



Time relays



- multifunctional
- switching on and off delays
- cyclic
- digital (electronic)

Use in automation and control systems for equipment such as pumps, motors, lighting, heating, etc.



Temperature regulators

They are used to maintain a given temperature regime, heating of premises, control of heating and cooling devices.



Voltage control relays

They are used to monitor the mains voltage and shut down equipment in the event of an increase or decrease in the mains voltage, asymmetry, or incorrect phase sequence.



Twilight switches

- twilight relay
- staircase lighting relay

They are used to automatically turn on the lighting at dusk and turn it off at dawn. For turning on and off the lighting on stairs with a delay or from different floors.



Impulse relays

- Pulse - bistable relays with memory

They are used in automation systems to control lighting or any device from different points.



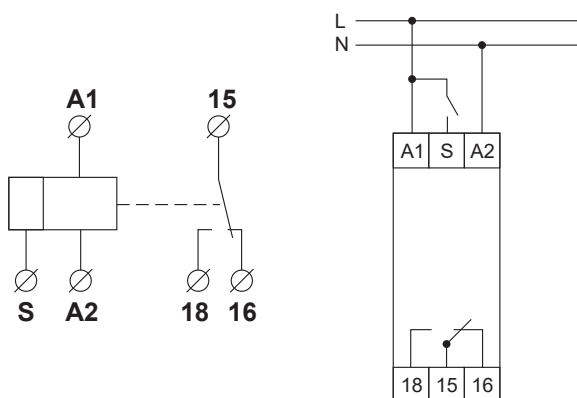
It is used for different switching options depending on the time.
Used in automation and equipment control systems.



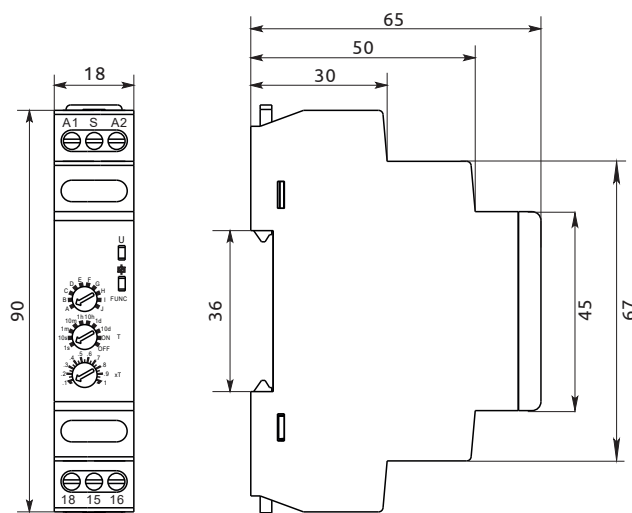
Technical specifications

Series	FRT14 12
Standards	EN/IEC 60730-1, EN/IEC 60730-2-7
Power supply terminals	A1, A2
Pulse terminal	S
AC/DC supply voltage, V	12-240
Rated frequency f, Hz	50/60
Time range	0.1s - 10 days
Installation accuracy	<5%
Repeat accuracy	<0.2%
Number of contacts	1 C/O
Rated current of contacts I _n , A	8A/AC1
Insulation voltage U _i , V	250
Degree of protection	IP20
Pollution level	3
Electrical wear resistance	10 ⁵
Mechanical wear resistance	10 ⁶
Cross-section of connecting conductors, mm ²	0.5-2,5
Bolt clamping torque, Nm	0.5
DIN rail mounting	TN35

Schematic diagrams



Overall dimensions



Order code	Full name of	Packaging, pcs		Unit	Gross weight, kg	
		Packaging	Box		Packaging	Box
FRT14 12	Multifunction time relay FRT14 12 12-240VAC/DC,50/60HZ	1	100	0,070	0,080	8,000



It is used to delay the switching after the supply voltage is applied.

