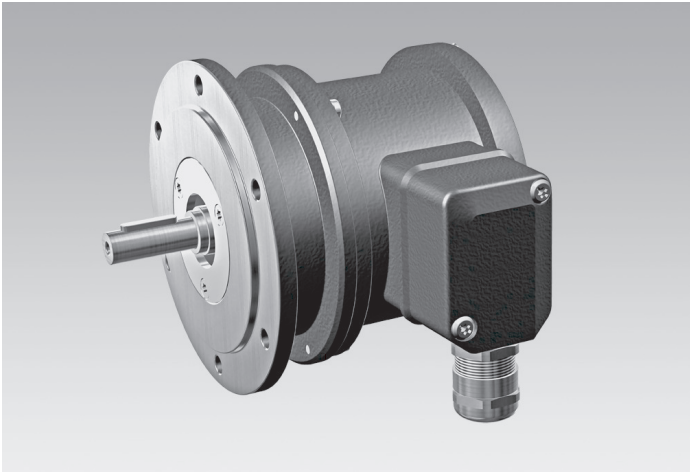


# ES 90

Electronic speed switch  
1 adjustable switching speed

Overview

- Electronic speed monitoring
- Circuit breaker with one selectable threshold speed
- Relay output with isolated changeover contact



Technical data

Technical data - electrical ratings

|                           |                                        |
|---------------------------|----------------------------------------|
| Switching accuracy        | ± 4 % (≤1500 rpm)<br>± 2 % (>1500 rpm) |
| Switching hysteresis      | = 30 % of switching speed              |
| Switching outputs         | 1 output, speed control                |
| Output switching capacity | ≤6 A / 250 VAC<br>≤1 A / 48 VDC        |
| Minimum switching current | 100 mA                                 |
| Switching delay time      | ≤40 ms                                 |
| Interference immunity     | EN 61000-6-2                           |
| Emitted interference      | EN 61000-6-3                           |
| Approval                  | CE                                     |

Technical data - mechanical design

|               |                    |
|---------------|--------------------|
| Size (flange) | ø115 mm            |
| Shaft type    | ø11 mm solid shaft |

Technical data - mechanical design

|                               |                                                       |
|-------------------------------|-------------------------------------------------------|
| Flange                        | EURO flange B10                                       |
| Protection DIN EN 60529       | IP 55                                                 |
| Speed (n)                     | ≤6000 rpm                                             |
| Range of switching speed (ns) | 650...6000 rpm                                        |
| Operating torque              | ≤2 Ncm                                                |
| Rotor moment of inertia       | 0,125 kgcm²                                           |
| Admitted shaft load           | ≤150 N axial<br>≤250 N radial                         |
| Operating temperature         | -20...+85 °C                                          |
| Weight approx.                | 1,3 kg                                                |
| Connection                    | Terminal box                                          |
| Material                      | Housing: aluminium die-cast<br>Shaft: stainless steel |

Optional

- As integrated speed switch type ESL for combination with encoders and/or tachogenerators

