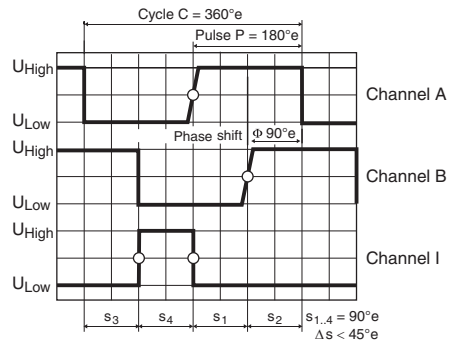
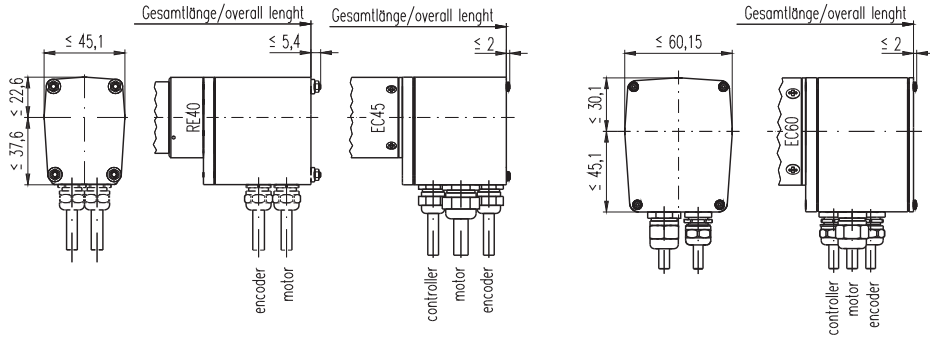


# Encoder HEDL 9140 500 CPT, 3 Channels, with Line Driver RS 422

maxon sensor



Direction of rotation cw (definition cw p. 48)

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

**Order Number**  
137959

Type	
Counts per turn	500
Number of channels	3
Max. operating frequency (kHz)	100
Max. speed (rpm)	12000

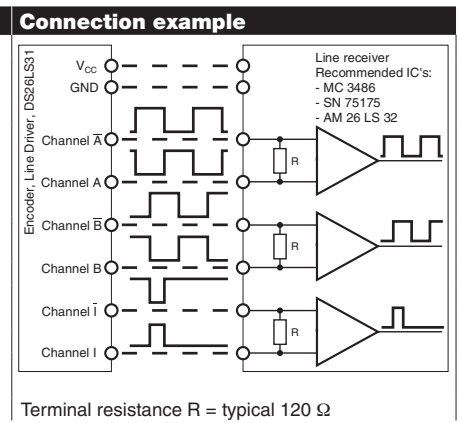


maxon Modular System						
+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead
RE 40, 150 W	82					125.1
RE 40, 150 W	82	GP 42, 3 - 15 Nm	237			●
RE 40, 150 W	82	GP 52, 4 - 30 Nm	240			●
RE 40, 150 W	82			AB 28	319	135.6
RE 40, 150 W	82	GP 42, 3 - 15 Nm	237	AB 28	319	●
RE 40, 150 W	82	GP 52, 4 - 30 Nm	240	AB 28	319	●
EC 45, 150 W	156					126.8
EC 45, 150 W	156	GP 42, 3 - 15 Nm	237			●
EC 45, 150 W	156	GP 52, 4 - 30 Nm	240			●
EC 45, 150 W	156			AB 28	319	135.6
EC 45, 150 W	156	GP 42, 3 - 15 Nm	237	AB 28	319	●
EC 45, 150 W	156	GP 52, 4 - 30 Nm	240	AB 28	319	●
EC 45, 250 W	157					159.6
EC 45, 250 W	157	GP 42, 3 - 15 Nm	238			●
EC 45, 250 W	157	GP 52, 4 - 30 Nm	240			●
EC 45, 250 W	157	GP 62, 8 - 50 Nm	242			●
EC 45, 250 W	157			AB 28	319	168.4
EC 45, 250 W	157	GP 42, 3 - 15 Nm	238	AB 28	319	●
EC 45, 250 W	157	GP 52, 4 - 30 Nm	240	AB 28	319	●
EC 45, 250 W	157	GP 62, 8 - 50 Nm	242	AB 28	319	●
EC 60, 400 W	158					177.3
EC 60, 400 W	158	GP 81, 20 - 120 Nm	243			●
EC 60, 400 W	158			AB 41	321	214.9
EC 60, 400 W	158	GP 81, 20 - 120 Nm	243	AB 41	321	●

Technical Data	
Supply voltage $V_{CC}$	5 V $\pm$ 10%
Output signal driver used:	EIA Standard RS 422 DS26LS31
Phase shift $\Phi$	90°e $\pm$ 45°e
Signal rise time (typically, at $C_L = 25$ pF, $R_L = 11$ k $\Omega$ , 25°C)	180 ns
Signal fall time (typically, at $C_L = 25$ pF, $R_L = 11$ k $\Omega$ , 25°C)	40 ns
Index pulse width	90°e
Operating temperature range	-40 ... +85°C
Moment of inertia of code wheel	$\leq 0.6$ gcm <sup>2</sup>
Max. angular acceleration	250 000 rad s <sup>-2</sup>
Output current per channel	min. -20 mA, max. 20 mA