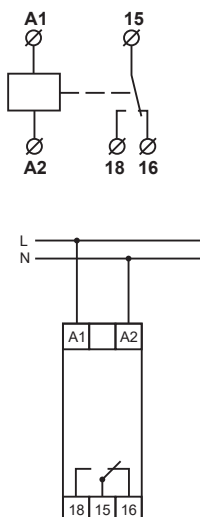


Technical specifications

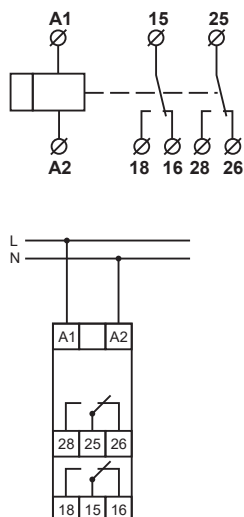
Series	FRT14 21	FRT14 22
Standards	EN/IEC 60730-1, EN/IEC 60730-2-7	
Power supply terminals	A1, A2	
AC/DC supply voltage, V	12-240	24-240
Rated frequency f, Hz	50/60	
Time range	0.1s - 10 days	
Installation accuracy	<5%	
Repeat accuracy	<0.2%	
Number of contacts	1 C/O	2 C/O
Rated current of contacts I _n , A	8A/AC1	
Insulation voltage U _i , V	250	
Degree of protection	IP20	
Pollution level	3	
Electrical wear resistance	10 ⁵	
Mechanical wear resistance	10 ⁶	
Cross-section of connecting conductors, mm ²	0.5-2,5	
DIN rail mounting	TN35	

Schematic diagrams

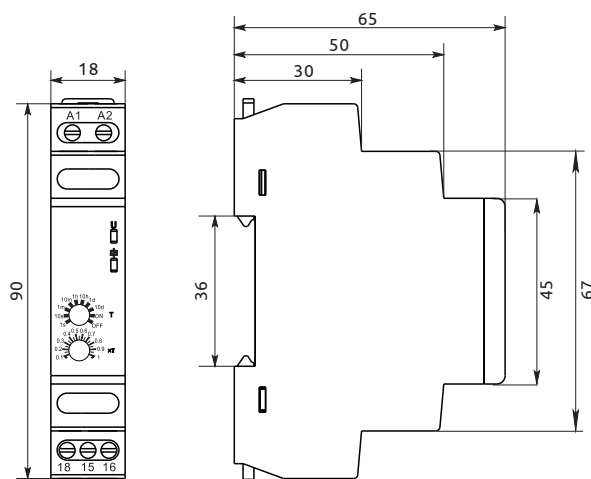
FRT14 21



FRT14 22



Overall dimensions



Order code	Full name of	Packaging, pcs		Unit	Gross weight, kg	
		Packaging	Box		Packaging	Box
FRT14 21	Switch-off delay relay FRT14 21	1	100	0,070	0,080	8,000
FRT14 22	Switch-off delay relay FRT14 22	1	100	0,080	0,090	9,000



It is used to delay the switching after the supply voltage is applied.



Technical specifications

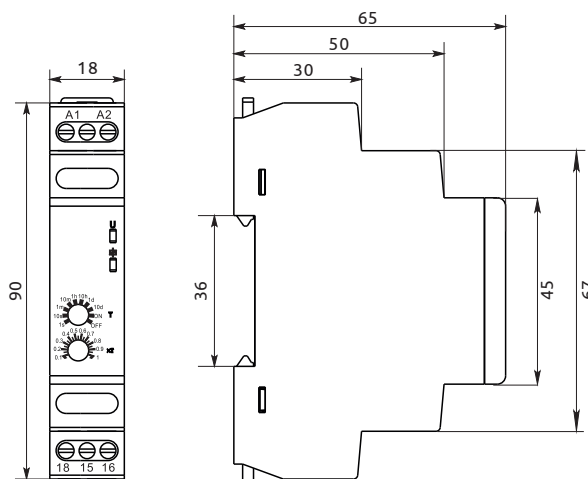
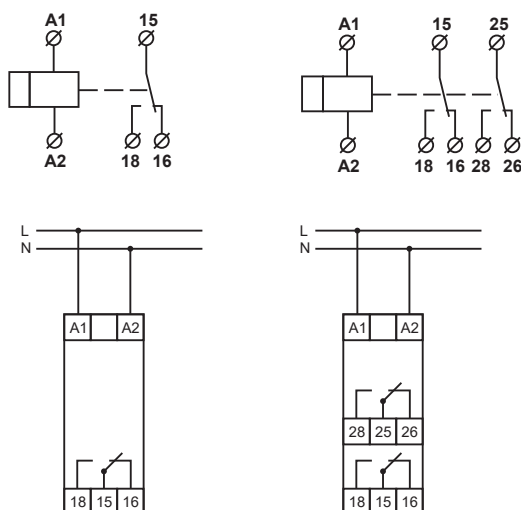
Series	FRT14 41	FRT14 41
Standards	EN/IEC 60730-1, EN/IEC 60730-2-7	
Power supply terminals	A1, A2	
AC/DC supply voltage, V	12-240	24-240
Rated frequency f, Hz	50/60	
Time range	0.1s - 10 days	
Installation accuracy	<5%	
Repeat accuracy	<0.2%	
Number of contacts	1 C/O	2 C/O
Rated current of contacts I _n , A	8A/AC1	
Insulation voltage U _i , V	250	
Degree of protection	IP20	
Pollution level	3	
Electrical wear resistance	10 ⁵	
Mechanical wear resistance	10 ⁶	
Cross-section of connecting conductors, mm ²	0.5-2,5	
DIN rail mounting	TN35	

