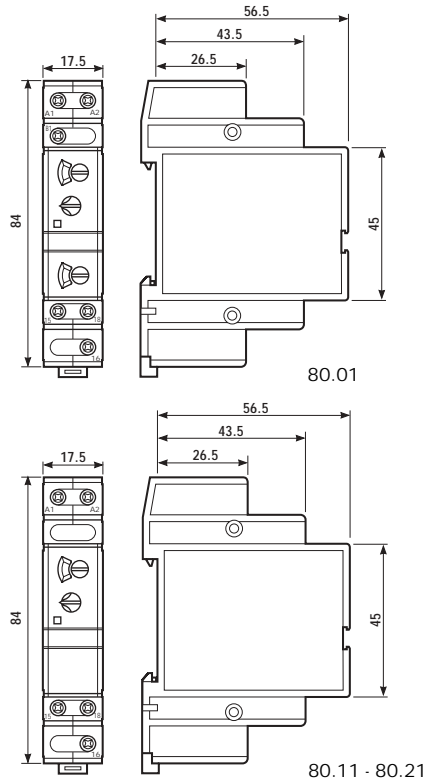
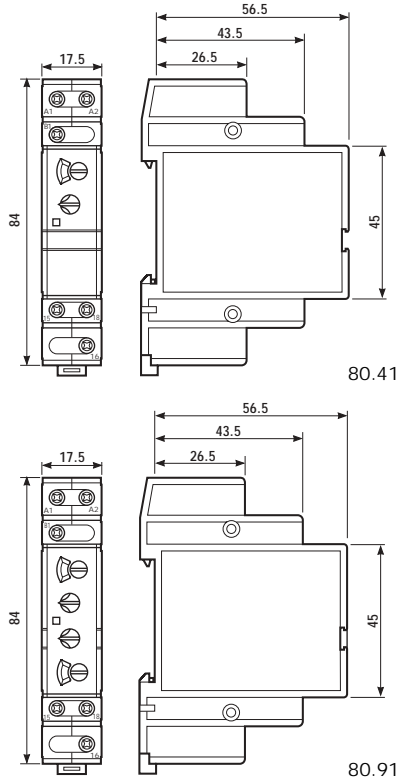


- Mono-function and multi-function versions available
- Rotary selector
- 17.5 mm wide
- Six time scales from 0.1s to 20h
- 35 mm rail (EN 50022) mount
- High input/output insulation



	80.01	80.11	80.21
	- Multi-voltage - Multi-function	- Mono-voltage - Mono-function	- Mono-voltage - Mono-function
	<b>AI:</b> ON delay <b>DI:</b> ON pulse <b>SW:</b> Symmetrical recycler: ON start <b>BE:</b> Signal OFF delay <b>CE:</b> Signal ON and OFF delay <b>DE:</b> Signal ON pulse	<b>AI:</b> ON delay	<b>DI:</b> ON pulse
	 wiring diagram (without signal START) wiring diagram (with signal START)	 wiring diagram (without signal START)	 wiring diagram (without signal START)
<b>Contact specifications</b>			
Contact configuration	1 CO	1 CO	1 CO
Rated current/Maximum peak current	A 16/30	A 16/30	A 16/30
Rated voltage/Maximum switching voltage V AC	250/400	250/400	250/400
Rated load in AC1	VA 4,000	VA 4,000	VA 4,000
Rated load in AC15 (230 VAC)	VA 750	VA 750	VA 750
Single phase motor rating (230 VAC)	kW 0.55	kW 0.55	kW 0.55
Breaking capacity in DC1: 30/110/220V A	16/0.3/0.12	16/0.3/0.12	16/0.3/0.12
Minimum switching load	mW(V/mA) 500 (10/5)	mW(V/mA) 500 (10/5)	mW(V/mA) 500 (10/5)
Standard contact material	AgCdO	AgCdO	AgCdO
<b>Supply specifications</b>			
Nominal voltage	V AC(50/60Hz) 12...240	V AC(50/60Hz) 24 - 230...240	V AC(50/60Hz) 24 - 230...240
	V DC 12...240	V DC 24 (non polarized)	V DC 24 (non polarized)
Rated power AC/DC	VA (50Hz)/W < 1.8/ < 1.4	VA (50Hz)/W < 1.8/ < 0.6	VA (50Hz)/W < 1.8/ < 0.6
Operating range	AC 10.2...265 V	(0.85...1.1)U <sub>N</sub>	(0.85...1.1)U <sub>N</sub>
	DC 10.2...265 V	(0.85...1.1)U <sub>N</sub>	(0.85...1.1)U <sub>N</sub>
<b>Technical data</b>			
Specified time range	(0.1...2) s, (1...20) s, (0.1...2) min, (1...20) min, (0.1...2) h, (1...20) h		
Repeatability	% ± 1	% ± 1	% ± 1
Recovery time	ms ≤ 50	ms ≤ 50	ms ≤ 50
Minimum control impulse	ms 50	ms —	ms —
Setting accuracy-full range	% ± 5	% ± 5	% ± 5
Electrical life at rated load in AC1	cycles 100·10 <sup>3</sup>	cycles 100·10 <sup>3</sup>	cycles 100·10 <sup>3</sup>
Ambient temperature range	°C -10...+50	°C -10...+50	°C -10...+50
Protection category	IP 20	IP 20	IP 20
<b>Approvals:</b> (according to type)			GOST

