



ZAMEL Sp. z o.o.

ul. Zielona 27, 43-200 Pszczyna, Poland
tel. +48 (32) 210 46 65, fax +48 (32) 210 80 04
www.zamelcet.com, e-mail: marketing@zamel.pl

DESCRIPTION

Remote switch LAN is used to control lighting, heating, etc. by means of ethernet (web browser). The switch is mounted in a 230 V~ socket and it has a possibility of a remote restart (relay status change at the adjusted time) of the connected device, which is done by means of a safe SSL protocol.

FEATURES

- remote control of electric device operation by means of computer network commands - by means of web browser,
- comfortable control of devices with difficult access (ventilation, heating, other),
- three operation modes (switching on, switching off, restart - contact relay position change for adjusted time),
- possible cooperation with standard network devices (routers, switches, etc.)
- SSL protocol secures connection,
- easy mounting in 230V AC socket.

**CAUTION!**

The device is designed for single-phase installation and must be installed in accordance with standards valid in a particular country. The device should be connected according to the details included in this operating manual.

Installation, connection and control should be carried out by a qualified electrician staff, who act in accordance with the service manual and the device functions.

In case of casing dismantling an electric shock may occur, and the guarantee is lost then. Before installation make sure the connection cables are not under voltage. The cruciform head screwdriver 3,5 mm should be used to instal the device. Improper transport, storage, and use of the device influence its wrong functioning. It is not advisable to instal the device in the following cases: if any device part is missing or the device is damaged or deformed. In case of improper functioning of the device contact the producer.

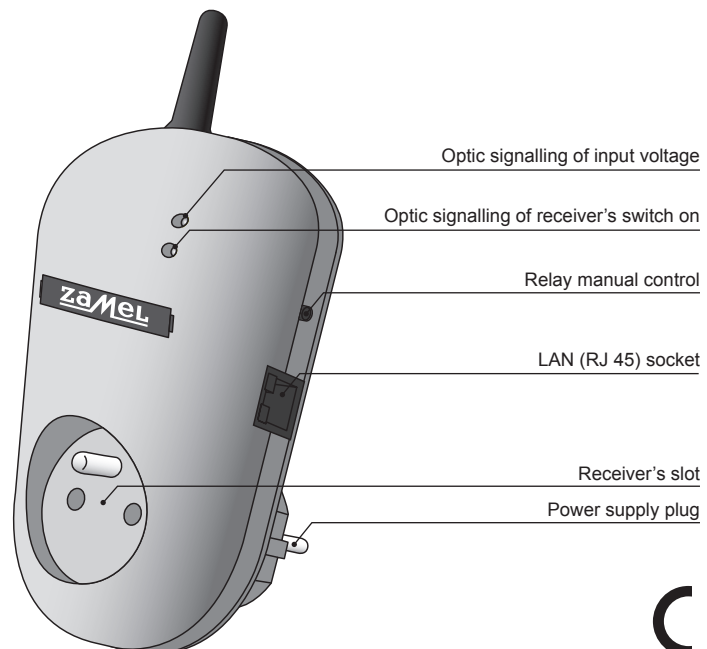


The symbol means selective collecting of electrical and electronic equipment. It is forbidden to put the used equipment together with other waste.

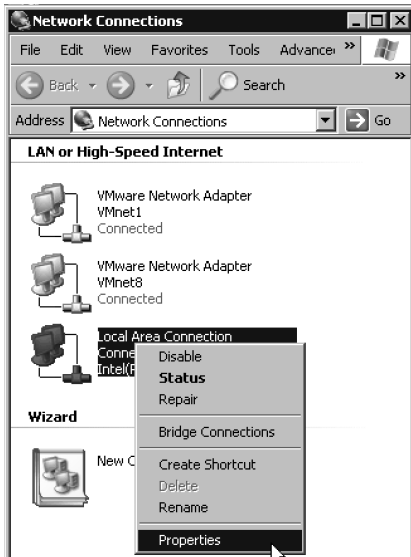
TECHNICAL DATA

GRL-01	
Input rated voltage:	230 V~
Input voltage tolerance:	-15 ÷ +10 %
Nominal power consumption:	2 W
Optic signalling of input (supply):	LED green diode
Number of operation modes:	3
Accepted communication protocols:	IP, TCP, UDP, HTTP, HTTPS, DHCP, ARP
Coding:	SSL code connection
Connection parameters (Link):	10 Mbps / Full Duplex
LAN socket type:	RJ 45
Optic signalling of relay status:	LED red diode
Output contacts parameters:	1NO 16A / 250V~ AC1 4000 VA
Ambient temperature range:	-10 ÷ +55 °C
Operating position:	free
Casing mounting:	230 V~ socket
Casing protection degree:	IP20 (EN 60529)
Protection level:	II
Overvoltage category:	II
Pollution degree:	2
Surge voltage:	1 kV (EN 61000-4-5)
Dimensions:	160 x 66 x 90 mm
Weight:	0,170 kg
Reference standard:	EN 60950-1:2007, EN 55024:2000, EN 610004-4

APPEARANCE



CUSTOMER COMPUTER CONFIGURATION



GRL-01 default configuration:

IP address: 192.168.1.10,

Mask: 255.255.255.0,

Gateway: 192.168.1.1

In order to receive a connection with GRL-01 device by means of LAN interface, proper configuration of customer network card is required.

