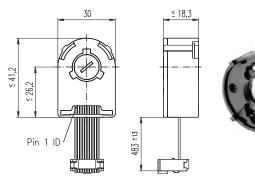
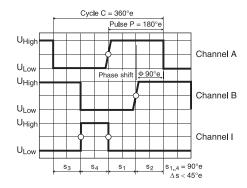
Encoder HEDL 5540, 500 CPT, 3 Channels, with Line Driver RS 422







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

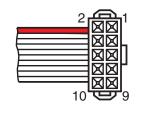
Counts per turn Number of channels Max. operating frequency (kHz)

Max. speed (rpm)

| Order Numl | ber | | |
|------------|--------|--------|--|
| 110512 | 110514 | 110516 | |
| | | | |
| 500 | 500 | 500 | |
| 3 | 3 | 3 | |
| 100 | 100 | 100 | |
| 12000 | 12000 | 12000 | |
| 0 | 4 | 6 | |

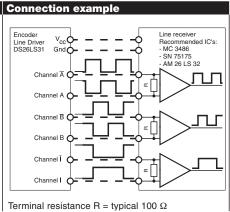
| Shaft diame | eter (mm) | | | | | 3 | 4 | 6 | |
|--------------|-----------|------------------------|---------|---------|------|------------------|----------------|--------|--|
| maxon Mod | ular Svs | stem | | | | | | | |
| + Motor | Page | + Gearhead | Page | + Brake | Page | Overall length [| mm] / • see Ge | arhead | |
| RE 25 | 77/79 | | | | | 75.3 | | | |
| RE 25 | 77/79 | GP 26 / GP 32 | 230/232 | | | • | | | |
| RE 25 | 77/79 | KD 32, 1.0 - 4.5 Nm | 238 | | | • | | | |
| RE 25 | 77/79 | GP 32, 0.75 - 6.0 Nm | 233/235 | | | • | | | |
| RE 25 | 77/79 | GP 32 S | 251-253 | | | • | | | |
| RE 25, 20 W | 79 | | | AB 28 | 316 | 105.7 | | | |
| RE 25, 20 W | 79 | GP 26 / GP 32 | 230/232 | AB 28 | 316 | • | | | |
| RE 25, 20 W | 79 | KD 32, 1.0 - 4.5 Nm | 238 | AB 28 | 316 | • | | | |
| RE 25, 20 W | 79 | GP 32, 0.75 - 6.0 Nm | 233/235 | AB 28 | 316 | • | | | |
| RE 25, 20 W | 79 | GP 32 S | 251-253 | AB 28 | 316 | • | | | |
| RE 35, 90 W | 81 | | | | | | 91.7 | | |
| RE 35, 90 W | 81 | GP 32, 0.75 - 4.5 Nm | 232 | | | | • | | |
| RE 35, 90 W | 81 | GP 32, 0.75 - 6.0 Nm | 234/235 | | | | • | | |
| RE 35, 90 W | 81 | GP 32, 4.0 - 8.0 Nm | 237 | | | | • | | |
| RE 35, 90 W | 81 | GP 42, 3.0 - 15 Nm | 240 | | | | • | | |
| RE 35, 90 W | 81 | GP 32 S | 251-253 | | | | • | | |
| RE 35, 90 W | 81 | | | AB 28 | 316 | 124.1 | | | |
| RE 35, 90 W | 81 | GP 32, 0.75 - 4.5 Nm | 232 | AB 28 | 316 | • | | | |
| RE 35, 90 W | 81 | GP 32, 0.75 - 6.0 Nm | 234/235 | AB 28 | 316 | • | | | |
| RE 35, 90 W | 81 | GP 42, 3.0 - 15 Nm | 240 | AB 28 | 316 | • | | | |
| RE 35, 90 W | 81 | GP 32 S | 251-253 | AB 28 | 316 | • | | | |
| RE 35, 90 W | 81 | GP 32, 4.0 - 8.0 Nm | 237 | AB 28 | 316 | • | | | |
| RE 40, 150 W | 82 | | | | | | 91.7 | | |
| RE 40, 150 W | 82 | GP 42, 3.0 - 15 Nm | 240 | | | | • | | |
| RE 40, 150 W | 82 | GP 52, 4.0 - 30 Nm | 243 | | | | • | | |
| RE 40, 150 W | 82 | | | AB 28 | 316 | 124.2 | | | |
| RE 40, 150 W | 82 | GP 42, 3.0 - 15 Nm | 240 | AB 28 | 316 | • | | | |
| RE 40, 150 W | 82 | GP 52, 4.0 - 30 Nm | 243 | AB 28 | 316 | • | | | |
| A-max 26 | 106-11 | 2 | | | | 63.5 | | | |
| A-max 26 | 106-11 | 2 GP 26, GS 30 | 230/231 | | | • | | | |
| A-max 26 | 106-11 | 2 GP 32, 0.4 - 2.0 Nm | 234 | | | • | | | |
| A-max 26 | 106-11 | 2 GP 32, 0.75 - 6.0 Nm | 233/236 | | | • | | | |
| A-max 26 | 106-11 | 2 GS 38, 0.1 - 0.6 Nm | 239 | | | • | | | |
| A-max 26 | 106-11 | 2 GP 32 S | 251-253 | | | • | | | |
| A-max 32 | 114/11 | 6 | | | | | 82.3 | | |
| A-max 32 | 114/11 | 6 GP 32, 0.75 - 6.0 Nm | 234/236 | | | | • | | |
| A-max 32 | | 6 GS 38, 0.1 - 0.6 Nm | 239 | | | | • | | |
| A-max 32 | 114/11 | 6 GP 32 S | 251-253 | | | | • | | |
| | | | | | | | | | |

