

GML20 and GML20T LonWorks® Options for GMD/W20 Series



GML20 (left) and GML20T modules enable digital communication between the Vaisala CARBOCAP® Carbon Dioxide Transmitter Series GM20 and a LonWorks® network.

Features/Benefits

- Enables digital communication between Vaisala CARBOCAP® Carbon Dioxide Transmitter Series GM20 and LonWorks®
- GML20 for CO₂ signal
- GML20T for CO₂+T signal
- Savings in cabling, installation and maintenance costs

Significant savings

Vaisala's GML20 and GML20T are interface modules for distributing signals from Vaisala CARBOCAP® Carbon Dioxide Transmitter Series GM20 digitally to a LonWorks® network over a twisted pair.

The GML20 Module distributes CO₂ signals; the GML20T Module distributes both CO₂ and temperature signals. The GML20T Module can be used only with the Vaisala CARBOCAP® Carbon Dioxide Transmitter GMW21.

The use of these modules and Vaisala CARBOCAP® Carbon Dioxide Transmitter Series GM20 with a LonWorks® networked control system contributes to considerable savings in cabling, installation and maintenance costs.

Intelligent LonTalk® protocol

In a LonWorks® network, devices called nodes communicate with each other

using the LonTalk® protocol. Every node consists of a Neuron® chip and a transceiver. The Neuron® chip is a microprocessor which contains an application program and LonTalk® protocol. The transceiver adapts the Neuron® chip into the hardware environment used. The nodes communicate with each other, sending messages containing the value of the desired variables.

With Vaisala modules, these variables are CO₂ (GML20) or CO₂ and temperature (GML20T). Some network variables are so-called configuration variables, which are used to define the behavior of the node. With the GML20 and GML20T, they are used to designate how much the temperature and/or carbon dioxide level must change before a measured value is sent again.

GML20T module connects a Vaisala CARBOCAP® Carbon Dioxide Transmitter GMW21 to a LonWorks® network.



Technical Data

Features

- LonWorks® interoperable
- Twisted pair free topology, network type TP/FT-10 at 78kbps
- Additional two wires needed for powering the transmitter; can thus be connected to both powered and non-powered networks
- Service button and service LED for simple installation and configuration
- External interface (.xif) file available on request (GML20 part no. 19412GM, GML20T part no. 19748GM)
- Temperature (GML20T only):

Measurement accuracy	0.5 °C (0.9 °F)
Measurement range	0...+45 °C (+32...113 °F)
Warm-up time	30 min.

Network Variables for CO₂

(Both models GML20 and GML20T)

nviRequest: to request modes for objects within this node

nvoStatus: to report status of objects on this node

nvoCO2ppm: this output variable reports the CO₂ level detected by the sensor

nciMaxSendtime: indicates the maximum period of time that expires before the sensor object automatically updates all its output variables (default value: 300 seconds)

nciMinSendtime: indicates the minimum period between output network variable transitions (default value: 5 seconds)

nciCO2MinDelta: indicates the minimum CO₂ level change required to update the output network variables
(default value: 10 ppm)

Networks Variables for Temperature

(GML20T model only)

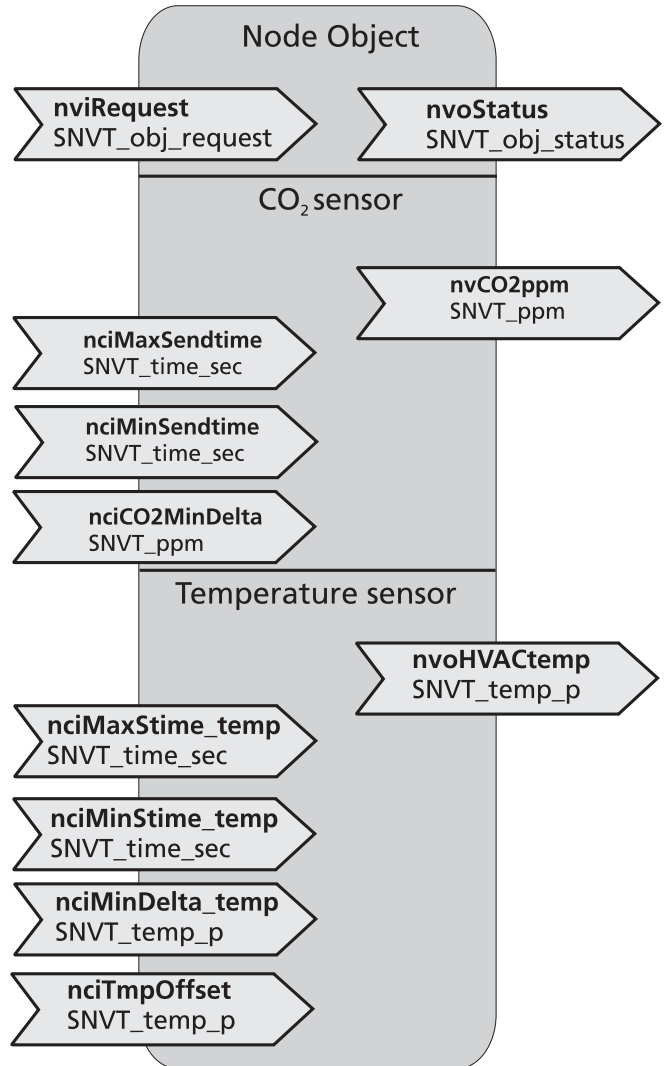
nvoHVACTemp: this output variable reports the temperature detected by the sensor

nciMaxStime_temp: indicates the maximum period of time that expires before the sensor object automatically updates all its output variables (default value: 300 seconds)

nciMinStime_temp: indicates the minimum period between output network variable transitions (default value: 5 seconds)

nciMinDelta_temp: indicates the minimum temperature change required to update the output network variables
(default value: 0.3 °C)

nciTmpOffset: indicates the temperature offset level
(default value: -0.8 °C)



LonWorks® is a registered trademark of Echelon Corporation.