

80.51 серия - реле времени



80 Series - Modular timers 8 A

Features

Multi-function and multi-voltage

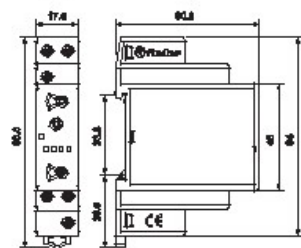
- 17,5 mm wide
- Six time scales from 0.1s to 24h
- High input/output isolation
- 3.5 mm rail (EN 60715) mount
- "Blade + cross" - both flat blade and cross head screw drivers can be used to adjust the range and function selectors, the timing trimmer, and to disengage the rail mounting clip
- New multi-voltage versions with "PWM clever" technology

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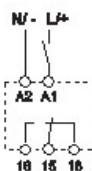


- Multi-voltage
- Multi-function

80.51
Screw terminal



- AI: ON delay
- DI: ON pulse
- SW: Symmetrical recycling: ON start
- BE: Signal OFF delay
- CE: Signal ON and OFF delay
- DE: Signal ON pulse



Wiring diagram
(without signal START)



Wiring diagram
(with signal START)

FOR UL HORSEPOWER AND PILOT DUTY RATINGS
SEE "General technical information" page V

Contact specification		
Contact configuration		1 CO (SPDT)
Rated current/Maximum peak current	A	8/16
Rated voltage/Maximum switching voltage V AC		250/400
Rated load AC1	VA	2,000
Rated load AC1.5 (230 V AC)	VA	400
Single phase motor rating (230 V AC)	kW	0.3
Breaking capacity DC1: 30/110/220 V	A	8/0.3/0.12
Minimum switching load	mW (V/mA)	500 (10/5)
Standard contact material		AgCdO
Supply specification		
Nominal voltage (U _N)	V AC (50/60 Hz)	24...240
	V DC	24...240
Rated power AC/DC	VA (50 Hz)/W	< 1.8 / < 1
Operating range	AC	(17...265)V
	DC	(17...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...24)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 ⁴
Ambient temperature range	°C	-10...+50
Protection category		IP 20
Approvals (according to type)		CE



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Technical data

Insulation				
Dielectric strength			80.51	
	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	
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	
		mm ²	1x6 / 2x4	1x4 / 2x2.5
		AWG	1x10 / 2x12	1x12 / 2x14

Accessories



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Sheet of marker tags, plastic, 72 tags, 6x12 mm	060.72
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Functions

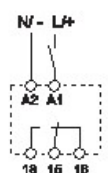
- U = Supply voltage
- S = Signal switch
- = Output contact

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

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



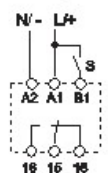
Type 80.51

(A1) ON delay.
Apply power to timer. Output contacts transfer after preset time has elapsed. Reset occurs when power is removed.

(D1) 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



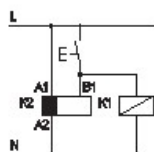
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(BE) Signal OFF delay.
Power is permanently applied to the timer. The output contacts transfer immediately on closure of the Signal Switch (S). Opening the Signal Switch initiates the preset delay, after which time the output contacts reset.

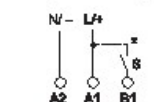
(CE) Signal ON and OFF delay.
Power is permanently applied to the timer. Closing the Signal Switch (S) initiates the preset delay, after which time the output contacts transfer. Opening the Signal switch initiates the same preset delay, after which time the output contacts reset.

(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.

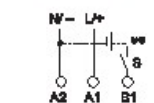
NOTE: The function must be set before energising the timer.



- Possible to control an external load, such as another relay coil or timer, connected to the signal start 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 = 24 V DC