| Technical Data | | Pin Allocation |
|---|---------------------------------|----------------|
| Supply voltage | 5 V ± 10 % | |
| Output signal driver used: | EIA Standard RS 422 DS26LS31 | 2 |
| Phase shift Φ | 90°e ± 45°e | |
| Signal rise time (typically, at $C_L = 25$ pF, $R_L =$ Signal fall time | 2.7 kΩ, 25°C) 180 ns | |
| (typically, at $C_1 = 25 \text{ pF}$, $R_1 =$ | 2.7 kΩ. 25°C) 40 ns | |
| Index pulse width | 90°e | 10 |
| Operating temperature rang | -40 +100°Ce | '` |
| Moment of inertia of code wh | eel ≤ 0.6 gcm ² | |
| Max. angular acceleration | 250 000 rad s ⁻² | |
| Output current per channel | min20 mA, max. 20 mA | |
| Option 1000 | counts per turn, 2 channels | |
| | | |
| The index signal Lis synchror | nised with channel A or B | |



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

Pin type Berg 246770 flat band cable AWG 28

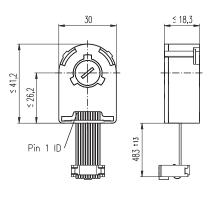


The index signal I is synchronised with channel A or B.

270 maxon sensor

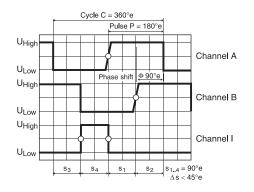
May 2009 edition / subject to change

Encoder HEDL 5540, 500 CPT, 3 Channels, with Line Driver RS 422



overall length





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

overall length

| Standard program Standard program | Order Numb | 110514 110516 110518 500 500 500 3 3 3 100 100 100 | | | |
|------------------------------------|------------|--|--------|--------|--|
| Special program (on request) | 110512 | 110514 | 110516 | 110518 | |
| Туре | | | | | |
| Counts per turn | 500 | 500 | 500 | 500 | |
| Number of channels | 3 | 3 | 3 | 3 | |
| Max. operating frequency (kHz) | 100 | 100 | 100 | 100 | |
| Max. speed (rpm) | 12000 | 12000 | 12000 | 12000 | |
| Shaft diameter (mm) | 3 | 4 | 6 | 8 | |



