

GRUBER Electric

Dinrail 45mm

Components for automation and industrial electronics



<http://www.gruber-electric.com>



Our company target is to offer a practically oriented assortment which is technically always up to date. Due to our special advice and service for our customers, we intend to tie them to our company in the perfect way of partnership.

According to our slogan: „any commencement refers to our customer“.

We develop and produce the latest technical requirements at very competitive prices. The reliability of our products can be achieved by a consequent and technically mature control of quality.

Our practice oriented range of products is so well coordinated that besides of our wide range of choice of standardized products which can be supplied immediately also special product related solutions can be offered within a short period. Our technical team is prepared any time to react quickly to special wishes of our customers.

Cooperation's with well known European producers make sure to keep up a constant and high level of quality to be able to submit international offers.

History of the company

1969 Company founding of Mr. Erwin Gruber

Development and production of customized products like failure modules and signal conditioner for switch gears. Later on development and production of auxiliary equipment for computerized controls for input and output of signals and the necessary power suppliers for them.

1992 Change from the small company to the limited company.

At the same time the company employing 12 people moved to Vienna to „Gastgebasse“.

1999 New address of the company

Due to the enlarged stock necessary the company had again to move to bigger premises in the Eduard Kittenberger Gasse in Vienna, 23rd district.

2000 Presentation of the own product line of time measure and monitoring relays.

2002 Takeover of the company.

The proprietor Mr. Erwin Gruber and Mr. Harald Graf negotiated a contract for the takeover of the company within the year 2005.

2003 New products developed by Mr. Graf

Development and introduction into the market of the unique GR-LED signal indicator lights.

2005 Takeover of the company by Mr. DI Harald Graf

The Ing. E. Gruber Ges.m.b.H. was changed into the Gruber Electric Ges.m.b.H. Due to the cooperation with Technofit Austria the variety of the product line and the know-how are widely enlarged.

2007 GRUBER goes international

The first time company Gruber Electric Ges.m.b.H. represented the product range at the HANNOVER INDUSTRIAL FAIR.

2008 GRUBER takes over the representation of the company SWARCO FUTURIT

Swarco Futurit is the world's leading producer of signal head (traffic lights) and GRUBER Electric are working in cooperation. That means, that GRUBER supplies traffic signal heads which are made according to the requirements of the customers.

2015 GRUBER starts at the new location in Kottlingbrunn

After 18 months of construction the entire company, office and warehouse, moved from Vienna to Kottlingbrunn. The building is characterized by the latest techniques and environmental protection measures. It was been used the latest generation of LED bulbs around the whole area, as well as a CO₂ neutral heating system and modern construction techniques. These arrangements will ensure a sustainable protection of our environment.



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Multi function time relay

GRM-91-U

- **Module housing**
17,5mm
- **10 Functions**
- **0,1sec. up to 10 days**
- **Wide input range**
- **1 SPDT contact**
- **switching current 16A**
- **LED status indication**
- **ON / OFF test function**

Technical specification

Supply

Voltage: 12 – 110V DC
12 – 240V AC
Frequency: 47 .. 63Hz
Power: 8,5VA / 1,2W
Indication: LED green

Control input S

Voltage: like supply
Current: 1mA @ 230V AC
0,1mA @ 24V AC/DC
Shortest Impulse: 25ms

Output

Indication: LED red
Relay contact: 16A @ 250V AC1
Material: AgSnO₂
Min. switching c.: 10mA
Inrush current: max. 30A
Life time: mech. > 3*10⁷
electr. AC1 > 0,7*10⁵

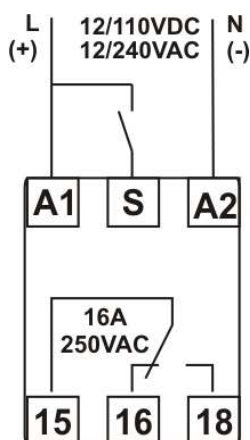
Function / Time

Function: Rotary switch 1
10 Positions
Time Range: Rotary switch 2
10 Positions
Time adjustment: Potentiometer 3
240°
Timer: 0,1s up to 10 Days
Accuracy: < 5%
Repeat ability: 0,2 % of Set point
Power off time: 150ms

Ambience

Storage temp.: -30°C to +70°C
Working temp.: -10°C to +55°C
Humidity: <95%RH not cond.
Isolation: 3kV
Protection degree: IP 20
Weight: 50 g
Dimensions: 98 x 17.5 x 68 mm
EMC: EN55022 CLASS B
Standards: CE conform
EN-61812-1, EN50081-1,
EN61010-1, EN50082-2

Connections



Order code

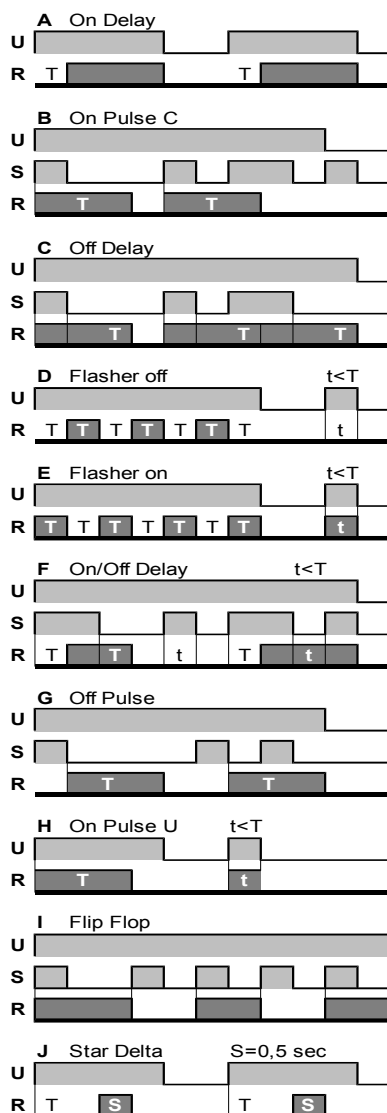
GRM - 91-U
Multifunction
9 time functions
1 contact
Universal power supply



