

ETD-FL-2T-DTI - Timer relay



2866187

<https://www.phoenixcontact.com/us/products/2866187>

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Multi-functional timer relay with 7 functions and two adjustable time ranges (50 ms - 10 h), wide range power supply unit, 2 changeover contacts

Product description

Increasingly higher demands are being placed on safety and system availability – across all sectors. Processes are becoming more and more complex, not only in mechanical engineering and the chemical industry, but also in plant and automation technology. Demands on power engineering are also increasing constantly.

The timer relays in the ETD series can be used to control time sequences in production and process technology.

Your advantages

- Universal use thanks to wide range of functions and selectable time ranges
- Time ranges from a few milliseconds to several days
- 2 floating changeover contact outputs
- Variable supply voltage range

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 2866187 |
| Packing unit | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | C441 |
| Product key | DK66ZZ |
| GTIN | 4046356046619 |
| Weight per piece (including packing) | 165 g |
| Weight per piece (excluding packing) | 165 g |
| Customs tariff number | 85364900 |
| Country of origin | AT |

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Technical data

Notes

Utilization restriction

| | |
|----------|---|
| EMC note | EMC: class A product, see manufacturer's declaration in the download area |
|----------|---|

Product properties

| | |
|-------------------------|--------------------------------|
| Product type | Timer relay |
| Operating mode | 100% operating factor |
| Mechanical service life | approx. 2×10^7 cycles |

Insulation characteristics

| | |
|----------------------|------------------|
| Insulation | Basic insulation |
| Overvoltage category | III |
| Pollution degree | 2 |

Electrical properties

| | |
|--|---|
| Service life electrical | approx. 2×10^5 cycles at ohmic load, 1000 VA |
| Nominal frequency | 48 Hz ... 400 Hz |
| Nominal power consumption | 2.5 VA (1 W) |
| Test voltage relay winding/relay contact | 4 kV |
| Rated insulation voltage | 300 V |

Input data

| | |
|---|--|
| Nominal power consumption | 2.5 VA (1 W) |
| Input voltage range | 24 V DC ... 240 V DC -20 % ... +25 % |
| | 24 V AC ... 240 V AC -15 % ... +10 % |
| Temperature coefficient, typical | ≤ 0.01 %/K |
| Recovery time | 500 ms |
| Function | lp: Switched-mode beginning with the pause |
| | li: Switched-mode beginning with the pulse |
| | ER: With switch-on and release delay with control contact |
| | EWu: With switch-on delay and single shot leading edge, voltage controlled |
| | EWs: With switch-on delay and single shot leading edge with control contact |
| | WsWa: With single shot leading edge and single shot trailing edge with control contact |
| Wt: Pulse sequence evaluation (retriggerable release delay) | |
| Setting range time | 50 ms ... 10 h (10 time end ranges) |
| Basic accuracy | ± 1 % (With 1 M Ω remote potentiometer, from scale end value) |
| Setting accuracy | ≤ 5 % (With 1 M Ω remote potentiometer, from scale end value) |
| Repeat accuracy | ≤ 0.5 % ± 5 ms |

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Control

| | |
|-------------------------------|--|
| Connection name | Floating, basic isolation between connection and input/output/bridge Y1-Y2 |
| Load capacity | Cannot carry load |
| Cable length | < 10 m |
| Control pulse length | min. 50 ms (only with Wt function: > 7 ms) |
| Maximum control voltage | 5 V |
| Maximum short-circuit current | 1 mA |

Output data

Switching

| | |
|---------------------------------------|---|
| Contact switching type | 2 floating changeover contacts |
| Maximum switching voltage | 250 V AC (in acc. with IEC 60664-1) |
| Interrupting rating (ohmic load) max. | 750 VA (3 A/250 V AC, module aligned, ≤ 5 mm spacing) 1250 VA (5 A/250 V AC, module not aligned, ≥ 5 mm spacing) |
| Output fuse | 5 A (fast-blow) |

Connection data

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Stripping length | 8 mm |
| Conductor cross-section rigid | 0.5 mm ² ... 2.5 mm ² |
| Conductor cross-section flexible | 0.5 mm ² ... 2.5 mm ² |
| Conductor cross-section AWG | 20 ... 14 |
| Tightening torque | 1 Nm ... 1 Nm |

Signaling

| | |
|----------------|--|
| Status display | Green LED (POWER) Yellow LED (relay active) |
|----------------|--|

Dimensions

| | |
|--------|---------|
| Width | 22.5 mm |
| Height | 90 mm |
| Depth | 113 mm |

Material specifications

| | |
|--|----------------------------------|
| Color | green (RAL 6021) |
| Flammability rating according to UL 94 | V0 |
| Housing insulation material | Polyamide PA, self-extinguishing |

Environmental and real-life conditions

Ambient conditions

| | |
|---|-----------------------------------|
| Degree of protection (Housing) | IP40 (Housing) |
| Degree of protection (Connection terminal blocks) | IP20 (Connection terminal blocks) |
| Ambient temperature (operation) | -25 °C ... 55 °C |

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| | |
|---|--|
| | -25 °C ... 40 °C (corresponds to UL 508) |
| Ambient temperature (storage/transport) | -25 °C ... 70 °C |
| Climatic class | 3K3 (in acc. with EN 60721) |
| Permissible humidity (operation) | 15 % ... 85 % |

Approvals

CE

| | |
|-------------|--------------|
| Certificate | CE-compliant |
|-------------|--------------|

