

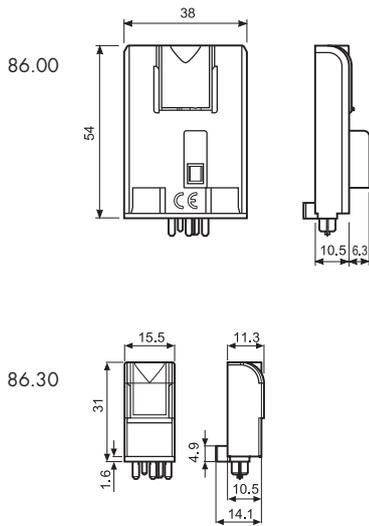
Features

Timer modules for use in conjunction with relay & socket.

86.00 - Multi-function & multi-voltage timer module

86.30 - Bi-function & multi-voltage timer module

- Timer module type 86.00 for 90, 92, 96 series sockets and type 86.30 for 90, 92, 94, 95, 96, 97 series sockets
- Wide supply voltage range: 12...240 V AC/DC (86.00)
12...24 V AC/DC or 230...240 V AC (86.30)
- LED indicator



86.00



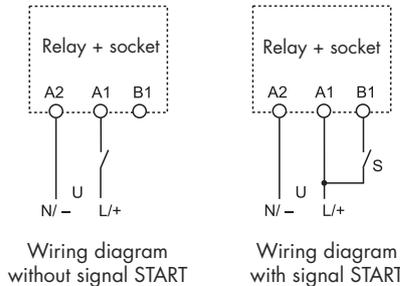
- Time scale: from 0.05s to 100h
- Multi-function
- Plug-in for use with 90.02, 90.03, 92.03 and 96.04 sockets

86.30

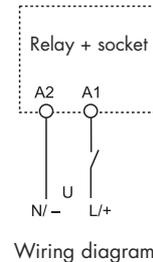


- Time scale: from 0.05s to 100h
- Bi-function
- Plug-in for use with 90.02, 90.03, 92.03, 94.02, 94.03, 94.04, 95.03, 95.05, 95.55, 96.02, 96.04, 97.01, 97.02, 97.51 and 97.52 sockets

AI: ON delay
DI: ON pulse
SW: Symmetrical recycling: ON start
BE: Signal OFF delay
CE: Signal ON & OFF delay
DE: Signal ON pulse
EE: Signal OFF pulse
FE: Signal ON pulse + OFF pulse



AI: ON delay
DI: ON pulse



Contact specification

Contact configuration

Rated current/Maximum peak current A

Rated voltage/Maximum switching voltage V AC

Rated load AC1 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 mW (V/mA)

Standard contact material

Supply specification

Nominal voltage (U_N) V AC (50/60 Hz)

V DC

Rated power AC/DC W

Operating range V AC (50/60 Hz)

DC

Technical data

Specified time range

Repeatability %

Recovery time ms

Minimum control impulse ms

Setting accuracy full range %

Electrical life at rated load in AC1 cycles

Ambient temperature range °C

Protection category

Approvals (according to type)

See 56, 60 and 62 series relays

Note: Do not use with relays

62.3x.x012.x300 and 62.3x.x012.x600

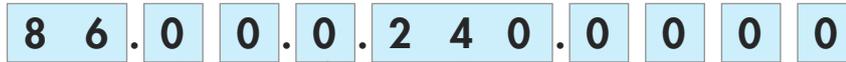
See 40, 44, 46, 55, 56, 60 and

62 series relays

Nominal voltage (U_N)	V AC (50/60 Hz)	12...240	12...24	110...125	230...240
	V DC	12...240	12...24	—	—
Rated power AC/DC	W	1.2	0.15		
Operating range	V AC (50/60 Hz)	10.2...265	9.6...33.6	88...137	184...265
	DC	10.2...265	9.6...33.6	—	—
Specified time range		(0.05...1)s, (0.5...10)s, (5...100)s, (0.5...10)min, (5...100)min, (0.5...10)h, (5...100)h			
Repeatability	%	± 1		± 1	
Recovery time	ms	≤ 50		≤ 50	
Minimum control impulse	ms	50		—	
Setting accuracy full range	%	± 5		± 5	
Electrical life at rated load in AC1	cycles	See 56, 60 and 62 series relays		See 40, 44, 46, 55, 56, 60 and 62 series relays	
Ambient temperature range	°C	-20...+50		-20...+50	
Protection category		IP 20		IP 20	

Ordering information

Example: 86 series multi-function timer module, (12...240)V AC/DC supply voltage.