In **CONTROL PANEL** in **NETWORK CONNECTION** open the **CHARACTERISTICS** section of local connection.

START >> SETTING >> CONTROL PANEL >> NETWORK CONNECTION >> CHARACTERISTICS

It is required to adjust in **TCP/IP** protocol characteristics:

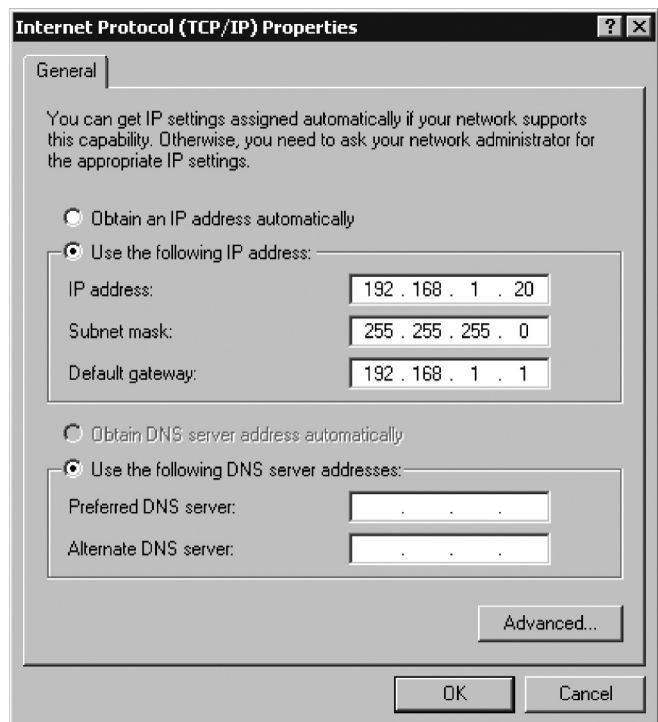
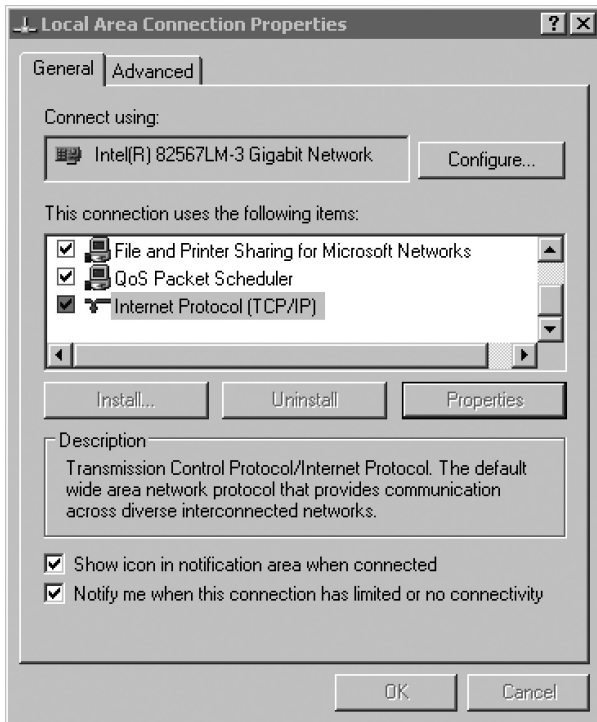
IP address: address from 192.168.1.xxx, (192.168.1.10 is forbidden)

Subnet Mask: 255.255.255.0

Gateway: 192.168.1.1

Confirm all settings with OK command. Make connection between computer network card and GRL-01 LAN socket. To carry it out use a pair twisted cable ended with RJ-45 plug.

Check if GRL-01 device is connected with network card - LED green diode in (GRL-01 device) LAN socket flashes.



CONFIGURATION BY MEANS OF WWW

Access to the configuration panel is obtained by means of typing a default address of GRL-01 device in a browser:

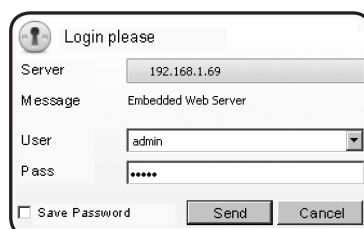
https://192.168.1.10

It is required to confirm the certificate before logging in order to be in a safe SSL connection.

