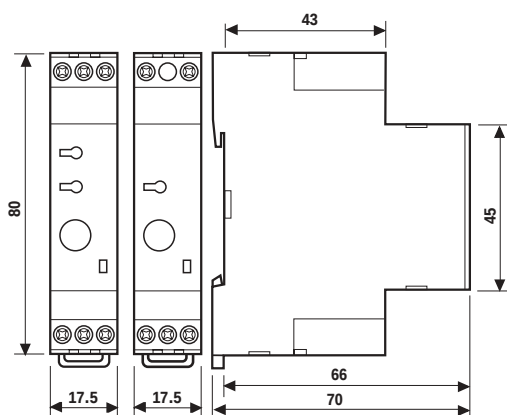


- Mono or multi-function timers
- One module (17.5 mm) wide
- Five functions
- Six time scales, from 0.05s to 10h
- 35 mm rail (EN 50022) mount



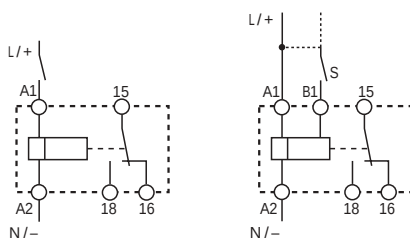
82.01 82.11

## 82.01



- Multi-function
- Multi-voltage
- 35 mm rail mounting

**AI:** ON delay  
**DI:** ON pulse  
**SW:** Symmetrical recycler:  
 ON start



wiring diagram  
(without signal START)

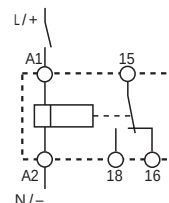
wiring diagram  
(with signal START)

## 82.11



- Mono-function
- Multi-voltage
- 35 mm rail mounting

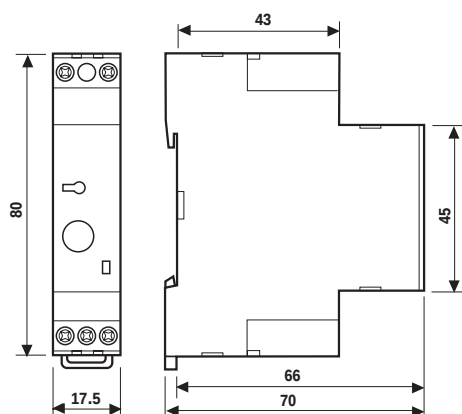
**AI:** ON delay



wiring diagram  
(without signal START)

| Contact specifications                        |               |                                                                                        |                            |
|-----------------------------------------------|---------------|----------------------------------------------------------------------------------------|----------------------------|
| Contact configuration                         |               | 1 CO                                                                                   | 1 CO                       |
| Rated current/ Maximum peak current           | A             | 5/20                                                                                   | 5/20                       |
| Rated voltage/ Maximum switching voltage V AC |               | 250/400                                                                                | 250/400                    |
| Rated load in AC1                             | VA            | 1,250                                                                                  | 1,250                      |
| Rated load in AC15 (230 VAC)                  | VA            | 250                                                                                    | 250                        |
| Single phase motor rating (230 VAC)           | kW            | 0.125                                                                                  | 0.125                      |
| Breaking capacity in DC1: 30/110/220V A       |               | 5/0.3/0.12                                                                             | 5/0.3/0.12                 |
| Minimum switching load                        | mW(V/mA)      | 300 (10/5)                                                                             | 300 (10/5)                 |
| Standard contact material                     |               | AgCdO                                                                                  | AgCdO                      |
| Supply specifications                         |               |                                                                                        |                            |
| Nominal voltage                               | V AC(50/60Hz) | 24...240                                                                               | 24...240                   |
|                                               | V DC          | 24...48                                                                                | 24...48                    |
| Rated power AC/DC                             | VA (50Hz)/ W  | 5/0.5                                                                                  | 5/0.5                      |
| Operating range                               | AC            | (0.85...1.1)U <sub>N</sub>                                                             | (0.85...1.1)U <sub>N</sub> |
|                                               | DC            | (0.85...1.2)U <sub>N</sub>                                                             | (0.85...1.2)U <sub>N</sub> |
| Technical data                                |               |                                                                                        |                            |
| Specified time range                          |               | (0.05...1) s, (0.5...10) s, (0.05...1) min, (0.5...10) min, (0.05...1) h, (0.5...10) h |                            |
| Repeatability                                 | %             | ± 1                                                                                    | ± 1                        |
| Recovery time                                 | ms            | ≤ 100                                                                                  | ≤ 100                      |
| Minimum control impulse                       | ms            | 250                                                                                    | 250                        |
| Setting accuracy-full range                   | %             | ± 5                                                                                    | ± 5                        |
| Electrical life at rated load in AC1          | cycles        | 100·10 <sup>3</sup>                                                                    | 100·10 <sup>3</sup>        |
| Ambient temperature range                     | °C            | -20...+50                                                                              | -20...+50                  |
| Protection category                           |               | IP 20                                                                                  | IP 20                      |
| Approvals: (according to type)                |               | GOST                                                                                   |                            |