Schematic diagrams

Overall dimensions

FRT14 41 T14 42

FR



Order code	Full name of	Packaging, pcs		Unit	Gross weight, kg	
		Packaging	Box		Packaging	Box
FRT14 41	Switch-on delay relay FRT14 41	1	100	0,070	0,080	8,000
FRT14 42	Switch-on delay relay FRT14 42	1	100	0,080	0,090	9,000



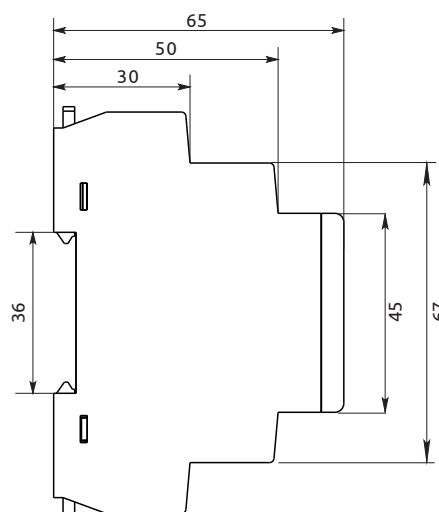
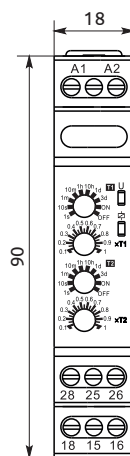
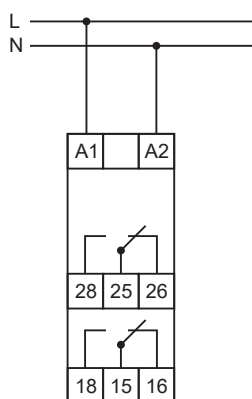
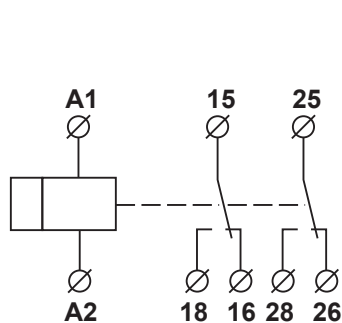
It is used to delay the switching after the supply voltage is applied.



Technical specifications

Series	FRT14 43
Standards	EN/IEC 60730-1, EN/IEC 60730-2-7
Power supply terminals	A1, A2
AC/DC supply voltage, V	24-240
Rated frequency f, Hz	50/60
Time range	0.1s - 10 days
Installation accuracy	<5%
Repeat accuracy	<0.2%
Number of contacts	2 C/O
Rated current of contacts I _n , A	8A/AC1
Insulation voltage U _i , V	250
Degree of protection	IP20
Pollution level	3
Electrical wear resistance	10 ⁵
Mechanical wear resistance	10 ⁶
Cross-section of connecting conductors, mm ²	0.5-2,5
DIN rail mounting	TN35

Schematic diagrams



Overall dimensions

Order code	Full name of	Packaging, pcs		Unit	Gross weight, kg	
		Packaging	Box		Packaging	Box
FRT14 43	Switch-on delay relay FRT14 43 24-240VAC/DC,50/60HZ	1	100	0,080	0,090	9,000



It is used to delay the switching after the supply voltage is applied.

