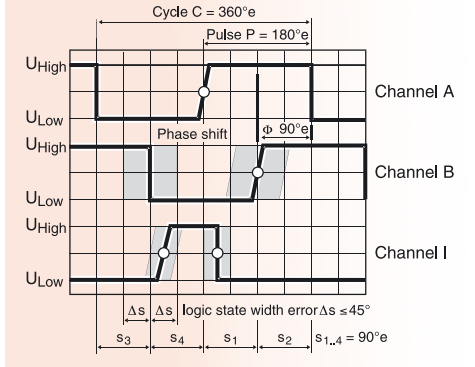


Encoder MR, Type M, 128 - 512 Counts per turn, 2 / 3 Channels, with Line Driver



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

| Order Number |        |        |        |        |        |            |
|--------------|--------|--------|--------|--------|--------|------------|
| 228179       | 228177 | 228181 | 228182 | 201937 | 201940 | on request |

| Type                           |     |     |     |     |     |     |     |
|--------------------------------|-----|-----|-----|-----|-----|-----|-----|
| Counts per turn                | 128 | 128 | 256 | 256 | 512 | 512 | 512 |
| Number of channels             | 2   | 3   | 2   | 3   | 2   | 3   | 3   |
| Max. operating frequency (kHz) | 80  | 80  | 160 | 160 | 320 | 320 | 320 |



| Combination     |      |                     |      |         |      | Overall length [mm] / see: + Gearhead |      |      |      |      |      |
|-----------------|------|---------------------|------|---------|------|---------------------------------------|------|------|------|------|------|
| + Motor         | Page | + Gearhead          | Page | + Brake | Page |                                       |      |      |      |      |      |
| EC 16, 15 W     | 151  |                     |      |         |      |                                       |      |      |      |      | 50.3 |
| EC 16, 15 W     | 151  | GP 16, 0.1 - 0.3 Nm | 205  |         |      |                                       |      |      |      |      | •    |
| EC 16, 40 W     | 152  |                     |      |         |      |                                       |      |      |      |      | 66.3 |
| EC 16, 40 W     | 152  | GP 22, 0.5 - 2.0 Nm | 213  |         |      |                                       |      |      |      |      | •    |
| EC 22, 20 W     | 154  |                     |      |         |      | 50.5                                  | 50.5 | 50.5 | 50.5 | 50.5 |      |
| EC 22, 20 W     | 154  | GP 22, 0.5 - 2.0 Nm | 213  |         |      | •                                     | •    | •    | •    | •    |      |
| EC 22, 50 W     | 156  |                     |      |         |      | 68.7                                  | 68.7 | 68.7 | 68.7 | 68.7 |      |
| EC 22, 50 W     | 156  | GP 22, 0.5 - 2.0 Nm | 213  |         |      | •                                     | •    | •    | •    | •    |      |
| EC-max 16, 5 W  | 169  |                     |      |         |      | 31.3                                  | 31.3 | 31.3 | 31.3 | 31.3 |      |
| EC-max 16, 5 W  | 169  | GP 16, 0.1 - 0.3 Nm | 205  |         |      | •                                     | •    | •    | •    | •    |      |
| EC-max 16, 8 W  | 170  |                     |      |         |      | 43.3                                  | 43.3 | 43.3 | 43.3 | 43.3 |      |
| EC-max 16, 8 W  | 170  | GP 22, 0.5 - 2.0 Nm | 213  |         |      | •                                     | •    | •    | •    | •    |      |
| EC-max 22, 12 W | 171  |                     |      |         |      | 41.7                                  | 41.7 | 41.7 | 41.7 | 41.7 |      |
| EC-max 22, 12 W | 171  | GP 22, 0.5 - 2.0 Nm | 213  |         |      | •                                     | •    | •    | •    | •    |      |
| EC-max 22, 25 W | 172  |                     |      |         |      | 53.4                                  | 53.4 | 53.4 | 53.4 | 53.4 |      |
| EC-max 22, 25 W | 172  | GP 32, 1 - 6 Nm     | 221  |         |      | •                                     | •    | •    | •    | •    |      |

| Technical Data                  |                         |
|---------------------------------|-------------------------|
| Supply voltage V <sub>CC</sub>  | 5 V ± 5 %               |
| Output signal                   | TTL compatible          |
| Index pulse width (nominal)     | 90°e                    |
| Operating temperature range     | -25 ... +85°C           |
| Moment of inertia of code wheel | ≤ 0.09 gcm <sup>2</sup> |
| Output current per channel      | max. 5 mA               |

Attention: The index signal I is synchronised with channel A or B

| Pin Allocation |                                                                                                                                                                                                                                           |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | 1 N.C.<br>2 V <sub>CC</sub><br>3 GND<br>4 N.C.<br>5 Channel A<br>6 Channel A<br>7 Channel B<br>8 Channel B<br>9* Channel I (Index)<br>10* Channel I (Index)<br>DIN Connector 41651<br>flat band cable AWG 28<br>* version with 3 channels |
|                | 1 N.C.<br>2 V <sub>CC</sub><br>3 GND<br>4 N.C.<br>5 Channel A<br>6 Channel A<br>7 Channel B<br>8 Channel B<br>9 Channel I (Index)<br>10 Channel I (Index)                                                                                 |

