Data Sheet

It is the responsibility of the person installing the electrical equipment to ensure that the installation meets the requirements of the IET wiring regulations and is therefore 'fit for purpose'. Factors such as correct selection of components, cable sizing, protective devices and Earth bonding are all critical and should be checked prior to full testing and power-up. Any other regulations applicable to the equipment being installed such as the Machinery Directive and current health and safety legislation must also be adhered to.

All connections (including factory made) must be checked for the correct tightness prior to commissioning of the electrical installation.
All connections should be inspected periodically to ensure correct tightness.

DO NOT USE POWER TOOLS ON THESE PRODUCTS

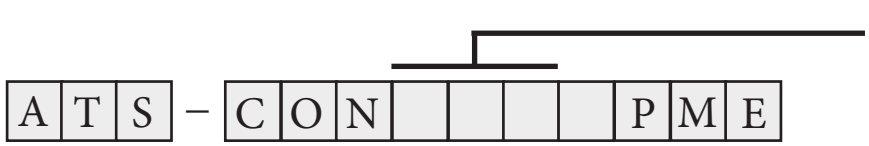
Europa Helpline: email: technical@europacomponents.com / tel: 01582 692 444

Europa House, Airport Way, Luton, Beds, LU2 9NH Tel: 01582 692 440

e-mail: sales@europacomponents.com website: www.europacomponents.com

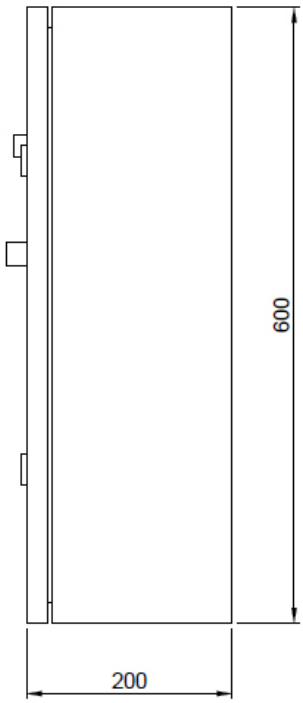
CE

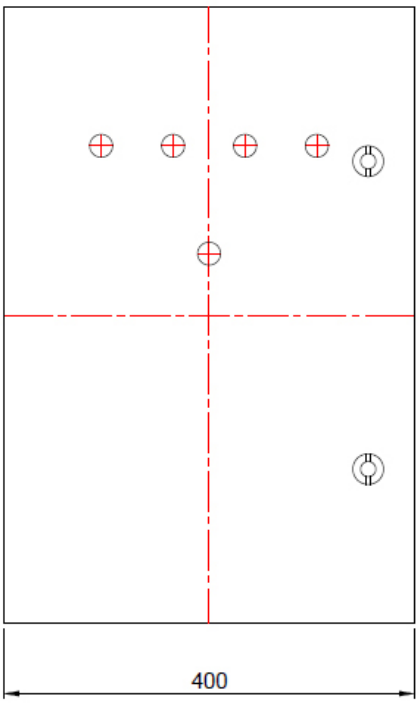
Automatic Transfer Switch (ATS)

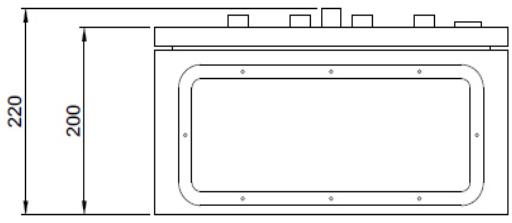


Amperage:
40, 60, 80, 100, 125

Number of poles:
2 = Single phase 230V
4 = Three phase 415V

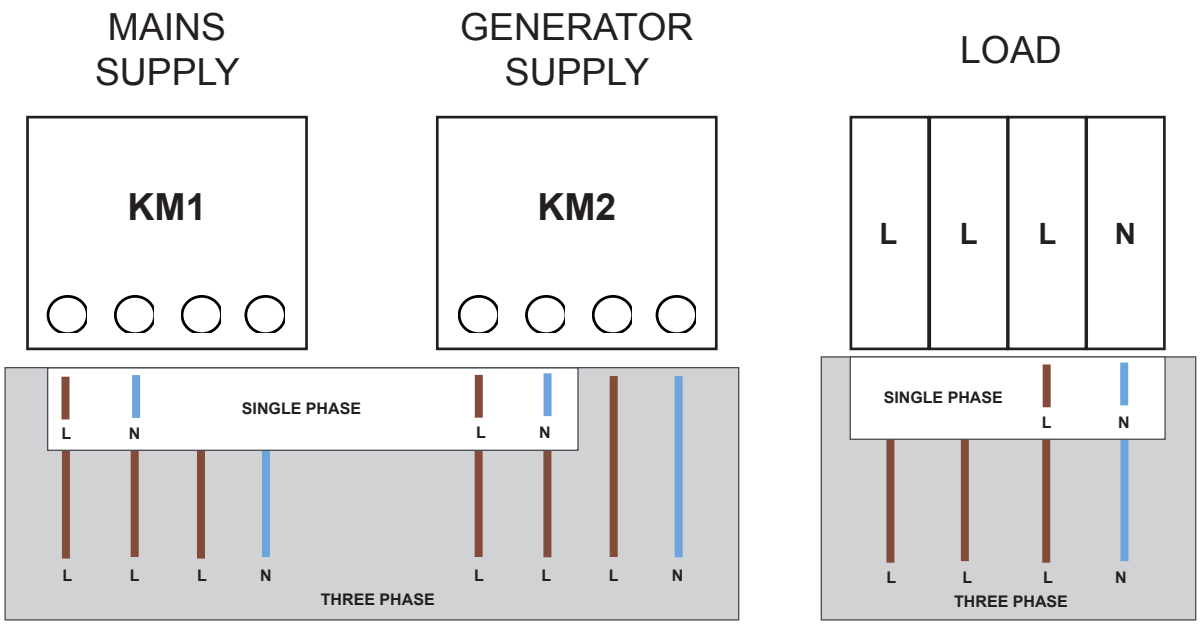






Maximum Cable size	**mm²**	10	16	25	35	50
Operational Current AC1	**A**	40	60	80	100	125
Compliance / Approvals	Low Voltage Control Gear & Switch Gear					
British / European / International Standard	BS/EN/IEC 60947-6-1					

Wiring Diagram:



Parameter Settings:

Mains Failure Relay (MFR)
Set the overvoltage and undervoltage thresholds, hysteresis and time delay in accordance with the phase failure relay datasheet.

