

# IGL-RA15 Control Panel

## Panel Mounted Remote Annunciator

### SW version 2.0.0

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# 1 Document information

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## 1.1 Clarification of Notation

**Note:** This type of paragraph calls the reader's attention to a notice or related theme.

**IMPORTANT:** This type of paragraph highlights a procedure, adjustment etc., which can cause a damage or improper function of the equipment if not performed correctly and may not be clear at first sight.

**WARNING:** This type of paragraph highlights a procedure, adjustment etc., which can cause a damage or improper function of the equipment if not performed correctly and may not be clear at first sight.

**Example:** This type of paragraph contains information that is used to illustrate how a specific function works.

## 1.2 About this guide

The Remote Annunciator IGL-RA15 installed in a Flat Panel, P/N 90600788 is designed as an extension signaling unit for the following ComAp products:

- > IntelliSys-NT or IntelliSys-CU
- > IntleiGen-NT or IntleiGen-CU
- > IntelliCompact-NT
- > IntelliLite-NT or IntelliLite-CU
- > IntreliDrive-DCU (Marine, Industrial) InteliDrive-Mobile (Logger)
- > InteliDrive-Lite (Lite, Marine, FPC, IPC, IPU, EM)

The IGL-RA15 is equipped with a fully configurable tri-color (red, orange, green) LED in order to help signal severity of an alarm state. In addition, the IGL-RA15 Flat Panel is equipped with an 80dB audible horn which will draw the attention of an operator in the event meet conditions set to trigger an audible notification.

## 1.3 Document history

Revision number	Version	Date of issue	Author
1	2.0.0	31.8.2022	Ben Killoy

## 1.4 Legal notice

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Pay attention to the following recommendations and measures to increase the level of security of ComAp products and services.

Please note that possible cyber-attacks cannot be fully avoided by the below mentioned recommendations and set of measures already performed by ComAp, but by following them the cyber-attacks can be considerably reduced and thereby to reduce the risk of damage. ComAp does not take any responsibility for the actions of persons responsible for cyber-attacks, nor for any damage caused by the cyber-attack. However, ComAp is prepared to provide technical support to resolve problems arising from such actions, including but not limited to restoring settings prior to the cyber-attacks, backing up data, recommending other preventive measures against any further attacks.

**Warning:** Some forms of technical support may be provided against payment. There is no legal or factual entitlement for technical services provided in connection to resolving problems arising from cyber-attack or other unauthorized accesses to ComAp's Products or Services.

General security recommendations and set of measures

1. Production mode
  - Disable production mode BEFORE the controller is put into regular operation.
2. User accounts
  - Change password for the existing default administrator account or replace that account with a completely new one BEFORE the controller is put into regular operation mode.
  - Do not leave PC tools (e.g. InteliConfig) unattended while a user, especially administrator, is logged in.

### 3. AirGate Key

- Change the AirGate Key BEFORE the device is connected to the network.
- Use a secure AirGate Key – preferably a random string of 8 characters containing lowercase, uppercase letters and digits.
- Use a different AirGate Key for each device.

### 4. MODBUS/TCP

- The MODBUS/TCP protocol (port TCP/502) is an instrumentation protocol designed to exchange data between locally connected devices like sensors, I/O modules, controllers etc. By its nature it does not contain any kind of security – neither encryption nor authentication. Thus it is intended to be used only in closed private network infrastructures.
- Avoid using MODBUS/TCP in unprotected networks (e.g. Internet).

### 5. SNMP

- The SNMP protocol (port UDP/161) version 1 and version 2 are not encrypted. They are intended to be used only in closed private network infrastructures.
- Avoid using SNMP v1 and v2 in unprotected networks (e.g. Internet).