GRUBER TIME RELAYS

Functions

- A** On delay
by power on
- B** On pulse
by control contact
- C** Off delay by control contact
- D** Flasher off start
- E** Flasher on start
- F** On and off delay
by control contact
- G** Off pulse
by control contact
- H** On pulse
by power on
- I** Flip-Flop function (push-push)
- J** Star – delta starter relay
puls contact



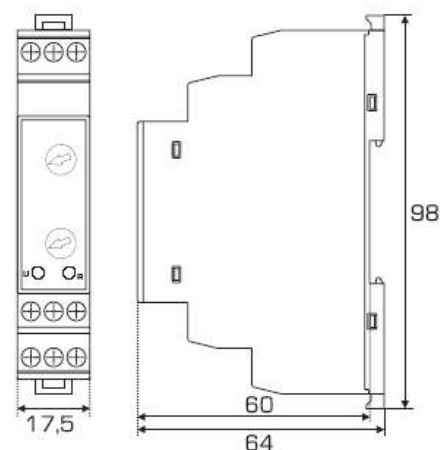
Multi function time relay

GRM-91-U

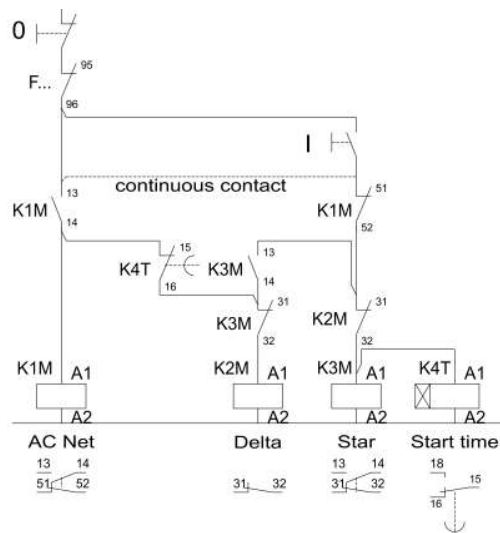
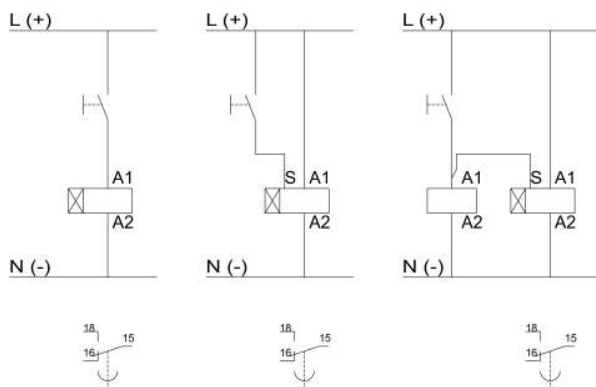
Time range

T:	1s	0,1 to 1	Second
	x10	1 to 10	Seconds
	1m	0,1 to 1	Minute
	x10	1 to 10	Minutes
	1h	0,1 to 1	Hour
	x10	1 to 10	Hours
	1d	0,1 to 1	Day
	x10	1 to 10	Days
	off	Relay ON	
	on	Relay OFF	

Dimension [mm]



Applications





Auto reset relay

GRAR-11

- Module housing 17,5mm
- 10ms power-failure detection
- 3s power on pulse
- 230V power supply
- 1 SPDT relay contact 8A
- 2 LED status indication

Technical data

Supply

Voltage: 230V AC
Tolerance: +15/-15%
Frequency: 47 .. 63Hz
Power: 8,5VA / 1,5W
Indication: LED green

Function / Time

Function: On-Pulse
Time: Pulse 3s
Shortest refresh: 10ms

Output

Indication: LED red
Relay Contact: 1 change over
Material: AgNi
Voltage: 250Vac
Current @ 25°C: > 20mA
< 8A AC1
Inrush current: 10A < 3 sec.
Power: < 2000VA AC1
> 0,5W DC
Life time: mech. <10⁷
electr. @ I_n < 10⁵

Description

This time relay monitors the AC supply voltage. A 3sec. start up pulse is generated in case of coming up of the supply voltage. This pulse is generated every time after the supply voltage loss longer than 10ms. This might enable a save restart and automatic failure reset of your application.

