

Modular timers 8 - 16 A

80
SERIES



Door control



Message
panels
infotainment



Driver's control
console



Multi-function and mono-function timer range
80.01T - Multi-function & multi-voltage
80.11T - On-delay, multi-voltage

- Complies with EN 45545-2:2020 (protection against fire of materials), EN 61373 (resistance against random vibrations and shock, Category 1, Class B), EN 50155 (resistance to temperature and humidity, OT4/ST1 class)
- 17.5 mm wide
- Six time scales from 0.1 s to 24 h
- High input/output isolation
- "Blade + cross" - both flat blade and cross head screw drivers can be used to adjust the range and function selectors, the timing trimmer, and to disengage the rail mounting clip
- New multi-voltage versions with "PWM clever" technology
- 35 mm rail (EN 60715) mount

80.01T/80.11T
Box clamp


* Short term (10 min) +70°C

For outline drawing see page 8

Contact specification

Contact configuration		1 CO (SPDT)	1 CO (SPDT)
Rated current/Maximum peak current	A	16/30	16/30
Rated voltage/ Maximum switching voltage	V AC	250/400	250/400
Rated load AC1	VA	4000	4000
Rated load AC15 (230 V AC)	VA	750	750
Single phase motor rating (230 V AC)	kW	0.55	0.55
Breaking capacity DC1: 24/110/220 V	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		AgNi	AgNi

Supply specification

Nominal voltage (U _N)	V AC (50/60 Hz)	12...240	24...240
	V DC	12...240	24...240
Rated power AC/DC	VA (50 Hz)/W	< 1.8/< 1	< 1.8/< 1
Operating range	V AC	10.8...265	16.8...265
	V DC	10.8...265	16.8...265

Technical data

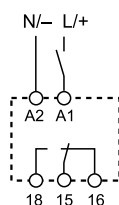
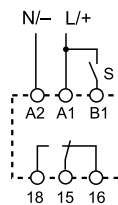
Specified time range		(0.1...2)s, (1...20)s, (0.1...2)min, (1...20)min, (0.1...2)h, (1...24)h	
Repeatability	%	± 1	± 1
Recovery time	ms	≤ 50	≤ 50
Minimum control impulse	ms	50	—
Setting accuracy-full range	%	± 5	± 5
Electrical life at rated load in AC1	cycles	100 · 10 ³	100 · 10 ³
Ambient temperature range	°C	-25...+55*	-25...+55*
Protection category		IP 20	IP 20

Approvals (according to type)

80.01T

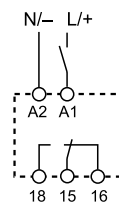

- Multi-voltage
- Multi-function

AI: On-delay
DI: Interval
SW: Symmetrical flasher (starting pulse on)
BE: Off-delay with control signal
CE: On- and off-delay with control signal
DE: Interval with control signal on


Wiring diagram
(without control signal)

Wiring diagram
(with control signal)

80.11T


- Multi-voltage
- Mono-function

AI: On-delay

Wiring diagram
(without control signal)

Mono-function timer range**80.41T - Off-delay with control signal, multi-voltage****80.61T - Power off-delay (True off-delay), multi-voltage**

- Complies with EN 45545-2:2020 (protection against fire of materials), EN 61373 (resistance against random vibrations and shock, Category 1, Class B), EN 50155 (resistance to temperature and humidity, OT4/ST1 class)
- 17.5 mm wide
- Type 80.41T: six time scales from 0.1 s to 24 h
- Type 80.61T: four time scales from 0.05 s to 3 min
- High input/output isolation
- "Blade + cross" - both flat blade and cross head screw drivers can be used to adjust the range and function selectors, the timing trimmer, and to disengage the rail mounting clip
- New multi-voltage versions with "PWM clever" technology
- 35 mm rail (EN 60715) mount