- Mono or multi-function timers
- One module (17.5 mm) wide
- Five functions
- Six time scales, from 0.05s to 10h
- 35 mm rail (EN 50022) mount

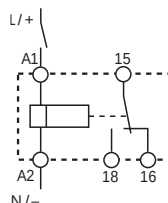


## 82.21



- Mono-function
- Multi-voltage
- 35 mm rail mounting

**DI:** ON pulse



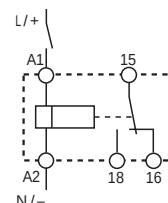
wiring diagram  
(without signal START)

## 82.31



- Mono-function
- Multi-voltage
- 35 mm rail mounting

**SW:** Symmetrical recycler: ON start



wiring diagram  
(without signal START)

### Contact specifications

|                                         |               |            |
|-----------------------------------------|---------------|------------|
| Contact configuration                   | 1 CO          | 1 CO       |
| Rated current/Maximum peak current      | A             | 5/20       |
| Rated voltage/Maximum switching voltage | V AC          | 250/400    |
| Rated load in AC1                       | VA            | 1,250      |
| Rated load in AC15 (230 VAC)            | VA            | 250        |
| Single phase motor rating (230 VAC)     | kW            | 0.125      |
| Breaking capacity in DC1:               | 30/110/220V A | 5/0.3/0.12 |
| Minimum switching load                  | mW(V/mA)      | 300 (10/5) |
| Standard contact material               | AgCdO         | AgCdO      |

### Supply specifications

|                   |               |                            |                            |
|-------------------|---------------|----------------------------|----------------------------|
| Nominal voltage   | V AC(50/60Hz) | 24...240                   | 24...240                   |
|                   | V DC          | 24...48                    | 24...48                    |
| Rated power AC/DC | VA (50Hz)/ W  | 5/0.5                      | 5/0.5                      |
| Operating range   | AC            | (0.85...1.1)U <sub>N</sub> | (0.85...1.1)U <sub>N</sub> |
|                   | DC            | (0.85...1.2)U <sub>N</sub> | (0.85...1.2)U <sub>N</sub> |

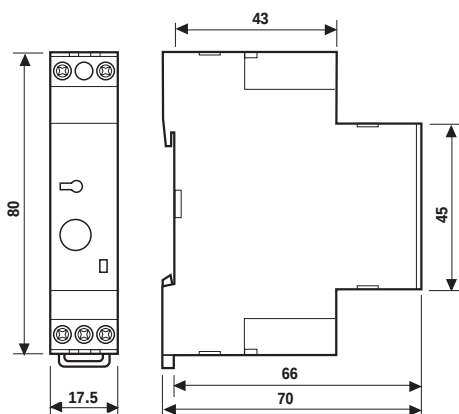
### Technical data

|                                      |        |                                             |                                            |
|--------------------------------------|--------|---------------------------------------------|--------------------------------------------|
| Specified time range                 |        | (0.05...1) s, (0.5...10) s, (0.05...1) min, | (0.5...10) min, (0.05...1) h, (0.5...10) h |
| Repeatability                        | %      | ± 1                                         | ± 1                                        |
| Recovery time                        | ms     | ≤ 100                                       | ≤ 100                                      |
| Minimum control impulse              | ms     | 250                                         | 250                                        |
| Setting accuracy-full range          | %      | ± 5                                         | ± 5                                        |
| Electrical life at rated load in AC1 | cycles | 100·10 <sup>3</sup>                         | 100·10 <sup>3</sup>                        |
| Ambient temperature range            | °C     | -20...+50                                   | -20...+50                                  |
| Protection category                  |        | IP 20                                       | IP 20                                      |

**Approvals:** (according to type)



- Mono or multi-function timers
- One module (17.5 mm) wide
- Five functions
- Six time scales, from 0.05s to 10h
- 35 mm rail (EN 50022) mount