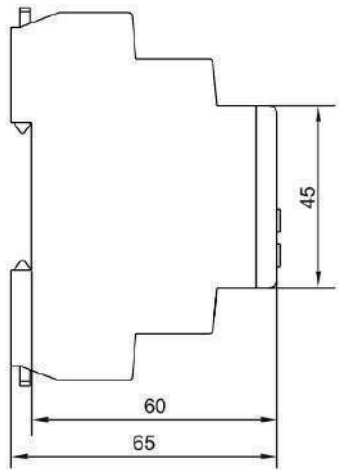
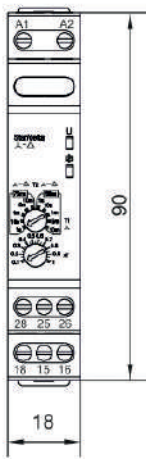
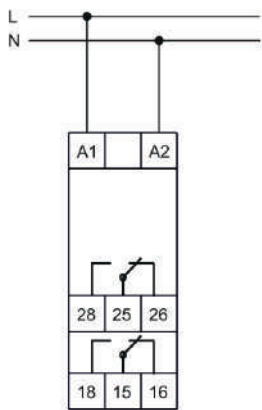
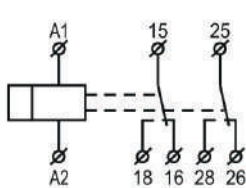


Technical specifications

Series	FRT47
Standards	EN/IEC 60730-1, EN/IEC 60730-2-7
Power supply terminals	A1, A2
Rated voltage of the AC/DC control circuit, V	12-240
Insulation voltage U_i , V	250
Rated frequency f , Hz	50/60
Operating setpoint time for the star circuit	0.1s - 10 minutes
Switching time, ms	75/150
Time reference error	<5%
Maximum switched current of AC 1/AC15 contacts, A	16/3
Number of contacts	2 C/O
Own power consumption, VA	1
Degree of protection	IP20
Pollution level	3
Wear resistance (electrical/mechanical)	$10^5/10^6$
Cross-section of connecting conductors, mm ²	0.5 ... 2.5
Bolt clamping torque, Nm	0.5
DIN rail mounting	yes

Schematic diagrams

Overall dimensions



Order code	Full name of	Packaging, pcs		Gross weight, kg		
		Packaging	Box	Unit	Packaging	Box
FRT47	Star/delta time relay FRT47	1	100	0,100	0,100	10,00



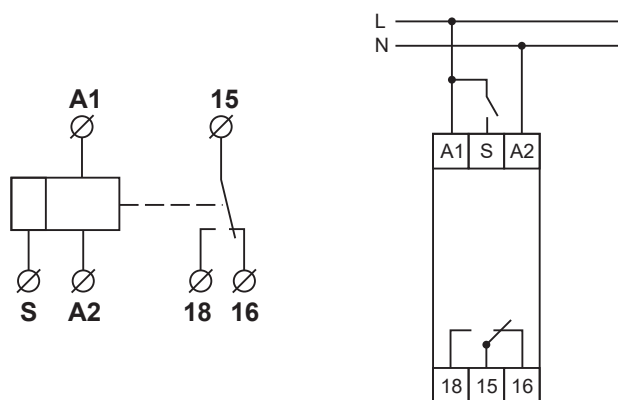
It is used for mechanisms that require intermittent operation. When the supply voltage is applied, the switching is cyclic, with the specified time intervals T1, T2 separately.