Delay On Start Timer (DOST)
Set the time for how long you want to delay the generator start signal following the loss or under/over voltage of the mains supply. Reference ECTDOFF datasheet. Please see footnote.

Mains Return Timer (MRT)
Set the time for how long you want to delay the ATS from returning the load back to the mains supply following the mains supply being available. Reference ECTON datasheet.

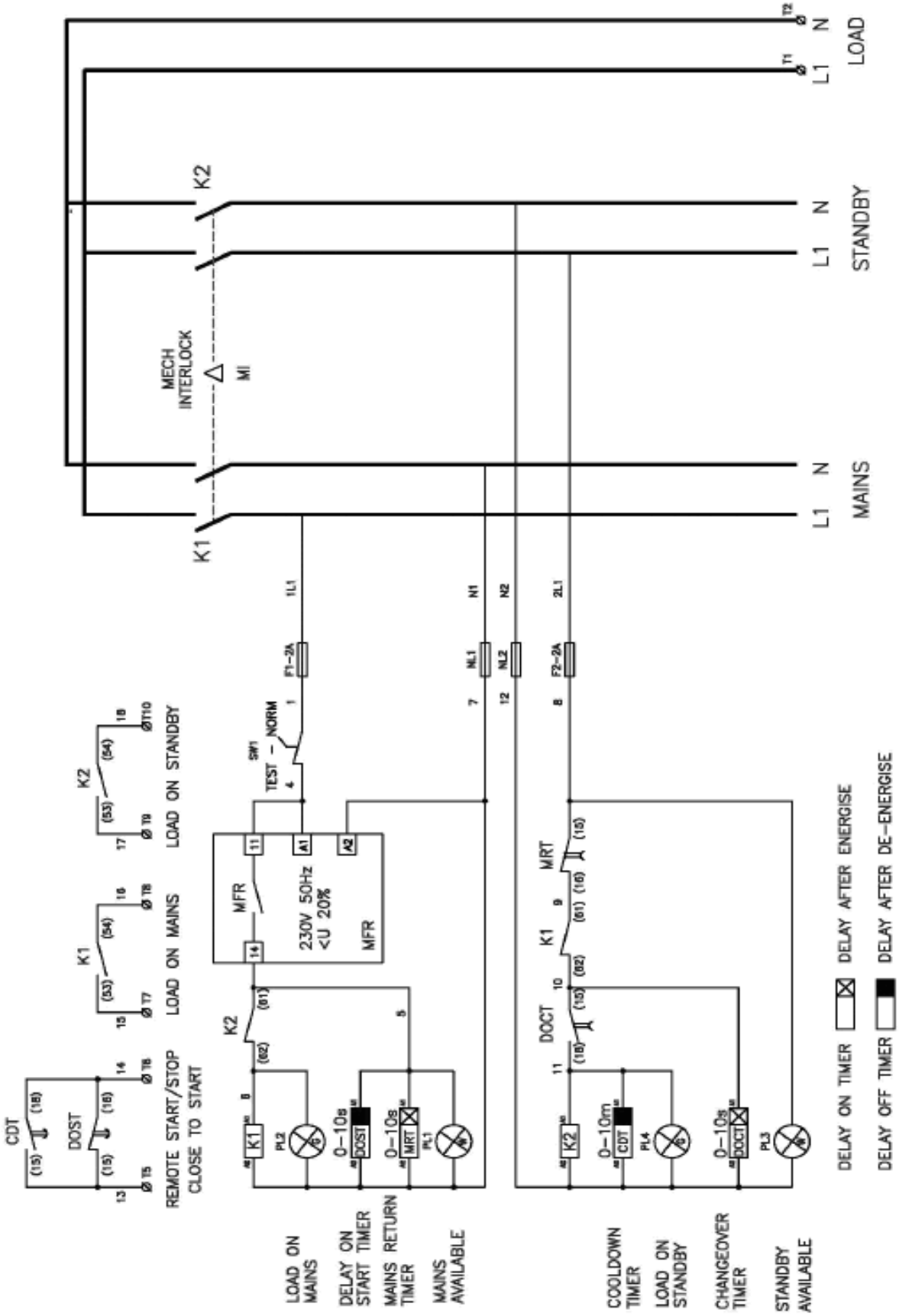
Cool Down Timer (CDT)
Set the time for how long you want to delay the generator stop signal following the load being transfered back to the mains supply. Reference ECTDOFF datasheet.

Changeover Timer (DOCT)
Set the time for how long you want to delay the ATS unit switching to the generator supply. Reference ECTON datasheet. Please see footnote.