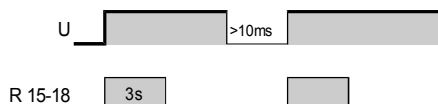
Ambience

Storage temp.: -30°C bis +70°C
Working temp.: -10°C bis +50°C
Humidity: <95%RH non con.
Isolation: 4kV
Protection degree: IP 40
Weight: 35g
Dimensions: 98 x 17.5 x 68mm
Standards: CE conform

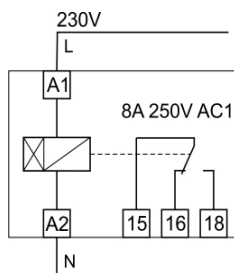
Order code

GRAR - 11
Auto reset relay
1 time function
1 contact

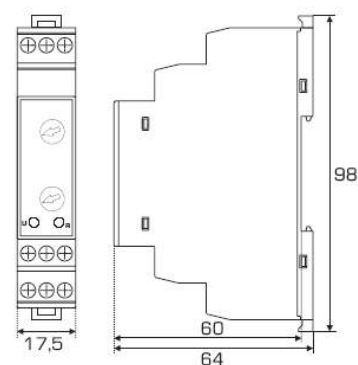
Function



Connections



Dimension [mm]





Star-Delta relay

GRT-2-SD

- **Module housing**
17,5mm
- **Time delay** 0,2s to 60s
- **24V AC/DC or 230V AC**
- **Rated current** 8A
- **2 independent relays**

Technical data

Supply

Voltage: 230V AC 47-63Hz
24V AC/DC
Tolerance: +10/-20%
Power: 8,5VA / 1,3W
Indication: LED green

Output

Indication: LED red
Relay contacts: 2 changeover
Material: AgNi
Voltage: 250Vac, max 440V
Current @ 25°C: > 20mA
< 8A AC1
Inrush current: 10A < 3s
Power: < 2000VA AC1
> 0,5W DC
Life Time: mech. < 10⁷
electr. @ I_n < 10⁵

Function / Time

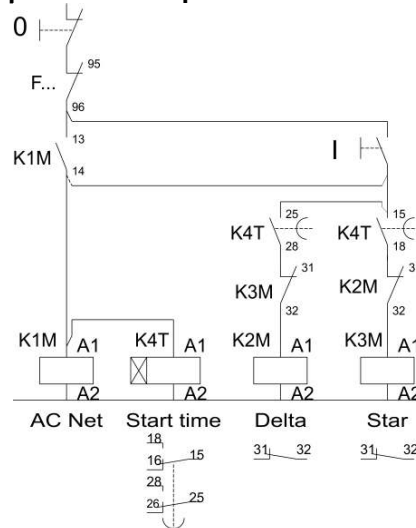
Star – Delta Starter

Time Range: 0,2 – 60s
Changeover time: 100ms
Start up delay: 100ms

Ambience

Storage temp.: -30°C to +70°C
Working temp.: -10°C to +55°C
Humidity: <95%RH not cond.
Isolation: 4kV
Protection degree: IP 40
Weight: 50g
Dimensions: 98 x 17.5 x 68mm
Standards: CE conform
EN-61812-1, EN50081-1,
EN61010-1, EN50082-2

Application Sample



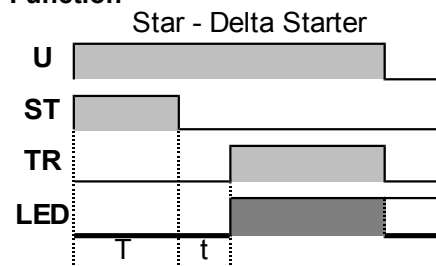
Order code

GRT -2-SD

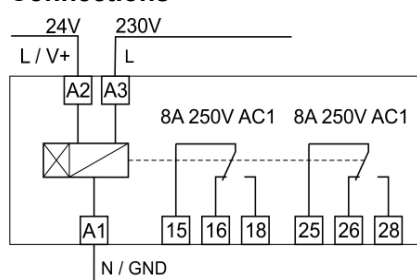
Star-Delta relay

2 contact Star-Delta

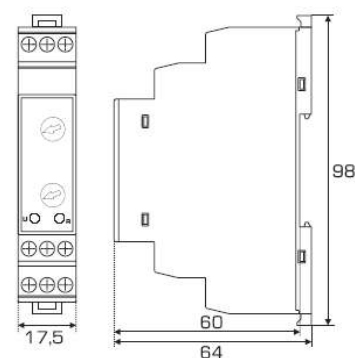
Function



Connections



Dimension [mm]





Installation relay

GRIR-11

- **Module housing 17,5mm**
- **Wide input range**
- **Optical indication**
- **16A SPDT contact**

Technical specification

Supply

Voltage: 24 - 240V AC
20 - 40V DC

Output

Indication: LED red
Relay: 1 Changeover
Material: AgSnO₂
Rated load AC1: 16 A / 250V AC
Inrush current: max. 30A
Life time AC1: electr. > 0,7*10⁵
mech. > 3*10⁷

Ambience

Storage temp.: -30°C to +70°C
Working temp.: -10°C to +55°C
Humidity: <95%RH not cond.
Isolation: 4kV
Protection degree: IP 40
Weight: 50 g
Dimensions: 98 x 17.5 x 68 mm
Standards: CE conform

Description

This unit can be used as a normal coupling relay, but offers a wide input voltage range. It includes an optical status indication and is able to switch a nominal current up to 16A.

