



MicroNet™ HDCombo Module

Background

The MicroNet 5466-253 and 5466-316 HDCombo modules were first introduced in 1997 for the steam controls market. This module includes a combination of eight Analog Inputs, four Analog Outputs, four Speed Inputs, and two Proportional Actuator Outputs. The -253 version has an ideal combination of I/O for TMR and 5009 systems controlling valves with proportional actuators.

Woodward's newer Speed/Analog combination module (5466-1115) lacks the on-board proportional actuator capability of the older HDCombo modules, requiring the addition of separate Two-Channel Actuator modules. This consumes valuable I/O space in the main TMR chassis.

Since 2016, Woodward has been providing HDCombo modules primarily for spare parts and system upgrades and has directed steam and compressor customers to use the 5466-1115 along with supplementary 2CH Actuator control modules. Woodward's 5009 standard steam turbine control was also changed to utilize the newer combo modules.

Updated Product Status

In early 2020, Woodward found an opportunity to allocate key parts shared with other Woodward controls for use on the HDCombo. Woodward then searched for and procured stock of other components required to keep this older design in production.

The 5466-253 has been made "Preferred" on Woodward's system and is now approved for use on new installations. The 5466-316 remains Non-Preferred, however it can be used for retrofits and spares.

Here is a table showing the HDCombo modules and their current status and dates:

Part Number	Usage	FTM	Current Status	Non-Preferred	Inactive
5466-253	TMR	2 x 5501-365	Preferred	2028	2030
5466-316	Simplex	5501-371	Non-Preferred	2017	2030

Note 1: Non-preferred means not intended for new system installations. Unit remains fully supported for retrofits, spares, and repairs.

Note 2: Inactive means that the module can no longer be produced. Typically, this is because of component obsolescence. Repairs and exchange units are supported as long as feasible (typically 5+ years after inactivation).

Note 3: FTM availability should meet or exceed that of combo modules.

Note 4: The future dates shown above are approximate based on Woodward's current information on component obsolescence and planned component usage rates. The dates cannot be guaranteed due to the potential for unexpected obsolescence issues to occur.

For installation and usage information, please see Woodward manual 26167.

Customer Action

The standard 5009XT Steam Turbine Controls will be changed over to use the 5466-253 HDCombo module in place of the 5466-1115 Combo module starting in late 2020. Custom programmed MicroNet TMR systems can use either configuration. Woodward recommends using 5466-253 on TMR systems if the turbine uses proportional actuators, and using 5466-1115 if the turbine uses integrating actuators or a separate servo controller such as an SPC. The 5466-316 can be used on retrofit systems needing the specific I/O and FTM offered by this module.

For additional information and support:

1. Contact your local Woodward representative and/or turbine OEM.
 2. Woodward contact and business partner information can be obtained at www.woodward.com.
 3. Technical assistance can be obtained by:
 - a. Searching for a local contact at www.woodward.com/directory
 - b. Call or email the Woodward Turbine Help Desk: 1-970-498-3095
TurbineHelpDesk@woodward.com
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