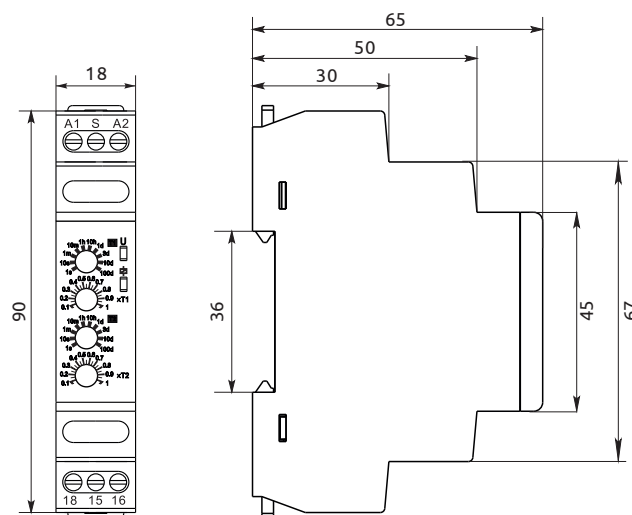
Technical specifications

Series	FRT14 51
Standards	EN/IEC 60730-1, EN/IEC 60730-2-7
Power supply terminals	A1, A2
Pulse terminal	S
AC supply voltage, V	220
Rated frequency f, Hz	50/60
Time range	0.1s - 100 days
Installation accuracy	<5%
Repeat accuracy	<0.2%
Number of contacts	1 C/O
Rated current of contacts I _n , A	8A/AC1
Insulation voltage U _i , V	250
Degree of protection	IP20
Pollution level	3
Electrical wear resistance	10 ⁵
Mechanical wear resistance	10 ⁶
Cross-section of connecting conductors, mm ²	0.5-2,5
DIN rail mounting	TN35

Schematic diagrams



Overall dimensions



Order code	Full name of	Packaging, pcs		Gross weight, kg		
		Packaging	Box	Unit	Packaging	Box
FRT14 51	Cyclic relay FRT14 51	1	100	0,070	0,080	8,000



Use in automation and equipment control systems. It is used for various switching options depending on the time.

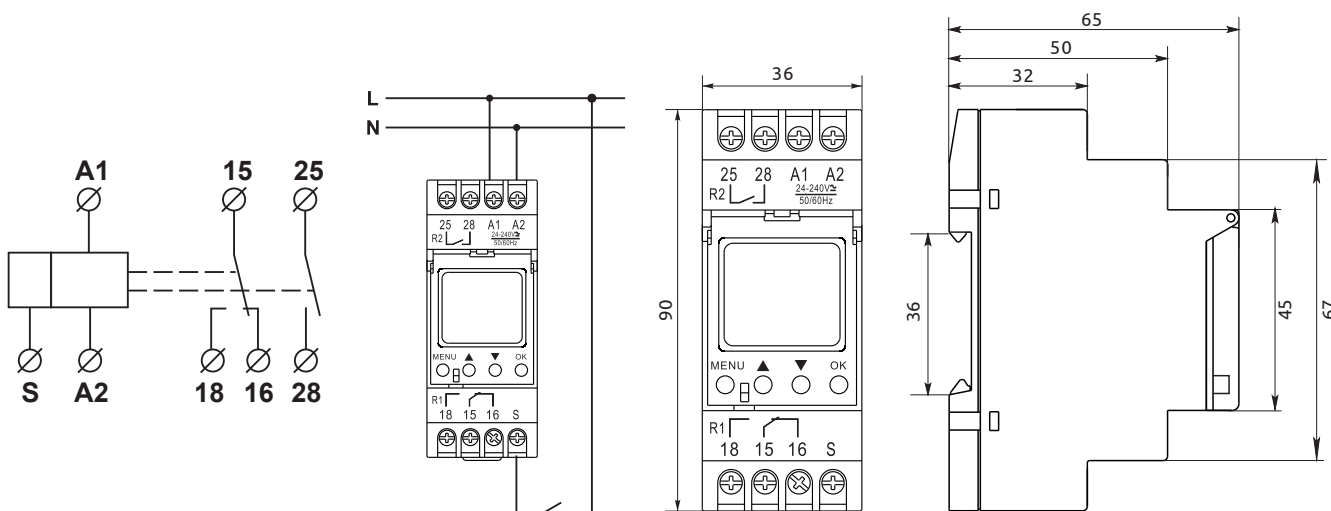


Technical specifications

Series	FRT14 62
Standards	EN/IEC 60730-1, EN/IEC 60730-2-7
Power supply terminals	A1, A2
Pulse terminal	S
AC/DC supply voltage, V	24-240
Rated frequency f, Hz	50/60
Time range s, min	0-9999, 0-9999
Repeat accuracy	max.±3s/24h 25°C
Reading information	LCD display with backlight
Saving data	10 years
Rated current of contacts In, A	8A/AC1
Number of contacts	1C/O - 1/NO
Insulation voltage Ui, V	250
Degree of protection	IP20
Pollution level	3
Electrical wear resistance	10 ⁵
Mechanical wear resistance	10 ⁶
Cross-section of connecting conductors, mm ²	0.5-2,5
DIN rail mounting	TN35

