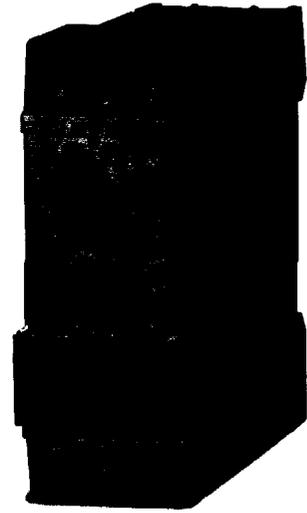


# Multifunction timer series *delta*

- Width 22,5mm
- 8 functions
- 8 time ranges
- Integrated voltage selector
- Loadable control contact
- Rotating knobs for adjustment of time and function
- Transparent identification label to shift
- Indication of time period



delta 6 - D6DM

## Important technical Data

### 1. Functions

E ..... On Delay  
 R ..... Off Delay  
 Wu .... Single shot leading edge  
 Ws .... Single shot leading edge pulse started  
 Wa .... Single shot trailing edge  
 Es ..... On delay with control contact  
 Bp ..... Flasher pause first  
 Wt ..... Pulse detection

### 2. Time ranges

**seconds:** 1, 10  
**minutes:** 1, 10  
**hours:** 1, 10  
**days:** 1, 10  
 time adjustment: from 5-100% of selected time range

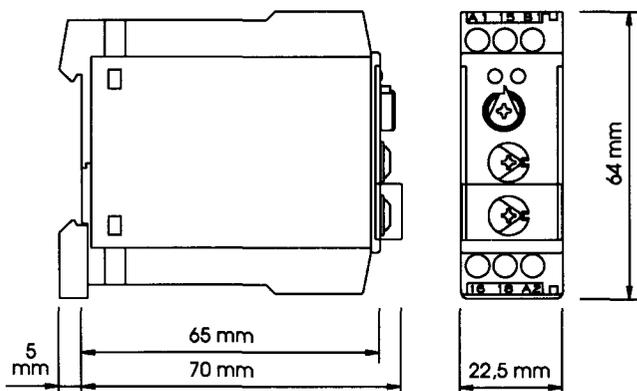
### 3. Displays

Green LED On: Power on  
 Yellow LED On/Off: relay status  
 Green LED is blinking: Indication of timing period

### 4. Mechanical Specifications

Screw terminals up to 4 mm<sup>2</sup>  
 Rail mounting on DIN rails according to DIN 46277/3

Dimensions:

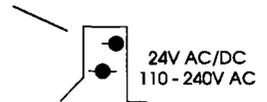


### 5. Supply voltage

24V AC/DC and 110 - 240V AC (via voltage selector)  
 frequency range 48-63Hz  
 permissible voltage range  
 24V DC:  $\pm 10\%$   
 24V AC:  $-15\% +10\%$   
 110-240V AC:  $-15\% +10\%$

#### Nominal consumption

24V AC/DC: 1,5 VA / 1 W  
 110V AC: 2 VA / 1 W  
 230V AC: 8 VA / 1.3W



### 6. Output

1 potential free change over  
 Switching capacity 8A, 250V AC, 2000 VA  
 Switching capacity 5A, 250V AC, 1500 VA  
 (units mounted without spacing)  
 Mechanical life:  $30 \times 10^6$  operations  
 Electrical life: 400.000 operations (1000VA resistive load)  
 Switching frequency: max.3600/h (100VA resistive load)

### 7. Control contact:

loadable parallel load: min. 1VA or 0,5W  
 depends on the voltage  
 (voltage B1-A2 must be 90% of A1-A2 at a minimum)  
 wiring distance:  
 capacity between A1-A2 must not exceed 10nF and resistance  
 must not be below 1M $\Omega$   
 leakage current AC: approx. 2mA (open contact at B1), min.  
 load 0,5W/1VA