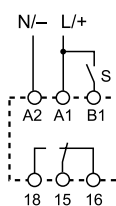
80.41T/80.61T
Box clamp



* Short term (10 min) +70°C
For outline drawing see page 8

80.41T

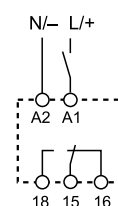
- Multi-voltage
- Mono-function

BE: Off-delay with control signal

Wiring diagram
(with control signal)

80.61T

- Multi-voltage
- Mono-function

BI: Power off-delay (True off-delay)

Wiring diagram
(without control signal)

Contact specification

Contact configuration

1 CO (SPDT)

1 CO (SPDT)

Rated current/Maximum peak current

A

16/30

8/15

Rated voltage/

Maximum switching voltage

V AC

250/400

250/400

Rated load AC1

VA

4000

2000

Rated load AC15 (230 V AC)

VA

750

400

Single phase motor rating (230 V AC)

kW

0.55

0.3

Breaking capacity DC1: 24/110/220 V

A

16/0.3/0.12

8/0.3/0.12

Minimum switching load

mW (V/mA)

500 (10/5)

300 (5/5)

Standard contact material

AgNi

AgNi

Supply specificationNominal voltage (U_N)

V AC (50/60 Hz)

24...240

24...240

V DC

24...240

24...220

Rated power AC/DC

VA (50 Hz)/W

< 1.8/< 1

< 0.6/< 0.6

Operating range

V AC

16.8...265

16.8...265

V DC

16.8...265

16.8...242

Technical data

Specified time range

(0.1...2)s, (1...20)s, (0.1...2)min, (1...20)min, (0.1...2)h, (1...24)h

(0.05...2)s, (1...16)s, (8...70)s, (50...180)s

Repeatability

%

± 1

± 1

Recovery time

ms

≤ 50

—

Minimum control impulse

ms

50

500 (A1-A2)

Setting accuracy-full range

%

± 5

± 5

Electrical life at rated load in AC1

cycles

100 · 10³100 · 10³

Ambient temperature range

°C

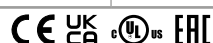
-25...+55*

-25...+55*

Protection category

IP 20

IP 20

Approvals (according to type)

Ordering information

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

	8	0	.	0	1	.	0	.	2	4	0	.	0	0	0	0	T
Series																	
Type																	
0 = Multi-function timer (AI, DI, SW, BE, CE, DE); 1 CO 16 A - 250 V AC																	
1 = Monofunction timer (AI); 1 CO 16 A - 250 V AC																	
4 = Monofunction timer (BE); 1 CO 16 A - 250 V AC																	
6 = Monofunction timer (BI); 1 CO 8 A - 250 V AC																	
Versions																	
0 = Standard																	
Supply voltage																	
240 = (12...240)V AC/DC (80.01T)																	
240 = (24...240)V AC/DC (80.11T, 80.41T)																	
240 = (24...220)V DC (80.61T)																	
Supply version																	
0 = AC (50/60 Hz)/DC																	
No. of poles																	
1 = 1 CO (SPDT)																	

Technical data

Insulation					
Dielectric strength			80.01T/11T/41T	80.61T	
			between input and output circuit V AC	4000	2500
			between open contacts V AC	1000	1000
Insulation (1.2/50 μs) between input and output			kV	6	4
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	
Other data					
Current absorption on signal control (B1)			< 1 mA		
Power lost to the environment			without contact current W	1.4	
			with rated current W	3.2	
 Screw torque			Nm	0.8	
Max. wire size				solid cable	stranded cable
			mm²	1 x 4 / 2 x 2.5	1 x 4 / 2 x 2.5
			AWG	1 x 12 / 2 x 14	1 x 12 / 2 x 14

Functions

U = Supply voltage**S** = Signal switch

— = Output contact

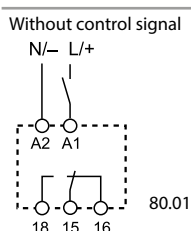
LED*	Supply voltage	NO output contact	Contacts	
			Open	Closed
	OFF	Open	15 - 18	15 - 16
	ON	Open	15 - 18	15 - 16
	ON	Open (Timing in Progress)	15 - 18	15 - 16
	ON	Closed	15 - 16	15 - 18

*The LED on type 80.61T is illuminated only when the supply voltage is applied to the timer; during the timing period the LED is not illuminated.