Next the user name and password are required.

Default:

User: admin
Password: admin



BASIC OPERATING MODES

Manual control ON/OFF – enables receiver's remote switching on / switching off which is connected to GRL-01 socket.

Status change is signalled in status bar and also by means of a LED red diode.

Relay status, after power supply has been applied, can be configured in section: „Relay configuration after power supply switch on”.

ON – relay switched on,
OFF – relay switched off.

BASIC OPERATING MODES

Controlled device configuration - this mode is used to control operation of any device equipped in LAN port. The control is supervised by checking the answer sent by means of GRL-01 to a data packet. In the moment when GRL-01 detects a number of data packets without answer - the receiver is disconnected for the time adjusted during configuration. After this operation GRL-01 switches on the receiver and waits for the answer sent to data packets. If such an answer is not received the receiver is disconnected again for the adjusted time.

The screenshot shows the 'GRL-01 LAN remote switch' web interface. The 'Menu' section includes: Manual control ON/OFF, Configuration of the supervised device, GRL-01 configuration, Access configuration, and About the device. The 'GRL-01 configuration' section is active, showing options for Login security mode, Filter MAC addresses, and Filter IP addresses. The 'Status' section displays: Firmware version 3.11, MAC Address: 00-80-E1-FF-00-20, Uptime: 384, Restart time: 10 s, Relay: OFF, Remote device testing: OFF.

GRL-01 CONFIGURATION

Basic configuration of LAN connection in GRL-01 device is done in a section.

The screenshot shows the 'GRL-01 LAN remote switch' web interface, specifically the 'TCP/IP setting' section. It offers two options: 'Obtain the IP address automatically (DHCP)' (selected) and 'Use the following IP address'. The 'GRL-01 configuration' section shows fields for IP address (192.168.1.10), Subnetwork Mask (255.255.255.0), and Default gateway (192.168.1.1). The 'Status' section displays: Firmware version 3.11, MAC Address: 00-80-E1-FF-00-20, Uptime: 330, Restart time: 10 s, Relay: OFF, Remote device testing: OFF.

„Get IP address automatically (DHC P)” - IP address is given by other network devices as routers, servers, etc.

„Use the following IP address” - IP address is added manually to the GRL-01 device operating in LAN network. It is necessary to configure basic connection parameters such as IP Address, Subnet Mask, Default Gateway.

Caution: Connection parameters should be consistent with other devices' parameters operating in the same LAN network.

ACCESS CONFIGURATION

GRL-01 device has a range of securities which make the device operation and configuration difficult by persona non grata.

Security mode - during logging it is necessary to give user name and password.

Default user name: **admin**
Default password: **admin**

It is possible to change the user name (3...15 signs) and the password (5...15 signs). After changes it is necessary to give new user name and password.

Switched off secured mode - access to the device is free or limited by other securities.

Additional securities:

Filtration by means of IP addresses - access to GRL-01 device is possible only for IP addresses which are included on a list. Maximum number of IP addresses is 3.

Filtration by means of MAC addresses - access to GRL-01 device is possible only for devices with MAC addresses which are included on a list. Maximum number of MAC addresses is 3.

It is possible to use both filters simultaneously where MAC filter has a higher priority than IP filter.

Parameters	Description	Values
Testing device address	Device IP address which is controlled by GRL-01. GRL-01 sends continuously data packet to this address.	-
Automatic restart time	The parameter defines output relay switching off time in GRL-01 device in order to „restart” supervised device. Restart means disconnection of power supply voltage of the supervised device.	10s, 15s, 20s, 25s, 30s, 35s, 40s, 45s, 50s, 1min
Test frequency	The parameter defines times GRL-01 checks the answer which is sent to data packet.	1s, 2s, 3s, 4s, 5s
Restart after a number of packets without answer	The parameter defines the number of lost answers (sent to data packet) after which GRL-01 restarts the supervised device.	2, 3, 5, 10, 20
Expectation time after restart	The parameter defines answer restart time to the sent by GRL-01 data packets, just after supervised device was restarted.	10s, 30s, 1 min, 2 min, 5 min

The screenshot shows the 'GRL-01 LAN remote switch' web interface, specifically the 'Relay configuration after switching on power supply' section. It shows 'Relay operation mode' set to OFF. The 'Remote device test configuration' section includes: Remote device testing (PING) checked, Tested remote device address (0.0.0.0), Automatic restart time (10 s), Test frequency (1 s), Restart after number of packets without reply (2), and Waiting time after restart (10 s). The 'Status' section displays: Firmware version 3.11, MAC Address: 00-80-E1-FF-00-20, Uptime: 145, Restart time: 10 s, Relay: OFF, Remote device testing: OFF.