Schematic diagrams

Overall dimensions



Order code	Full name of	Packaging, pcs		Gross weight, kg		
		Packaging	Box	Unit	Packaging	Box
FRT14 62	Digital multifunction time relay FRT14 62	1	50	0,120	0,125	6,300



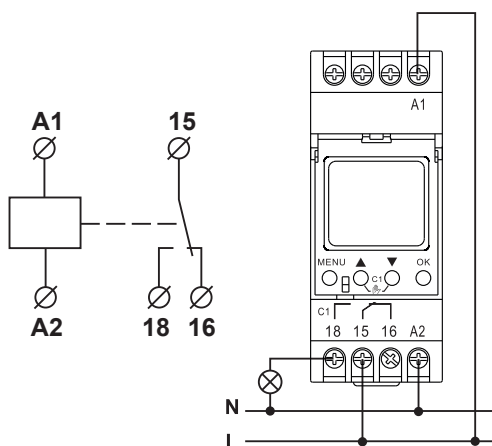
It is used to configure the switching on and off depending on the time during the week.



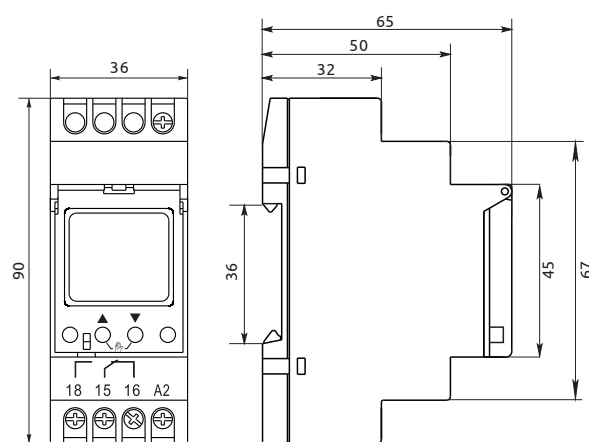
Technical specifications

Series	FRT14 71
Standards	EN/IEC 60730-1, EN/IEC 60730-2-7
Power supply terminals	A1, A2
AC supply voltage, V	220-240
Rated frequency f, Hz	50/60
Power consumption P, W	1
Sensitivity to voltage changes	±10%
Number of channels	1
Number of programs	52
Programs	weekly, daily, impulse
Operating modes	manual, automatic, holiday
Summer/winter time	off, automatic change
Time error	1s at 25°C
Battery backup	3 years
Number of contacts	1C/O
Rated current of contacts AC1, A/V	16/250
Switching capacity VA/AC1, W/DC	4000/384
Insulation voltage Ui, V	250
Degree of protection	IP20
Pollution level	3
Electrical wear resistance	10 ⁵
Mechanical wear resistance	10 ⁶
Cross-section of connecting conductors, mm ²	0.5-2,5
DIN rail mounting	TN35
Permissible humidity	50% / 40°C

Schematic diagrams



Overall dimensions



Order code	Full name of	Packaging, pcs			Gross weight, kg	
		Packaging	Box	Unit	Packaging	Box
FRT14 71	Single channel digital weekly time switch FRT14 71	1	50	0,120	0,125	6,300



