

Modular timers 16 A



Control panels



Milk processing plant



Punches, cleaners, planers and sanders



Hoists and cranes



Shipyards



Door and gate openers



81 SERIES

81 SERIES Modular timers 16 A

Multi-function and multi-voltage timer

- One module 17.5 mm wide housing
- Seven functions (4 with supply start and 3 with control signal)
- Additional Reset function
- Six time ranges from 0.1 s to 10 h
- 35 mm rail (EN 60715) mounting

For outline drawing see page 4

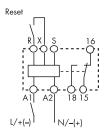
81.01 Screw terminal



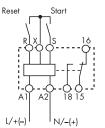




- Multi-voltage (DC non polarized)
- Multi-function
- 35 mm rail (EN 60715) mounting
- AI: On-delay
- **DI:** Interval
- **SW:** Symmetrical flasher (starting pulse on)
- **SP:** Symmetrical flasher (starting pulse off)
- **BE:** Off-delay with control signal
- **DE:** Interval with control signal on
- **EEb:** Interval with control signal off



Wiring diagram (supply START)



Wiring diagram (control signal)

3 , 3		(Supply Sirtiti)	(correror signar)	
Contact specification				
Contact configuration		1 CO (SPDT)		
Rated current/Maximum peak current A		16/30		
Rated voltage/				
Maximum switching voltage V AC		250/400		
Rated load AC1	I load AC1 VA		4000	
Rated load AC15 (230 V AC)	VA	750		
Single phase motor rating (230 V AC) kW		0.55		
Breaking capacity DC1: 24/110/220 V A		16/0.3/0.12		
Minimum switching load	mW (V/mA)	500 (10/5)		
Standard contact material		AgNi		
Supply specification				
Nominal voltage (U _N)	V AC (50/60 Hz)	122	30	
	V DC	12230 (non	polarized)	
Rated power AC/DC	VA (50 Hz)/W	< 2/<	2	
perating range V AC		10.8250		
	V DC	10.8250		
Technical data				
Specified time range		(0.11)s, (110)s, (1060)s, (1	10)min, (1060)min, (110)h	
Repeatability	%	±1		
Recovery time	ms	≤ 50		
linimum control impulse ms		50		
Setting accuracy-full range %		±5		
Electrical life at rated load in AC1 cycles		100 · 10³		
Ambient temperature range °C		-10+50		
Protection category		IP 20		

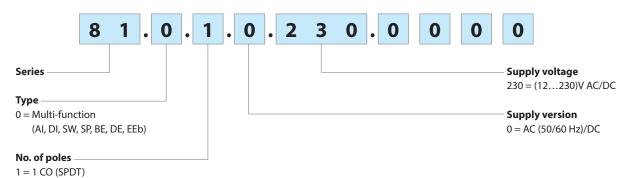
C€ KK EHI

Approvals (according to type)



Ordering information

Example: 81 series, modular timer multi-voltage, 1 CO (SPDT) - 16 A, supply rated at (12...230)V AC/DC.