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# 2 System Overview

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## 2.1 Controller Type Settings

Controller Type	Jumper A	Jumper B	Address
InteliCompact-NT	OPEN	OPEN	1
InteliLite-NT			
InteliDrive Lite			
InteliGen-NT	CLOSED	OPEN	5+6
InteliSys-NT			
InteliDrive DCU			
InteliLite (IL3)			
InteliGen-NT	CLOSED	CLOSED	User Defined
InteliSys-NT			
InteliDrive DCU			
InteliLite (IL3)			

## 2.2 Controller Address Setting

SW changing of CAN1 address is enabled when both jumpers are closed only. Any one of these addresses (1+2 or 3+4 or 5+6 or 7+8) can be set by following steps:

- > Switch to programming mode (Hold the Horn reset and Lamp test when unit is powering on)
  - » Status led is yellow
- > Press *Lamp Test* sixteen times
- > Set the address up by pressing Horn reset.
  - » The Red LED will flash corresponding to CAN1 address
    - Two flashes for addresses 1+2
    - Four flashes for addresses 3+4
    - Six flashes for addresses 5+6
    - Eight flashes for addresses 7+8

- Press *Lamp Test*

**Note:** The unit will return to normal operation if there is no user input when placed in programming mode. Changes made while in programming mode will not be saved.

## 2.3 LED Color Change

Each LED color is adjusted independently of controller output settings. For instance, the IGL-RA15 Control Panel may not show a red LED1 if the CONTROLLER Output 1 is set as "Common Shutdown". The LED color can be adjusted by the following steps:

- Switch to programming mode
  - Hold the Horn reset and Lamp test when unit is powering on
  - The Status LED will be yellow when in programming mode
- Press Horn reset to change the LED1 color (green, yellow, red)
- Press Lamp Test to switch to move to the next LED
- Continue to adjust all subsequent LEDs
- After LED15 has been set, Press Lamp Test three (3) times

**Note:** Factory default LED color is RED. You must adjust the color setting if you prefer green or yellow LED

**Note:** The unit will return to normal operation if there is no user input when placed in programming mode. Changes made while in programming mode will not be saved.

## 2.4 Horn Timeout Setting

The horn output is activated when the red or yellow LED is on. The Horn output is active until the *Horn Reset* button is pressed or horn timeout counts down. The timeout setting is adjusted by the following steps:

- Switch to programming mode
  - Hold the *Horn Reset* and *Lamp Test* when the unit is powered on
  - The Status LED is yellow when in programming mode
- Press *Lamp Test* fifteen times
- Set the horn timeout by pressing *Horn reset*.
  - The Green LED will flash corresponding to a delay time.
    - 1 flash for 10s timeout
    - 2 flashes for 10s timeout
    - 15 flashes for disabling horn timeout (Horn is active until Horn Reset is pressed).
- Press *Lamp test* two times

**Note:** The unit will return to normal operation if there is no user input when placed in programming mode. Changes made while in programming mode will not be saved.

## 2.5 Signal LEDs

The signal LEDs are handled like binary outputs. It means all binary outputs from the Controller can be interfaced to the LEDs of IGL-RA15 Control Panel.

- An LED will activate when the logical output from the controller is active
- The green LED is OFF when the logical output is not active on the controller

- The yellow or red LED is dark when the logical output is not active on the controller and horn reset was pressed.
- The yellow or red LED blinks when the configured logical output is not active on the controller and horn reset was not pressed.

## 2.5.1 Power LED

- Blinking Green: The unit is OK and communication with the master controller is OK.
- Blinking Red: The unit is OK but communication to the master controller is broken.
- Blinking Yellow: The EEPROM check failed when the unit was powered on.
- Solid Yellow: The unit is in programming mode.

## 2.6 Horn

The horn is active if:

- A red or yellow LED activates
- At the end of the extended lamp test (see Section 2.7)

The horn can be silenced:

- By pressing horn reset button
- It turns off automatically after the Timeout setting is reached

## 2.7 Lamp and Horn Test

Pressing and holding Lamp Test button for less than 2 s executes a basic lamp test. All LEDs will light up in the configured color.

An extended test is activated if Lamp Test button is held longer than 2 s. Each LED is tested step-by-step in green and then in red. The horn is activated at the end of the test. The unit returns to normal operation after the test cycles completes. The horn can be silenced by pressing the Horn Reset button.