- Mono-function and multi-function versions available
- Rotary selector
- 17.5 mm wide
- Six time scales from 0.1s to 20h
- 35 mm rail (EN 50022) mount
- High input/output insulation



## 80.41

## 80.91

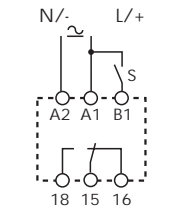


- Mono-voltage
- Mono-function

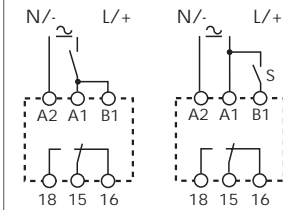
- Multi-voltage
- Mono-function

**BE:** Signal OFF delay

**LI:** Asymmetrical recycler (ON starting)  
**LE:** Signal asymmetrical recycler (ON starting)



wiring diagram (with signal START)



wiring diagram (without signal START)    wiring diagram (with signal START)

### Contact specifications

Contact configuration		1 CO	1 CO
Rated current/Maximum peak current	A	16/30	16/30
Rated voltage/Maximum switching voltage	V AC	250/400	250/400
Rated load in AC1	VA	4,000	4,000
Rated load in AC15 (230 VAC)	VA	750	750
Single phase motor rating (230 VAC)	kW	0.55	0.55
Breaking capacity in DC1:	30/110/220V A	16/0.3/0.12	16/0.3/0.12
Minimum switching load	mW(V/mA)	500 (10/5)	500 (10/5)
Standard contact material		AgCdO	AgCdO

### Supply specifications

Nominal voltage	V AC(50/60Hz)	24 - 230...240	12...240
	V DC	24	12...240
Rated power AC/DC	VA (50Hz)/W	< 1.8/ < 0.6	< 1.8/ < 1.4
Operating range	AC	(0.85...1.1)U <sub>N</sub>	10.2...265 V
	DC	(0.85...1.1)U <sub>N</sub>	10.2...265 V

### Technical data

Specified time range		(0.1...2) s, (1...20) s, (0.1...2) min, (1...20) min, (0.1...2) h, (1...20) h	
Repeatability	%	± 1	± 1
Recovery time	ms	≤ 50	≤ 50
Minimum control impulse	ms	50	50
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	-10...+50	-10...+50
Protection category		IP 20	IP 20

**Approvals:** (according to type)



## ORDERING INFORMATION

Example: a 80 series, modular timers, 1 CO, 16 A, supply rated at 12 ... 240 V AC/DC.

<b>8</b>	<b>0</b>	<b>.</b>	<b>0</b>	<b>1</b>	<b>.</b>	<b>0</b>	<b>.</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>.</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

**Series** —————

**Type** —————

0 = Multi-function (AI, DI, SW, BE, CE, DE)  
 1 = ON delay (AI)  
 2 = ON pulse (DI)  
 4 = Signal OFF delay (BE)  
 9 = Asymmetrical recycler ON starting (LI, LE)

**No. of poles** —————

1 = 1 CO

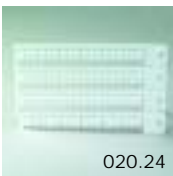
**Supply voltage**

024 = 24 V AC/DC  
 240 = 230...240 V AC (80.11, 80.21, 80.41)  
 240 = 12 ... 240 V AC/DC (80.01, 80.91)

**Supply version**

0 = AC (50/60 Hz)/DC (80.01, 80.91)  
 8 = AC (50/60 Hz) (80.11, 80.21, 80.41)