Series _____
Type _____
 0 = Multi-function (AI, DI, SW, BE, CE, DE, EE, FE)
 3 = Bi-function (AI, DI)
No. of poles _____
 See 40, 44, 46, 55, 56, 60 and 62 series relays
 Poles for chosen relay/socket combination -
 according to chart below

Supply voltage
 024 = (12...24)V AC/DC (86.30 only)
 120 = (110...125)V AC (86.30 only)
 240 = (12...240)V AC/DC (86.00 only)
 240 = (230...240)V AC (86.30 only)
Supply version
 0 = AC (50/60 Hz)/DC
 8 = AC (50/60 Hz)

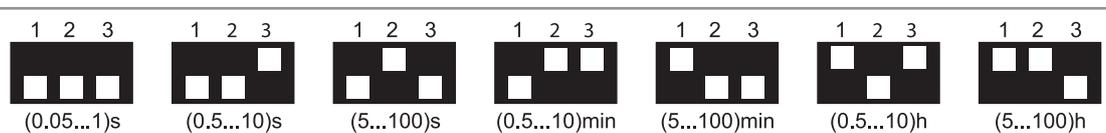
Combinations

Number of poles	Relay type	Socket type	Timer module
1	40.31	95.03	86.30
1	40.61	95.05	86.30
1	46.61	97.01/97.51	86.30
2	40.52/44.52/44.62	95.05/95.55	86.30
2	46.52	97.02/97.52	86.30
2	55.32	94.02	86.30
2	56.32	96.02	86.30
2	60.12	90.02	86.00/86.30
2	62.32	92.03	86.00/86.30
3	55.33	94.03	86.30
3	60.13	90.03	86.00/86.30
3	62.33	92.03	86.00/86.30
4	55.34	94.04	86.30
4	56.34	96.04	86.00/86.30

Technical data

EMC specifications			86.00	86.30
Type of test	Electrostatic discharge	Reference standard		
	contact discharge	EN 61000-4-2	4 kV	n.a.
	air discharge	EN 61000-4-2	8 kV	8 kV
	Radio-frequency electromagnetic field (80 ÷ 1000 MHz)	EN 61000-4-3	10 V/m	10 V/m
	Fast transients (burst) (5-50 ns, 5 kHz) on Supply terminals	EN 61000-4-4	4 kV	2 kV
Surges (1.2/50 µs) on Supply terminals	common mode	EN 61000-4-5	4 kV	2 kV
	differential mode	EN 61000-4-5	4 kV	1 kV
Radio-frequency common mode (0.15 ÷ 80 MHz) on Supply terminals		EN 61000-4-6	10 V	10 V
Radiated and conducted emission		EN 55022	class B	class B
Other data		86.00	86.30	
Current absorption on signal control (B1)	mA	1	—	
Power lost to the environment	without contact current	W	0.1 (12 V) - 1 (230 V)	
	with rated current		See 60 and 62 series relays	
			See 40, 44, 46, 55, 60, 62 series relays	

Time scales



NOTE: Time scales and functions must be set before energising the timer.
 To achieve the minimum time setting of 0.05 seconds it is necessary to use one of the functions with signal START.
 When setting very short times it may be necessary to take into account the operate time of the relay used.