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



Image 2.1 LED Label

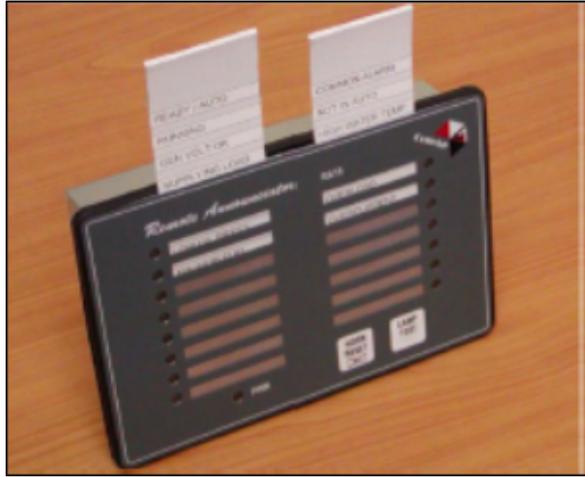


Image 2.2 Inserting the Labels into the RA15

# 3 Installation and Wiring

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## 3.1 IGL-RA15 Dimensions

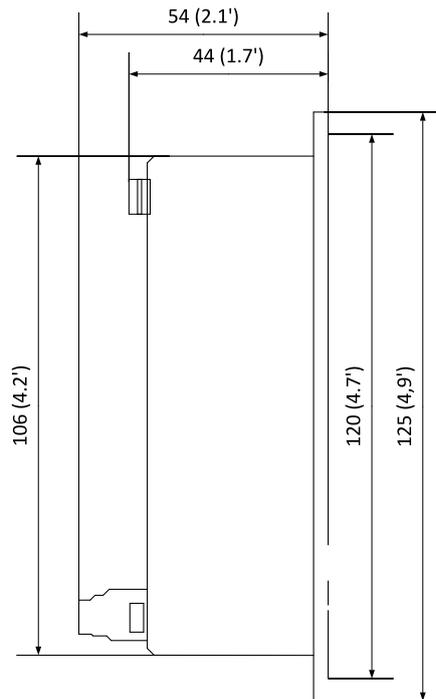


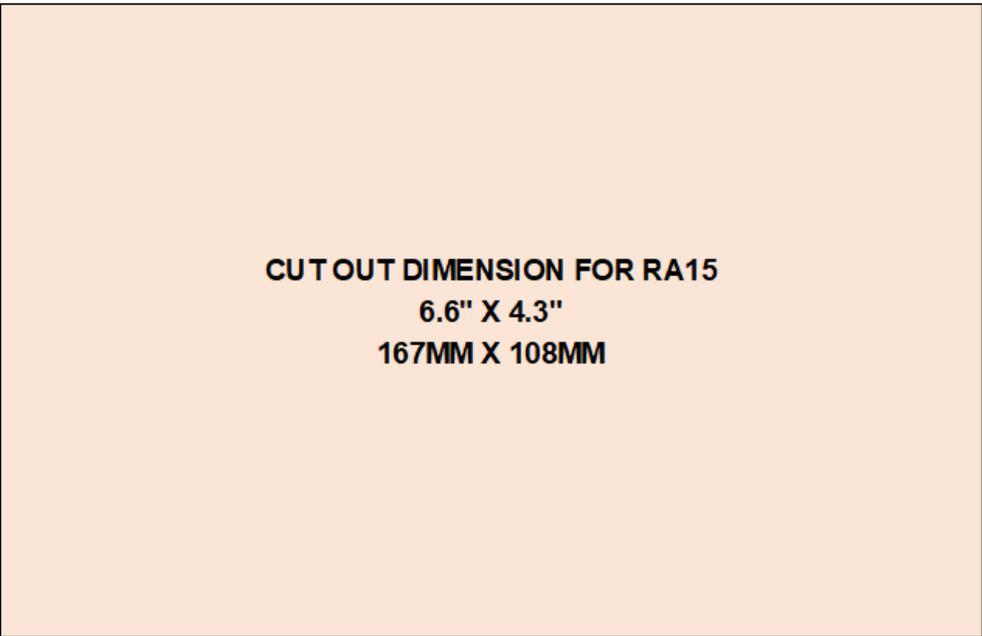
Image 3.1 Dimensions, Side View



Image 3.2 Dimensions, Bottom View

**Note:** All dimensions are in mm.

The IGL-RA15 Annunciator is mounted on a 16ga steel panel powder coated in ANSI Black. The following dimensions are provided if the RA15 needs to be moved to another panel.