## ACCESSORIES



**Sheet of marker tags** (24 tags) for types 80.01/11/21/41: 9x17mm | 020.24

## TECHNICAL DATA

### EMC SPECIFICATIONS

TYPE OF TEST	REFERENCE STANDARD
ELECTROSTATIC DISCHARGE	- contact discharge EN 61000-4-2 4 kV
	- air discharge EN 61000-4-2 8 kV
RADIO-FREQUENCY ELECTROMAGNETIC FIELD (80 ÷ 1000 MHz)	EN 61000-4-3 10 V/m
FAST TRANSIENTS (burst) (5-50 ns, 5 kHz) on Supply terminals	EN 61000-4-4 4 kV
SURGES (1.2/50 µs) on Supply terminals	- common mode EN 61000-4-5 4 kV
	- differential mode EN 61000-4-5 4 kV
	on start terminal (B1) - common mode EN 61000-4-5 4 kV
	- differential mode EN 61000-4-5 4 kV
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

### INSULATION

DIELECTRIC STRENGTH	- between input and output circuit V AC	4,000
	- between open contacts V AC	1,000
INSULATION (1.2/50 µs) between input and output	kV	6

### OTHER DATA

CURRENT ABSORPTION on signal control (B1)	< 1 mA		
POWER LOST TO THE ENVIRONMENT	- without contact current W	1.3	
	- with rated current W	3.2	
MAX WIRE SIZE	solid cable	stranded cable	
	mm <sup>2</sup>	1x6 / 2x4	1x4 / 2x2.5
	AWG	1x10 / 2x12	1x12 / 2x14
SCREW TORQUE	Nm	0.8	

FUNCTIONS

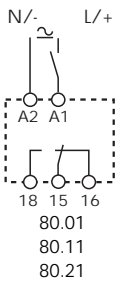
	LED	Supply voltage	NO output contact	Contacts	
				Open	Closed
<b>U</b> = Supply voltage		OFF	Open	15 - 18	15 - 16
<b>S</b> = Signal switch		ON	Open	15 - 18	15 - 16
		ON	Open (Timing in Progress)	15 - 18	15 - 16
		ON	Closed	15 - 16	15 - 18

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

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

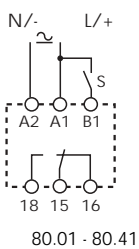
Wiring diagram

Without signal START



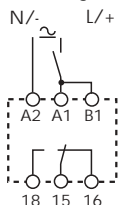
<b>Type</b> 80.01 80.11		<b>(AI) ON delay.</b> Apply power to timer. Output contacts transfer after preset time has elapsed. Reset occurs when power is removed.
80.01 80.21		<b>(DI) ON pulse.</b> Apply power to timer. Output contacts transfer immediately. After the preset time has elapsed, contacts reset.
80.01		<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).

With signal START



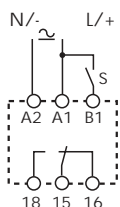
80.01 80.41		<b>(BE) Signal OFF delay.</b> Power is permanently applied to the timer. The output contacts transfer immediately on closure of the Signal Switch (S). Opening the Signal Switch initiates the preset delay, after which time the output contacts reset.
80.01		<b>(CE) Signal ON and OFF delay.</b> Power is permanently applied to the timer. Closing the Signal Switch (S) initiates the preset delay, after which time the output contacts transfer. Opening the Signal switch initiates the same preset delay, after which time the output contacts reset.
80.01		<b>(DE) Signal ON pulse.</b> Power is permanently applied to the timer. On momentary or maintained closure of Signal Switch (S), the output contacts transfer, and remain so for the duration of the preset delay, after which they reset.

Without signal START

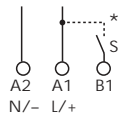


80.91		<b>(LI) Asymmetrical recycler (ON starting).</b> Apply power to timer. Output contacts transfer immediately and cycle between ON and OFF for as long as power is applied. The ON and OFF times are independently adjustable.
80.91		<b>(LE) Signal asymmetrical recycler (ON starting)</b> Power is permanently applied to the timer. Closing Signal Switch (S) causes the output contacts to transfer immediately and cycle between ON and OFF, until opened.

With signal START



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



- \* - With DC supply, positive polarity has to be connected to B1 terminal (according to EN 60204-1).
- A voltage other than the supply voltage can be applied to the command Start (B1), example:  
A1 - A2 = 230 V AC  
B1 - A2 = 12 V DC

80.91