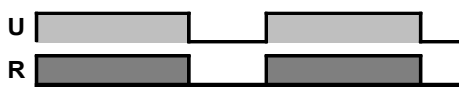
Order code

GRIR – 11

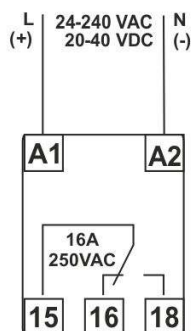
Installation relay

1 no time function
1 contact

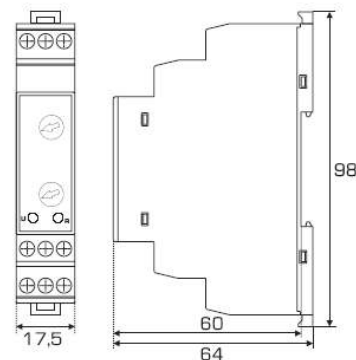
Function



Connections



Dimension [mm]





GRUBER COUPLING RELAYS

Digital override relay

GR1-H0A-RGP-24UC



Technical specification

Supply

Voltage range: 21,0V – 26,5V
Rated consumption: 0,4 W / 0,7VA
Power dissipation: max. 0,48W

Contacts

Relay contact: 2 change over AgNi
Rated load: 6A 240V AC1
Signal contact: brass gold plated
Imax. 15mA @ 24V

Environment

Working temp.: -10°C to +55°C
Storage temp.: -40°C to +70°C
Humidity: <85% RH
non-condensing

Mechanical characteristics

Housing: PU-UL 94 V0, gray
Screw terminals: 2,5mm² / AWG14
Dimensions: 22,5*98*56 mm
Weight (kg): 0,15 kg

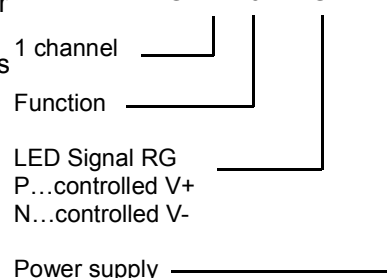
Function

The Hand – 0 – Auto coupling module enables local access points independent of your DDC. Switch to **Auto** position to get controlled by the external DDC and get feedback to the DDC. Switch to **0** position and the output is turned off. Using the **Hand** function for starting your application locally. 2 LED indicators (red and green) provides independent signalization, or feedback from your application. You can change the polarity of those LEDs by order. Please refer to order code. The yellow LED shows the status of the relay contact.

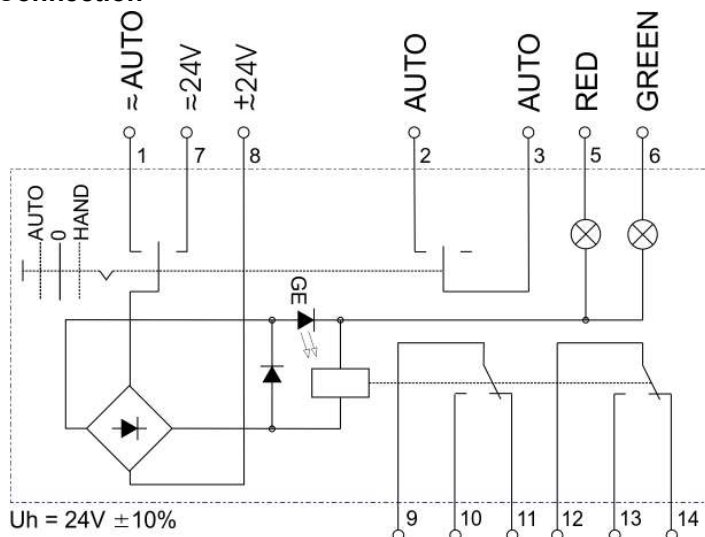
- Hand 0 Auto switch
- 2 LED indicators
- 2 SPDT outputs 6A
- Feedback contact
- Supply 24V AC / DC
- Module housing 22,5mm

Order code

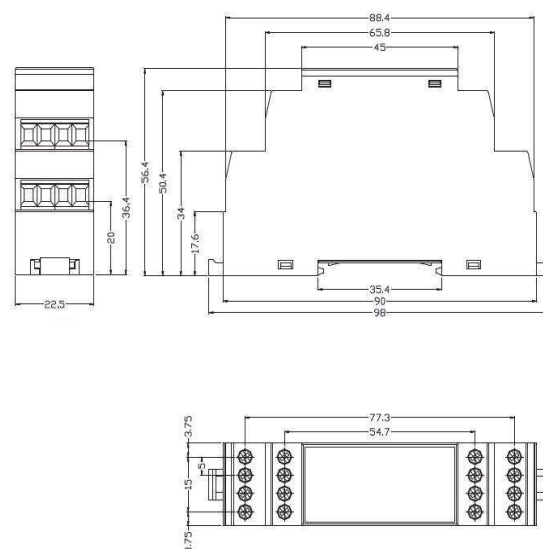
GR1-H0A-RGP-24UC



Connection



Dimensions [mm]





Technical specification

Supply

Voltage range: 21,0V – 26,5V
 Rated consumption: 0,8 W / 2,4VA
 Power dissipation: max. 3,8W

Analog signal:

Indicator: Input Pin 8
 0...10V / 10 LEDs
 Default setting: Output 7
 0...10V / I_{max}: 1mA
 Auto contact: brass gold plated
 I_{max}: 15mA @ 24V

Environment

Working temp.: -10°C to +55°C
 Storage temp.: -40°C to +70°C
 Humidity: <85% RH
 non-condensing

Mechanical characteristics

Housing: PU-UL 94 V0, gray
 Screw terminals: 2,5mm² / AWG14
 Dimensions: 22,5*98*56 mm
 Weight (kg): 0,16 kg

Function

The Hand – 0 – Auto coupling module with bar graph indication can be used for local set point settings and offers digital and optical feedback.