### 3.2 Recommended Wiring

The IGL-RA15 is pre-wired from ComAp. Wires are landed in an 8-pole double row terminal block. The user is required to provide:

- > 8 – 36VDC power supply
- > A ground connection
- > CANBus

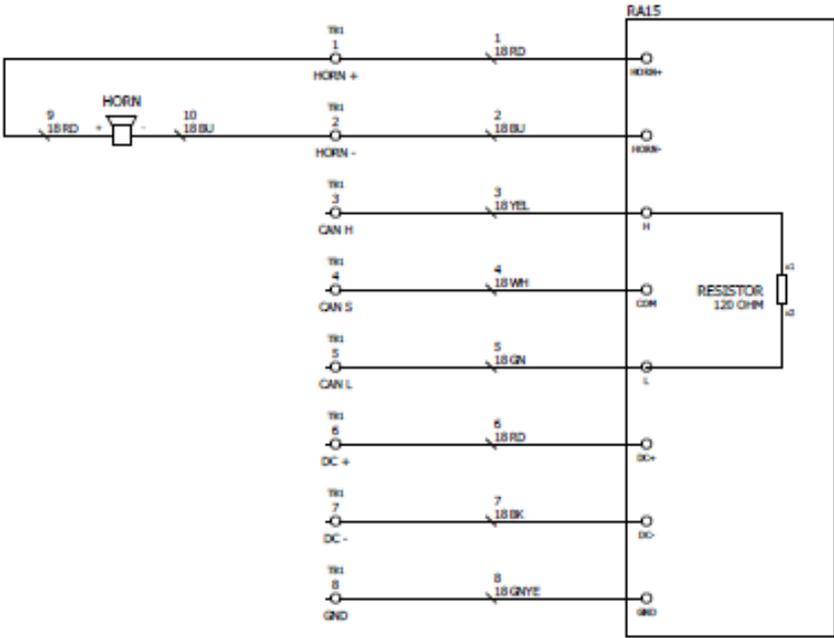


Image 3.3 Factory wiring between the RA15 and the Terminal Block

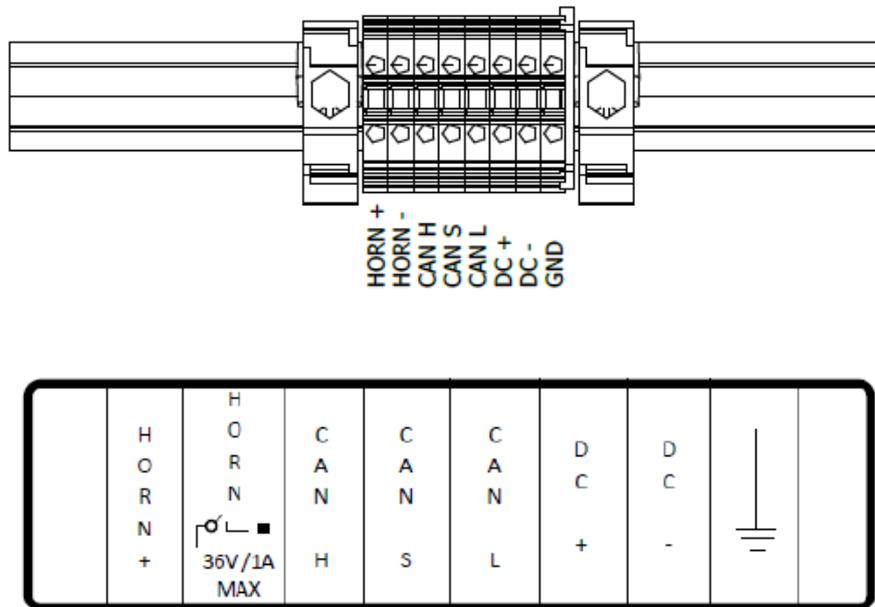
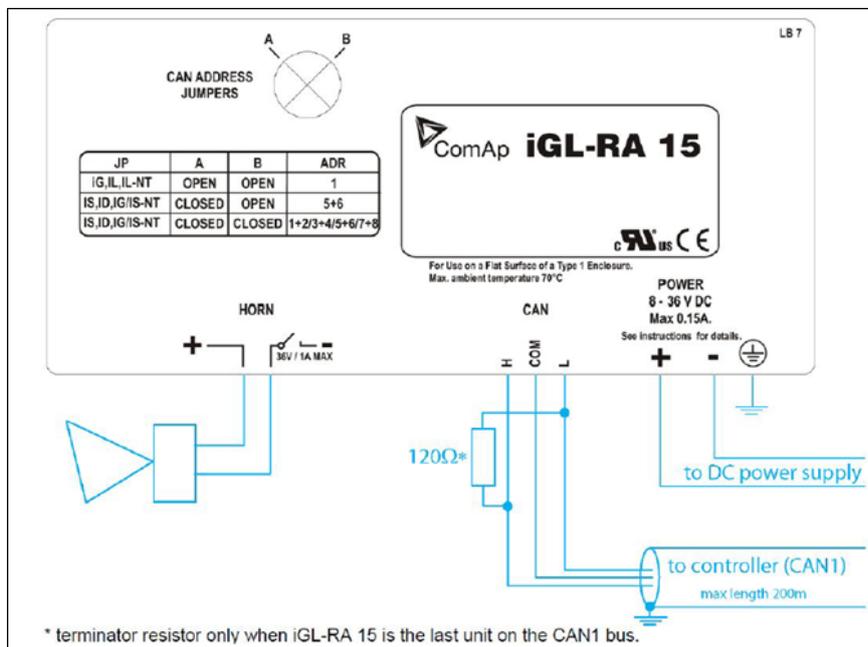