Pin Allocation	
Cable white	= 2 $V_{CC}$ 5 VDC
Cable brown	= 3 GND
Cable green	= 5 Channel A
Cable yellow	= 6 Channel A
Cable yellow	= 7 Channel B
Cable pink	= 8 Channel B
Cable blue	= 9 Channel I (Index)
Cable red	= 10 Channel I (Index)

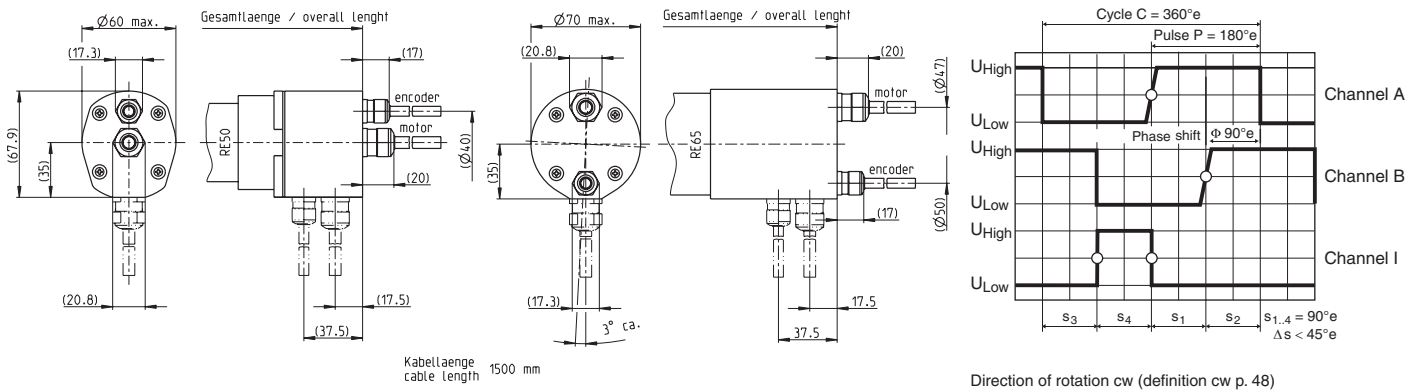
Cable size 8 x 0.25 mm<sup>2</sup>



The index signal I is synchronised with channel A or B.

# Encoder HEDL 9140 500 CPT, 3 Channels, with Line Driver RS 422

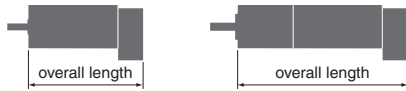
maxon sensor



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

Order Number	
cable outlet axial	<b>386051</b> <b>386001</b>
cable outlet radial	<b>386053</b> <b>386002</b>

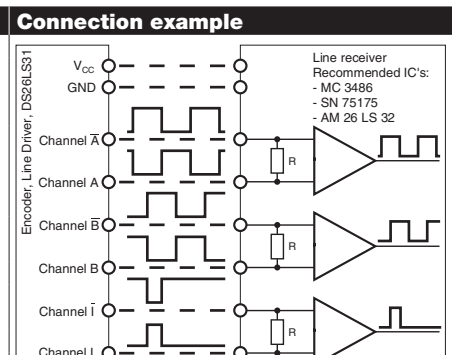
Type		
Counts per turn	500	500
Number of channels	3	3
Max. operating frequency (kHz)	100	100
Max. speed (rpm)	12000	12000



maxon Modular System						
+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead
RE 50, 200 W	83					170.4
RE 50, 200 W	83	GP 52, 4 - 30 Nm	241			●
RE 50, 200 W	83	GP 62, 8 - 50 Nm	242			●
RE 50, 200 W	83			AB 44	322	183.4
RE 50, 200 W	83	GP 52, 4 - 30 Nm	241	AB 44	322	●
RE 50, 200 W	83	GP 62, 8 - 50 Nm	242	AB 44	322	●
RE 65, 250 W	84					187.5
RE 65, 250 W	84	GP 81, 20 - 120 Nm	243			●
RE 65, 250 W	84			AB 44	322	205.5
RE 65, 250 W	84	GP 81, 20 - 120 Nm	243	AB 44	322	●

Technical Data	
Supply voltage $V_{CC}$	$5 V \pm 10\%$
Output signal driver used:	EIA Standard RS 422 DS26LS31
Phase shift $\Phi$	$90^\circ e \pm 45^\circ e$
Signal rise time (typically, at $C_L = 25$ pF, $R_L = 11$ k $\Omega$ , 25°C)	180 ns
Signal fall time (typically, at $C_L = 25$ pF, $R_L = 11$ k $\Omega$ , 25°C)	40 ns
Index pulse width	$90^\circ e$
Operating temperature range	-40 ... +85°C
Moment of inertia of code wheel	$\leq 0.6$ gcm <sup>2</sup>
Max. angular acceleration	250000 rad s <sup>-2</sup>
Output current per channel	min. -20 mA, max. 20 mA
Protection to	IP54

Pin Allocation	
<b>Encoder</b>	
Cable white	= $V_{CC}$ 5 VDC
Cable brown	= GND
Cable green	= Channel $\bar{A}$
Cable yellow	= Channel A
Cable yellow	= Channel $\bar{B}$
Cable pink	= Channel B
Cable blue	= Channel I (Index)
Cable red	= Channel I (Index)
Cable size	8 x 0.25 mm <sup>2</sup>
<b>Motor</b>	
Cable white	= Motor +
Cable brown	= Motor -
Cable size	2 x 1.0 mm <sup>2</sup>



The index signal I is synchronised with channel A or B.

Terminal resistance R = typical 120  $\Omega$