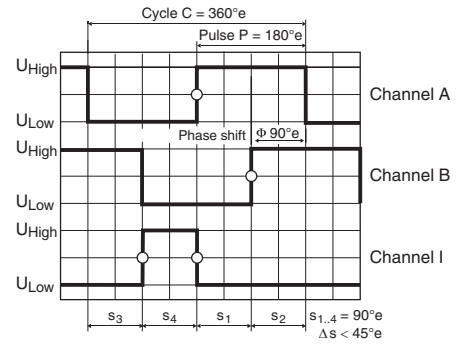


Encoder MR Type L, 256 - 1024 CPT, 3 Channels, with Line Driver



Direction of rotation cw (definition cw p. 48)

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

Order Number

225783 228452 225785 228456 225787

Type	225783	228452	225785	228456	225787
Counts per turn	256	500	512	1000	1024
Number of channels	3	3	3	3	3
Max. operating frequency (kHz)	80	200	160	200	320
Max. speed (rpm)	18750	24000	18750	12000	18750



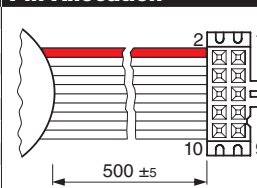
maxon Modular System

+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / • see Gearhead				
RE 30, 60 W	80					79.4	79.4	79.4	79.4	79.4
RE 30, 60 W	80	GP 32, 0.75 - 4.5 Nm	229			•	•	•	•	•
RE 30, 60 W	80	GP 32, 0.75 - 6.0 Nm	231/232			•	•	•	•	•
RE 30, 60 W	80	GP 32 S	249-251			•	•	•	•	•
RE 35, 90 W	81					82.4	82.4	82.4	82.4	82.4
RE 35, 90 W	81	GP 32, 0.75 - 4.5 Nm	229			•	•	•	•	•
RE 35, 90 W	81	GP 32, 0.75 - 6.0 Nm	231/232			•	•	•	•	•
RE 35, 90 W	81	GP 32, 4.0 - 8.0 Nm	234			•	•	•	•	•
RE 35, 90 W	81	GP 42, 3 - 15 Nm	237			•	•	•	•	•
RE 35, 90 W	81	GP 32 S	249-251			•	•	•	•	•
RE 40, 150 W	82					82.4	82.4	82.4	82.4	82.4
RE 40, 150 W	82	GP 42, 3 - 15 Nm	237			•	•	•	•	•
RE 40, 150 W	82	GP 52, 4 - 30 Nm	240			•	•	•	•	•
A-max 32	110/112					72.7	72.7	72.7	72.7	72.7
A-max 32	110/112	GP 32, 0.75 - 6.0 Nm	231/233			•	•	•	•	•
A-max 32	110/112	GS 38, 0.1 - 0.6 Nm	236			•	•	•	•	•
A-max 32	110/112	GP 32 S	249-251			•	•	•	•	•
EC-max 40, 70 W	168					73.9	73.9	73.9	73.9	73.9
EC-max 40, 70 W	168	GP 42, 3 - 15 Nm	238			•	•	•	•	•
EC-max 40, 120 W	169					103.9	103.9	103.9	103.9	103.9
EC-max 40, 120 W	169	GP 52, 4 - 30 Nm	241			•	•	•	•	•
EC-i 40, 50 W	190					42.0	42.0	42.0	42.0	42.0
EC-i 40, 50 W	190	GP 32, 1 - 6 Nm	233			•	•	•	•	•
EC-i 40, 50 W	190	GP 32 S	249-251			•	•	•	•	•
EC-i 40, 70 W	191					52.0	52.0	52.0	52.0	52.0
EC-i 40, 70 W	191	GP 32, 1 - 6 Nm	233			•	•	•	•	•
EC-i 40, 70 W	191	GP 32 S	249-251			•	•	•	•	•

Technical Data

Supply voltage V_{CC}	$5V \pm 5\%$
Output signal	TTL compatible
Phase shift Φ	$90^\circ e \pm 45^\circ e$
Index pulse width	$90^\circ e \pm 45^\circ e$
Operating temperature range	$-25 \dots +85^\circ C$
Moment of inertia of code wheel	$\leq 1.7 \text{ gcm}^2$
Output current per channel	max. 5 mA

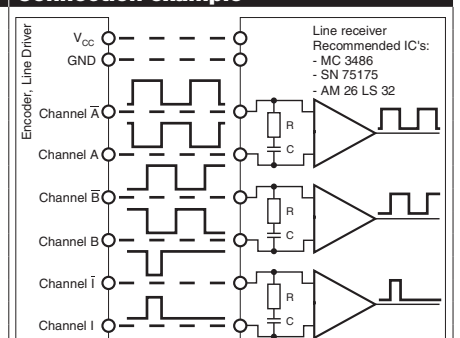
Pin Allocation



- 1 N.C.
- 2 V_{CC}
- 3 GND
- 4 N.C.
- 5 Channel A
- 6 Channel A
- 7 Channel B
- 8 Channel B
- 9 Channel I (Index)
- 10 Channel I (Index)

DIN Connector 41651
flat band cable AWG 28

Connection example



Terminal resistance $R = \text{typical } 120 \Omega$
Capacitor $C \geq 0.1 \text{ nF}$ per m line length