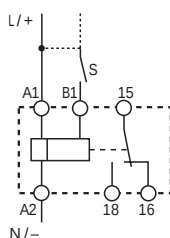


## 82.41



- Mono-function
- Multi-voltage
- 35 mm rail mounting

**BE:** Signal OFF delay



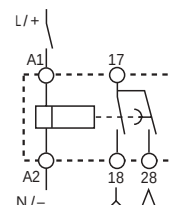
wiring diagram  
(with signal START)

## 82.82



- Mono-function
- Multi-voltage
- 35 mm rail mounting

**SD:** Star-Delta



wiring diagram  
(without signal START)

| Contact specifications                        |               |                                                                                  |                                                        |
|-----------------------------------------------|---------------|----------------------------------------------------------------------------------|--------------------------------------------------------|
| Contact configuration                         |               | 1 CO                                                                             | 2 NO                                                   |
| Rated current/ Maximum peak current           | A             | 5/20                                                                             | 5/20                                                   |
| Rated voltage/ Maximum switching voltage V AC |               | 250/400                                                                          | 250/400                                                |
| Rated load in AC1                             | VA            | 1,250                                                                            | 1,250                                                  |
| Rated load in AC15 (230 VAC)                  | VA            | 250                                                                              | 250                                                    |
| Single phase motor rating (230 VAC)           | kW            | 0.125                                                                            | 0.125                                                  |
| Breaking capacity in DC1:                     | 30/110/220V A | 5/0.3/0.12                                                                       | 5/0.3/0.12                                             |
| Minimum switching load                        | mW(V/mA)      | 300 (10/5)                                                                       | 300 (10/5)                                             |
| Standard contact material                     |               | AgCdO                                                                            | AgCdO                                                  |
| Supply specifications                         |               |                                                                                  |                                                        |
| Nominal voltage                               | V AC(50/60Hz) | 24...240                                                                         | 24...240                                               |
|                                               | V DC          | 24...48                                                                          | 24...48                                                |
| Rated power AC/DC                             | VA (50Hz)/ W  | 5/0.5                                                                            | 5/0.5                                                  |
| Operating range                               | AC            | (0.85...1.1)U <sub>N</sub>                                                       | (0.85...1.1)U <sub>N</sub>                             |
|                                               | DC            | (0.85...1.2)U <sub>N</sub>                                                       | (0.85...1.2)U <sub>N</sub>                             |
| Technical data                                |               |                                                                                  |                                                        |
| Specified time range                          |               | (0.05...1)s, (0.5...10)s, (0.05...1)min, (0.5...10)min, (0.05...1)h, (0.5...10)h | (0.15...3)s, (0.5...10)s, (0.05...1)min, (0.5...10)min |
| Repeatability                                 | %             | ± 1                                                                              | ± 1                                                    |
| Recovery time                                 | ms            | ≤ 100                                                                            | ≤ 100                                                  |
| Minimum control impulse                       | ms            | 250                                                                              | 250                                                    |
| Setting accuracy-full range                   | %             | ± 5                                                                              | ± 5                                                    |
| Electrical life at rated load in AC1          | cycles        | 100·10 <sup>3</sup>                                                              | 100·10 <sup>3</sup>                                    |
| Ambient temperature range                     | °C            | -20...+50                                                                        | -20...+50                                              |
| Protection category                           |               | IP 20                                                                            | IP 20                                                  |
| Approvals: (according to type)                |               | GOST                                                                             |                                                        |

## ORDERING INFORMATION

Example: a 82 series, multi-function modular timer, 24 to 48 V DC and 24 to 240 V AC (50/60) Hz supply voltage.

**8 2 . 0 1 . 0 . 2 4 0 . 0 0 0 0**

**Series**

**Type**

0 = Multi-function (AI, DI, BE, SW)  
 1 = ON delay (AI)  
 2 = ON pulse (DI)  
 3 = Symmetrical recycler: ON start (SW)  
 4 = Signal OFF delay (BE)  
 8 = Star - delta (SD)