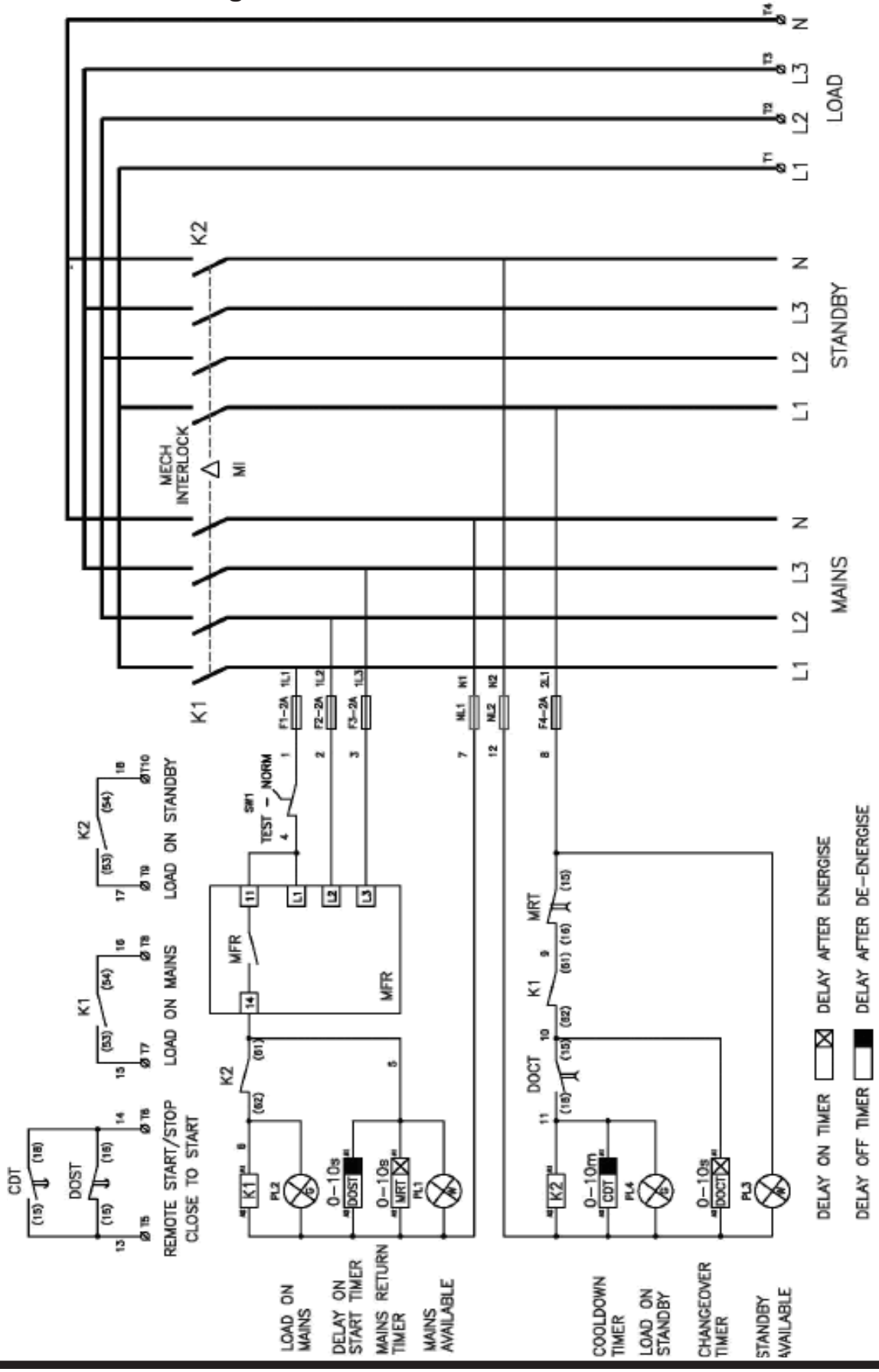
Footnote:
The Changeover timer (DOCT) setting will determine delay before the ATS unit switches the load from mains to generator. The delay on start timer (DOST) will determine the delay before the generator start signal is given after the mains fails. Therefore the changeover timer (DOCT) must be set to incorporporate the start-up time required for the generator to reach full speed and deliver the correct output voltage and frequency.

Time required for generator to reach required output	=	Changeover timer	-	Start timer
2	=	7	-	5

Single Phase Circuit Diagram



Three Phase Circuit Diagram



It is the responsibility of the person installing the electrical equipment to ensure that the installation meets the requirements of the IET wiring regulations and is therefore 'fit for purpose'. Factors such as correct selection of components, cable sizing, protective devices and Earth bonding are all critical and should be checked prior to full testing and power-up. Any other regulations applicable to the equipment being installed such as the Machinery Directive and current health and safety legislation must also be adhered to.

All connections (including factory made) must be checked for the correct tightness prior to commissioning of the electrical installation.
All connections should be inspected periodically to ensure correct tightness.

DO NOT USE POWER TOOLS ON THESE PRODUCTS

Europa Helpline: 01582 692 444 **/ Email:** technical@europacomponents.com

Europa House, Airport Way, Luton, Beds, LU2 9NH Tel: 01582 692 440

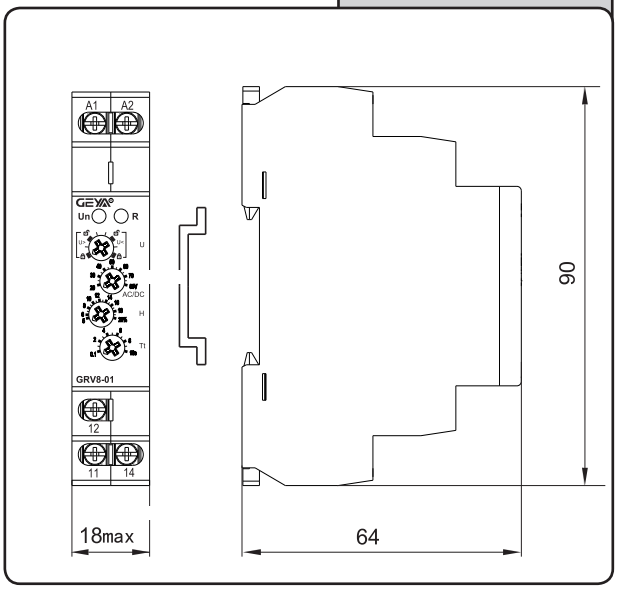
e-mail: sales@europacomponents.com website: www.europacomponents.com

