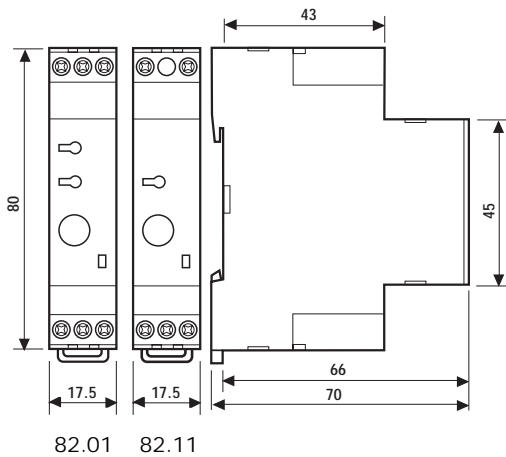
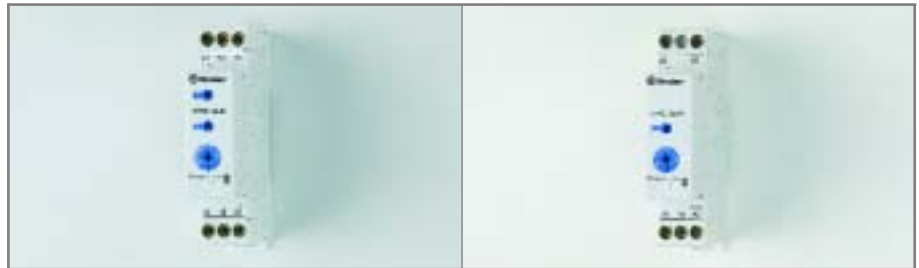


- Mono or multi-function timers
- One module (17.5 mm) wide
- Five functions
- Six time scales, from 0.05s to 10h
- 35 mm rail (EN 50022) mount



## 82.01

## 82.11



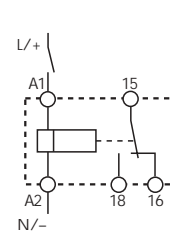
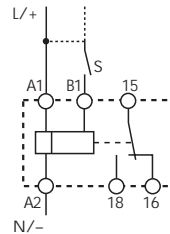
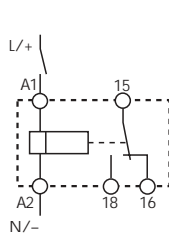
- Multi-function
- Multi-voltage
- 35 mm rail mounting

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

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

**BE:** Signal OFF delay

**AI:** ON delay



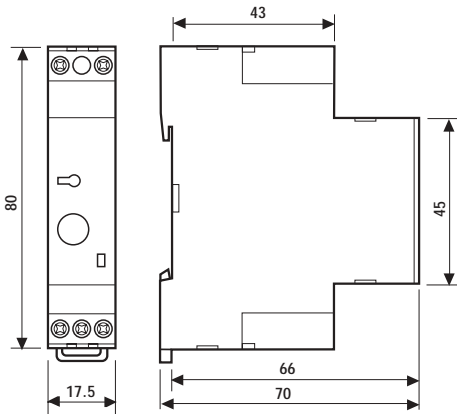
wiring diagram  
(without signal START)

wiring diagram  
(with signal START)

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
<b>Approvals:</b> (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



## 82.21

## 82.31

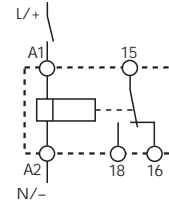
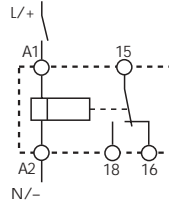


- Mono-function
- Multi-voltage
- 35 mm rail mounting

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

**DI:** ON pulse

**SW:** Symmetrical recycler: ON start



wiring diagram  
(without signal START)

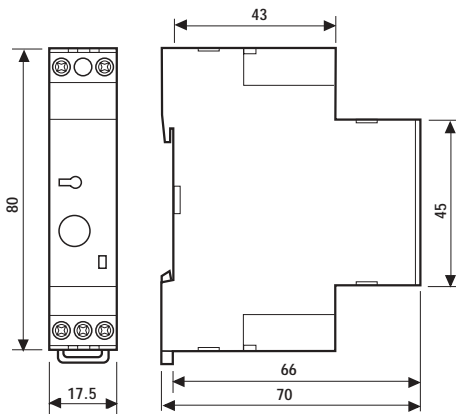
wiring diagram  
(without signal START)

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)



- 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

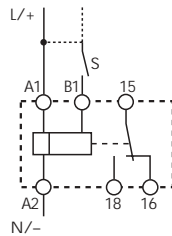


## 82.41



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

**BE:** Signal OFF delay



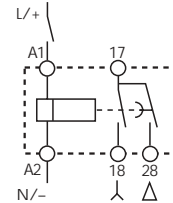
wiring diagram  
(with signal START)

## 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
<b>Approvals:</b> (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 =  $\begin{cases} 24...48 \text{ V DC} \\ 24...240 \text{ V AC} \end{cases}$

**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	10V/m
FAST TRANSIENTS (burst) (5-50 ns, 5 kHz) on Supply terminals	EN 61000-4-4	6 kV
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	10 V
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	
	mm <sup>2</sup>	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

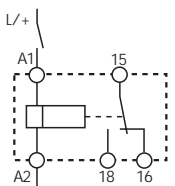
	LED	Relay type	Supply voltage	NO output contact	Contacts	
					Open	Closed
<b>U</b> = Supply Voltage		82.01 82.11 82.21	ON	Open	15 - 18	15 - 16
<b>S</b> = Signal switch		82.31 82.41				
<b>C</b> = Output contact		82.82	ON	Closed ( $\wedge$ )	17 - 28	17 - 18
			ON	Closed ( $\Delta$ )	17 - 18	17 - 28

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

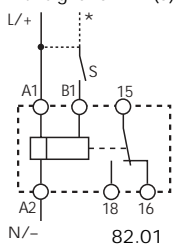
With signal Start = Start via contact into control terminal (B1).

### Wiring diagram

#### Multi-function without signal START

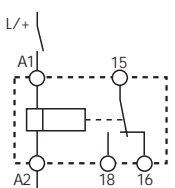


#### with signal START (S)

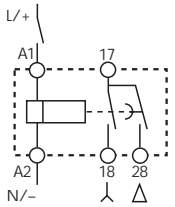


Type	Timing Diagram	Description
<b>82.01</b>		<b>(AI) ON delay.</b> Apply power to timer. Output contacts transfer after preset time has elapsed. Reset occurs when power is removed.
		<b>(DI) ON pulse.</b> Apply power to timer. Output contacts transfer immediately. After the preset time has elapsed, contacts reset.
		<b>(SW) Symmetrical recycler: ON start.</b> 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> 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.

#### Mono-function without signal START

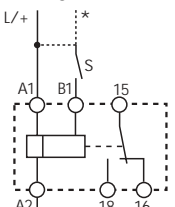


82.11  
82.21  
82.31



82.82

#### with signal START



82.41

<b>82.11</b>		<b>(AI) ON delay.</b> 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> 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> 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> 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 ~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> 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