UL, USA/Canada

| | |
|----------------|-----------------------|
| Identification | UL/C-UL Listed UL 508 |
|----------------|-----------------------|

EMC data

| | |
|-------------------------------|--|
| Electromagnetic compatibility | Conformance with EMC directive |
| Low Voltage Directive | Conformance with Low Voltage Directive |
| Noise immunity | EN 61000-6-2 |

Noise emission

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-6-4 |
|-----------------------|--------------|

Standards and regulations

| | |
|-----------------------|----------|
| Standards/regulations | EN 50178 |
|-----------------------|----------|

Mounting

| | |
|-------------------|--|
| Mounting type | DIN rail mounting |
| Assembly note | on standard DIN rail NS 35 in accordance with EN 60715 |
| Mounting position | any |

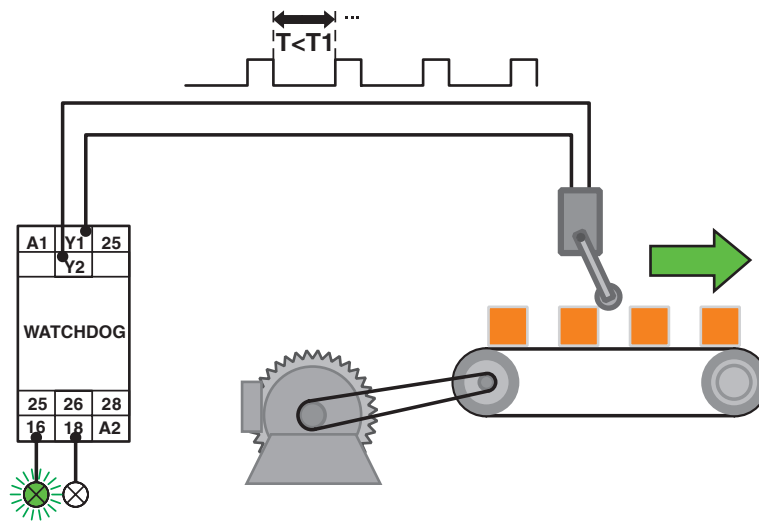
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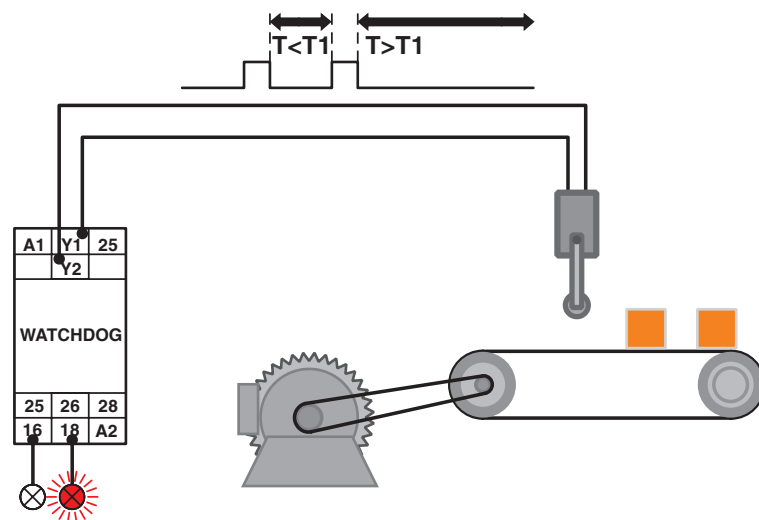
Drawings

Application drawing



Function: Pulse sequence evaluation

Application drawing



Message for incorrect pulse

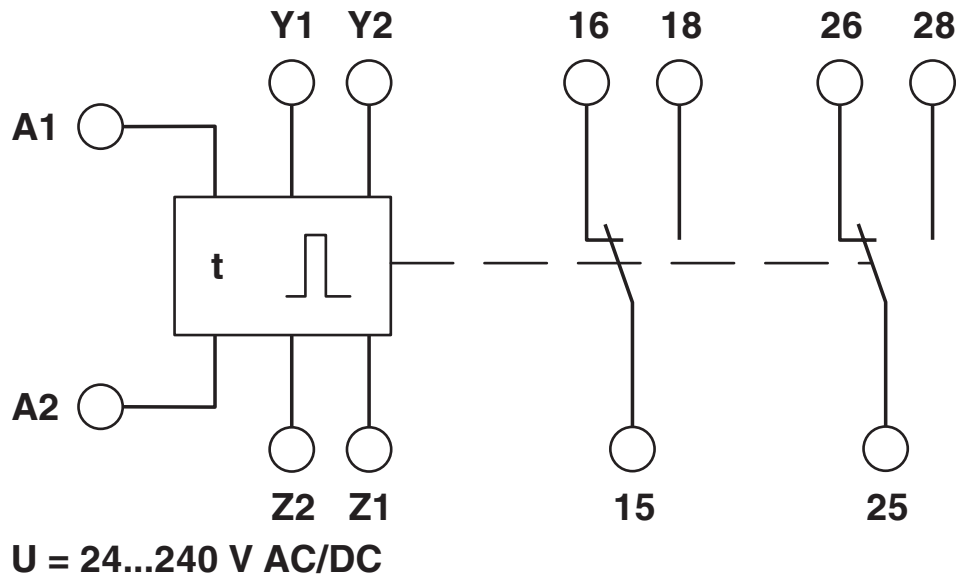
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Block diagram



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Classifications

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39122300 |
|-------------|----------|

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Environmental product compliance

EU RoHS

| | |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

China RoHS

| | |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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