



# PRODUCT DATASHEET

# GENESIS DUO™

## DUAL-POINT CONTROL AND MONITORING SOLUTION

### APPLICATION

The Thermon Genesis Duo™ is a microprocessor-based temperature control and monitoring module developed specifically for heat tracing applications. The unit provides control and monitoring capabilities for one or two heat tracing circuits with input from up to two RTDs per circuit. The unit can be configured to control and limit with dedicated RTD inputs for the limiter channel. Genesis Duo has a 4.3" glove touch capable LCD display with an additional light ring for visual indication. Genesis Duo is also native to the Genesis Network requiring no additional hardware to communicate with Thermon's state of the art supervisory and management platform.

### PRODUCT FEATURES

A Thermon Genesis Duo™ control and monitoring unit offers the following features:

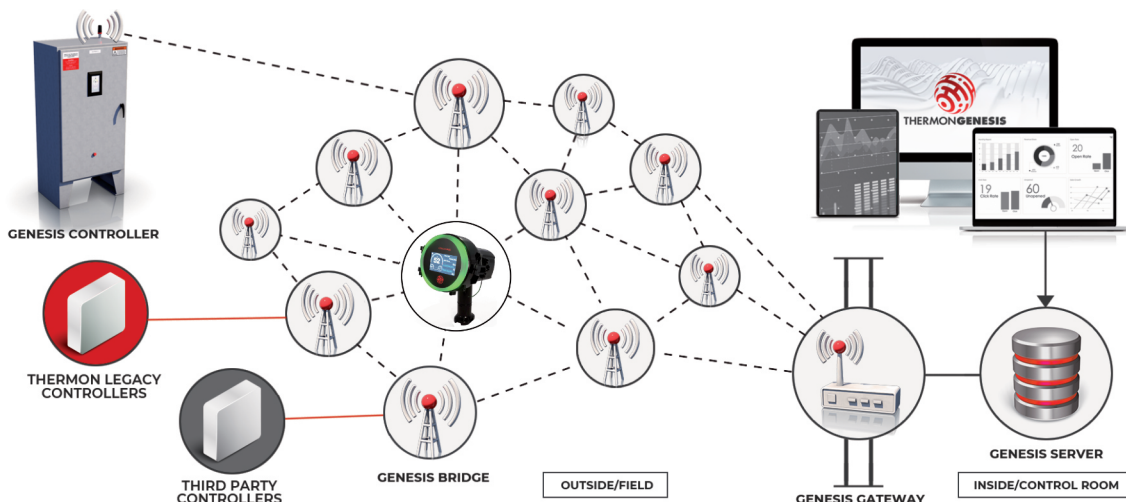
Efficient Configuration and Operation: With the glove touch enabled 4.3" LCD operators can quickly program the Genesis Duo and access all readings. When the Duo is connected to Genesis Network configuration and operation can be done from a centralized location to enable a distributed controls network.

Improved Control Methods: The Duo utilizes multiple control methods, (On/Off, Soft-Start, Proportional) and features the upgraded Ambient Proportional Control (APC and APCM) that employs the energy saving method of Ambient Proportional Control with the higher current capacity of the mechanical relay.



Upgraded Communications: The Duo is Genesis Network native with the built in wireless mesh or wired ethernet. The Duo can also optionally be connected directly to any plant DCS system via Modbus RTU (Modbus TCP will be available in a future update).

High Temperature Limiter: The Duo has the ability to be configured as a single channel with a high temperature limiter. The high temperature limiter functionality is isolated and has dedicated RTD inputs. The Duo when enabled with the limiter function meets the requirements of IEC/EN/UL/ CSA 60079-30-1 for controlled design to limit energy to the heat trace in explosive atmospheres.



### GENESIS NETWORK

The Thermon **Genesis Network** consists of a control room server, a gateway, and a collection of field deployed bridges/nodes that form a wireless mesh communications network. Alternatively, the network can be made via a traditional wired Ethernet network. The **Genesis Network** connects all heat trace panels and controllers to the control room and gives visibility of all assets from a single dashboard and user interface that can be accessed from any browser.

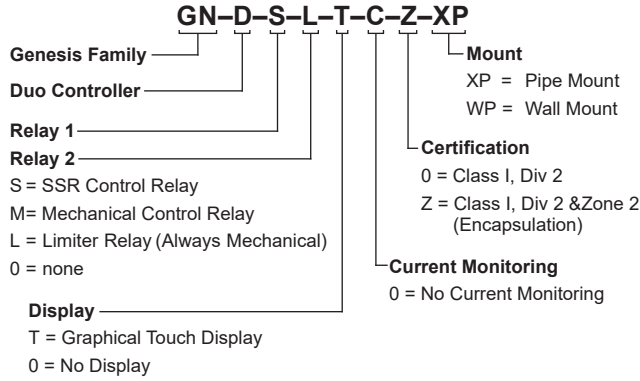


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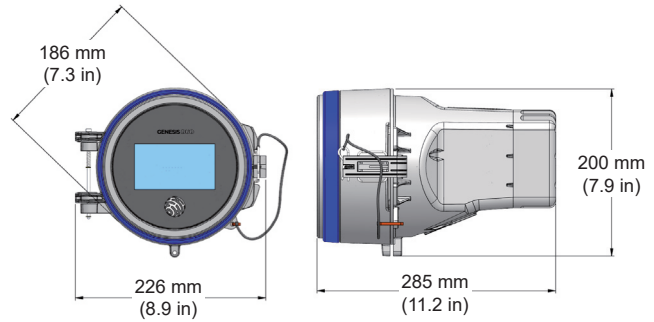
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## DUAL-POINT CONTROL AND MONITORING SOLUTION

### HOW TO SPECIFY




### PRODUCT DIMENSIONS





### RATINGS

Control and monitoring capacity	2 heat tracing circuits
Supply and load voltages	100-277 V~, 50/60 Hz
Maximum input current	1.5 A
Fuse rating	3.15 A
Heater Outputs (each circuit independently powered and switched)	
Input Voltage	100-277 V~, 50/60 Hz
Output Current (See derating)	30 A~
Ground fault measurement	up to 500 mA
Heater current measurement	up to 60 A
Voltage measurement (for power calculation)	up to 277 V
Power clamp function	Programmable from 20%-100%
Temperature input	up to two, 3-wire platinum 100 Ohm RTDs per circuit
Temperature control range	-40°C to 600°C (-40°F to 1112°F)
Control band	Programmable in increments of 1 degree
Dry contact alarm relay	Two 277 V~, 500 mA or higher
Aux Input	Contact closure sensed
Self-test frequency	Programmable from 2 to 99 hours
Communication	
Wired	Modbus (RS-485)
Wireless	Mesh via 802.15.4 Radio WiFi 802.11 bgn
Auxiliary power output	9 W @ 24 Vdc
Pollution Degree	2
Degree of Protection and Type Rating	IP66, Type 4
Operating Temperature Range	-40°C to +60°C (See derating curve)
Storage Temperature Range	-40°C to +85°C

### CERTIFICATIONS/APPROVALS


 -40°C ≤ TAMB ≤ +60°C  
 Class I, Zone 1, AEx ec mc [ib Gb] IIC T4 Gc


 Class I, Division 2, Groups A, B, C, and D T4  
 Ex ec mc [ib Gb] IIC T4 Gc


 II 3 (2) G Ex ec mc [ib Gb] IIC T4 Gc