GRL-01 FUNCTIONALITY

Typical configuration of GRL-01 gives a user a possibility to control any device with power supply of 230V AC by means of internet browser (LAN local network) e.g. at home, in the company, etc.

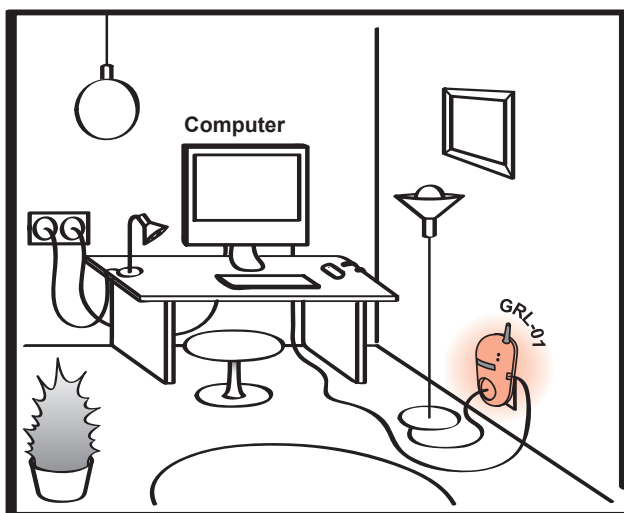
The control can be done remotely from any place by means of Internet or GPRS - address forwarding is required from local network to public address. It is done by a proper router or server configuration to which GRL-01 is connected. In case of some network devices, e.g. LIVEBOX (Neostrada) it is necessary to use DynDNS service.

Default settings:

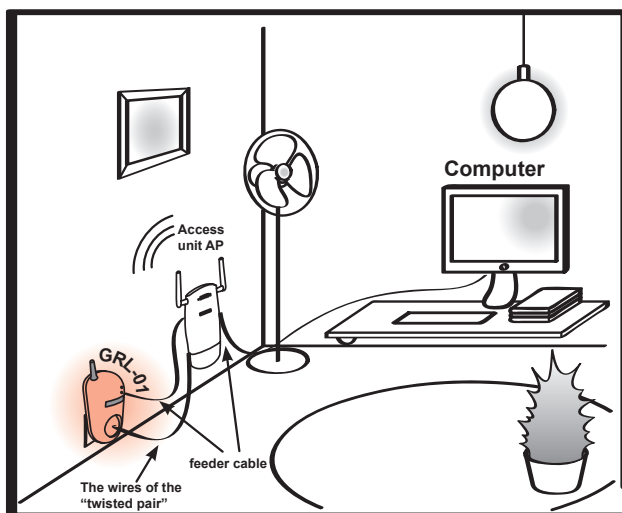
- user – admin
- password – admin
- relay – OFF
- remote device testing – OFF
- default restart time – 10 second
- device IP address – 192.168.1.10
- subnet mask – 255.255.255.0
- default gateway – 192.168.1.1

CAUTION: During position change from insecure mode to secure mode, it is required to give a new user name and password. In secure mode, during change of access configuration settings, a new user name and a new password is required every time. In order to return to default settings, put the device into a socket with pressed programming push-button. Press the push-button for about 10 seconds. When the device starts changing the relay status cyclically, put the device out and into the socket (without pressing the push-button).

APPLICATION


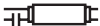




Remote LAN switch GRL-01 which controls lighting (switch on/ switch off) by means of computer browser



Remote LAN switch GRL-01 which controls access device operation.

CAPACITY

 2000 W AC5b
 1000 W AC5a

 750 W AC5a
 500 W AC5a

WARRANTY CARD

There is 24 months guarantee on the product

1. ZAMEL provides a two-year warranty for its products.
2. The ZAMEL warranty does not cover: a) mechanical defects resulting from transport, loading / unloading or other circumstances b) defects resulting from incorrect installation or operation of ZAMEL products; c) defects resulting from any changes made by CUSTOMERS or third parties, to products sold or equipment necessary for the correct operation of products sold; d) defects resulting from force majeure or other aleatory events for which ZAMEL is not liable; e) power supply (batteries) to be equipped with a device in the moment of sale (if they appear);
3. All complaints in relation to the warranty must be provided by the CUSTOMER in writing to the retailer after discovering a defect.;
4. ZAMEL will review complaints in accordance with existing regulations.;
5. The way a complaint is settled, e.g. replacement of the product, repair or refund, is left to the discretion of ZAMEL.
6. Guarantee does not exclude, does not limit, nor does it suspend the rights of the PURCHASER resulting from the discrepancy between the goods and the contract.

Salesman stamp and signature, date of sale

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