Extension module for iL/iG/iS genset controllers

Remote annunciator
iGL-RA15

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# Table of Contents

Table of Contents .................................................................................................................. 2  
What describes this manual? ................................................................................................. 3  
Terminals and dimensions ................................................................................................. 4  
Configuration and wiring .................................................................................................... 5  
  LED labels ......................................................................................................................... 6  
  LED colour change .......................................................................................................... 7  
  Horn timeout setting ......................................................................................................... 7  
  Controller type selection ................................................................................................. 8  
Function description ............................................................................................................ 9  
  Signal LEDs .................................................................................................................... 9  
  Horn ..................................................................................................................................... 9  
  Lamp and horn test .......................................................................................................... 9  
Technical data ..................................................................................................................... 10  
  Power supply ................................................................................................................... 10  
  Operating conditions ....................................................................................................... 10  
  Dimensions and weight .................................................................................................... 10  
  Horn output ..................................................................................................................... 10  
  CAN bus interface ........................................................................................................... 10  

iGL-RA15-1.2.pdf
What describes this manual?

This manual describes the Remote annunciator iGL-RA15 module, which is designed as an extension signalling unit for iL/iG/iS genset controllers.

What is the purpose of the manual?

This manual provides general information how to install and operate iGL-RA15 module.

This manual is dedicated for
- Operators of gensets
- Gen-set control panel builders
- For everybody who is concerned with installation, operation and maintenance of the genset

Note:
ComAp believes that all information provided herein is correct and reliable and reserves the right to update at any time. ComAp does not assume any responsibility for its use unless otherwise expressly undertaken.
Terminals and dimensions

[Diagram showing terminals and dimensions]

Cutout for Remote Annunciator

167 x 108 mm
(6.6 x 4.3“)
Configuration and wiring

Note:
1. The shielding of the CAN bus cable shall be grounded at one point only.
2. There can be only one 120R resistor connected to the CAN bus (on the RA15 side or on the controller side).
3. See the section Technical data for recommended CAN bus cable type.
LED labels

The labels are slipped to slots in the front foil. The slot openings are located on the upper edge of the front panel. Labels can be created using a standalone MS word document “RA15LabelsForm.doc” on the LiteEdit installation CD.

The RA15 module is shipped with one A4 sheet of foil for printing of labels.

**Hint:**

Please note that labels in “RA15LabelsForm.doc” file are designed for printer “Paper format” A4. Other Paper format setting can change labels dimension. Following figure is only an example.
LED colour change
To change colour of the LEDs, press simultaneously both buttons on the front panel and then switch the power on. PWR indicator starts to light steady yellow.

- Use **HORN RESET** button to change the colour of selected LED
- Use **LAMP TEST** button to go step by step over all LEDs.

Pressing **LAMP TEST** button after adjusting of the last LED finishes the colour adjust process and horn timeout adjusting follows:

Horn timeout setting
After LED colours adjusting the timeout for the horn can be set. The PWR LED changes its colour to steady green. Signal LEDs are now used as “bargraph” indicating the current value of the horn timeout (one LED = 10s). The value can be changed by pressing **HORN RESET** button. If all 15 LEDs on, the horn timeout is deactivated. The range for setting is then 0 to 140s or infinite time.
Pressing **LAMP TEST** button finishes the timeout setting. Adjusted colours and horn timeout are written into EEPROM memory and the unit returns to normal operation.

**Note:** If there is no operator action during LED colour adjusting or horn timeout setting, the unit returns to normal operation without writing changes to EEPROM.
Controller type selection

The type of the controller to be used with iGL-RA15 is selected via jumpers accessible through the opening marked “CAN ADDRESS JUMPERS” in the rear cover. Both jumpers must be open for iG/iL controller; jumper “A” must be closed for iS controller. See picture above to see the position of the jumpers.

Note: In case of iS controller the unit has to be configured as two binary output modules. iGL-RA15 version 1.0 and 1.1 works on addresses of BO modules 13 and 14, from version 1.2 it works on addresses 5 and 6.
Function description

Signal LEDs
The signals LEDs are handled like binary outputs. It means all what can be configured to binary outputs can be also configured to the LEDs of iGL-RA15.
- The LED lights, if configured logical output is active on the controller
- The green LED is dark, if configured logical output is not active on the controller
- The yellow or red LED is dark, if configured logical output is not active on the controller and HORN RESET] was pressed.
- The yellow or red LED blinks, if configured logical output is not active on the controller and HORN RESET] was still not pressed.