CE

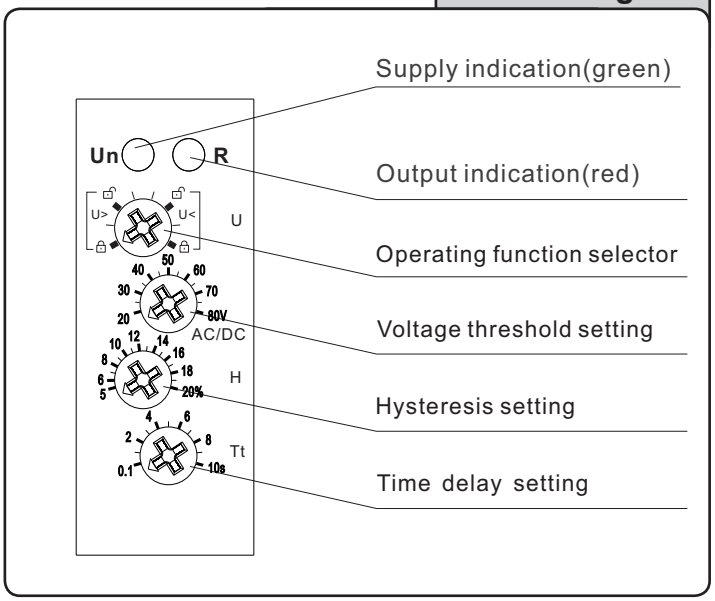
Technical Data: **ECPF02** Single Phase Failure Relay

Data	ECPF02
Function	Monitoring voltage
Supply terminals	A1-A2
Rated supply voltage	AC/DC110-240V
Rated supply frequency	45-65Hz
Hysteresis	5% - 20%
Supply indication	Green LED
Time delay	Adjustable 0.1-10s, 10%
Measurement error	≤ 1%
Run up delay at power up	0.5s time delay
Knob setting accuracy	1% of scale value
Reset time	1000ms
Temperature coecient	0.05%/°C, at-20°C(0.05%°F, at-68°F)
Output	1 x SPDT
Current rating	10A / AC1
Switching voltage	250VAC / 24VDC
Minimum breaking capacity	500mW
Output indication	Red LED
Mechanical life	1×10^7
Electrical life (AC1)	1×10^6
Operating temperature	-20°C to +55°C (-4°F to 131°F)
Storage temperature	-35°C to +75°C (-22°F to 158°F)
Mounting / din rail	Din rail EN/IEC 60715
Protection degree	IP40 for front panel / IP20 terminals
Operating position	Any
Overvoltage category	III.
Pollution degree	2
Maximum cable size (mm^2)	Solid wire maximum 1x2.5 or 2x1.5 / With sleeve maximum 1x2.5 (AWG 12)
Dimensions	90 x 18 x 64mm
Weight	59g
Standards	IEC/EN 60255-6, IEC/EN61010-1

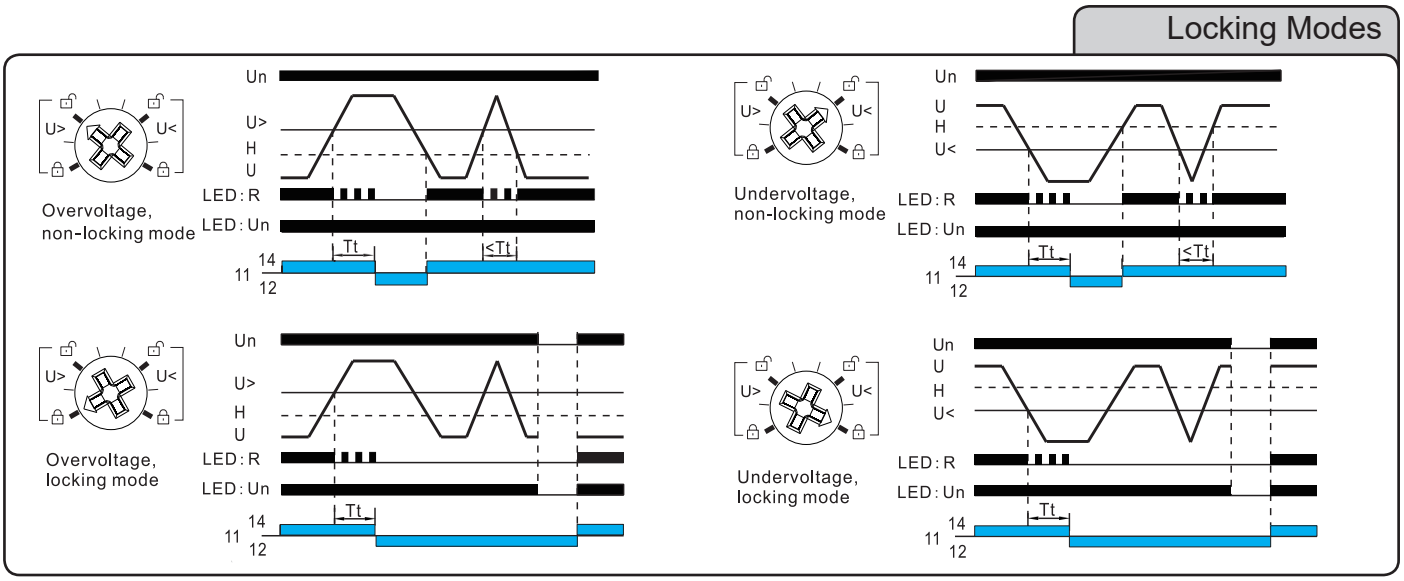
Dimensions:



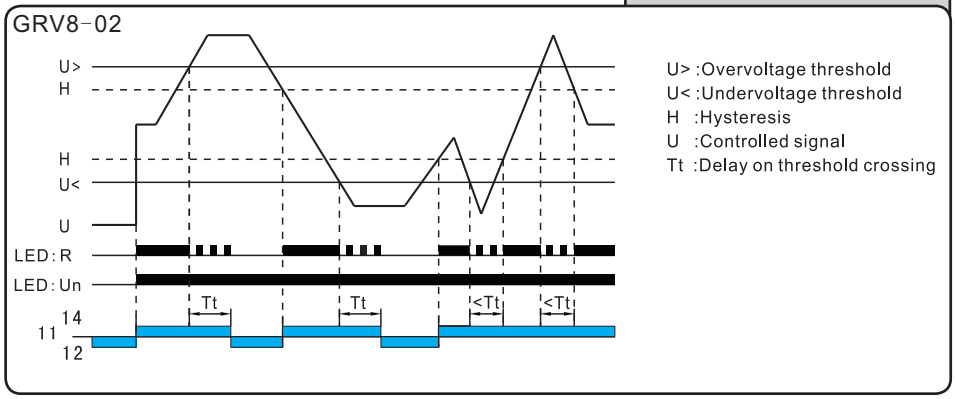
Panel Diagram



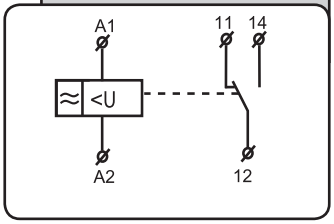
Locking Modes



Functions Diagram:



Wiring Diagram:



It is the responsibility of the person installing the electrical equipment to ensure that the installation meets the requirements of the IET wiring regulations and is therefore 'fit for purpose'. Factors such as correct selection of components, cable sizing, protective devices and Earth bonding are all critical and should be checked prior to full testing and power-up. Any other regulations applicable to the equipment being installed such as the Machinery Directive and current health and safety legislation must also be adhered to.

All connections (including factory made) must be checked for the correct tightness prior to commissioning of the electrical installation.
All connections should be inspected periodically to ensure correct tightness.

DO NOT USE POWER TOOLS ON THESE PRODUCTS

Europa Helpline: 01582 692 444 **/ Email:** technical@europacomponents.com

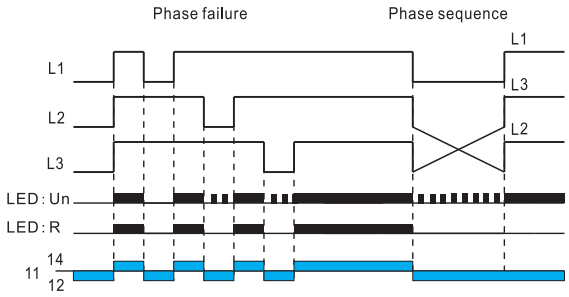
CE

Technical Data: **ECPF03, ECPF05, ECPF08** Phase Failure Relay

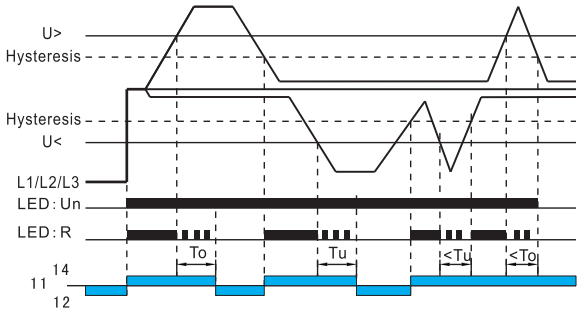
Data	ECPF03	ECPF05	ECPF08
Function	Monitoring 3-phase voltage		
Monitoring terminials	L1-L2-L3		
Supply terminals	L1-L2		
Voltage range	220-230-240-380-400-415-440-460 (P-P)		
Rated supply frequency	45Hz-65Hz		
Measuring range	176V-552V		
Threshold adjustment voltage	-	2%-20% of Un selected	
Adjustment of asymmetry threshold	-	8%	
Hysteresis	2%		
Phase failure value	70% of Un selected		
Time delay	-	Adjustable 0.1s-10s,10%	2s
Measurement error	≤1%		
Run up delay at power up	0.5s time delay		
Knob Setting Accuracy	-	1% of scale value	
Supply Indication	Green LED		
Output indication	Red LED		
Reset time	1000ms		
Output	1 × SPDT		
Current rating	10A / AC1		
Switching voltage	250VAC / 24VDC		
Min breaking capacity DC	500mW		
Temperature coecient	0.05%/^{o}C,at=20°C (0.05%^{o}F, at=68°F)		
Mechanical life	1×10^{7}		
Electrical life (AC1)	1×10^{6}		
Operating temperature	-20°C to + 55°C (-4°F to 131°F)		
Storage temperature	-35°C to + 75°C (-22°F to 158°F)		
Mounting/DIN rail	Din Rail EN/IEC 60715		
Protection degree	IP40 for front panel / IP20 Terminals		
Operating position	Any		
Overvoltage category	III.		
Pollution degree	2		
Max Cable Size (mm^2)	Solid wire max 1 x 2. 5 or 2 x 1.5 / with sleeve max 1 x 2.5 (AWG 12)		
Dimensions	90 x 18 x 64mm		
Weight	64g		
Standards	IEC/EN 60255-6, IEC/EN61010-1		

Functions Diagram:

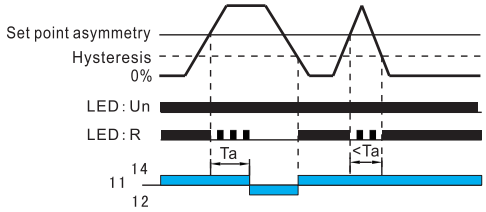
●Phase failure and phase sequence function diagram