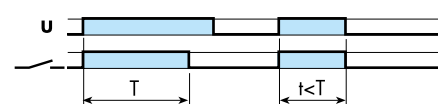
Wiring diagram

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

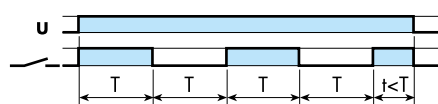
With control signal = Start via contact into control terminal (B1).

**Type
80.01T****(AI) On-delay.**

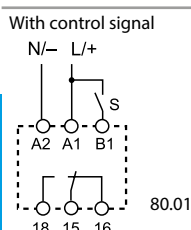
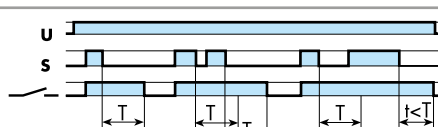
Apply power to timer. Output contacts transfer after preset time has elapsed. Reset occurs when power is removed.

**(DI) Interval.**

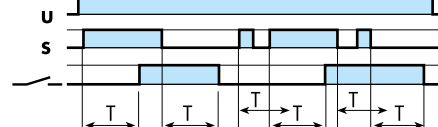
Apply power to timer. Output contacts transfer immediately. After the preset time has elapsed, contacts reset.

**(SW) Symmetrical flasher (starting pulse on).**

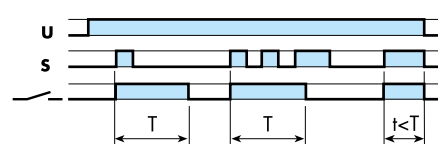
Apply power to timer. Output contacts transfer immediately and cycle between ON and OFF for as long as power is applied. The ratio is 1:1 (time on = time off).

**80.01T****(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.

**(CE) On- and off-delay with control signal.**

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.

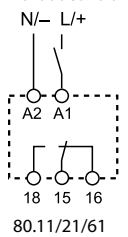
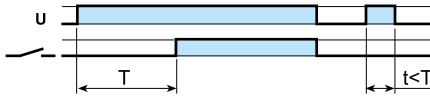
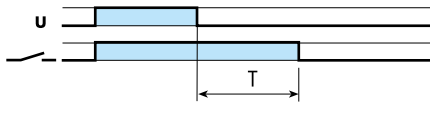
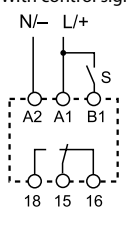
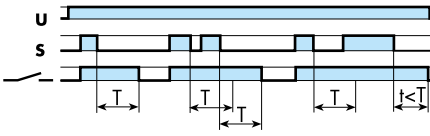
**(DE) Interval with control signal on.**

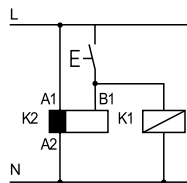
Power is permanently applied to the timer. On momentary or maintained closure of Signal Switch (S), the output contacts transfer, and remain so for the duration of the preset delay, after which they reset.

NOTE: The function must be set before energising the timer.

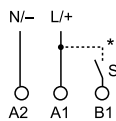
Functions

Wiring diagram

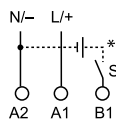
Without control signal  80.11/21/61	Type 80.11T 80.61T	 (AI) On-delay. Apply power to timer. Output contacts transfer after preset time has elapsed. Reset occurs when power is removed.  (BI) Power off-delay (True off-delay). Apply power to timer (minimum 500 ms). Output contacts transfer immediately. Removal of power initiates the preset delay, after which time the output contacts reset.	
With control signal  80.41	80.41T	 (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.	