PWR LED:
- Is blinking green, if the unit is OK and the communication to the master controller is OK.
- Is blinking red, if the unit is OK, but the communication to the master controller is not running.
- Is blinking yellow, if EEPROM check not passed OK after power on
- Is steady yellow during the LED colour and horn timeout adjustment

Hint: If the PWR LED is blinking yellow, the unit must be reconfigured (see chapter LED colour change and Horn timeout setting.) If the situation repeats every time the unit is switched on, it must be sent to repair.

Horn
The horn is activated if:
1. Some of red or yellow LED lights up or
2. At the end of the extended lamp test (see below)

The horn can be silenced:
1. By pressing HORN RESET] button or
2. It silences automatically after adjusted time (see chapter Horn timeout setting above)

Lamp and horn test
Pressing and holding LAMP TEST button for less than 2s execute the basic lamp test. All LEDs light up with the configured colour. If the button is hold longer than 2s, an extended test is started. Every LED is tested step-by-step in green colour and then in red colour. The horn is activated at the end of the test. After that the unit returns to normal operation. The horn can be silenced with HORN RESET]
Technical data

**Power supply**

<table>
<thead>
<tr>
<th>Power supply</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage supply</td>
<td>8-36V DC</td>
</tr>
<tr>
<td>Consumption</td>
<td>0.35-0.1A (+1A max horn output)</td>
</tr>
<tr>
<td></td>
<td>Depend on supply voltage</td>
</tr>
</tbody>
</table>

**Operating conditions**

<table>
<thead>
<tr>
<th>Operating conditions</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature</td>
<td>-20..+70°C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-30..+80°C</td>
</tr>
<tr>
<td>Protection front panel</td>
<td>IP65</td>
</tr>
<tr>
<td>Humidity</td>
<td>85%</td>
</tr>
<tr>
<td>Standard conformity</td>
<td>EN 61010-1:95 +A1:97</td>
</tr>
<tr>
<td>Electromagnetic Compatibility</td>
<td>EN 50082-1:99, EN 50082-2:97</td>
</tr>
<tr>
<td>Vibration</td>
<td>5 - 25 Hz, ±1.6mm</td>
</tr>
<tr>
<td></td>
<td>25 - 100 Hz, a = 4 g</td>
</tr>
<tr>
<td>Shocks</td>
<td>a = 200 m/s²</td>
</tr>
</tbody>
</table>

**Dimensions and weight**

<table>
<thead>
<tr>
<th>Dimensions and weight</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>180x120x55mm</td>
</tr>
<tr>
<td>Weight</td>
<td>950g</td>
</tr>
</tbody>
</table>

**Horn output**

<table>
<thead>
<tr>
<th>Horn output</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum current</td>
<td>1 A</td>
</tr>
<tr>
<td>Maximum switching voltage</td>
<td>36 VDC</td>
</tr>
</tbody>
</table>

**CAN bus interface**

<table>
<thead>
<tr>
<th>CAN bus interface</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Galvanic separated</td>
<td></td>
</tr>
<tr>
<td>Maximal CAN bus length</td>
<td>200m</td>
</tr>
<tr>
<td>Speed</td>
<td>250Kbd</td>
</tr>
<tr>
<td>Nominal impedance</td>
<td>120Ω</td>
</tr>
<tr>
<td>Cable type</td>
<td>twisted pair (shielded)</td>
</tr>
</tbody>
</table>

Following dynamic cable parameters are important especially for maximal 200 meters CAN bus length:

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Velocity of Propagation</td>
<td>min. 75% (max. 4.4 ns/m)</td>
</tr>
<tr>
<td>Wire crosscut</td>
<td>min.0.25 mm²</td>
</tr>
<tr>
<td>Maximal attenuation (at 1 MHz)</td>
<td>2 dB / 100m</td>
</tr>
</tbody>
</table>

Recommended Industrial Automation & Process Control Cables:

Belden (see http://www.belden.com):

- 3082A DeviceBus for Allen-Bradley DeviceNet
- 3083A DeviceBus for Allen-Bradley DeviceNet
- 3086A DeviceBus for Honeywell SDS
- 3087A DeviceBus for Honeywell SDS
- 3084A DeviceBus for Allen-Bradley DeviceNet
- 3085A DeviceBus for Allen-Bradley DeviceNet
- 3105A  Paired EIA Industrial RS485 cable

LAPP CABLE (see http://www.lappcable.com)
- Unitronic BUS DeviceNet Trunk Cable
- Unitronic BUS DeviceNet Drop Cable
- Unitronic BUS CAN
- Unitronic-FD BUS P CAN UL/CSA