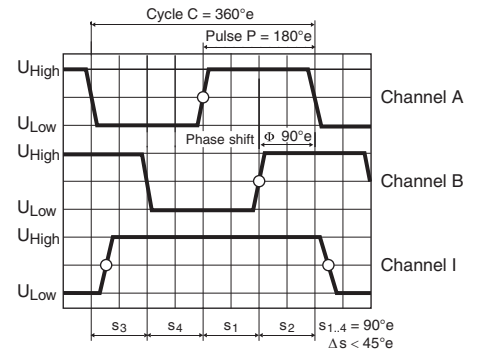
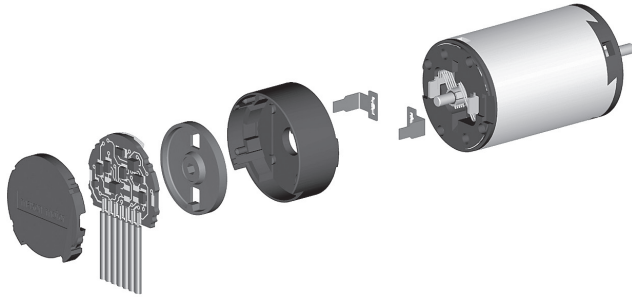


Encoder MR Type M, 32 CPT, 2/3 Channels



Direction of rotation cw (definition cw p. 150)

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

Part Numbers

201935	201938
--------	--------

Type	201935	201938
Counts per turn	32	32
Number of channels	2	3
Max. operating frequency (kHz)	8	8
Max. speed (rpm)	15000	15000



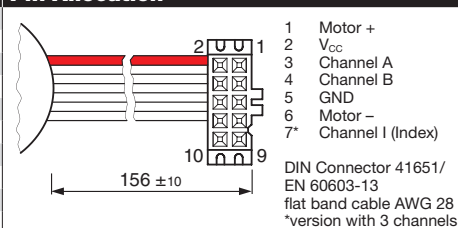
maxon Modular System

+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead
RE 16, 2 W	174					28.0 / 28.0
RE 16, 2 W	174	GP 16, 0.1 - 0.6 Nm	323/324			● / ●
RE 16, 2 W	174	GP 16 S	365/366			● / ●
RE 16, 3.2 W	176					45.4 / 45.4
RE 16, 3.2 W	176	GP 16, 0.1 - 0.6 Nm	323/324			● / ●
RE 16, 3.2 W	176	GP 16 S	365/366			● / ●
RE 16, 4.5 W	178					48.4 / 48.4
RE 16, 4.5 W	178	GP 16, 0.1 - 0.6 Nm	323/324			● / ●
RE 16, 4.5 W	178	GP 16 S	365/366			● / ●
A-max 16	194/196					30.4 / 30.4
A-max 16	194/196	GS 16, 0.01 - 0.1 Nm	319-322			● / ●
A-max 16	194/196	GP 16, 0.1 - 0.3 Nm	323			● / ●
A-max 16	194/196	GP 16 S	365/366			● / ●
A-max 19, 1.5 W	198					34.0 / 34.0
A-max 19, 1.5 W	198	GP 19, 0.1 - 0.3 Nm	325			● / ●
A-max 19, 1.5 W	198	GP 22, 0.5 - 2.0 Nm	331			● / ●
A-max 19, 1.5 W	198	GS 24, 0.1 Nm	335			● / ●
A-max 19, 1.5 W	198	GP 22 S	368/369			● / ●
A-max 19, 2.5 W	200					35.8 / 35.8
A-max 19, 2.5 W	200	GP 19, 0.1 - 0.3 Nm	325			● / ●
A-max 19, 2.5 W	200	GS 20, 0.06 - 0.25 Nm	326			● / ●
A-max 19, 2.5 W	200	GP 22, 0.5 - 2.0 Nm	331			● / ●
A-max 19, 2.5 W	200	GS 24, 0.1 Nm	335			● / ●
A-max 19, 2.5 W	200	GP 22 S	368/369			● / ●
A-max 22	202/204					36.9 / 36.9
A-max 22	202/204	GP 22, 0.1 - 0.6 Nm	327/328			● / ●
A-max 22	202/204	GP 22, 0.5 - 2.0 Nm	327-331			● / ●
A-max 22	202/204	GS 24, 0.1 Nm	335			● / ●
A-max 22	202/204	GP 22 S	368/369			● / ●

