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## CG-AO CLICKNGO MODULE 1 ANALOG OUTPUT (NV-820KCG11AO)

### USER GUIDE

### INTRODUCTION

**CG-AO** ClickNGo Module has 1 current analog output (0-20 and 4-20 mA) and was designed to work as an expansion module for **NOVUS** line of modular controllers.

**CG-AO** must be attached to the controller dock (to insert the module to the controller, make sure the device is turned off). Once inserted, it will be automatically recognized. Its configuration parameters will be displayed according to the slot in which the module has been attached to the dock.

You can configure this module directly at the controller, through the **QuickTune** software, or through the **QuickTune Mobile**.

### DIMENSION

Built in UL94 polycarbonate and with an IP20 protection rating, the **CG-AO** ClickNGo module has an identification engraving on the top and the following dimensions:

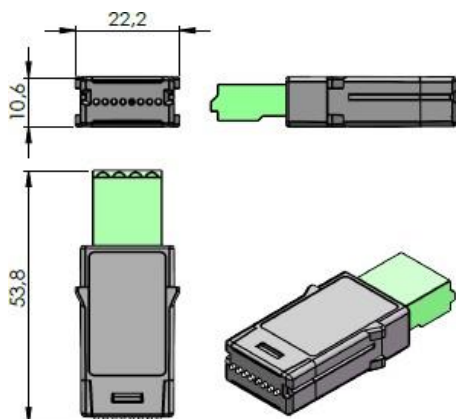


Figure 1 – Module overview

### ELECTRICAL INSTALLATION

**CG-AO** uses 1 plug-in connector. The figure below shows the laser engraving with the electrical connections of this module:

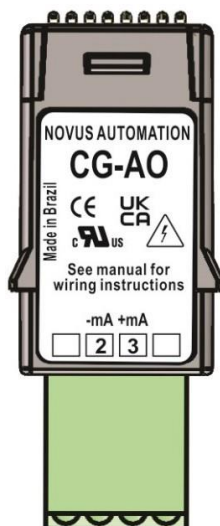


Figure 2 – Electrical connections

### INSTALLATION RECOMENDATIONS

- The electrical connections must be made at the module's terminals and accept 0.32 to 2.5 mm<sup>2</sup> (28 to 11 AWG) wire. The terminals must have a torque of 0.45 Nm (4.0 lb in).
- The power supply for electronic instruments must come from a network suitable for instrumentation.
- The use of RC FILTERS (noise suppressors) in contactor coils, solenoids, etc. is recommended.
- In control applications, you must consider what can happen when any part of the system fails. The built-in safety features of the device do not guarantee total protection.

## HOW TO INSERT THE MODULE TO THE DEVICE



Before you insert or remove a ClickNGo module from the device, make sure the device has been turned off.

Once the dock has been attached to the controller, simply plug the **CG-AO** ClickNGo module into the desired slot, pressing it in until it clicks into place. If the module does not click into place, it is either not properly attached, or it has been plugged into the wrong slot.

Once the **CG-AO** ClickNGo module is inserted into the dock and the device has been turned on, it will be automatically recognized. You can use the navigation keys to go through the parameter cycles and access the settings of the added module (see OPERATION section of the device manual).

The module settings will be available in the parameter cycle and according to its position in the dock. A **CG-AO** ClickNGo module inserted into slot 1 of the dock, for example, can be viewed within the Configuration Cycle, under module 1 (Cf **g >> Md.1**).

Once a module is removed from the dock, it will no longer be recognized by the device and the any settings made will be lost.

## MODULE OPERATION

Once the module has been attached to the device, the controller will display the following parameters:

<b>Ch 1F</b> <i>Channel 1 Function</i>	Allows you to set analog output operation mode: <b>OFF</b> Channel is off <b>MV</b> Analog output acts as a control output 1 <b>R.PV</b> Analog output acts as a process 1 variable retransmission (PV1) <b>R.SP</b> Analog output acts as a Setpoint retransmission (SP)
<b>TYPE</b> <i>Type</i>	Allows you to define the analog output signal: 0-20 mA or 4-20 mA.
<b>In</b> <i>Inverse</i>	Allows you to set the current direction in relation to the range: Up or Down.
<b>Err</b> <i>Error</i>	Allows you to define the analog output behavior in case of a PV error: <b>no</b> Analog output value does not change. It remains at the value set at the time of the PV failure <b>Low</b> Analog output value goes to minimum limit (0 or 4 mA) <b>Hi</b> Analog output value goes to maximum limit (20 mA)

Table 1 – Module parameters

The parameters will be displayed in the cycle related to the position of the module in the device dock.



If the module is removed from the controller dock, all settings will be lost. Therefore, when possible, use QuickTune software or the QuickTune Mobile application to save a version of the settings you have made.

For more information on the controller primary operation, see the OPERATION chapter of the device manual.

## CONFIGURATION SOFTWARE

Once you have inserted the **CG-AO ClickNGo** module into the device dock, you can configure it using the **QuickTune** software, which is free and available for download on **NOVUS** official website, or the **QuickTune Mobile** app, which is also free and available on Google Play Store and Apple Store.

