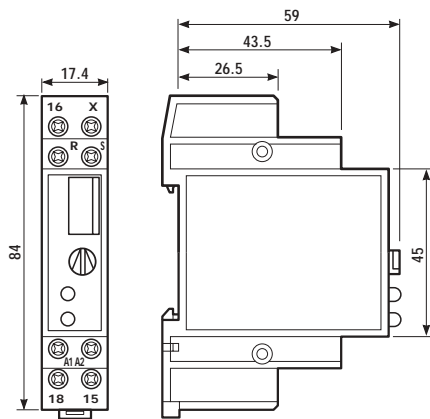


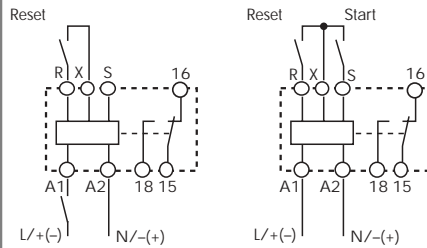
81.01

- Multi-voltage multi-function timer
- One module (17.5 mm) wide housing
- Seven functions (4 with supply start and 3 with signal start)
- Six time scales, from 0.1s to 10h
- 35 mm rail (EN 50022) mount



- Multi-voltage (DC non polarized)
- Multi-function
- 35 mm rail mounting

- AI:** ON delay **BE:** Signal OFF delay
DI: ON pulse **DE:** Signal ON pulse
SW: Symmetrical recycler: **EE:** Signal OFF pulse
 ON start
SP: Symmetrical recycler:
 OFF start



wiring diagram
(without signal START)

wiring diagram
(with signal START)

Contact specifications

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

Supply specifications

Nominal voltage	V AC(50/60Hz)	12...230
	V DC	12...230 (non polarized)
Rated power AC/DC	VA (50Hz)/W	< 2/<2
Operating range	AC	10.8...250
	DC	10.8...250

Technical data

Specified time range		(0,1...1)s,(1...10)s,(10...60)s,(1...10)min,(10...60)min,(1...10)h
Repeatability	%	± 1
Recovery time	ms	≤ 50
Minimum control impulse	ms	50
Setting accuracy-full range	%	± 5
Electrical life at rated load in AC1	cycles	100·10 ³
Ambient temperature range	°C	-10...+50
Protection category		IP 20

Approvals: (according to type)



ORDERING INFORMATION

Example: a 81 series multi-voltage timer with 1 CO contact, 16 A for 12 ... 230 V AC/DC supply.

8

1

.

0

1

.

0

.

2

3

0

.

0

0

0

0

Series —————

Type —————
0 = Multi-voltage

No. of poles —————
1 = 1 pole

Supply voltage
230 = 12 ... 230 V AC/DC

Supply version
0 = AC (50/60 Hz)/DC

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 (81.01)
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	< 1 mA (S-X)	< 1 mA (R-X)			
POWER LOST TO THE ENVIRONMENT					
- without contact current	W	1.3			
- with rated current	W	3.2			
	LOWER TERMINAL	UPPER TERMINAL			
MAX WIRE SIZE	solid cable	stranded cable	solid cable	stranded cable	
	mm ²	1x6 / 2x4	1x4 / 2x2.5	1x4 / 2x2.5	1x2.5 / 2x2.5
	AWG	1x10 / 2x12	1x12 / 2x14	1x12 / 2x14	1x14 / 2x14
SCREW TORQUE	Nm	0.8	0.8		

TIME SCALES

(0.1...1) s

(1...10) s

(10...60) s

(1...10) min

(10...60) min

(1...10) h

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

FUNCTIONS

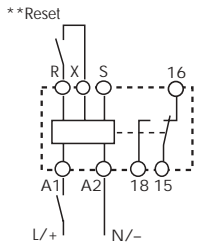
	LED		Supply voltage	NO output contact	Contacts	
	Green	Red			Open	Closed
U = Supply voltage			OFF	Open	15 - 18	15 - 16
S = Signal switch			ON	Open	15 - 18	15 - 16
C = Output contact			ON	Closed	15 - 16	15 - 18

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

With signal Start = Start via contact into control terminal (S-X).

Wiring diagram

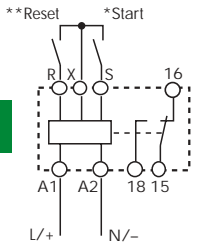
Without signal START



**Reset facility is optional

<p>1 </p> <p>2 </p> <p>3 </p>	<p>U </p> <p>c </p> <p>T $t < T$</p>	<p>(AI) ON delay. Apply power to timer. Output contacts transfer after preset time has elapsed. Reset occurs when power is removed.</p>
<p>1 </p> <p>2 </p> <p>3 </p>	<p>U </p> <p>c </p> <p>T $t < T$</p>	<p>(DI) ON pulse. Apply power to timer. Output contacts transfer immediately. After the preset time has elapsed, contacts reset.</p>
<p>1 </p> <p>2 </p> <p>3 </p>	<p>U </p> <p>c </p> <p>T T T T $t < T$</p>	<p>(SW) Symmetrical recycler: 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).</p>
<p>1 </p> <p>2 </p> <p>3 </p>	<p>U </p> <p>c </p> <p>T T T T T $t < T$</p>	<p>(SP) Symmetrical recycler: OFF start. Apply power to timer. Output contacts transfer after time T has elapsed and cycle between OFF and ON for as long as power is applied. The ratio is 1:1 (time on = time off).</p>

With signal START



* Terminals R, X & S must not be directly connected to the timer supply voltage, but they should be considered to be a supply voltage potential for the purposes of insulation.
**Reset facility is optional

<p>1 </p> <p>2 </p> <p>3 </p>	<p>U </p> <p>S </p> <p>c </p> <p>T T T T</p>	<p>(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.</p>
<p>1 </p> <p>2 </p> <p>3 </p>	<p>U </p> <p>S </p> <p>c </p> <p>T T $t < T$</p>	<p>(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.</p>
<p>1 </p> <p>2 </p> <p>3 </p>	<p>U </p> <p>S </p> <p>c </p> <p>T T T</p>	<p>(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.</p>

RESET Function (R)

In each and every function and time scale, the timer is immediately released when the reset switch is depressed.

<p>1 </p> <p>2 </p> <p>3 </p>	<p>U </p> <p>R </p> <p>c </p> <p>T T T</p>	<p>On depressing the Signal Reset Switch the timer is immediately released. Releasing the Signal Reset Switch reactivates the function. Example: ON delay function.</p>
<p>1 </p> <p>2 </p> <p>3 </p>	<p>U </p> <p>S </p> <p>R </p> <p>c </p> <p>T $t < T$ T</p>	<p>Depressing the Signal Reset Switch terminates the interval time. To re-start, it is necessary to depress the Signal Switch again. Example: ON pulse function.</p>