	316-319	16	•	•
A-max 16	140/142	GP 16, 0.1 - 0.3 Nm	320	16	•	•
A-max 16	140/142	GP 16 S	361/362	16	•	•
A-max 19, 1.5 W	144			19	34.0	34.0
A-max 19, 1.5 W	144	GP 19, 0.1 - 0.3 Nm	322	19	•	•
A-max 19, 1.5 W	144	GP 22, 0.5 - 2.0 Nm	327	19	•	•
A-max 19, 1.5 W	144	GS 24, 0.1 Nm	331	19	•	•
A-max 19, 1.5 W	144	GP 22 S	364/365	19	•	•
A-max 19, 2.5 W	146			19	35.8	35.8
A-max 19, 2.5 W	146	GP 19, 0.1 - 0.3 Nm	322	19	•	•
A-max 19, 2.5 W	146	GP 22, 0.5 - 2.0 Nm	327	19	•	•
A-max 19, 2.5 W	146	GS 24, 0.1 Nm	331	19	•	•
A-max 19, 2.5 W	146	GP 22 S	364/365	19	•	•
A-max 22	148/150			22	36.9	36.9
A-max 22	148/150	GP 22, 0.1 - 0.6 Nm	323/324	22	•	•
A-max 22	148/150	GP 22, 0.5 - 2.0 Nm	323-327	22	•	•
A-max 22	148/150	GS 24, 0.1 Nm	331	22	•	•
A-max 22	148/150	GP 22 S	364/365	22	•	•

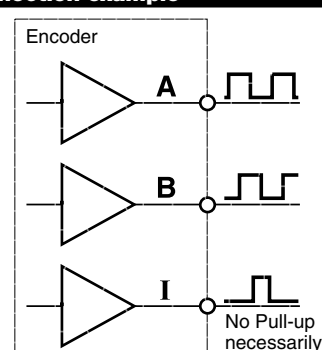
Technical Data

Supply voltage V_{CC}	2.7–5.5 V
Typical current draw 2 channel	6 mA
Typical current draw 3 channel	9 mA
Output signal $V_{CC} = 5$ VDC	TTL compatible
Phase shift Φ	$90^\circ \pm 45^\circ$
Operating temperature range	$-25 \dots +85^\circ \text{C}$
Moment of inertia of code wheel	$\leq 0.09 \text{ gcm}^2$
Output current per channel	max. 5 mA

Pin Allocation

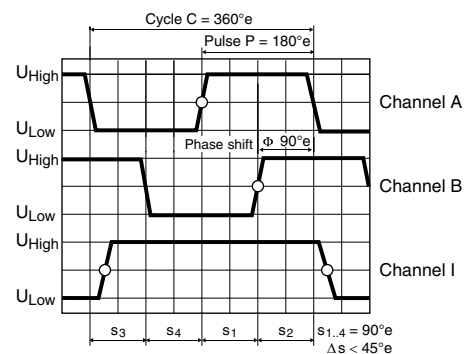


Connection example



The index signal I is not synchronized with channel A or B. The length of the index signal can last more than one cycle.

maxon sensor



-  Stock program
- Standard program
-  Special program (on request)

201935	201938
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Counts per turn	32	32			
Number of channels	2	3			
Max. operating frequency (kHz)	8	8			
Max. speed (rpm)	15 000	15 000			

[illegible]

Supply voltage V_{CC}	2.7–5.5 V
Typical current draw 2 channel	6 mA
Typical current draw 3 channel	9 mA
Output signal $V_{CC} = 5$ VDC	TTL compatible
Phase shift Φ	$90^\circ e \pm 45^\circ e$
Operating temperature range	-25...+85 °C
Moment of inertia of code wheel	≤ 0.09 gcm ²
Output current per channel	max. 5 mA

1 Motor +
2 V_{CC}
3 Channel A
4 Channel B
5 GND
6 Motor -
7* Channel I (Index)

10 9 8 7 6

150 ± 10

DIN Connector 41651/
EN 60603-13
flat band cable AWG 28
*version with 3 channels

Encoder

A

B

I

No Pull-up necessarily

maxon sensor 401