●Overvoltage and undervoltage function diagram



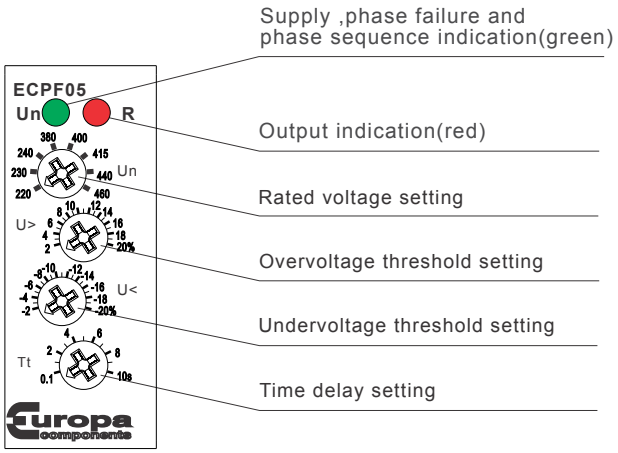
●Asymmetry function diagram

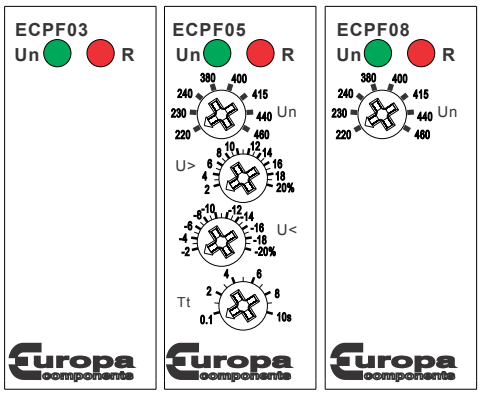


To:Overvoltage threshold tripping delay.
Tu:Undervoltage threshold tripping delay.
Ta:Asymmetry threshold tripping delay.

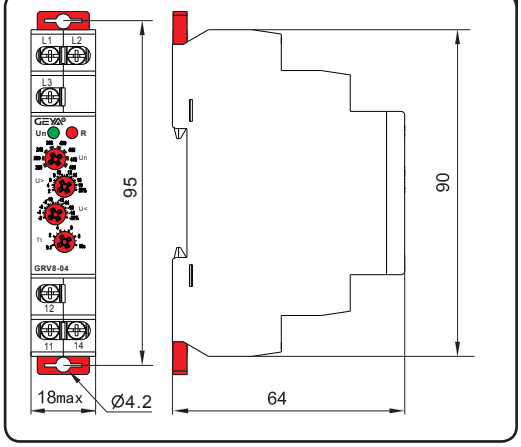
NOTE:
1. In case of phase fault at power supply terminals L1 and L2, the function LED would not make indication.
2. If the switch position is changed the device is operating, all the LED's flash, but the product continues to operate normally with the voltage selected at the time of energisation precedubg the change of position. The LED's return to their normal state if the switch is returned to the original position selected prior to the last energisation.

Panel Diagram **Panel** Diagram:

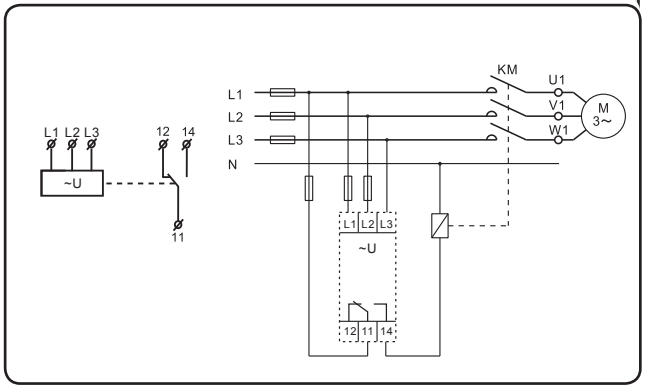




Dimensions(mm) **Dimensions:**



Wiring Diagram:



It is the responsibility of the person installing the electrical equipment to ensure that the installation meets the requirements of the IET wiring regulations and is therefore 'fit for purpose'. Factors such as correct selection of components, cable sizing, protective devices and Earth bonding are all critical and should be checked prior to full testing and power-up. Any other regulations applicable to the equipment being installed such as the Machinery Directive and current health and safety legislation must also be adhered to.

All connections (including factory made) must be checked for the correct tightness prior to commissioning of the electrical installation.
All connections should be inspected periodically to ensure correct tightness.

DO NOT USE POWER TOOLS ON THESE PRODUCTS



Europa Helpline: 01582 692 444 **/ Email:** technical@europacomponents.com
Europa House, Airport Way, Luton, Beds, LU2 9NH Tel: 01582 692 440

e-mail: sales@europacomponents.com website: www.europacomponents.com

ECTDOFF - Single Function True Delay OFF Timer

Technical Parameters	ECTDOFF
Supply terminals	A1-A2
Voltage range	AC/DC 12-240V(50-60Hz)
Burden	AC 0.7-3VA/DC 0.5-1.7W
Supply voltage tolerance	-15%;+10%
Supply indication	green LED
Time ranges	0.1s-10min
Time setting	potentionmeter
Time deviation	5%-mechanical setting
Repeat accuracy	0.2%-set value stability
Mininum power time	200ms
Temperature coecient	0.05%/°C, at=20°C (0.05%/°C at=68°C)
Output	1×SPDT
Current rating	16A / AC1
Switching voltage	250VAC / 24VDC
Min.breaking capacity DC	500mW
Output indication	red LED
Mechanical life	1×10
Electrical life(AC1)	1×10
Reset time	max.200ms
Operating temperature	-20°C to +55°C -4°C to 131°C
Storage temperature	-35°C to +75°C -22°C to 158°C
Mounting/DIN rail	Din rail EN/IEC 60715
Protection degree	IP40 for front panel/IP20 terminals
Operating position	any
Overvoltage category	solid wire max.1×2.5 or 2×1.5/with sleeve max.1×2.5(AWG 12)
Pollution degree	2
Dimensions	90×18×64mm
Weight	66g
Standards	IEC/EN 61812-1,IEC/EN61010-1

