

## 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.

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

### 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.

#### Features/Benefits

- Enables digital communication between Vaisala CARBOCAP®
- Carbon Dioxide Transmitter Series GM20 and LonWorks®
- GML20 for CO<sub>2</sub> signal
- GML20T for CO<sub>2</sub> + T signal
- Savings in cabling, installation and maintenance costs

The GML20 Module distributes CO<sub>2</sub> signals; the GML20T Module distributes both CO<sub>2</sub> 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 CO<sub>2</sub> (GML20) or CO<sub>2</sub> 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.

# 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 CO<sub>2</sub>

(BOTH MODELS GML20 AND GML20T)

**nviRequest:** to request modes for objects within this node

**nvoStatus:** to report status of objects on this node

**nvoCO<sub>2</sub>ppm:** this output variable reports the CO<sub>2</sub> 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)

**nciCO<sub>2</sub>MinDelta:** indicates the minimum CO<sub>2</sub> level change required to update the output network variables (default value: 10 ppm)

## Networks Variables for Temperature

(GML20T MODEL ONLY)

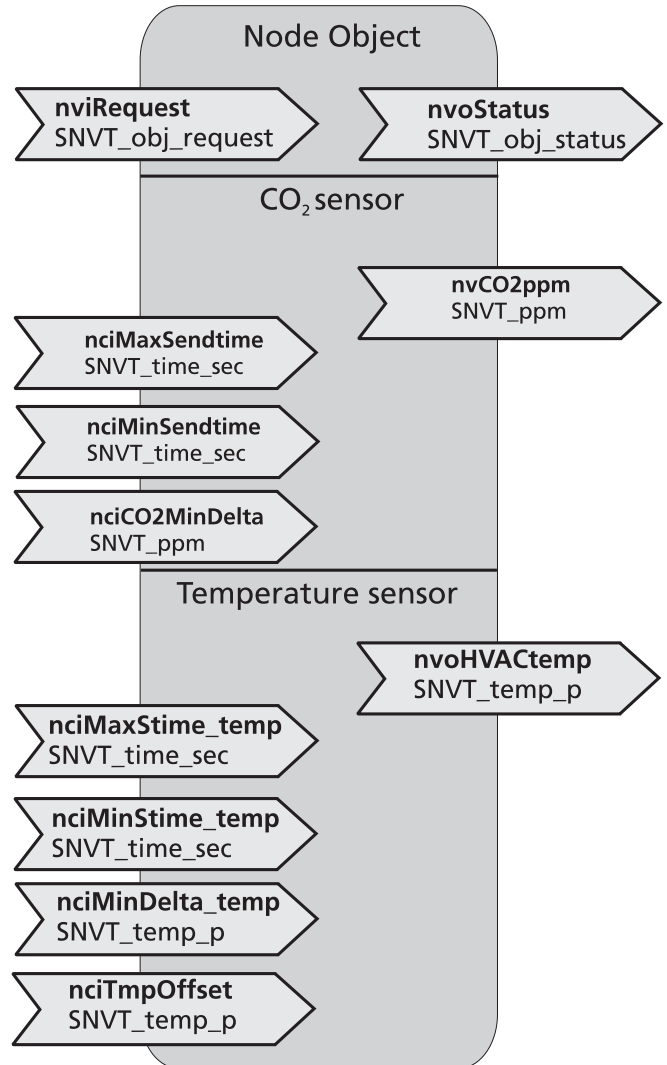
**nvoHVACTemp:** this output variable reports the temperature detected by the sensor

**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)



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# VAISALA

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