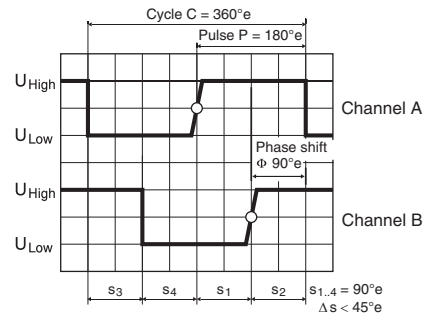
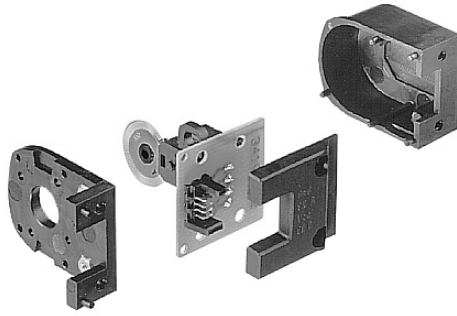
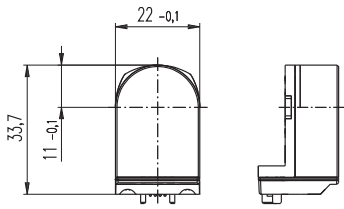


Encoder Enc 22 100 Counts per turn, 2 Channels

maxon sensor



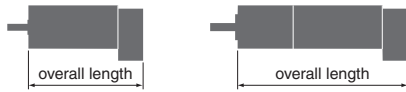
Direction of rotation cw (definition cw p. 48)

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

Order Number

| | | | | | |
|--------|--------|--------|--------|--------|--------|
| 103937 | 143330 | 103935 | 110520 | 168045 | 110521 |
|--------|--------|--------|--------|--------|--------|

| Type | 103937 | 143330 | 103935 | 110520 | 168045 | 110521 |
|---|--------|--------|--------|--------|--------|--------|
| Counts per turn | 100 | 100 | 100 | 100 | 100 | 100 |
| Number of channels | 2 | 2 | 2 | 2 | 2 | 2 |
| Max. operating frequency (kHz) | 20 | 20 | 20 | 20 | 20 | 20 |
| Max. speed (rpm) | 12000 | 12000 | 12000 | 12000 | 12000 | 12000 |
| Shaft diameter (mm) | 2 | 2 | 3 | 2 | 3 | 3 |
| Orientation encoder to motor mounting defined | | ± 5° | | | ± 5° | |



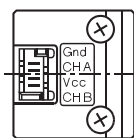
maxon Modular System

| + Motor | Page | + Gearhead | Page | Overall length [mm] / ● see Gearhead |
|---------|-------|----------------------|---------|--------------------------------------|
| RE 25 | 77/79 | | | 68.6 |
| RE 25 | 77/79 | GP 26, 0.5 - 2.0 Nm | 227 | ● |
| RE 25 | 77/79 | GP 32, 0.75 - 4.5 Nm | 229 | ● |
| RE 25 | 77/79 | GP 32, 0.75 - 4.5 Nm | 230 | ● |
| RE 25 | 77/79 | GP 32, 1.0 - 6.0 Nm | 232 | ● |
| RE 25 | 77/79 | GP 32 S | 249-251 | ● |

Technical Data

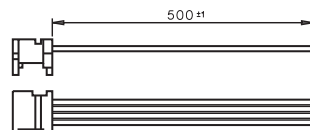
| | |
|--|-------------------------------|
| Supply voltage V_{CC} | $5 V \pm 10\%$ |
| Output signal | TTL compatible |
| Phase shift Φ | $90^\circ \pm 45^\circ$ |
| Signal rise time (typically, at $C_L = 25 \text{ pF}$, $R_L = 11 \text{ k}\Omega$, 25°C) | 200 ns |
| Signal fall time (typically, at $C_L = 25 \text{ pF}$, $R_L = 11 \text{ k}\Omega$, 25°C) | 50 ns |
| Operating temperature range | $-20 \dots +85^\circ\text{C}$ |
| Moment of inertia of code wheel | $\leq 0.05 \text{ gcm}^2$ |
| Output current per channel | min. -1 mA, max. 5 mA |