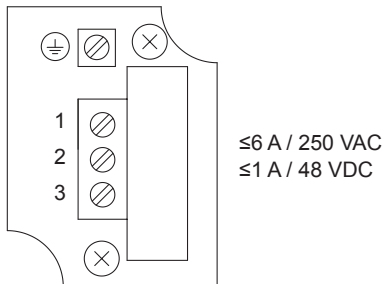
## ES 90

Electronic speed switch

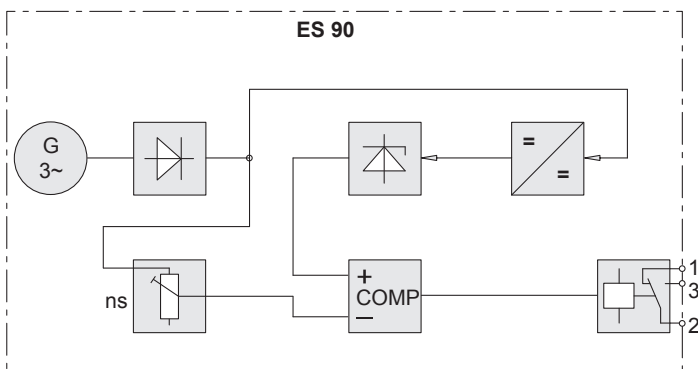
1 adjustable switching speed

### Terminal assignment

**View A** (see dimension)  
Connecting terminal

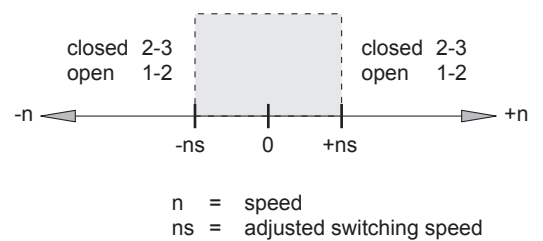


### Block circuit diagram



Speed switch ES 90

### Switching characteristics

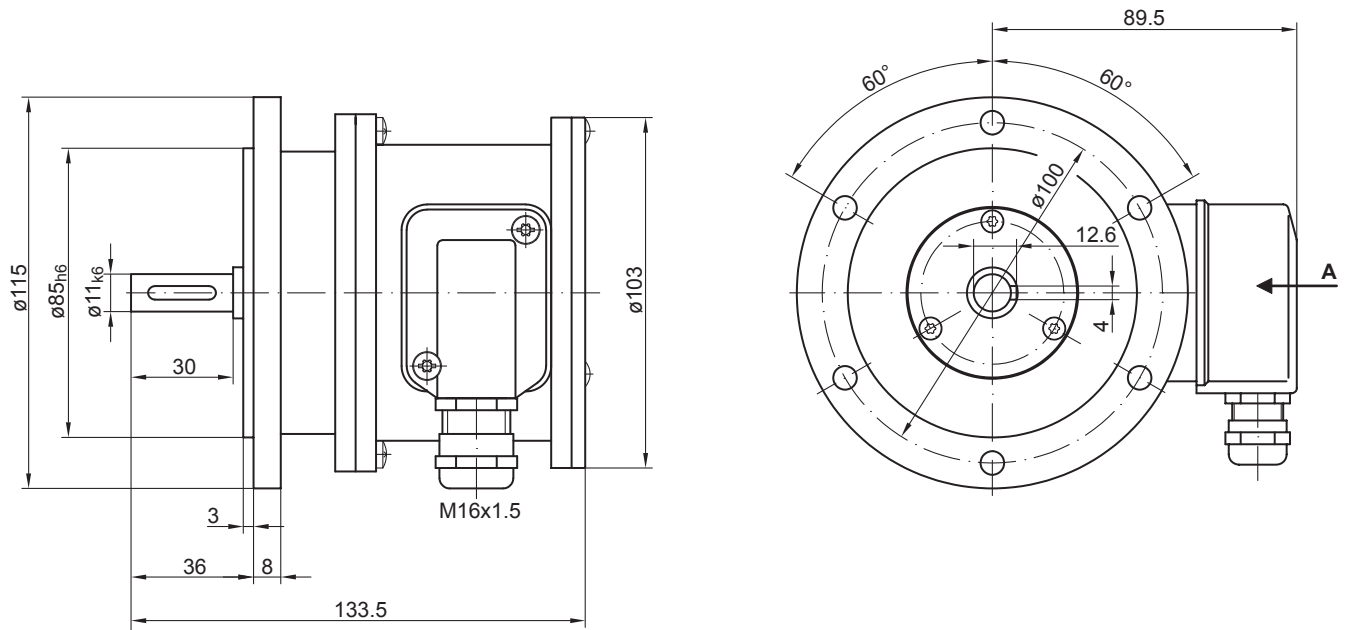


## ES 90

Electronic speed switch

1 adjustable switching speed

### Dimensions



# ES 90

Electronic speed switch

1 adjustable switching speed

## Ordering reference

|                               |  |             |     |
|-------------------------------|--|-------------|-----|
|                               |  | <b>ES90</b> | ... |
| <b>Product</b>                |  |             |     |
| Speed switch                  |  | ES90        |     |
| <b>Switching speed (ns)</b>   |  |             |     |
| 650...6000 rpm <sup>(1)</sup> |  |             | ... |

(1) Please specify the exact switching speed in addition to the part number (factory setting).

## Accessories

### Mounting accessories

|                                               |
|-----------------------------------------------|
| Spring disk coupling K 35 (shaft ø6...12 mm)  |
| Spring disk coupling K 50 (shaft ø11...16 mm) |
| Spring disk coupling K 60 (shaft ø11...22 mm) |