Features
Mono-function and multi-function timer range 22.5 mm wide
87.01-1 Pole - Multi-function and multi-voltage 87.02-2 Pole - Multi-function and multi-voltage, (timed + instantaneous options) External time setting potentiometer option

- Wide supply voltage range:
(24...240)V AC / (24...48)V DC
- LED indicator
- Time setting from 0.05 seconds to 60 hours
- 35 mm rail (EN 50022) mounting
87.01 / 87.02

Screw terminal


Contact specification
Contact configuration
Rated current/Maximum peak current A
Rated voltage/Maximum switching voltage V AC
Rated load AC15 (230 V AC) VA
Single phase motor rating ( 230 V AC ) kW

| Breaking capacity $\mathrm{DCl}: 30 / 110 / 220 \mathrm{~V}$ | A |
| :--- | :--- |
| Minimum switching load $\quad \mathrm{mW}(\mathrm{V} / \mathrm{mA})$ |  |

Standard contact material
Supply specification

| Nominal voltage $\left(U_{N}\right)$ | $V$ VC $(50 / 60 \mathrm{~Hz})$ |
| :--- | ---: |
|  | V DC |
| Rated power AC/DC | $\mathrm{VA}(50 \mathrm{~Hz}) / W$ |
| Operating range | AC |

## Technical data

Specified time range

| Recovery time | ms |
| :--- | ---: |
| Minimum control impulse | ms |
| Setting accuracy-full range | $\%$ |
| Electrical life at rated load in ACl | cycles |
| Ambient temperature range (Contact current) | ${ }^{\circ} \mathrm{C}$ |
| Protection category |  |

Approvals (according to type)
87.01


- Multi-function
- 1 pole
- 35 mm rail (EN 50022) mount


## Al: ON delay

BE: Signal OFF delay
CE: Signal ON and OFF Delay
DE: Signal ON pulse
DI: ON pulse
EE a: Signal OFF pulse
GI: Fixed pulse delayed
SW: Symmetrical recycling: ON start


Wiring diagram (without signal START)

Wiring diagram
(with signal START) (with signal START)
87.02


- Multi-function
- Timing can be regulated using ext. Potentiometer
- 2 timed contacts or 1 timed +1 instantaneous contact
- 35 mm rail (EN 50022) mount


## AI: ON delay

BE: Signal OFF delay
CE: Signal ON and OFF Delay
DE: Signal ON pulse
DI: ON pulse
EE a: Signal OFF pulse
GI: Fixed pulse delayed
SW: Symmetrical recycling: ON start


Wiring diagram (without signal START)


Wiring diagram
(with signal START)

87 Series - Modular timers 5-8 A

Features
Mono-function and multi-function timer range 22.5 mm wide
87.11 - ON delay, multi-voltage
87.21 - ON pulse, multi-voltage
87.31 - Symmetrical recycling, multi-voltage

- 1 Pole output contact
- Wide supply voltage range:
(24...240)V AC / (24...48)V DC
- LED indicator
- Time setting:

Types $87.11 / 21-0.05$ seconds to 60 hours Type 87.31-0.5 seconds to 10 seconds - 35 mm rail (EN 50022) mount
$87.11 / 87.21 / 87.31$
Screw terminal


Contact configuration
Rated current/Maximum peak current
Rated voltage/Maximum switching voltage V AC
Rated load AC1
Rated load AC15 (230 V AC)
Single phase motor rating ( 230 V AC ) kW

| Breaking capacity DCl: $30 / 110 / 220 \mathrm{~V} \quad \mathrm{~A}$ |
| :--- | :--- |
| Minimum switching load $\quad \mathrm{mW}(\mathrm{V} / \mathrm{mA})$ |


| Minimum switching load | $\mathrm{mW}(\mathrm{V} / \mathrm{mA})$ |
| :--- | :--- |
| Standard contact material |  |

## Supply specification

Nominal voltage $\left(U_{N}\right) \quad \frac{V A C}{}(50 / 60 \mathrm{~Hz})$
Rated power AC/DC VA ( 50 Hz )/W
Operating range

## Technical data

| Specified time range |  |
| :--- | ---: |
| Repeatability | $\%$ |
| Recovery time | ms |
| Minimum control impulse | $\%$ |
| Setting accuracy-full range | cycles |
| Electrical life at rated load in AC1 | ${ }^{\circ} \mathrm{C}$ |
| Ambient temperature range |  |
| Protection category |  |


| Protection category |
| :--- |
| Approvals (according to type) |

### 87.11



- Mono-function
- 35 mm rail (EN 50022) mount
- 35 mm rail (EN 50022) mount • 35 mm rail (EN 50022) mount
87.21



Wiring diagram (without signal START)
87.31


SW: Symmetrical recycling: ON start


Wiring diagram (without signal START)
 -

Wiring diagram (without signal START)

DI: ON pulse
 (

Features
Mono-function and multi-function timer range 22.5 mm wide
87.41 - Signal OFF delay, multi-voltage, 1 Pole
87.61 - True OFF delay, multi-voltage, 1 Pole
87.62 - True OFF delay, multi-voltage, 2 Pole

- Wide supply voltage range:

Type 87.41, (24...240)V AC/(24...48)V DC Types 87.61/62, (24...240)V AC/DC

- LED indicator
- Time setting range:

Type 87.41-0.05 seconds to 60 hours Types $87.61 / 62-0.15$ seconds to 10 minutes - 35 mm rail (EN 50022) mount
87.41 / $87.61 / 87.62$