Pin Allocation

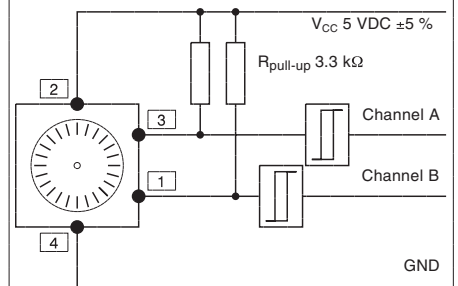


Micromodule contact strip
Type Lumberg MICS 4
Pin 4 GND
Pin 3 Channel A
Pin 2 V_{CC} , Pin 1 Channel B
recommended connectors:
Micromodule connector
Type Lumberg MICA 4

Order number for connector with cable: 3419.506

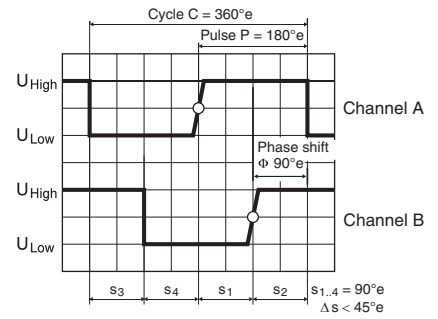
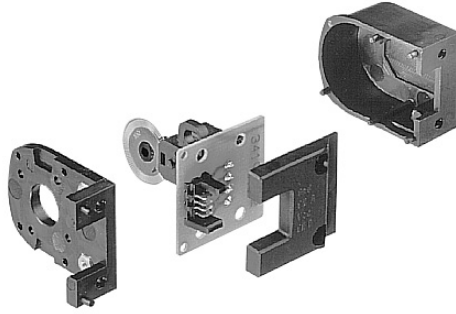
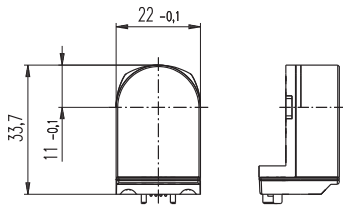


Connection example



Ambient temperature range $\vartheta_U = 22 - 25^\circ\text{C}$

Encoder Enc 22 100 Counts per turn, 2 Channels



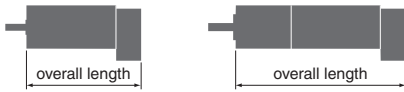
Direction of rotation cw (definition cw p. 48)

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

Order Number

| | | | | | |
|--------|--------|--------|--------|--------|--------|
| 103937 | 143330 | 103935 | 110520 | 168045 | 110521 |
|--------|--------|--------|--------|--------|--------|

| Type | 103937 | 143330 | 103935 | 110520 | 168045 | 110521 |
|---|--------|--------|--------|--------|--------|--------|
| Counts per turn | 100 | 100 | 100 | 100 | 100 | 100 |
| Number of channels | 2 | 2 | 2 | 2 | 2 | 2 |
| Max. operating frequency (kHz) | 20 | 20 | 20 | 20 | 20 | 20 |
| Max. speed (rpm) | 12000 | 12000 | 12000 | 12000 | 12000 | 12000 |
| Shaft diameter (mm) | 2 | 2 | 3 | 2 | 3 | 3 |
| Orientation encoder to motor mounting defined | | ± 5° | | | ± 5° | |