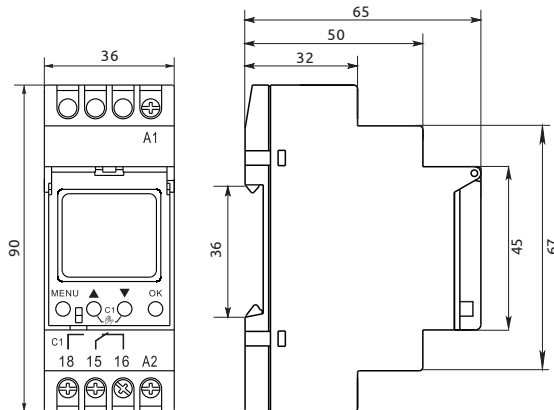
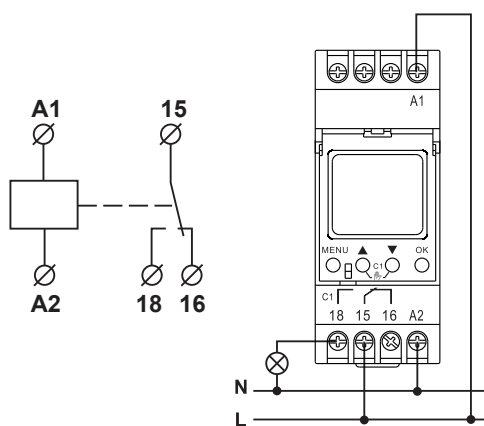
It is used to set the device to turn on or off depending on the time during the week or year. The astronomical function allows the relay to be used without a light sensor.



Technical specifications

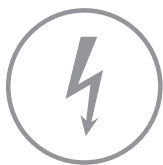
Series	FRT14 81
Standards	EN/IEC 60730-1, EN/IEC 60730-2-7
Power supply terminals	A1, A2
AC/DC supply voltage, V	24-264
Rated frequency f, Hz	50/60
Power consumption P, W	1
Sensitivity to voltage changes	±10%
Number of channels	1
Number of programs	40
Programs	weekly, annual and astronomical
Operating modes	manual, automatic, holiday, random
Summer/winter time	off, automatic change
Time error	1s at 20°C
Battery backup	3 years
Number of contacts	1C/O
Rated current of contacts AC1, A/V	16/250
Switching capacity VA/AC1, W/DC	4000/384
Insulation voltage Ui, V	250
Degree of protection	IP20
Pollution level	3
Electrical wear resistance	10 ⁵
Mechanical wear resistance	10 ⁶
Cross-section of connecting conductors, mm ²	0.5-2,5
DIN rail mounting	TN35
Permissible humidity	50% / 40°C

Schematic diagrams



Overall dimensions

Order code	Full name of	Packaging, pcs		Gross weight, kg		
		Packaging	Box	Unit	Packaging	Box
FRT14 81	Astronomic multifunction timer FRT14 81	1	50	0,120	0,125	6,300



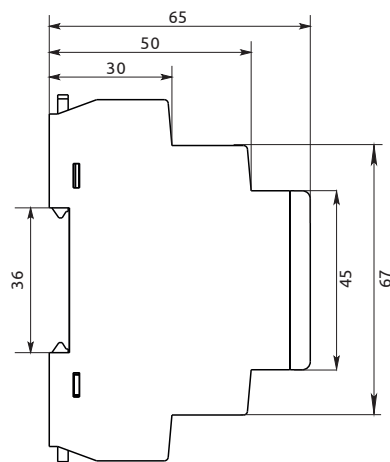
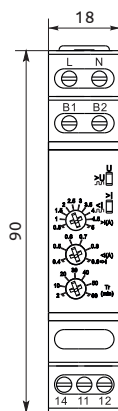
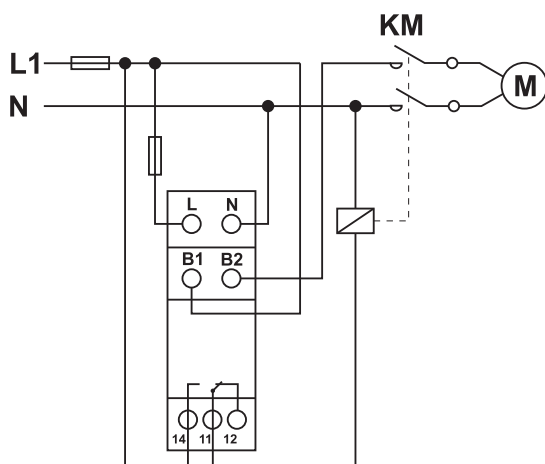
It is used to protect a single-phase pump.
It monitors current consumption, overvoltage,
and has a delay time adjustment.