In **Auto** position the Auto - feedback contact is closed and the analog signal will be put through directly from the DDC to the output.

In **0** position the output signal is 0V.

In **Hand** position the set point value can be adjusted by the internal potentiometer between 0-10V. The bargraph indicator might be used as an optical feedback of your 0-10V signal.

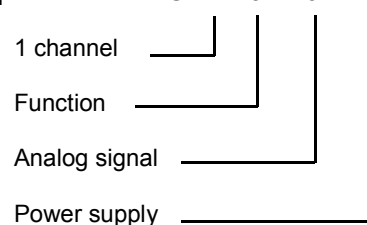
Analog override relay

GR1-H0A-10V-24UC

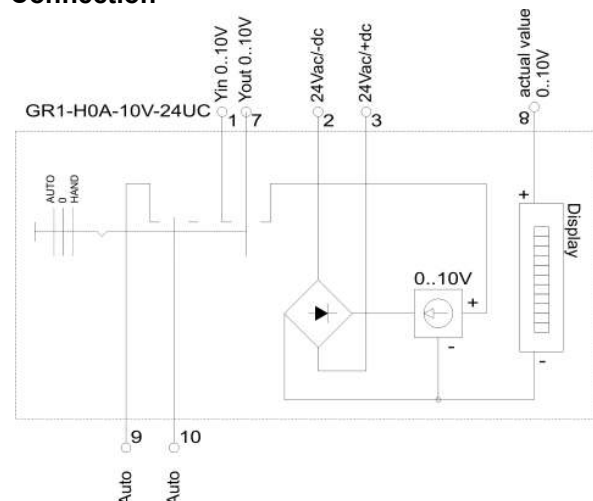
- Hand 0 Auto switch
- Analog indicator 0..10V
- Analog locally setting
- Feedback contact
- Supply 24V AC / DC
- Module housing 22,5mm

Order code

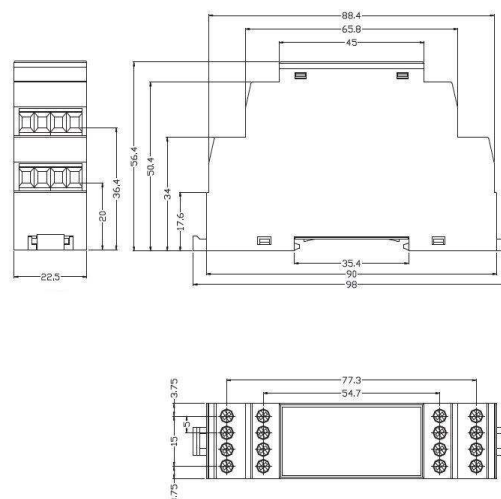
GR1-H0A-10V-24UC



Connection



Dimensions [mm]





GRUBER MONITORING RELAYS



Current monitoring relay

GRCR-31

- Galvanic insulated measurement
- Adjustable set point
- Time delay up to 10s
- Wide input range
- Suitable for current transformers
- LED status indication

Technical specification

Supply

Voltage: 12 – 240V AC/DC
Frequency: 47 - 63Hz
Rated consumption: 1,5W
Indication: U LED green

Measurement

Range: 0.8 - 16A
0.25-5A
Hysteresis: 0.6 - 1.2%
Time delay: 0.25 – 10s

Output

Indication: R LED red
Relay: 1 Changeover
Material: AgSnO₂
Rated load AC1: 8A @ 250V
Inrush current: max. 15 A
Life time AC1: electr. > 0,7*10⁵
mech. > 3*10⁷
Switching current: min. 10mA
Switching voltage: min. 10V
Switching load: min. 1,0W

Ambience

Storage temp.: -30° to +70° C
Working temp.: -10° to +55° C
Humidity: <95%RH not cond.
Isolation: 4 kV
Protection degree: IP 40
Weight: 60 g
Dimensions: 98 x 17.5 x 68 mm
Standards: CE conform
EN-61812-1, EN50081-1,
EN61010-1, EN50082-2

Description

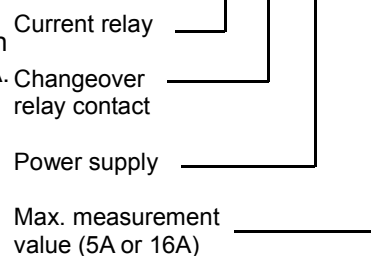
Use the current monitoring relay for setting a limit value at a certain current level, which needs to be signalized. If you want monitor CT's order 5A version or make direct measurement up to 16A.

Notes

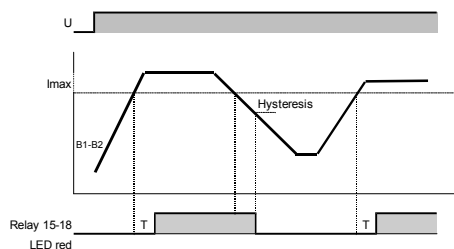
For perfect operation, a side clearance of min. 5mm is recommended.