Information about the primary configuration of the device is available in the CONFIGURATION SOFTWARE chapter of the controller manual. **This section shows information on how to configure the parameters for this module.**

To start the configuration, simply click the **Configure** button on the home screen of the software or application. If you are using the **QuickTune Mobile** application, you must enable the Bluetooth interface of your smartphone. If you are using the **QuickTune** software, you must run the software and perform the process of identifying the device.

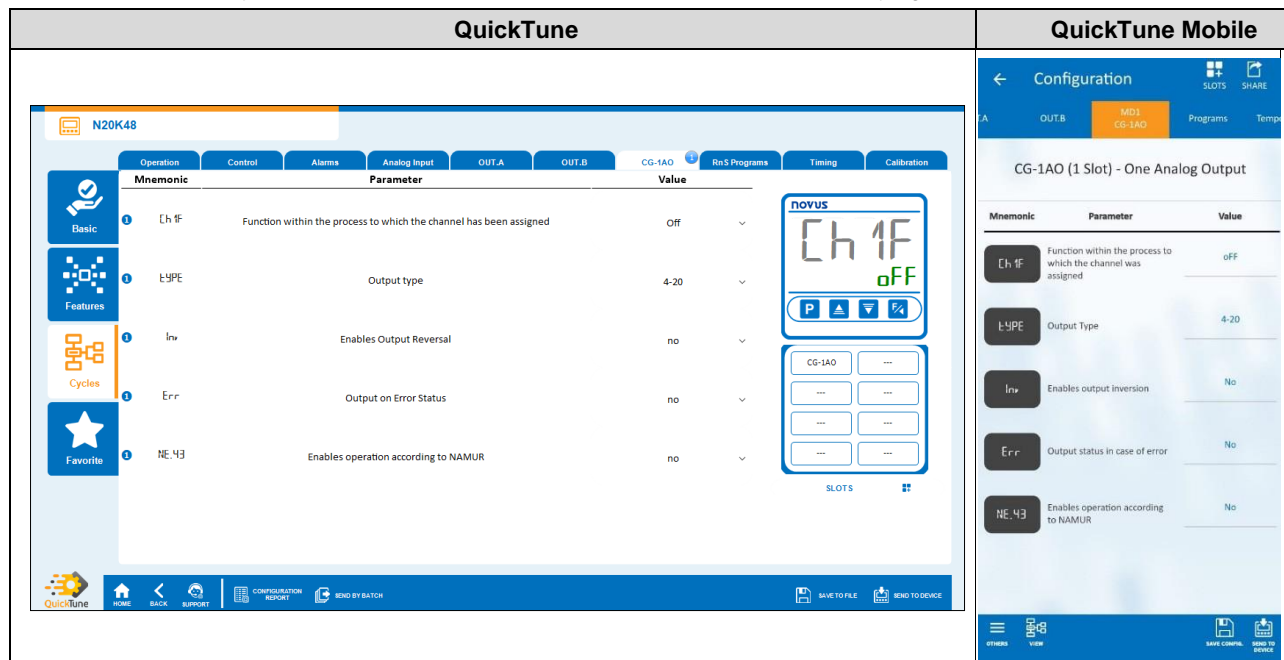


Figure 3 – Configuration software

- **Function within the process to which the channel has been assigned:** Allows you to set the channel function: "Channel off", "Control output 1", "Control output 2", "Retransmission of the process variable 1", "Retransmission of the process variable 2" or "Setpoint retransmission".
- **Output type:** Allows you to define the analog output signal: 4-20 mA or 0-20 mA.
- **Enables output reversal:** Allows you to invert the output.
- **Output on Error Status:** Allows you to set the output function in case of error: "No", "Low", "High" or "Near".
- **Enables operation according to NAMUR:** Allows you to enable operation according to NAMUR.

## MAINTENANCE

Connection errors and improper programming are the most common errors during controller operation. A final review can avoid wasted time and damage.

If the module is not recognized by the device, you must remove it from the dock, add it to another available slot, and restart the device.

## TECHNICAL SPECIFICATION

FEATURES	CG-AO CLICKNGO MODULE
Available analog output types	0 to 20 mA   4 to 20 mV
Current Accuracy	0.25 % @ 25 °C
Resolution	0.00125 mA (14 bits)
Thermal Drift	0.005 % / °C
Load maximum impedance	500 Ohms
Voltage capacity at the output	10 V
Maximum voltage at output terminals when there is no load	16 V
Electrical isolation from other controller circuits	600 Vac
Environmental Conditions	Operating Temperature: -20 to 60 °C (-4 to 140 °F) Relative Humidity: 80 % max. @ 30 °C (86 °F) (For temperatures above 30 °C (86 °F), reduce by 3 % for each °C) Internal use; Installation category II, Pollution degree 2; Altitude < 2000 m
Electrical Compatibility	EN 61326-1:2020
Security	EN 61010-1:2010 UL 61010-1/A2:2012
Dimension	53.8 x 10.6 x 22.2 mm Approximated weight: 12 g
Protection Degree	IP50 when installed in the controller
Plastic material	ABS+PC UL94 V-0
Software	<b>QuickTune</b> (for PC) <b>QuickTune Mobile</b> (for smartphones)
Certification	CE, UKCA

**Table 2** – Technical specifications

## CERTIFICATIONS

### CE Mark / UKCA

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.