| maxon Modul | ar Sys | tem | | | | | | | | |
|--------------------|---------|----------------------|---------|---------|------|----------------|-----------------|---------|-------|--|
| + Motor | Page | + Gearhead | Page | + Brake | Page | Overall length | [mm] / • see Ge | earhead | | |
| RE 50, 150 W | 83 | | | | | | | | 128.7 | |
| RE 50, 150 W | 83 | GP 52, 4 - 30 Nm | 243 | | | | | | • | |
| RE 50, 150 W | 83 | GP 62, 8 - 50 Nm | 245 | | | | | | • | |
| RE 65, 250 W | 84 | | | | | | | | 157.3 | |
| RE 65, 250 W | 84 | GP 81, 20 - 120 Nm | 246 | | | | | | • | |
| EC 32, 80 W* | 156 | | | | | | 78.4 | | | |
| EC 32, 80 W* | 156 | GP 32, 0.75 - 4.5 Nm | 232 | | | | • | | | |
| EC 32, 80 W* | 156 | GP 32, 0.75 - 6.0 Nm | 234/236 | | | | • | | | |
| EC 32, 80 W* | 156 | GP 32 S | 251-253 | | | | • | | | |
| EC 40, 120 W* | 157 | | | | | | | 88.4 | | |
| C 40, 120 W* | 157 | GP 42, 3.0 - 15 Nm | 240 | | | | | • | | |
| C 40, 120 W* | 157 | GP 52, 4.0 - 30 Nm | 243 | | | | | • | | |
| C-max 30, 40 W | 170 | | | | | | 62.6 | | | |
| C-max 30, 40 W | 170 | GP 32, 1 - 6 Nm | 236 | | | | • | | | |
| C-max 30, 40 W | 170 | | | AB 20 | 314 | | 101.7 | | | |
| C-max 30, 40 W | 170 | GP 32, 1 - 6 Nm | 236 | AB 20 | 314 | | • | | | |
| C-max 30, 40 W | 170 | GP 32 S | | | | | • | | | |
| C-max 30, 40 W | 170 | GP 32, 4.0 - 8.0 Nm | 237 | | | | | | | |
| C-max 30, 60 W | 171 | | | | | | 84.6 | | | |
| C-max 30, 60 W | 171 | GP 32, 4.0 - 8.0 Nm | 237 | | | | | | | |
| C-max 30, 60 W | 171 | GP 42, 3 - 15 Nm | 241 | | | | • | | | |
| C-max 30, 60 W | 171 | | | AB 20 | 314 | | 123.7 | | | |
| C-max 30, 60 W | 171 | GP 42, 3 - 15 Nm | 241 | AB 20 | 314 | | • | | | |
| C-max 40, 70 W | 172 | | | | | | | 81.4 | | |
| C-max 40, 70 W | 172 | GP 42, 3 - 15 Nm | 241 | | | | | • | | |
| C-max 40, 70 W | 172 | | | AB 28 | 315 | | | 121.4 | | |
| C-max 40, 70 W | 172 | GP 42, 3 - 15 Nm | 241 | AB 28 | 315 | | | • | | |
| C-max 40, 120 W | 173 | | | | | | | 111.4 | | |
| C-max 40, 120 W | 173 | GP 52, 4 - 30 Nm | 244 | | | | | • | | |
| C-max 40, 120 W | 173 | | | AB 28 | 315 | | | 151.4 | | |
| C-max 40, 120 W | | GP 52, 4 - 30 Nm | 244 | AB 28 | 315 | | | • | | |
| Pin Allocation sie | ha Paga | | | | | | | | | |

