# Dimension Sheet for
# ROBA®-takt Control Unit Type 014.000.2

**(M.0140002.GB)**

## Application

This unit is used to start, stop and to position by switching and controlling the *mayr*®-clutch-brake units.

## Function

The ROBA®-takt control unit operates according to the principle of a clocked switching controller with a frequency of 18 kHz. Its coil is energised by actuating the sensor for clutch and brake. A temperature monitor protects the unit from overheating. Should the temperature exceed >80 ℃, the coil voltage is switched off. The LED “excess temperature unit” lights up red.
A slope separation avoids simultaneous occurrence of clutch and brake torques.
On overexcitation, the coil attraction time is reduced, allowing exact switching and positioning.

## Electrical Connection

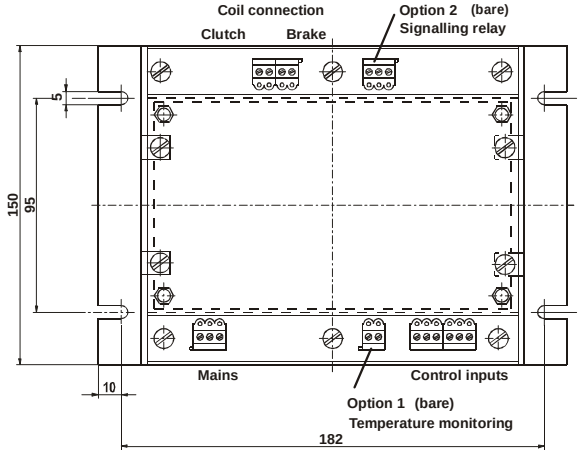
| | |
|---|---|
| PE, L1, N | Connection input voltage |
| +12V / Ku/ Gnd1 | Sensor connection for clutch |
| +12V / Br / Gnd2 | Sensor connection for brake |
| Br1 / Br2 | Coil connection for brake |
| Ku1 / Ku2 | Coil connection for clutch |

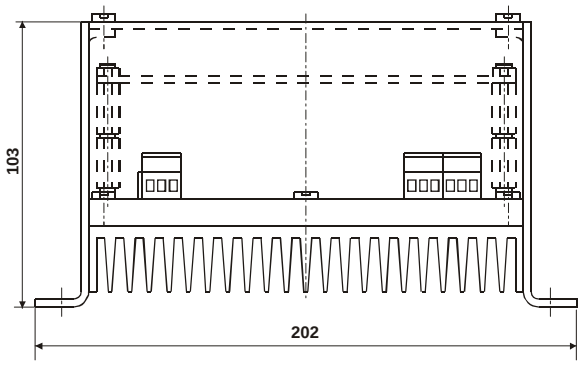
## Technical Data

| | |
|---|---|
| Input voltage | 230 VAC ±10 %, 50-60 Hz |
| Current consumption | Max. 4 Amp./100 % duty cycle |
| No-load supply power | < 7 Watt |
| $Coil_{NOM}$-voltage | 24 VDC |
| $Coil_{NOM}$-power | Max. 96 Watt |
| $Coil_{NOM}$-current | ***Manufacturer-side setting*** to mayr®-ROBA®-takt-size |
| Coil overexcitation | Max. 325 VDC<br>current limitation is adapted to the respective coil size |
| Overexcitation time | 2-50 ms (–30 % up to +60 %), externally adjustable<br>(only applicable with coding „overexcitation ON“) |
| Slope separation | 2-150 ms (–25 % to +30 %), externally adjustable |
| Protection | IP 20 |
| Ambient temperature | 0 ℃ up to +50 ℃ |
| Storage temperature | -20 ℃ up to +70 ℃ |
| Clamping conductor cross section | 0.14-2.5 $mm^2$ / AWG 26-14 |
| Weight | 1.5 kg / 3.31 lb |
| Protection fuse | |
| Input-side G-microfuse | F1/F2, 4 A (M), IEC 5x20mm |
| Coil-side G- microfuse | F3, the current is adapted to the ROBA®-takt sizes. Always use the same replacement fuses |
| Overvoltage category | two; one for connection to PELV/SELV (control wires) |
| Overvoltage protection | **For installation in <u>overvoltage category III,</u> a suitable overvoltage protection unit is required between the incoming voltage and the ROBA®-takt control unit.** |

**Control unit temperature monitoring**
A fitted temperature switch prevents the control unit from overheating.

## Dimension (mm)




## Order Example

| To be stated on order: | Size | Type |
|---|---|---|
| Order number | _ | 014.000.2 |