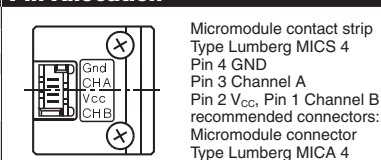
maxon Modular System

| + Motor | Page | + Gearhead | Page | Overall length [mm] / ● see Gearhead |
|-----------------|---------|-----------------------|---------|--------------------------------------|
| A-max 19, 1.5 W | 94 | | | 43.3 |
| A-max 19, 1.5 W | 94 | GP 19, 0.1 - 0.3 Nm | 217 | ● |
| A-max 19, 1.5 W | 94 | GS 20, 0.06 - 0.25 Nm | 218 | ● |
| A-max 19, 1.5 W | 94 | GP 22, 0.1 - 2.0 Nm | 219-222 | ● |
| A-max 19, 1.5 W | 94 | GS 24, 0.1 Nm | 226 | ● |
| A-max 19, 1.5 W | 94 | GP 22 S | 247/248 | ● |
| A-max 19, 2.5 W | 96 | | | 45.9 |
| A-max 19, 2.5 W | 96 | GP 19, 0.1 - 0.3 Nm | 217 | ● |
| A-max 19, 2.5 W | 96 | GP 22, 0.1 - 2.0 Nm | 219-222 | ● |
| A-max 19, 2.5 W | 96 | GS 24, 0.1 Nm | 226 | ● |
| A-max 19, 2.5 W | 96 | GP 22 S | 247/248 | ● |
| A-max 22 | 98/100 | | | 46.3 |
| A-max 22 | 98/100 | GP 22, 0.1 - 0.3 Nm | 219 | ● |
| A-max 22 | 98/100 | GP 22, 0.2 - 0.6 Nm | 220 | ● |
| A-max 22 | 98/100 | GP 22, 0.1 - 2.0 Nm | 219-222 | ● |
| A-max 22 | 98/100 | GS 24, 0.1 Nm | 226 | ● |
| A-max 22 | 98/100 | GP 22 S | 247/248 | ● |
| A-max 26 | 102-108 | | | 59.1 |
| A-max 26 | 102-108 | GP 26, 0.5 - 2.0 Nm | 227 | ● |
| A-max 26 | 102-108 | GS 30, 0.07 - 0.2 Nm | 228 | ● |
| A-max 26 | 102-108 | GP 32, 0.75 - 4.5 Nm | 229 | ● |
| A-max 26 | 102-108 | GP 32, 0.75 - 4.5 Nm | 230 | ● |
| A-max 26 | 102-108 | GP 32, 1.0 - 6.0 Nm | 233 | ● |
| A-max 26 | 102-108 | GS 38, 0.1 - 0.6 Nm | 236 | ● |
| A-max 26 | 102-108 | GP 32 S | 247/248 | ● |

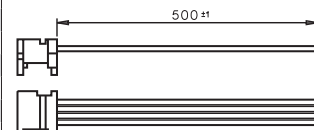
Technical Data

| | |
|---|-------------------------|
| Supply voltage V_{CC} | 5 V ± 10% |
| Output signal | TTL compatible |
| Phase shift ϕ | 90°e ± 45°e |
| Signal rise time (typically, at $C_L = 25$ pF, $R_L = 11$ k Ω , 25°C) | 200 ns |
| Signal fall time (typically, at $C_L = 25$ pF, $R_L = 11$ k Ω , 25°C) | 50 ns |
| Operating temperature range | -20 ... +85°C |
| Moment of inertia of code wheel | ≤ 0.05 gcm ² |
| Output current per channel | min. -1 mA, max. 5 mA |

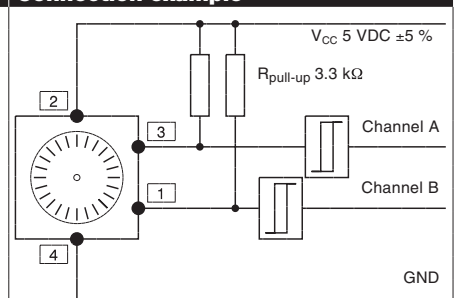
Pin Allocation



Order number for connector with cable: 3419.506



Connection example



Ambient temperature range $\vartheta_U = 22 - 25^\circ\text{C}$