Functions

- U** = Supply voltage
- S** = Signal switch
- = Output contact

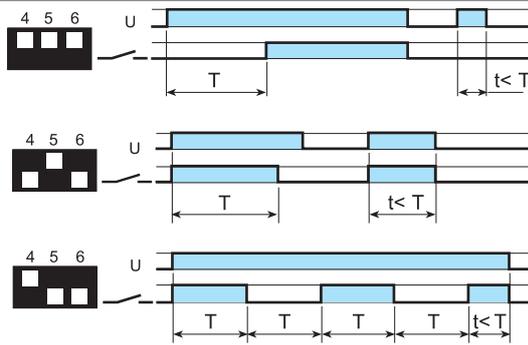
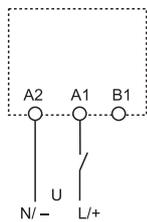
LED Type 86.00	LED Type 86.30	Supply voltage	NO output contact
		OFF	Open
		ON	Open
		ON	Open (timing in progress)
		ON	Closed

Without signal Start= Start via contact in supply line (A1).
 With signal Start = Start via contact into control terminal (B1).

Wiring diagram

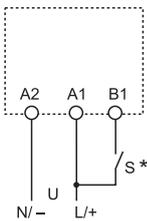
Type 86.00

Without signal START

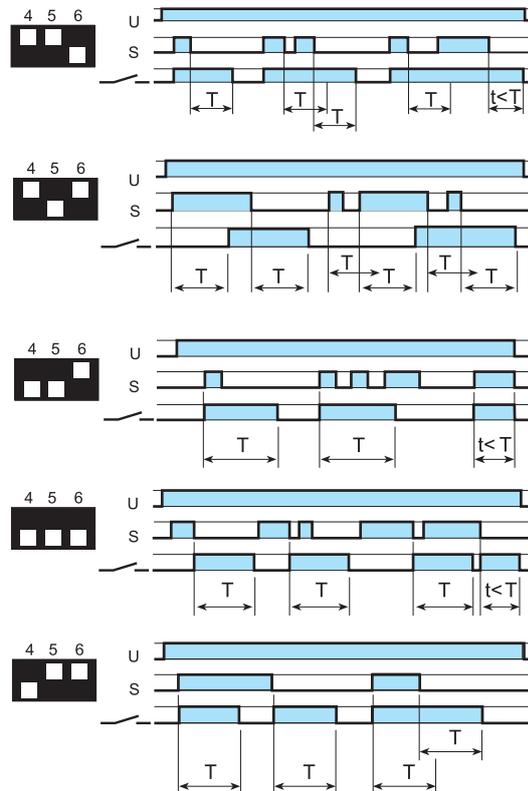


- (AI) ON delay.**
Apply power to timer. Output contacts transfer after preset time has elapsed. Reset occurs when power is removed.
- (DI) ON pulse.**
Apply power to timer. Output contacts transfer immediately. After the preset time has elapsed, contacts reset.
- (SW) Symmetrical recycling: ON start.**
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



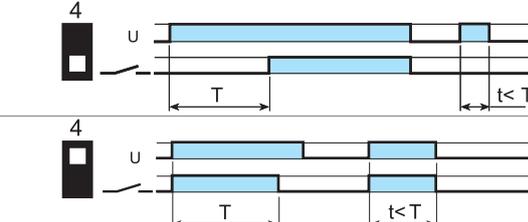
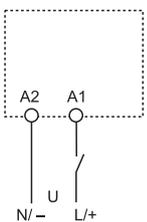
* With DC supply, positive polarity has to be connected to B1 terminal (according to EN 60204-1). Switch S should be exclusively used to provide the control signal to terminal B1. (Do not connect any other load at this point).



- (BE) Signal OFF delay.**
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.
- (CE) Signal ON and OFF delay.**
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.
- (DE) Signal ON pulse.**
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.
- (EE) Signal OFF pulse.**
Power is permanently applied to the timer. On opening of the Signal Switch (S) the output contacts transfer, and remain so for the duration of the preset delay, after which they reset.
- (FE) Signal ON pulse + OFF pulse.**
Power is permanently applied to the timer. Both the opening and closing of the Signal Switch (S) initiates the transfer of the output contacts. In both instances the contacts reset after the delay period has elapsed.

Wiring diagram

Type 86.30



- (AI) ON delay.**
Apply power to timer. Output contacts transfer after preset time has elapsed. Reset occurs when power is removed.
- (DI) ON pulse.**
Apply power to timer. Output contacts transfer immediately. After the preset time has elapsed, contacts reset.