Technical specifications

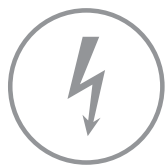
Series	FRD311
Standards	EN/IEC 60730-1, EN/IEC 60730-2-7
Number of phases	L-N
Supply voltage Un, V, AC	220±20%
Input current contacts	B1-B2
Rated frequency f, Hz	50/60
Current settings, A	0.5~5
Current protection settings, A	(0.4-0.9) x current setpoint value
Overvoltage switching value, V	265
Reset time of current protection, min	2~60
Current protection trip delay, s	4
Overvoltage trip delay, s	1
Reset mode	manual, automatic
Class of operation	10
Rated current of contacts In, A	<8/AC1
Number of contacts	1C/O
Insulation voltage Ui, V, AC	250
Mechanical wear resistance	10 ⁶
Electrical wear resistance	10 ⁶
Degree of protection	IP20
Pollution level	3
Cross-section of connecting conductors, mm ²	0.5-2.5
DIN rail mounting	TN35

Schematic diagrams



Overall dimensions

Order code	Full name of	Packaging, pcs		Gross weight, kg		
		Packaging	Box	Unit	Packaging	Box
FRD311	Single phase pump protection relay FRD311 220V, 50/60HZ	1	100	0,070	0,075	7,500



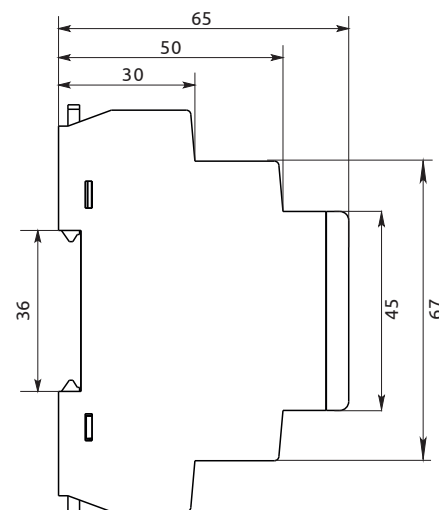
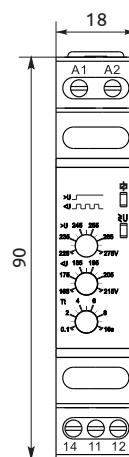
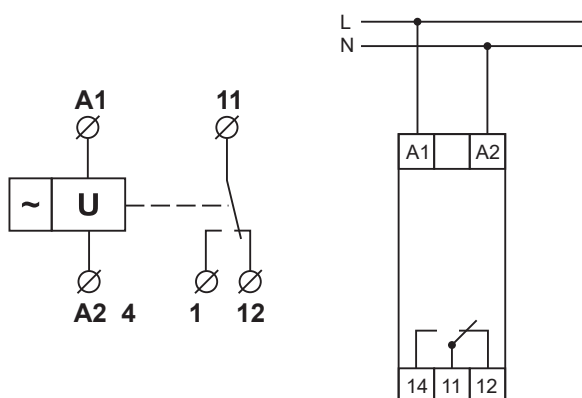
It is used to monitor the mains voltage and shut down the equipment in case of an increase or decrease in the mains voltage.



Technical specifications

Series	FRV11
Standards	EN/IEC 60730-1, EN/IEC 60730-2-7
AC supply voltage, V	220
Rated frequency f, Hz	50/60
Voltage range, AC/V	150-275
U> limit value, V	225~275
U< limit value, V	165~215
Voltage measurement error	≤1%
Response delay, s	0.1~10
The error of the operation delay, s	±5%+0.1
Hysteresis	±3%
Insulation voltage Ui, V	250
Rated current of contacts In, A	8A/AC1
Number of contacts	1C/O
Mechanical wear resistance	10 ⁶
Electrical wear resistance	10 ⁶
Degree of protection	IP20
Pollution level	3
Cross-section of connecting conductors, mm ²	0.5-2,5
DIN rail mounting	TN35

Schematic diagrams



Overall dimensions

Order code	Full name of	Packaging, pcs		Gross weight, kg		
		Packaging	Box	Unit	Packaging	Box
FRV11	Single phase voltage monitoring relay FRV11 230V,50/60HZ	1	100	0,070	0,075	7,500