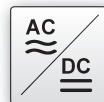


design                    45 x 75 x 110mm  
 zero speed            pulses/minute            1 ... 2500

- ✓ analog rotation speed and/or pulse adjustment
- ✓ wide monitoring range
- ✓ adjustable response delay time
- ✓ rotation speed setting via test button
- ✓ 3 x LED for function displays
- ✓ DIN housing width 45mm
- ✓ 230V AC and 24V DC operating voltage in one device
- ✓ mounting on DIN-rail



**zero speed monitor  
 analog set-actual comparison**



**description**

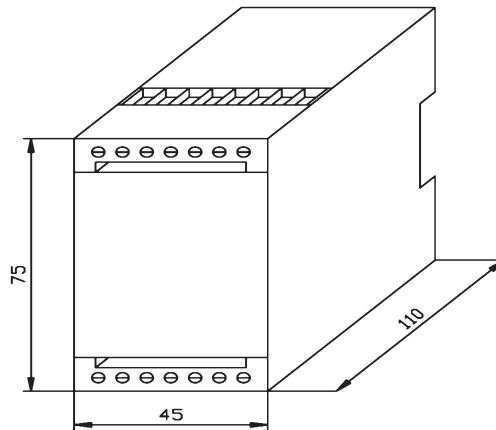
Zero speed monitors of the **WS57** series are easy adjustable evaluation systems for a multitude of applications in the field of automation technology. After the operating voltage has been applied and the response delay time (adjustable between 1 and 10sec) has elapsed, the pulses arriving (e.g. from a sensor) are compared to the set rotation speed. The specified rotation speed may be set analogously between 1 and 2,500 pulses per minute. Depending on the setting of the dip switches the relay will energize, when the rotation speed exceeds or falls short of the set rotation speed. In addition to this the pnp output interconnects the 24V DC. 24V DC are available to connect a sensor (e.g. inductive,

capacitive or optical proximity switch as pulse generator). Zero speed monitors are used wherever a signal is required for the rotation speed falling short of or exceeding a set value and to shut-down or block a drive. Zero speed monitors are snapped on a corresponding 35mm DIN top hat rail to DIN EN 60715 TH 35 (formerly DIN 46277 and DIN EN 50022) and have terminals for wires up to 2.5mm<sup>2</sup>.

**application examples**

- ▶ monitoring of a minimum rotation speed
- ▶ announcing a standstill
- ▶ rotary furnaces and transport chains
- ▶ working machines and grinding belts

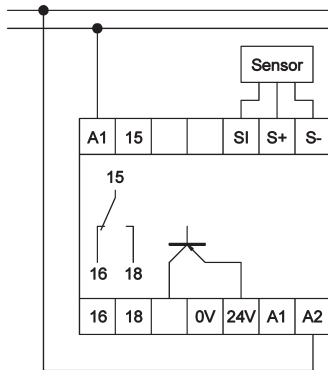
|                 |                          |
|-----------------|--------------------------|
| article-no.     | WS574400                 |
| version         | zeoro speed monitor      |
| output          | relay and transistor     |
| operating range | 1 ... 2500 pulses/minute |



### TECHNICAL DATA

|                                 |  |
|---------------------------------|--|
| pulses                          | 1 ... 2500 pulses/minute (monitoring range)  |
| output signal (relay)           | 1 change-over contact / 250V / 6A / 90W / 720VA                                      |
| output signal (transistor)      | pnp, no - transistor output 24V DC / 50mA (terminal TR)                              |
| operating voltage               | 230V AC and 24V DC   |
| current consumption             | approx. 3VA  |
| continuous duty                 | 100% CD  |
| hysteresis                      | 20%  |
| repeat accuracy                 | < 1%   |
| temperature drift               | < 0.1% / °C  |
| display                         | (3xLED): "NET" – operating voltage // "OFF" – output active // "SIG" – sensor pulses |
| setting (switch-point)          | 1 ... 2500 pulses per minute   |
| response delay time             | via potentiometer adjustable between 1 and 10sec                                     |
| test button                     | for setting a switch-point without an effect on the output signal                    |
| power supply                    | auxiliary voltage (external sensor): 16 ... 24V DC / 80mA                            |
| signal input                    | pnp-signal 24V DC (pulse length > 0.5msec)   |
| input resistance                | 10kΩ   |
| contact life                    | approx. 2.5x10 <sup>7</sup> operating cycles (0.5A)                                  |
| design                          | 45x75x110mm  |
| housing material                | plastic  |
| operating temperature           | -25 ... +70°C  |
| system of protection (EN 60529) | housing: IP40 / terminals: IP20  |
| connection                      | terminals for lines up to 2.5mm <sup>2</sup>   |
| mounting                        | DIN-rail 35mm (old: DIN 50022 / new: DIN EN 60715 TH35)                              |

connection



PROGRAMMING OF THE DIP SWITCHES

| function                     | S1  | S2  | S5  |
|------------------------------|-----|-----|-----|
| 1 ... 10 pulses / minute     | on  | on  | -   |
| 8 ... 80 pulses / minute     | off | off | -   |
| 64 ... 640 pulses / minute   | on  | off | -   |
| 250 ... 2500 pulses / minute | off | on  | -   |
| operating current            | -   | -   | on  |
| quiescent current            | -   | -   | off |

**self-monitoring (operating current/S5 on):**

After connecting the supply voltage, the relay responds for the time being (energized), the pnp-output is switched and the LED (OFF) lights up. After the response delay time, pulses arriving at the signal input (SI) are compared with the set rotation speed and the status sets itself correspondingly.

**without self-monitoring (quiescent current/S5 off):**

After connecting the supply voltage, the relay remains in the idle position for the time being (de-energized), the pnp-output is locked and the LED (OFF) does not light up. After the response delay time, pulses arriving at the signal input (SI) are compared with the set rotation speed and the status sets itself correspondingly.

This data sheet contains the standard versions only. Kindly request the availability of other output- and connection functions.

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

### notes

#### export division

Kalver Straße 27  
D-58515 Lüdenscheid

Fon +49 (0) 2351 / 98597-0  
Fax +49 (0) 2351 / 98597-29