Order code

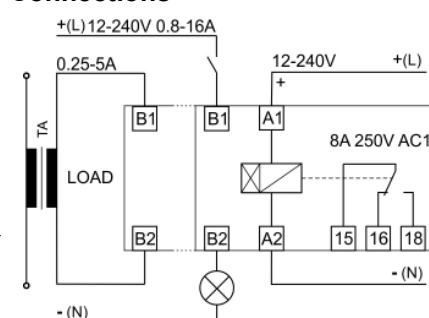
GRCR-31-230-16A



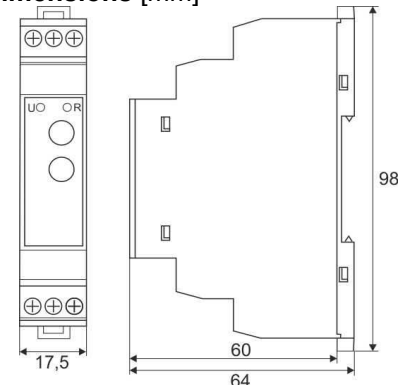
Function



Connections



Dimensions [mm]





DC voltage monitoring

GRVR-34-40

- **Module housing**
17,5mm
- **Adjustment range**
12 – 40 VDC
- **No auxiliary supply**
needed
- **16A relay contact**
- **LED status indicators**

Technical Specification

Supply / Measurement circuit

Range: 12 – 40V DC
 Rated consumption: < 1,2VA
 Indication: U LED green

Output

Indication: R LED red
 Relay: 1 changeover
 Rated load: 16A / 250V AC
 Inrush current: 30A < 3s
 Max. capacity: < 4000VA / AC1
 > 384 W / DC
 Life time: mech. $3 \cdot 10^7$
 electr. $0,7 \cdot 10^5$

Ambience

Storage temp.: -30°C to +70°C
 Working temp.: -10°C to +55°C
 Humidity: <95%RH not cond.
 Isolation: 4kV
 Protection degree: IP 40
 Weight: 60g
 Dimensions: 98 x 17.5 x 68mm
 Standards: CE conform

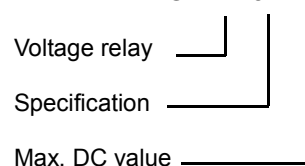
Description

The DC voltage monitoring relay signalizes if the voltage value is within a defined level or outside of this band range. This might be suitable for UPS or battery charging applications. You can define a maximum value and a minimum level up to 30% from nominal voltage level. By using the time delay T you can ensure a safe switching level.

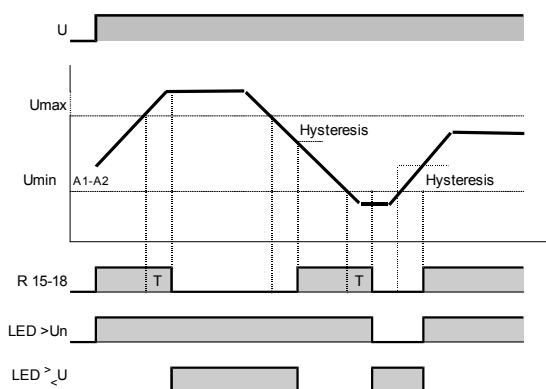
Get optical feedback, LED green signalizes the voltage within the adjusted level, LED red means the voltage is out of range.

Order code

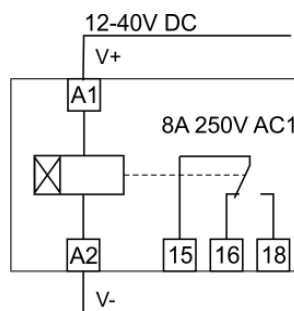
GRVR-34-40



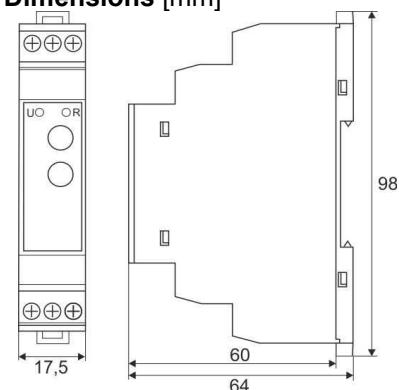
Function



Connections



Dimensions [mm]





GRUBER MONITORING RELAYS



AC under-voltage control

GRVR - 51

- Module housing 17,5mm
- Trip value fix adjusted
- Time delay adjustable
- 1, 2 or 3 times 230V
- Independent of phase sequence
- 8A SPDT contact
- 2 LED status indication

Technical data

Supply

Measure Voltage: 1*230V AC (L1+L2+L3)
or 3*400V AC (L1/L2/L3) + N
Tolerance: 0,75 – 1,15%
Frequency: 47 .. 63Hz
Power: 8,4VA
Indication: LED green

Measures

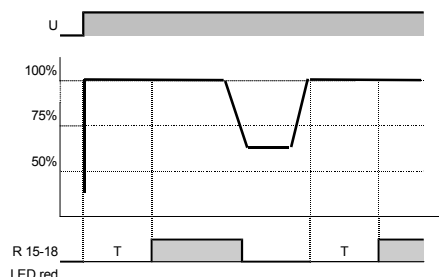
Under Voltage: < 175V AC
Time delay: 0 - 10s
Under Voltage: 0 - 10s
Phase loss: 200ms

Output

Indication: LED red
Relay Contact: 1 change over
Material: AgNi
Voltage: 250V AC
Current @ 25°C: > 20mA
< 8A AC1
Inrush current: 10A < 3s
Power: < 2000VA AC1
> 0,5W DC
Life time: mech. <10⁷
electr. @ I_n < 10⁵