**Supply voltage**

240 = { 24...48 V DC  
 24...240 V AC

**Supply version**

0 = AC (50/60 Hz)/DC

**No. of poles**

1 = 1 pole for types 0, 1, 2, 3, 4  
 2 = 2 pole for star - delta

## TECHNICAL DATA

### EMC SPECIFICATIONS

| TYPE OF TEST                                                    | REFERENCE STANDARD  |              |
|-----------------------------------------------------------------|---------------------|--------------|
| ELECTROSTATIC DISCHARGE                                         | - contact discharge | EN 61000-4-2 |
|                                                                 | - air discharge     | EN 61000-4-2 |
| RADIO-FREQUENCY ELECTROMAGNETIC FIELD (80 ÷ 1000 MHz)           |                     | EN 61000-4-3 |
| FAST TRANSIENTS (burst) (5-50 ns, 5 kHz) on Supply terminals    |                     | EN 61000-4-4 |
| SURGES (1.2/50 µs) on Supply terminals                          | - common mode       | EN 61000-4-5 |
|                                                                 | - differential mode | EN 61000-4-5 |
| RADIO-FREQUENCY COMMON MODE (0.15 ÷ 80 MHz) on Supply terminals |                     | EN 61000-4-6 |
| RADIATED AND CONDUCTED EMISSION                                 |                     | EN 55022     |
|                                                                 |                     | class B      |

### OTHER DATA

|                                                                                                 |     |             |                |
|-------------------------------------------------------------------------------------------------|-----|-------------|----------------|
| CURRENT ABSORPTION on signal control (B1)                                                       |     | 1mA         |                |
| POWER LOST TO THE ENVIRONMENT                                                                   |     |             |                |
| - without contact current                                                                       | W   | 5           |                |
| - with rated current                                                                            | W   | 6           |                |
| MAX WIRE SIZE                                                                                   |     | solid cable | stranded cable |
|                                                                                                 | mm² | 1x4 / 2x2.5 | 1x4 / 2x1.5    |
|                                                                                                 | AWG | 1x12 / 2x14 | 1x12 / 2x16    |
|  SCREW TORQUE | Nm  | 1           |                |

## TIME SCALES

| Type  | Function Code | Function                       | s    | s    | s   | min  | min | h    | h   |
|-------|---------------|--------------------------------|------|------|-----|------|-----|------|-----|
|       |               |                                | 0.05 | 0.15 | 0.5 | 0.05 | 0.5 | 0.05 | 0.5 |
|       |               |                                | 1    | 3    | 10  | 1    | 10  | 1    | 10  |
| 82.01 | AI            | ON delay                       | •    |      | •   | •    | •   | •    | •   |
|       | BE            | Signal OFF delay               | •    |      | •   | •    | •   | •    | •   |
|       | DI            | ON pulse                       | •    |      | •   | •    | •   | •    | •   |
|       | SW            | Symmetrical recycler: ON start | •    |      | •   | •    | •   | •    | •   |
| 82.11 | AI            | ON delay                       | •    |      | •   | •    | •   | •    | •   |
| 82.21 | DI            | ON pulse                       | •    |      | •   | •    | •   | •    | •   |
| 82.31 | SW            | Symmetrical recycler: ON start | •    |      | •   | •    | •   | •    | •   |
| 82.41 | BE            | Signal OFF delay               | •    |      | •   | •    | •   | •    | •   |
| 82.82 | SD            | Star - delta                   |      | •    | •   | •    | •   |      |     |

NOTE: time scales and functions must be set before energising the timer.

## FUNCTIONS

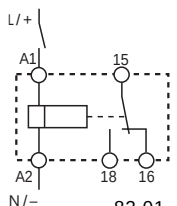
|                           | LED                                                                               | Relay type              | Supply voltage | NO output contact   | Contacts |         |
|---------------------------|-----------------------------------------------------------------------------------|-------------------------|----------------|---------------------|----------|---------|
|                           |                                                                                   |                         |                |                     | Open     | Closed  |
| <b>U</b> = Supply Voltage |  | 82.01<br>82.11<br>82.21 | ON             | Open                | 15 - 18  | 15 - 16 |
| <b>S</b> = Signal switch  |  | 82.31<br>82.41          | ON             | Closed              | 15 - 16  | 15 - 18 |
| <b>C</b> = Output contact |  |                         | ON             | Closed ( $\wedge$ ) | 17 - 28  | 17 - 18 |
|                           |  | 82.82                   | ON             | Closed ( $\Delta$ ) | 17 - 18  | 17 - 28 |

Without signal Start= Start via contact in supply line (A1).

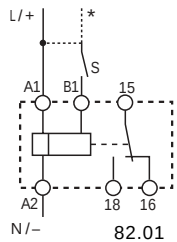
With signal Start = Start via contact into control terminal (B1).