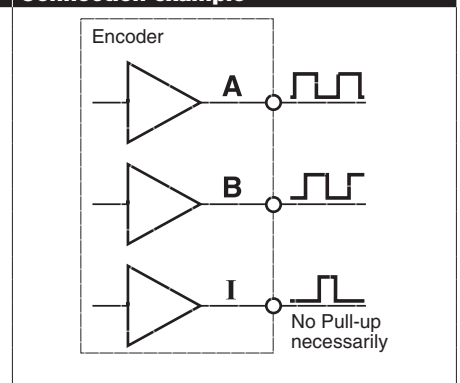
Technical Data

Supply voltage V_{CC}	2.7–5.5 V
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

Pin Allocation

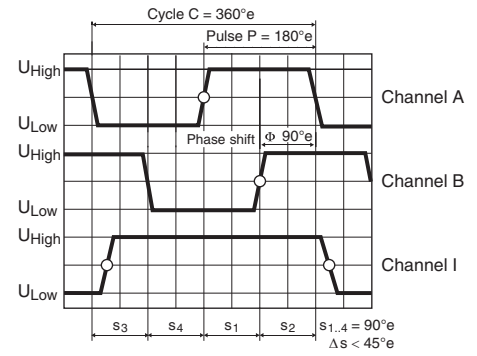
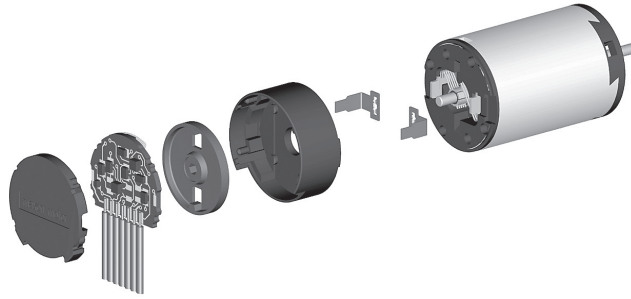


Connection example



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

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



Direction of rotation cw (definition cw p. 150)

maxon sensor

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

Part Numbers

201935	201938
--------	--------

Type	201935	201938
Counts per turn	32	32
Number of channels	2	3
Max. operating frequency (kHz)	8	8
Max. speed (rpm)	15000	15000



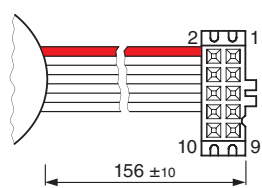
maxon Modular System

+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead
RE-max 21, 3.5 W	224					34.0 / 34.0
RE-max 21, 3.5 W	224	GP 22, 0.5 - 2.0 Nm	329/331			● / ●
RE-max 21, 3.5 W	224	GS 38, 0.1 - 0.6 Nm	348			● / ●
RE-max 21, 3.5 W	224	GP 22 S	368/369			● / ●
RE-max 21, 6 W	226					35.8 / 35.8
RE-max 21, 6 W	226	GP 22, 0.5 - 2.0 Nm	329/331			● / ●
RE-max 21, 6 W	226	GS 38, 0.1 - 0.6 Nm	348			● / ●
RE-max 21, 6 W	226	GP 22 S	368/369			● / ●

Technical Data

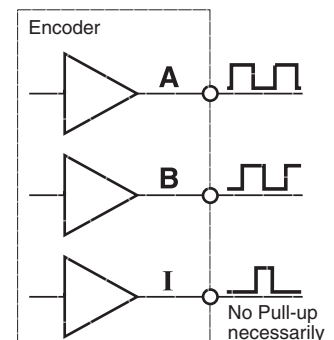
Supply voltage V_{CC}	2.7 - 5.5 V
Output signal $V_{CC} = 5$ VDC	TTL compatible
Phase shift Φ	$90^\circ \pm 45^\circ$
Operating temperature range	-25...+85 °C
Moment of inertia of code wheel	≤ 0.09 gcm ²
Output current per channel	max. 5 mA

Pin Allocation



- 1 Motor +
 - 2 V_{CC}
 - 3 Channel A
 - 4 Channel B
 - 5 GND
 - 6 Motor -
 - 7* Channel I (Index)
- DIN Connector 41651/
EN 60603-13
flat band cable AWG 28
*version with 3 channels

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.