General

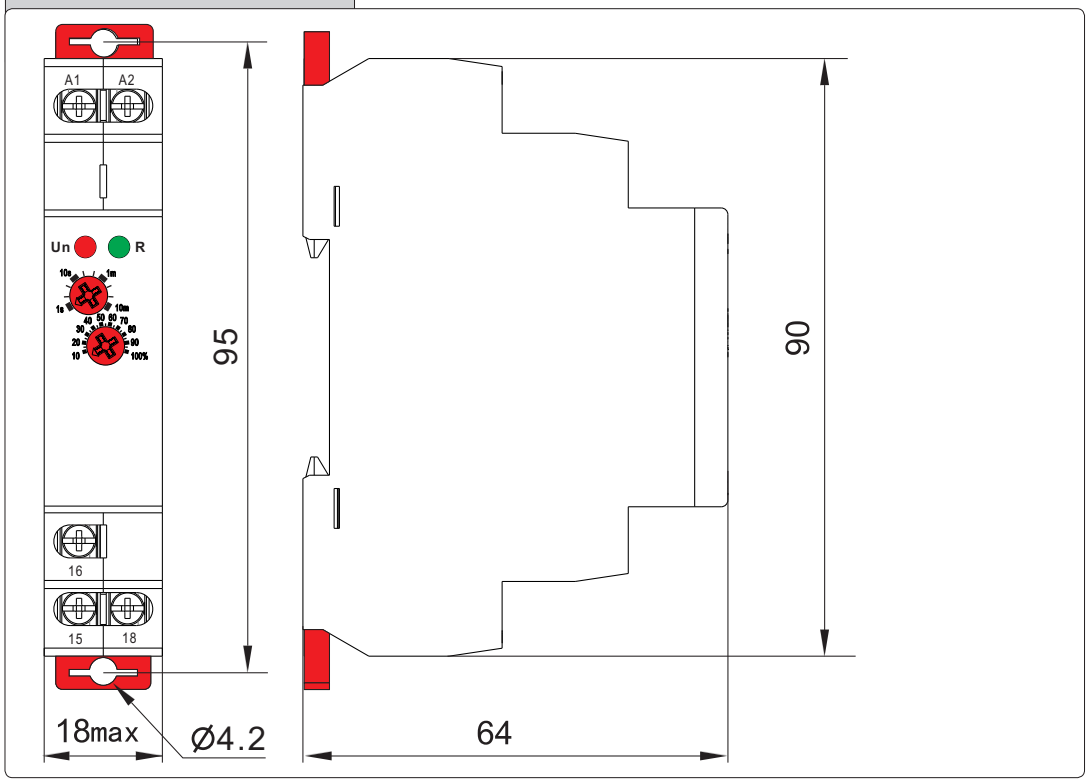
■Applications

-Back-up source for Delay OFF in case of voltage failure (emergency lighting, emergency respirator,or protection of el. controlled doors - in case of fire).

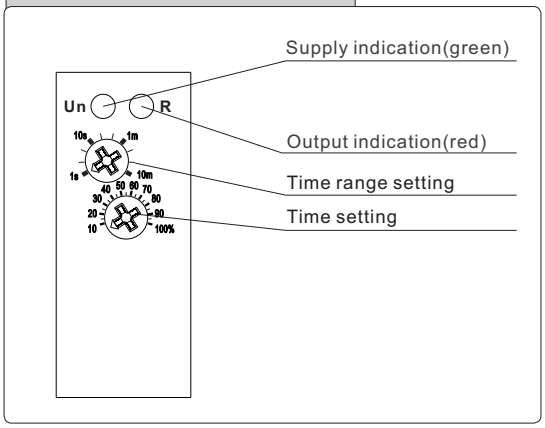
■Function Features

-Time range (adjustable by rotary switch and fine setting by potentiometer):
-0.1 s - 10 min.
-Voltage range: AC/DC12-240V , clamp terminals.
-Relay status is indicated by LED.
-1-MODULE,DIN rail mounting.

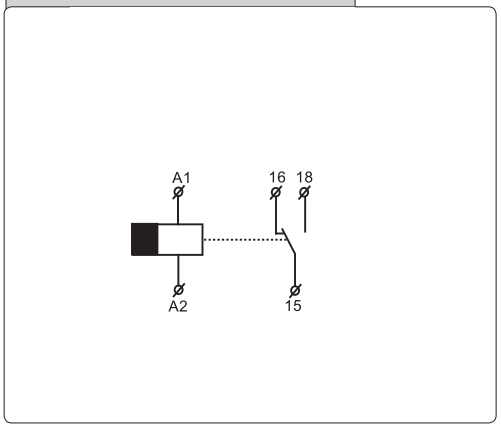
Dimensions



Panel Diagram



Wiring Diagram



Europa components

Data Sheet

It is the responsibility of the person installing the electrical equipment to ensure that the installation meets the requirements of the IET wiring regulations and is therefore 'fit for purpose'. Factors such as correct selection of components, cable sizing, protective devices and Earth bonding are all critical and should be checked prior to full testing and power-up. Any other regulations applicable to the equipment being installed such as the Machinery Directive and current health and safety legislation must also be adhered to.

All connections (including factory made) must be checked for the correct tightness prior to commissioning of the electrical installation.
All connections should be inspected periodically to ensure correct tightness.