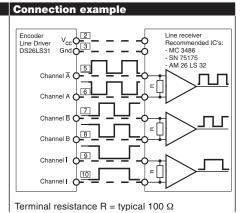
| I III Allocation siene i age 2 | 70 | | |
|---|---------------------------------|--|---|
| Technical Data | | Pin Allocation for | motor RE 75 |
| Supply voltage | 5 V ± 10 % | | Flanged connector |
| Output signal driver used: | EIA Standard RS 422 DS26LS31 | | Type SOURIAU 8G |
| Phase shift Φ | 90°e ± 45°e | | 2 N.C. (do not con |
| Signal rise time (typically, at $C_L = 25 \text{ pF}$, $R_L =$ | 2.7 kΩ, 25°C) 180 ns | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | 3 GND 4 N.C. (do not con 5 Channel I (Index |
| Signal fall time | | _40 o ₅ \\\ | 6 Channel I |
| (typically, at $C_L = 25 \text{ pF}$, $R_L =$ | 2.7 k Ω , 25°C) 40 ns | | 7 Channel B |
| Index pulse width | 90°e | | 8 Channel B 9 Channel A |
| Operating temperature rang | -40 +100°Ce | | 9 Channel A 10 Channel A |
| Moment of inertia of code wh | neel ≤ 0.6 gcm ² | | 11 N.C. (do not con |
| Max. angular acceleration | 250 000 rad s ⁻² | | 12 N.C. (do not con |
| Output current per channel | min20 mA, max. 20 mA | | recommended cable Type SOURIAU 8GI |
| Option 1000 | counts per turn, 2 channels | | (metal, straight exit: |
| | | | maxon Art. No. 267 8G-V2-12S (plastic, |

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

Flanged connector
Type SOURIAU 8GM-QL2-12P
1 V_{CC}
2 N.C. (do not connect)
3 GND
4 N.C. (do not connect)
5 Channel I (Index)
6 Channel I

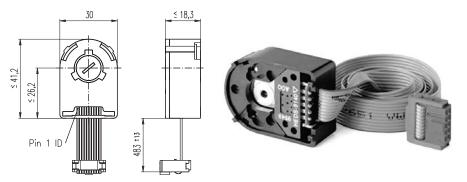
- 1 V_{CC}
 2 N.C. (do not connect)
 3 GND
 4 N.C. (do not connect)
 5 Channel I (Index)
 6 Channel I
 7 Channel B
 8 Channel B
 9 Channel A
 10 Channel A
 11 N.C. (do not connect)
 12 N.C. (do not connect)
 13 N.C. (do not connect)
 14 N.C. (do not connect)
 15 N.C. (do not connect)
 16 N.C. (do not connect)
 17 N.C. (do not connect)
 18 N.C. (do not connect)
 19 N.C. (do not connect)
 19 N.C. (do not connect)
 10 N.C. (do not connect)
 10 N.C. (do not connect)
 11 N.C. (do not connect)
 12 N.C. (do not connect)
 13 N.C. (do not connect)
 14 N.C. (do not connect)
 15 N.C. (do not connect)
 16 N.C. (do not connect)
 17 N.C. (do not connect)
 18 N.C. (do not connect)
 18 N.C. (do not connect)
 19 N.C. (do not connect)
 10 N.C. (do not connect)

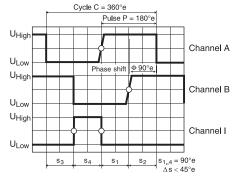
(metal, straight exit: maxon Art. No. 2675.538) or 8G-V2-12S (plastic, 90° angle: maxon Art. No. 2675.539)



maxon sensor 271 May 2009 edition / subject to change

Encoder HEDL 5540, 500 CPT, 3 Channels, with Line Driver RS 422





| Stock program Standard program | Order Num | ber | |
|--------------------------------|-----------|--------|--------|
| Special program (on request) | 110512 | 110514 | 110516 |
| e | | | |
| Counts per turn | 500 | 500 | 500 |
| Number of channels | 3 | 3 | 3 |
| Max. operating frequency (kHz) | 100 | 100 | 100 |
| Max. speed (rpm) | 12000 | 12000 | 12000 |
| Shaft diameter (mm) | 3 | 4 | 6 |