Function

This monitoring relay recognizes an under voltage lower than 75% from nominal voltage. You can use it for 230V single phase or all three phases at 3*230V / N. Use the time delay function to enable a save restart of your system



Order code

GRVR-51

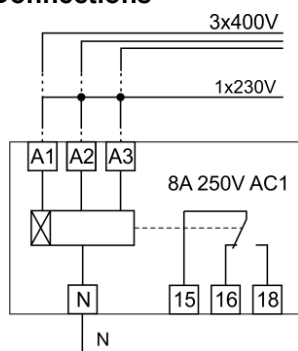
Voltage relay

Monitoring function

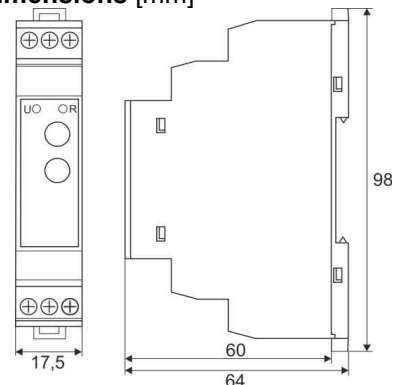
Ambience

Storage temp.: -30°C bis +70° C
Working temp.: -10°C bis +50° C
Humidity: <95%RH not cond.
Isolation: 4kV
Protection degree: IP 40
Weight: 56g
Dimensions: 98 x 17.5 x 68mm
Standards: CE conform

Connections



Dimensions [mm]





3-Phase monitoring relay

GRVR – 52 / N

- Module housing 17,5mm
- Deviation adjustable
- Time delay adjustable
- No auxiliary supply needed
- 8A SPDT contact
- 2 LED status indication

Technical data

Supply

Measure range: 3*400V AC
with or w/o Neutral
Frequency: 47 .. 63Hz
Power L1: < 13VA
Power L2,L3: < 0,1VA
Indication: LED green

Measures

Over voltage: 420 – 500V AC
Hysteresis: 5 % fix
Under voltage: 300 – 380V AC
Hysteresis: 5 % fix
Phase failure: $U < 165V$ AC
Delay time (Td): 100ms
Voltage failure (t): 0,2-10ms
Phase failure (tr): 50ms

Output

Indication: LED red
Relay Contact: 1 change over
Material: AgNi
Voltage: 250V AC
Current @ 25°C: > 20mA
< 8A AC1
Inrush current: 10A < 3s
Power: < 2000VA AC1
> 0,5W DC
Life time: mech. < 10⁷
electr. @ $I_n < 10^5$

Ambience

Storage temp.: -30°C bis +70° C
Working temp.: -10°C bis +55° C
Humidity: <95%RH not cond.
Isolation: 4kV
Protection degree: IP 40
Weight: 35 g
Dimensions: 98 x 17.5 x 68 mm
Standards: CE conform

Description

This 3 phase relay monitors the phase voltage 3*400V for maximum, minimum and asymmetric.

In case of at least one phase has a deviation of more than adjusted, the mains asymmetric will be indicated, as well as in the case of broken neutral conductor, or drift of the neutral potential.

In these cases the relay trips after the adjusted time delay.

Order code

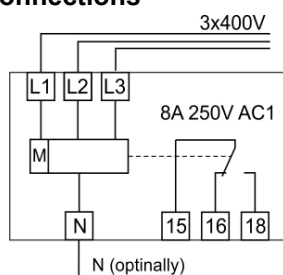
GRVR-52 / N

Voltage relay

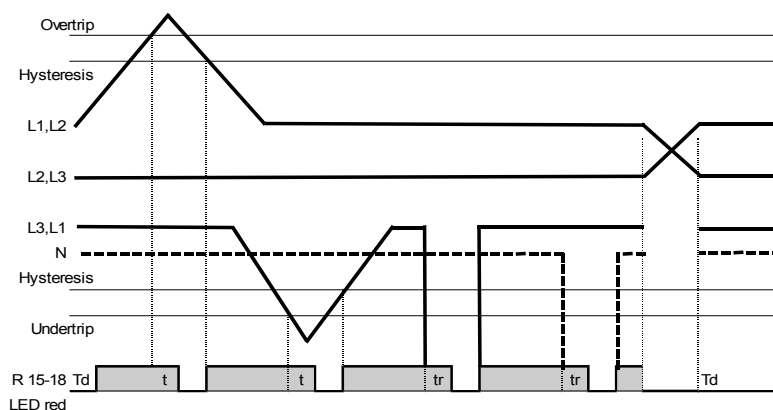
3Phase monitoring

With neutral wire connection

Connections



Function





Battery charger 12V

GR-BC-12L005

- **Module housing**
17,5mm
- **U/I charging curve**
- **Recommended for**
batteries up to 7 Ah

Technical specification

Supply:

Voltage: 230 Vac +- 10%
43Hz - 63 Hz
Cold start: < 30A
Overload protection: 110% Hiccup

Output:

Voltage: 13,8Vdc +- 7%
Charging current: max. 0,5A
Continuous power: max. 7W
Ripple noise: max. 300 mV
Charging curve: U/I

General informations:

Efficiency: 75%
Electrical Insulation: 3kV
Derating 3,4%/ln/°C >45°C
MTBF: 20.000h
Protection degree: IP20
Weight: 60g
Dimensions: 98*17,5*64mm
Status indication: LED green
Working temperature: -20..+60°C
(free air cooling)
Storage temperature: -30..+70°C
Humidity: < 95%RH non cond.
Mounting: 35mm Rail