DO NOT USE POWER TOOLS ON THESE PRODUCTS



Europa Helpline: 01582 692 444 / **Email:** technical@europacomponents.com
Europa House, Airport Way, Luton, Beds, LU2 9NH Tel: 01582 692 440

e-mail: sales@europacomponents.com website: www.europacomponents.com

ECTOFF - Single Function Delay OFF Time Relay
ECTON - Single Function Delay ON Time Relay

Function	delay ON	delay OFF
Supply terminals	A1-A2	
Voltage range	AC/DC 12-240V(50-60Hz)	
Burden	AC 0.7-3VA/DC 0.5-1.7W	
Voltage range	AC 230V(50-60Hz)	
Power input	AC max.12VA/1.3W	AC max.12VA/1.9W
Supply voltage tolerance	-15%;+10%	
Supply indication	green LED	
Time ranges	0.1s-10days,ON,OFF	
Time setting	Potentionmeter	
Time deviation	5%-mechanical setting	
Repeat accuracy	0.2%-set value stability	
Temperature coecient	0.05%/℃, at=20℃(0.05%℃Cat=68℃)	
Output	1×SPDT	1×DPDT
Current rating	16A / AC1	
Switching voltage	250VAC / 24VDC	
Min.breaking capacity DC	500mW	
Output indication	red LED	
Mechanical life	1×10	
Electrical life(AC1)	1×10	
Reset time	max.200ms	
Operating temperature	-20℃ to +55℃, -4℃ to 131℃	
Storage temperature	-35℃ to +75℃, -22□ to 158℃	
Mounting/DIN rail	Din rail EN/IEC 60715	
Protection degree	IP40 for front panel/IP20 terminals	
Operating position	Any	
Overvoltage cathegory	III.	
Pollution degree	2	
Max. Cable Size (mm^2)	solid wire max.1×2.5or 2×1.5/with sleeve max.1×2.5(AWG 12)	
Dimensions	90×18×64mm	
Weight	1×SPDT: W240- 60g,A230-59g	
	1×DPDT: W240- 81g,A230-79g	
Standards	IEC/EN 61812-1,IEC/EN61010-1Time Range	

General

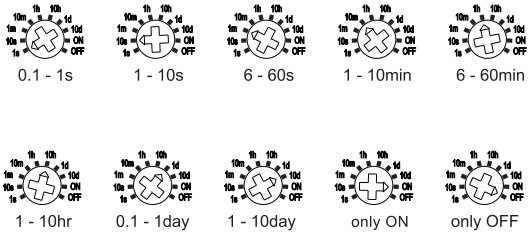
■Applications

-Suitable for applications where function and time requirements are know.
-Time switch , possible to be used for pump decay time after switching heating off , switching of fans.

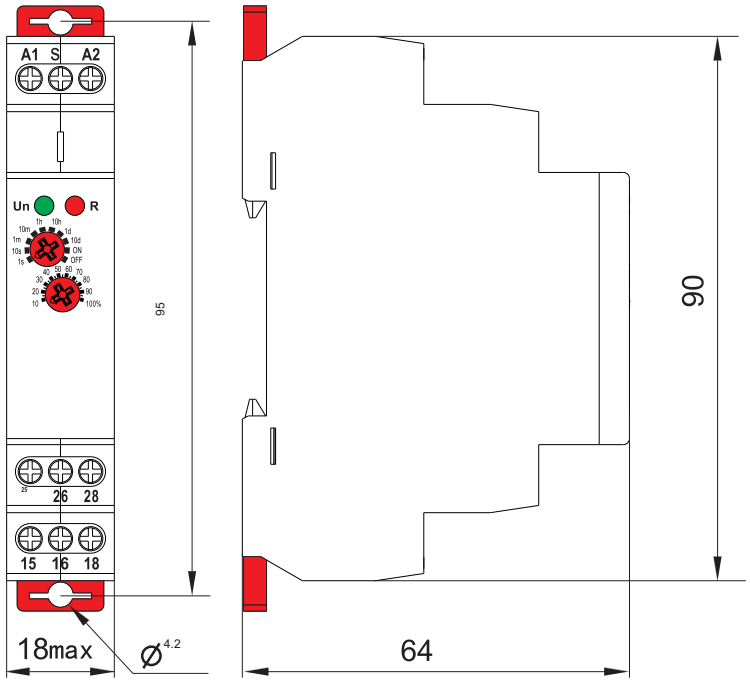
■Function Features

-Single-function relay with possibility of time setting by a potentiometer.
-Choice of 2 functions:
A:Delay ON
B:Delay OFF
-Time scale 0.1 s - 10 days divided into 10 ranges..
-Relay status is indicated by LED.
-1-MODULE,DIN rail mounting.

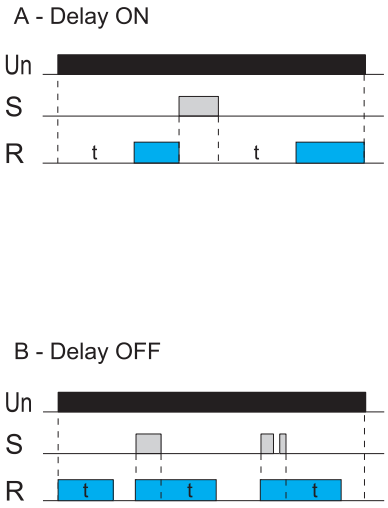
Time Range



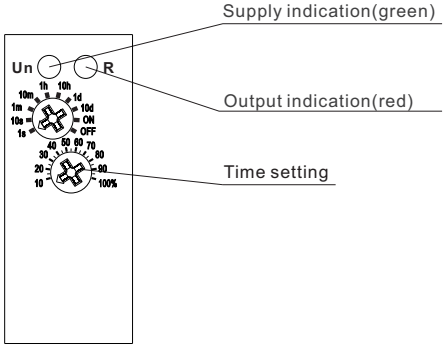
Dimensions



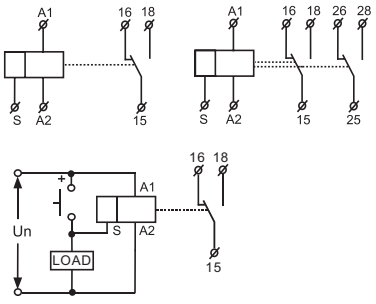
Functions Diagram



Panel Diagram



Wiring Diagram



It is possible to connect load between S-A2 (e.g contactor , control of light or any other device, without disturbing a correct function of relay(load is energized while the switch is ON.)