ROBA®-takt control unit
Sizes 3 - 7

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mayr® Antriebstechnik

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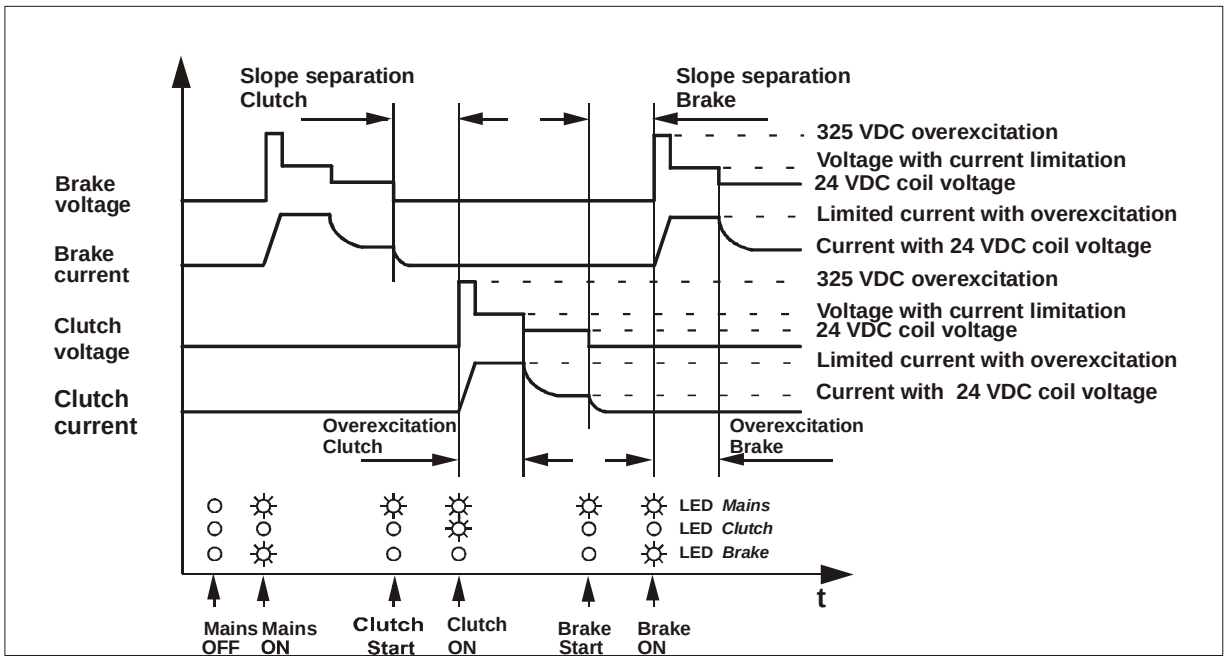
## Functional Sequence

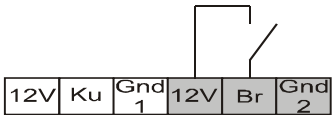



## Connection Example

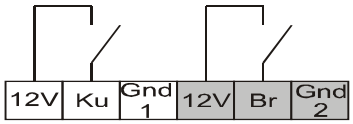
Control elements / control function
Control sensor for start and stop

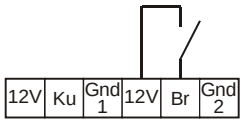
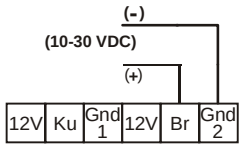
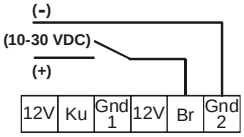
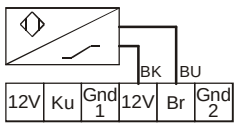
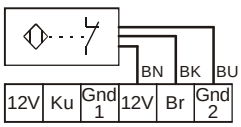
Brake = (Br)
Clutch = (Ku)

**Connection Example 1-sensor operation**




**Connection Example 2-sensor operation**




| Application | | Function (condition-controlled) | | Function (slope-controlled) | |
|---|---|---|---|---|---|
| Contact potential-free (NO contact) |  | Close contact<br>Open contact | Clutch ON<br>Brake ON | Close contact clutch<br>or<br>Close contact brake | Clutch ON<br>Brake ON |
| SPS control (10 up to 30 VDC) |  | +24 VDC signal<br>0 VDC signal | Clutch ON<br>Brake ON | +24 VDC signal to clutch<br>or<br>+24 VDC signal to brake | Clutch ON<br>Brake ON |
| External voltage (10 up to 30 VDC) |  | +10-30 VDC signal<br>0 VDC signal | Clutch ON<br>Brake ON | +10-30 VDC signal to clutch<br>or<br>+10-30 VDC signal to brake | Clutch ON<br>Brake ON |
| NAMUR Proximity switch (10 up to 30 VDC) |  | Sensor undamped<br>Sensor damped | Clutch ON<br>Brake ON | Sensor clutch undamped<br>or<br>Sensor brake undamped | Clutch ON<br>Brake ON |
| PNP – NC contact Proximity switch (10 up to 30 VDC) |  | Sensor undamped<br>Sensor damped | Clutch ON<br>Brake ON | Sensor clutch undamped<br>or<br>Sensor brake undamped | Clutch ON<br>Brake ON |

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