### 8.a. System times (without output relay)

operate time operated by supply voltage:  
 AC 35-55ms, DC 35-45ms  
 release time operated by supply voltage:  
 AC and DC 10-20ms  
 protection against power failure: max. 10ms

### 8.b. Accuracy

base accuracy at min. and max. position:  $\pm 0,5\%$   
 repetition accuracy under constant conditions:  
 5ms or  $< 0,5\%$  of end value  
 adjusting accuracy:  $< 5\%$   
 influence of temperature:  $< 0,01\% / ^\circ\text{C}$

# Function diagrams

## Legend:

- U .... supply voltage
- S .... control contact
- T .... time period
- R .....relays

### On delay (E)



On application of supply voltage the time period starts to run. On completion of time the relay energises.

### Off delay (R)



Supply to the unit must be continuous. On closure of the control contact the relay energises immediately. On re-opening of S the time period starts to run and R de-energises. If the control contact is reclosed before the actual time period is completed, this period will be deleted and a new one starts on re-opening of S.

### Single shot leading edge pulse started (Ws)



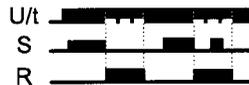
Supply to the unit must be continuous. On closure of S the relay energises immediately and the time starts to run. On completion of time the relay de-energise. Activation of S during the time out period has no effect.

### On delay with control contact (Es)



Supply to the unit must be continuous. On closure of S the time period starts to run. On completion of time the relay energises and stays energised as long as S is closed. Opening the control contact before time out is complete will reset the time period.

### Single shot trailing edge (Wa)



Supply to the unit must be continuous. The first closure of S has no effect. On opening of S the time period starts to run and R energises immediately. On completion of time the relay de-energise. Activation of the control contact during the time out period has no effect.

### Single shot leading edge (Wu)



On application of supply voltage the time starts and R energises immediately. Following time out the relay will de-energise. For a new start of function the supply voltage must be interrupted.

### Flasher pause first (Bp)



On application of supply voltage the time period starts to run. The relay switches on and off for the periods, beginning with a pause. The time period for pause and pulse is equal.

### Pulse detection (Wt)



On application of supply voltage the relay energises. The first pulse of S starts the time period. Receiving pulses during the time period extends it and R stays energised. Receiving no pulses during the time period completes it and R de-energises. R stays latched until supply voltage has been interrupted.

## Standards

- Duty cycle:** 100%, IEC class 1c
- Permissible ambient temperature:** -25 up to +55°C
- Climatic resistance:** HVF according to DIN 40040, pr IEC 1812-1(1994) and IEC 721-3-3 class 3K3
- Protection against contact:** according to VDE 0106 and VBG 4
- Terminal arrangement and marking:** according to DIN 46199
- Enclosure:** Self-extinguishing plastic, protection class IP 40

- Protection against accidental contact:** class IP 20
- Standard:** according to VDE 0110 iGr. C/250
- Dielectric strength:** 2000V AC according to VDE 0435
- Low voltage directive** according to IEC664-1
- EMC emission:** EN 50081-1, EN 55022 class B
- EMC immunity:** Immunity against surge according to IEC 1000-4-5
- Fast transients,** Burst according to EN 50082-2 (Level 3), IEC 1000-4-4 2kV 5/50ns
- Fast transients,** Burst according to EN 61812-1 (Level 3), IEC 1000-4-4 2kV 5/50ns

- Fast transients,** Burst according to IEC 1000-4-4 (Level 4) 4kV 5/50ns
- Electrostatic discharge ESD:** according to EN 50082-2, IEC 1000-4-2
- Electrostatic discharge ESD:** according to EN 61812-1 (Level 3) IEC 1000-4-2
- Immunity** against conducted HF disturbance according to EN 50082-2, ENV 50141
- Immunity** against Electromagnetic HF-Field according to EN 50082-2, ENV 50140 and ENV 50204
- Manufacturing standard** according to ISO 9001

## Connection