Image 3.4 Terminal Block Detail

### 3.2.1 Recommended Wiring if the RA15 is Removed from the Flat Panel



**Note:** The shielding of the CANBus cable has to be grounded at one point only. Please see **Technical data on page 13** for a recommended CANBus cable type.

# Technical data

## Power supply

Voltage supply	8-36 V DC
Consumption	0.35-0.1 A (+1 A <sub>max</sub> horn output depends on supply voltage)

## Power supply

Operating temperature	-20 °C to +70 °C
Storage temperature	-30 °C to + 80 °C
RA-15 / Enclosure Solution	IP65 / NEMA 1
Humidity	85%
Standard conformity	
Low Voltage Directive	EN 61010-1:95 +A1:97
Electromagnetic Compatibility	EN 50081-1:94 EN 50081-2:96 EN 50082-1:99 EN 50082-2:97
Vibration	5-25 Hz, ± 1.6 mm 25-100 Hz, a = 4 g
Shocks	a=200 m/s <sup>2</sup>
Heat radiation	2 W

## Horn output

Maximum current	1.0 A
Maximum switching voltage	36 V DC

## CAN bus interface

Galvanic separated	
Maximal CAN bus length	200 m
Speed	250 kBd
Nominal impedance	120 Ω
Cable type	twisted pair (shielded)

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

Nominal Velocity of Propagation	min. 75 % (max 4.4 ns/m)
Wire crosscut	min 0.25 mm <sup>2</sup>
Maximal attenuation (@ 1 MHz)	2 dB / 100 m

## Recommended Industrial Automation & Process Control Cables

<b>BELDEN</b> (see <a href="http://www.belden.com">www.belden.com</a> ):	
>	3082A DeviceBus for Allen-Bradley DeviceNet
>	3083A DeviceBus for Allen-Bradley DeviceNet
>	3086A DeviceBus for Honeywell SDS
>	3087A DeviceBus for Honeywell SDS
>	3084A DevoceBus for Allen-Bradley DeviceNet
>	3085A DeviceBus for Allen-Bradley DeviceNet
>	3105A Paired EIA Industrial RS485 cable
<b>LAPP CABLE</b> (see <a href="http://www.lappcable.com">www.lappcable.com</a> ):	
>	Unitronic BUS DeviceNet Trunk Cable
>	Unitronic BUS DeviceNet Drop Cable
>	Unitronic BUS CANUnitronic-FD BUS P CAN UL/CSA

## Related products

Product	Description	Order code
RT-300 Control panel	Retrofit control panel for single Gen-set applications.	RT4MRS16BLA/BAA

## Controller Dimensions and Weight

Dimensions	180 × 120 × 55 mm (7.1" × 4.7" × 2.2")
Weight	950 g (2.1 lbs)

## Enclosure Dimensions and Weight

Dimensions	254 × 254 × 101.6 mm (10" × 10" × 0.06")
Weight	4082 g (9 lbs)

## Flat Panel Dimensions and Weight

Dimensions	304.8 × 304.8 × 6.4 mm (12" × 12" × 0.06")
Weight	2268 g (5 lbs)