Order code

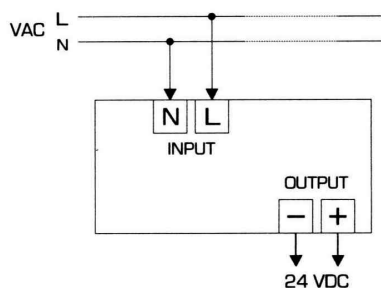
GR-BC-12L005

Battery charger

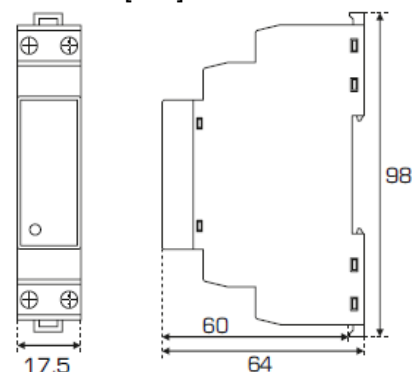
Output voltage

Charging current

Connections



Dimensions [mm]





GRUBER BATTERY CHARGER



Battery charger 24V

GR-BC-24L002

- **Module housing**
17,5mm
- **U/I charging curve**
- **Recommended for**
batteries up to 7 Ah

Technical specification

Supply:

Voltage: 230 Vac \pm 10%
43Hz - 63 Hz
Cold start: < 30A
Overload protection: 110% Hiccup

Output:

Voltage: 27,6Vdc \pm 7%
Charging current: max. 0,2A
Continuous power: max. 5,5W
Ripple noise: max. 300 mV
Charging curve: U/I

General informations:

Efficiency: 75%
Electrical Insulation: 3kV
Derating 3,4%/In/°C >45°C
MTBF: 20.000h
Protection degree: IP20
Weight: 60g
Dimensions: 98*17,5*64mm
Status indication: LED green
Working temperature: -20..+60°C
(free air cooling)
Storage temperature: -30..+70°C
Humidity: < 95%RH non cond.
Mounting: 35mm Rail

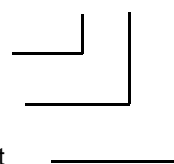
Order code

GR-BC-24L002

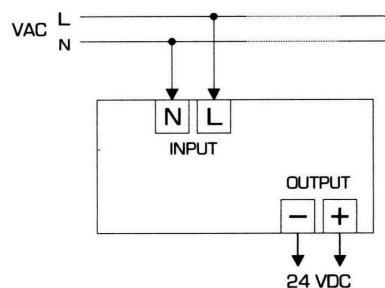
Battery charger

Output voltage

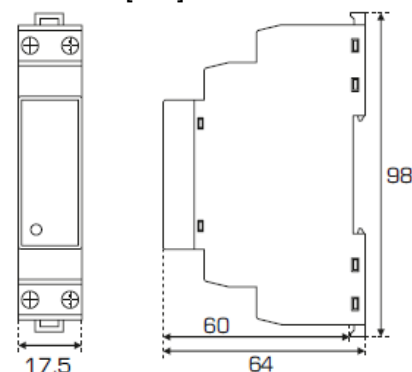
Charging current



Connections



Dimensions [mm]





Battery charger 24V

GR-BCMF-24 01

- Module housing 17,5mm
- U/I charging curve
- Recommended for batteries up to 24 Ah

Technical specification

Supply:

Voltage: 230 Vac \pm 10%
43Hz - 63 Hz
Cold start: < 30A
Overload protection: <110% Un

Output:

Voltage: 27,6Vdc \pm 7%
Charging current: max. 1,2A
Continuous power: max. 25W
Ripple noise: max. 300 mV
Charging curve: U/I

General informations:

Efficiency: 80%
Electrical Insulation: 3kV
Derating 3,4%/ln/°C >45°C
MTBF: 20.000h
Protection degree: IP20
Weight: 130g
Dimensions: 95*70*60mm
Status indication: LED green
Working temperature: -20..+60°C
(free air cooling)
Storage temperature: -30..+70°C
Humidity: < 95%RH non cond.
Mounting: 35mm Rail

Order code

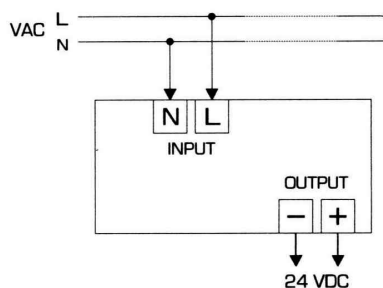
GR-BCMF-24 01

Battery charger

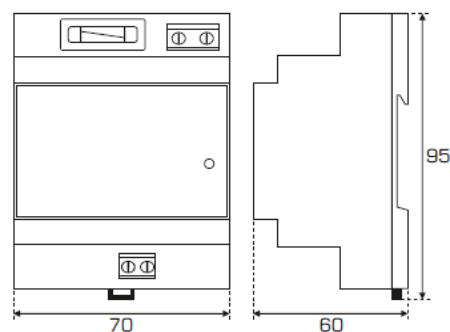
Output voltage

Charging current

Connections



Dimensions [mm]



GRUBER Electric Ges.m.b.H.



GRUBER Electric

Dinrail 45mm

Fast delivery



Best support



Highest quality



Your reliable partner



Gruber Electric Ges.m.b.H.

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