Screw terminal


Contact specification
Contact configuration
Rated current/Maximum peak current A

| Rated voltage/Maximum switching voltage V AC |
| :--- | :--- |
| Rated lad ACl |


| Rated load ACl | VA |
| :--- | ---: |
| Rated load AC15 (230 V AC) | VA |
| Single phase motor rating (230 V AC) | kW |


| Breaking capacity DC1:30/110/220 V A |
| :--- | ---: |
| Minimum switching load $\quad \mathrm{mW}(\mathrm{V} / \mathrm{mA})$ |


| Minimum switching load | $\mathrm{mW}(\mathrm{V} / \mathrm{mA})$ |
| :--- | :--- |
| Standard contact material |  |


| Supply specification |  |
| :--- | ---: |
| Nominal voltage $\left(U_{N}\right)$ | $V \mathrm{VAC}(50 / 60 \mathrm{~Hz})$ |
|  | $\mathrm{VA}(50 \mathrm{~Hz}) / \mathrm{W}$ |
| Rated power AC/DC | AC |
| Operating range | DC |

## Technical data

| Specified time range |
| :--- |
| Repeatability |


| Repeatability \% | $\pm 0.2$ | $\pm 1$ | $\pm 1$ |
| :---: | :---: | :---: | :---: |
| Recovery time ms | 50 | 50 | 50 |
| Minimum control impulse ms | 50 | $300 \mathrm{~ms}(\mathrm{Al}$ - A2) | $300 \mathrm{~ms}(\mathrm{Al}$ - A2) |
| Setting accuracy-full range \% | $\pm 5$ | $\pm 5$ | $\pm 5$ |
| Electrical life at rated load in AC1 cycles | $100 \cdot 10^{3}$ | $100 \cdot 10^{3}$ | $100 \cdot 10^{3}$ |
| Ambient temperature range ${ }^{\circ} \mathrm{C}$ | $-20 \ldots+70$ | $-20 \ldots+70$ | $-20 \ldots+70$ |
| Protection category | IP 20 | IP 20 | IP 20 |
| Approvals (according to type) | CE (GL) PG ©ULUs |  |  |

Features

## Mono-function and multi-function timer range

 22.5 mm wide87.82 - Star-Delta timer, multi-voltage, star and delta output contacts
87.91-Multi-function Recycling timer, 1 Pole

- Wide supply range:
(24...240)V AC / (24...48)V DC
- LED indicator
- Time setting voltage range:

Type 87.82-0.05 minute to 1 minute Type 87.91-0.05 seconds to 60 hours - 35 mm rail (EN 50022) mount

### 87.82 / 87.91 <br> Screw terminal



Contact specification
Contact configuration
Rated current/Maximum peak current
Rated voltage/Maximum switching voltage V AC
Rated load AC1 VA

| Rated load AC 15 (230 V AC) | VA |
| :--- | ---: |
| Single phase motor rating (230 V AC) | kW |

Breaking capacity $\mathrm{DCl}: 30 / 110 / 220 \mathrm{~V}$ A
Minimum switching load $\quad \mathrm{mW}(\mathrm{V} / \mathrm{mA})$

| Standard contact material |  |
| :--- | ---: |
| Supply specification |  |
| Nominal voltage $\left(U_{N}\right)$ | $V$ V DC $(50 / 60 \mathrm{~Hz})$ |
|  | $\mathrm{VA}(50 \mathrm{~Hz}) / \mathrm{W}$ |
| Rated power AC/DC | AC |
| Operating range | DC |

## Technical data

| Specified time range | $\%$ |
| :--- | ---: |
| Repeatability | ms |
| Recovery time | ms |
| Minimum control impulse | $\%$ |
| Setting accuracy-full range | cycles |
| Electrical life at rated load in ACl | ${ }^{\circ} \mathrm{C}$ |
| Ambient temperature range |  |

Protection category

Approvals (according to type)

### 87.82



- Mono-function: Star - delta
- 2 pole
- 35 mm rail (EN 50022) mount

SD: Star - delta


Wiring diagram (without signal START)
87.91


- Multi-function recycling
- 1 pole
- 35 mm rail (EN 50022) mount

LI: Asymmetrical recycling (ON starting)
LE: Signal asymmetrical recycling (ON starting)
PI: Asymmetrical recycling (OFF starting)
PE: Signal asymmetrical recycling (OFF starting)


Wiring diagram (without signal START)


Wiring diagram (with signal START)

## Ordering information

Example: 87 series multi-function timer $8 \mathrm{~A}, 1 \mathrm{CO}(\mathrm{SPDT})$ contact, $(24 \ldots 240) \mathrm{VAC}(50 / 60 \mathrm{~Hz})$ and (24...48)V DC supply.


## Technical data



Time scales


Potentiometer for remote time setting of 87.02 timer.
087.02.2
$10 \mathrm{k} \Omega / 0.25 \mathrm{~W}$ linear. Panel hole diameter - 22.5 mm

## Functions

$\mathbf{U}=$ Supply Voltage
$\mathbf{S}=$ Signal switch
C = Output Contact


* 25-26-28 only for type 87.02 with 2 timed contacts. 21-22-24 only for type 87.02 with 1 instantaneous contact + 1 timed positioning the front DIP switch.
** The LED on types 87.61 and 87.62 is illuminated when supply voltage is supplied to timer.
Wiring diagram



## Functions

Wiring diagram


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