| maxon Modul | C | A | | | | | | | |
|----------------|------|----------------------|---------|---------|-------|------------------|--------------|----------|--|
| + Motor | Page | + Gearhead | Page | + Brake | Page | Overall length [| mm] / esee G | earhead | |
| RE 25 | 78 | 1 Gournoud | i ago | Diano | i ago | 63.8 | | ourrioud | |
| RE 25 | 78 | GP 26 / GP 32 | 230/232 | | | • | | | |
| RE 25 | 78 | KD 32, 1.0 - 4.5 Nm | 238 | | | • | | | |
| RE 25 | 78 | GP 32, 0.75 - 6.0 Nm | | | | • | | | |
| RE 25 | 78 | GP 32 S | 251-253 | | | • | | | |
| RE 25. 20 W | 78 | G. 62 6 | | AB 28 | 316 | 94.3 | | | |
| RE 25, 20 W | 78 | GP 26 / GP 32 | 230/232 | - | 316 | 04.0 | | | |
| RE 25, 20 W | 78 | KD 32, 1.0 - 4.5 Nm | | AB 28 | 316 | | | | |
| RE 25, 20 W | 78 | GP 32, 0.75 - 6.0 Nm | | | 316 | | | | |
| RE 25, 20 W | 78 | GP 32 S | 251-253 | | 316 | • | | | |
| EC-powermax 22 | - | GI 02 0 | 201 200 | AD 20 | 010 | 70.1 | | | |
| EC-powermax 22 | | GP 22 / GP 32 | 227/236 | | | 70.1 | | | |
| EC-powermax 22 | | GP 32 S | 251-253 | | | | | | |
| EC-powermax 22 | | GI 32 3 | 231-233 | | | 87.5 | | | |
| EC-powermax 22 | | GP 22 / GP 32 | 227/236 | | | 07.5 | | | |
| EC-powermax 22 | | GP 32 S | 251-253 | | | | | | |
| EC-powermax 30 | | GI 32 3 | 231-233 | | | • | 67.6 | | |
| EC-powermax 30 | | GP 32, 4.0 - 8.0 Nm | 237 | | | | 07.0 | | |
| EC-powermax 30 | | GP 42, 3 - 15 Nm | 241 | | | | | | |
| EC-powermax 30 | | GF 42, 3 - 13 NIII | 241 | AB 20 | 314 | | 79.1 | | |
| EC-powermax 30 | | GP 32, 4.0 - 8.0 Nm | 237 | AB 20 | 314 | | 79.1 | | |
| EC-powermax 30 | | GP 42, 3 - 15 Nm | 241 | AB 20 | 314 | | • | | |
| EC-powermax 30 | | GF 42, 3 - 13 NIII | 241 | AD 20 | 314 | | 84.6 | | |
| EC-powermax 30 | | GP 32, 4.0 - 8.0 Nm | 237 | | | | 04.0 | | |
| | | , | 241 | | | | | | |
| EC-powermax 30 | | GP 42, 3 - 15 Nm | 241 | AB 20 | 314 | | 96.1 | | |
| EC-powermax 30 | | CD 00 40 00 Nm | 007 | - | - | | | | |
| EC-powermax 30 | | GP 32, 4.0 - 8.0 Nm | 237 | AB 20 | 314 | | • | | |
| EC-powermax 30 | | GP 42, 3 - 15 Nm | 241 | AB 20 | 314 | | • | 40.0 | |
| EC-i 40, 50 W | 192 | 00.00 4 0.01 | 000 | | | | | 49.0 | |
| EC-i 40, 50 W | 192 | GP 32, 1 - 6 Nm | 236 | | | | | • | |
| EC-i 40, 50 W | 192 | GP 32 S | 251-253 | | | | | - | |
| EC-i 40, 70 W | 193 | 00.00 / 011 | | | | | | 59.0 | |
| EC-i 40, 70 W | 193 | GP 32, 1 - 6 Nm | 236 | | | | | • | |
| EC-i 40, 70 W | 193 | GP 32 S | 251-253 | | | | | • | |