### Wiring diagram

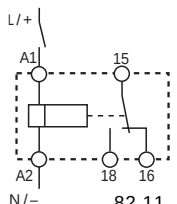
#### Multi-function without signal START



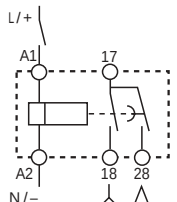
#### with signal START (S)



#### Mono-function without signal START

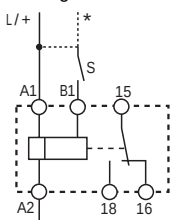


82.11  
82.21  
82.31

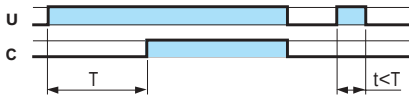
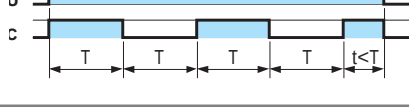
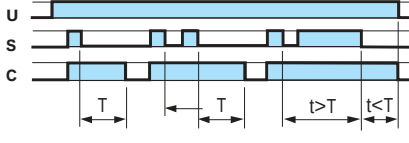


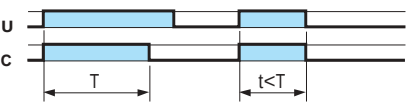
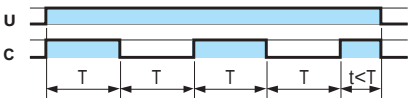
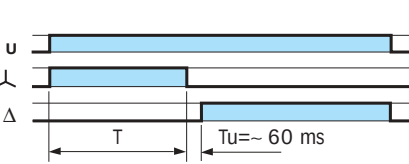
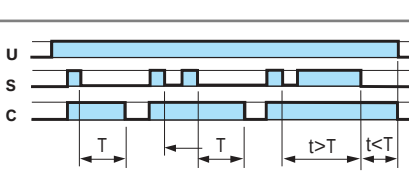
82.82

#### with signal START



82.41

|                   |                                                                                     |                                                                                                                                                                                                                                                             |
|-------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Type 82.01</b> |    | <b>(AI) ON delay.</b><br>Apply power to timer. Output contacts transfer after preset time has elapsed. Reset occurs when power is removed.                                                                                                                  |
|                   |    | <b>(DI) ON pulse.</b><br>Apply power to timer. Output contacts transfer immediately. After the preset time has elapsed, contacts reset.                                                                                                                     |
|                   |   | <b>(SW) Symmetrical recycler: ON start.</b><br>Apply power to timer. Output contacts transfer immediately and cycle between ON and OFF for as long as power is applied. The ratio is 1:1 (time on = time off).                                              |
|                   |  | <b>(BE) Signal OFF delay.</b><br>Power is permanently applied to the timer. The output contacts transfer immediately on closure of the Signal Switch (S). Opening the Signal Switch initiates the preset delay, after which time the output contacts reset. |

|              |                                                                                     |                                                                                                                                                                                                                                                                                                                    |
|--------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>82.11</b> |  | <b>(AI) ON delay.</b><br>Apply power to timer. Output contacts transfer after preset time has elapsed. Reset occurs when power is removed.                                                                                                                                                                         |
| <b>82.21</b> |  | <b>(DI) ON pulse.</b><br>Apply power to timer. Output contacts transfer immediately. After the preset time has elapsed, contacts reset.                                                                                                                                                                            |
| <b>82.31</b> |  | <b>(SW) Symmetrical recycler: ON start.</b><br>Apply power to timer. Output contacts transfer immediately and cycle between ON and OFF for as long as power is applied. The ratio is 1:1 (time on = time off).                                                                                                     |
| <b>82.82</b> |  | <b>(SD) Star - delta.</b><br>Apply power to timer. The star contact ( $\wedge$ ) closes immediately. After preset delay has elapsed the star contact ( $\wedge$ ) resets. After a further fixed time of $\sim 60$ ms the delta contact ( $\Delta$ ) closes and remains in that position, until reset on power off. |
| <b>82.41</b> |  | <b>(BE) Signal OFF delay.</b><br>Power is permanently applied to the timer. The output contacts transfer immediately on closure of the Signal Switch (S). Opening the Signal Switch initiates the preset delay, after which time the output contacts reset.                                                        |

\* A voltage other than the supply voltage can be applied to the command START (B1).

Example: A1 - A2 = 230 V AC / B1 - A2 = 24 V AC