• Possible to control an external load, such as another relay coil or timer, connected to the control signal terminal B1.

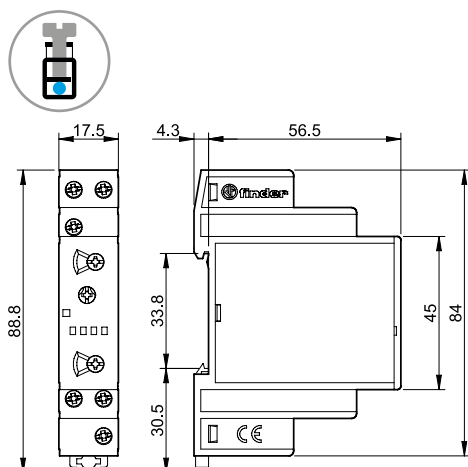
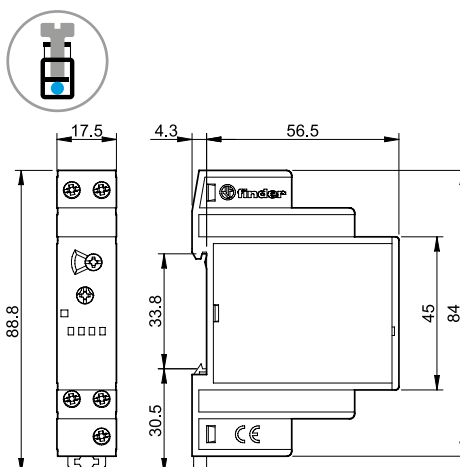
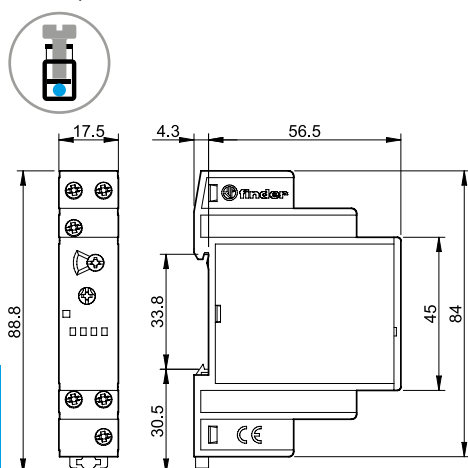
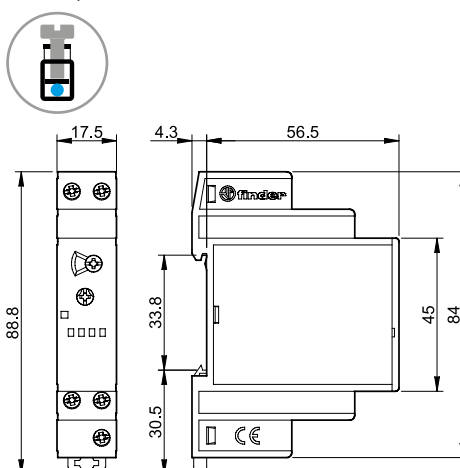


* With DC supply, positive polarity has to be connected to B1 terminal (according to EN 60204-1).

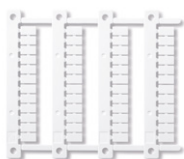


** A voltage other than the supply voltage can be applied to the command Start (B1), example:
A1 - A2 = 230 V AC
B1 - A2 = 12 V DC

Outline drawings

Type 80.01T
Box clampType 80.11T
Box clampType 80.41T
Box clampType 80.61T
Box clamp

Accessories



060.48

Sheet of marker tags, plastic, 48 tags, 6 x 12 mm, for CEMBRE's thermal transfer printers

060.48