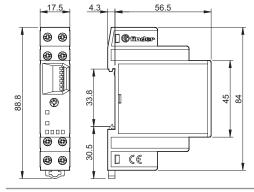


Technical data

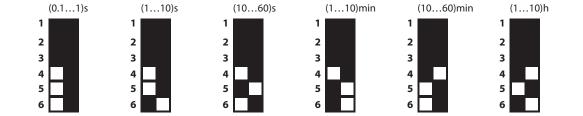
EMC specifications			
Type of test		Reference standard	
Electrostatic discharge	contact discharge	EN 61000-4-2	4 kV
	air discharge	EN 61000-4-2	8 kV
Radio-frequency electromagnetic field (80	÷ 1000 MHz)	EN 61000-4-3	10 V/m
Fast transients (burst) (5-50 ns, 5 kHz) on Su	upply terminals	EN 61000-4-4	4 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
Radio-frequency common mode (0.15 ÷ 80	MHz) on Supply terminals	EN 61000-4-6	10 V
Radiated and conducted emission		EN 55022	class A
Other data			
Current absorption on signal control (B1)		< 1 mA (S-X)	< 1 mA (R-X)
Voltage potential on the input terminal R -	X and S -X	Not galvanic separation from the supply voltage on A1 - A2	
Power lost to the environment	without contact current W	1.3	
	with rated current W	3.2	
Screw torque Nm		0.8	
Max. wire size		solid cable	stranded cable
	mm²	1 x 6 / 2 x 4	1 x 4 / 2 x 2.5
	AWG	1 x 10 / 2 x 12	1 x 12 / 2 x 14

Outline drawings





Time range setting



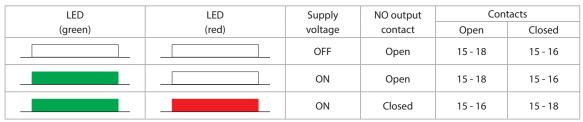
NOTE: time range and function must be set before energising the timer.

Functions

= Supply voltage = Signal switch

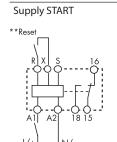
= Reset

= Output contact

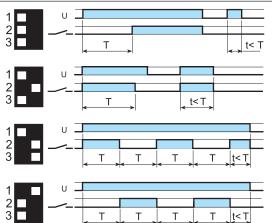


Supply Start = Start via contact in supply line (A1). Control signal = Start via contact into control terminal (X-S).

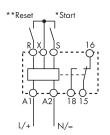
Wiring diagram



** Connection of the Reset (R-X) is optional

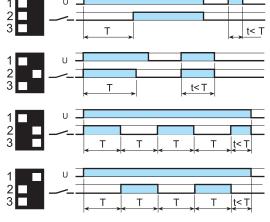


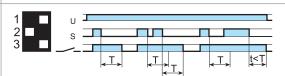
Control signal

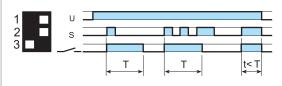


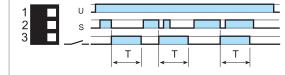
* Terminals R, S & X must not be directly connected to the timer supply voltage, but they should be considered to be at supply voltage potential for the purposes of insulation.

** Connection of the Reset (R-X) is optional









(AI) On-delay.

Apply power to timer. Output contacts transfer after preset time has elapsed. Reset occurs when power is removed.

(DI) Interval.

Apply power to timer. Output contacts transfer immediately. After the preset time has elapsed, contacts reset.

(SW) Symmetrical flasher (starting pulse on).

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).

(SP) Symmetrical flasher (starting pulse off).

Apply power to timer. First transfer of contact occurs after preset time has elapsed. The timer now cycles between OFF and ON as long as power is applied. The ratio is 1:1 (time on = time off).

(BE) Off-delay with control signal.

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.

(DE) Interval with control signal on.

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.

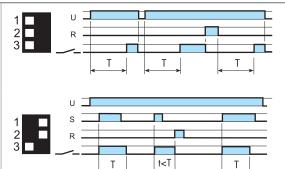
(EEb) Interval with control signal off.

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.

RESET function (R)

For each and every function and time range, the timer is immediately reset when the reset switch is closed.



Supply START; ON delay function

Closing the external reset switch immediately resets the timer. Opening the reset switch re-initiates the timing function.

Example:

Control signal; ON pulse function.

Closing the external reset switch terminates the interval time and resets the timer. To re-start, it is necessary to open the reset switch, before closing the control signal contact.



Accessories



Identification tag, for type 81.01, plastic, 1 tag, 17 x 25.5 mm

019.01



Sheet of marker tags (CEMBRE Thermal transfer printers) for type 81.01, plastic, 48 tags, 6 x 12 mm 060.48

060.48