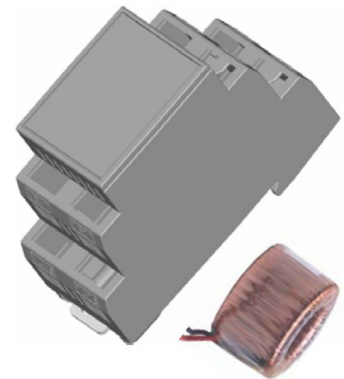


# digital motor excess rotation speed protection

## digital motor excess rotation speed protection for frequency converter

**article-no.:** VY 86 A9 85 (evaluation unit)  
 NY 98 A9 43 (current transformer 50A/60A max.)  
 NY 98 A9 64 (current transformer 100A/110A max.)



### device function

The digital excess rotation speed protection evaluates signals of a transformer element that is attached on a motor's supply line. Via this evaluation a monitoring of the motor's rotation speed is realized. When the settable rotation speed is exceeded the integrated relay is set.

### technical data

operating voltage		24V DC $\pm$ 20%
current consumption		< 15mA
reverse polarity protection		+
output	1 x relay change-over contact	250V AC / 1.5A
inputs	current sensor reset	max.1W min. pulse length 300msec
displays	LED 1 (operating mode display) LED 2 (pulse display) LED 3 (excess rotation speed, flashes during teach-in)	green yellow red
operation elements	push-button (teach-in) external teach-in trimmer (rotation speed offset)	10 ... 24V DC
housing	polycarbonate, light grey, RAL7035, (UL94) system of protection (EN 60529): IP 20	85 x 65 x 35.6mm
ambient temperature		-25 ... +75 °C
mounting		DIN-rail

### operation

After connecting the operating voltage, the device initializes. At this point all LEDs are flashing shortly. After that only the green operating mode display LED lights up and the device is ready for use.

**teach rotation speed:** Set the frequency converter for operational rotation speed and start-up the motor. When the motor reaches its operational rotation speed the rotation speed is saved by pressing the teach button. To confirm this, the red LED flashes twice. This function can also be realized using the external teach input.

**setting the switching rotation speed:** Using the potentiometer an adjustment of the switching rotation speed between approx. 5 ... 20% of the taught-in value is possible.

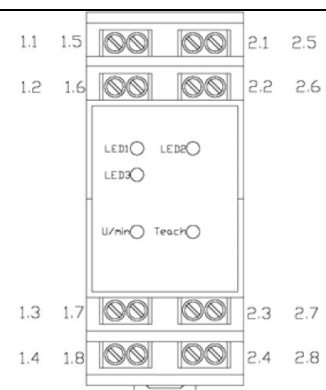
**deleting the taught-in values:** By pressing the teach-in button longer than 5sec the taught-in value will be deleted. To confirm this, the red LED flashes in a high frequency. This function can also be realized using the external teach input.

**reset the output relay:** By removing the reset-bridge a restart of the device is caused. In this connection the green operating mode display LED flashes. After resetting the bridge, the device is ready for use again. The same effect is caused by removing the operating voltage.

**wire breakage monitoring of the current sensor:** The device recognizes a breakage and/or a not connected current sensor and reacts with setting the output relay and the red LED. This can be reset via resetting the output relay (see above).

### wiring diagram

terminal	connection
1.1 & 1.5	24V DC $\pm$ 20%
2.1 & 2.5	GND (+24V)
1.2 & 1.6	current sensor connection
2.2 & 2.6	current sensor shield
1.4 & 1.8	relay COM
2.4	relay no
2.8	relay nc
1.3 & 1.7	reset
2.7	external teach-in (10 ... 24V DC)
2.3	GND (external teach-in)



**Warning:** Never use these devices in applications where the safety of a person depends on their functionality!