

Service Bulletin 089
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Installing tN4 Reset Modules 420, 422, and 423 with Modulating Boilers

The following tables lists the essential settings required for the tN4 Reset Modules 420, 422 and 423 when installed with some of the most common modulating boilers on the market.

Table 1: Boilers with 0-10 Vdc Modulating Input for Firing Rate

Boiler Model	Fire Delay (min)	Boiler Motor (sec)	Minimum Mod (%)	Maximum Mod (%)	Required Equipment from Boiler Manufacturer	Boiler Control Setting		
						Parameter	Setting	Reference
Buderus GB142, 162, 312	0:30	10	30	100	EM10 Module	None	None	None
Dunkirk Q95M-200	2:15	10	18	100	HAM 0-10VDC Module	Parameter 34 [p. 34]	[-04]	p. 3 HAM Installation Instructions
HTP Elite	0:14	24	16	100	None	Function 16	0-10 Volt	Pg. 57 of I/O Manual
						Function 17	Fan Speed	
Lochinvar Knight	0:23	10	20	100	None	Control Modes	BMS = Active	Pg. 24 & 26 of Service Manual
						BMS	BMS Type = Power	
Lochinvar Sync	0:35	10	20	100	None	Demand Config.	3	Pg. 19 of Service Manual
Peerless PureFire REV2	0:15	50	20	100	Interface Adapter PFA-1	Heating Mode	5	Pg. 43 of I/O Manual
Triangle Tube Prestige Solo	0:10	30	20	100	None	CH Demand Type	0-10V	Pg. 46 of I/O Manual
Triangle Tube Prestige Excellence	0:10	30	20	100	None	CH Demand Type	0-10V	Pg. 43 of I/O Manual
Weil-McLain Ultra Series 3	0:30	60	20	100	None	Additional Heat Demand	Type 4	Pg. 84 of I/O Manual

It is important to note that on the tekmar Reset Module's 420, 422 and 423 the dip switch labeled Boil On-Off/Mod must be set to Mod position when using the control to modulate the fire rate on a modulating boiler.

Boilers that require a 4-20mA signal may be connected to a tN4 Reset Module with the addition of a 3rd party converter module. Please contact Customer Technical Support for more information.

Fig 1: tekmar tN4 Reset Module to Buderus GB142/162/312

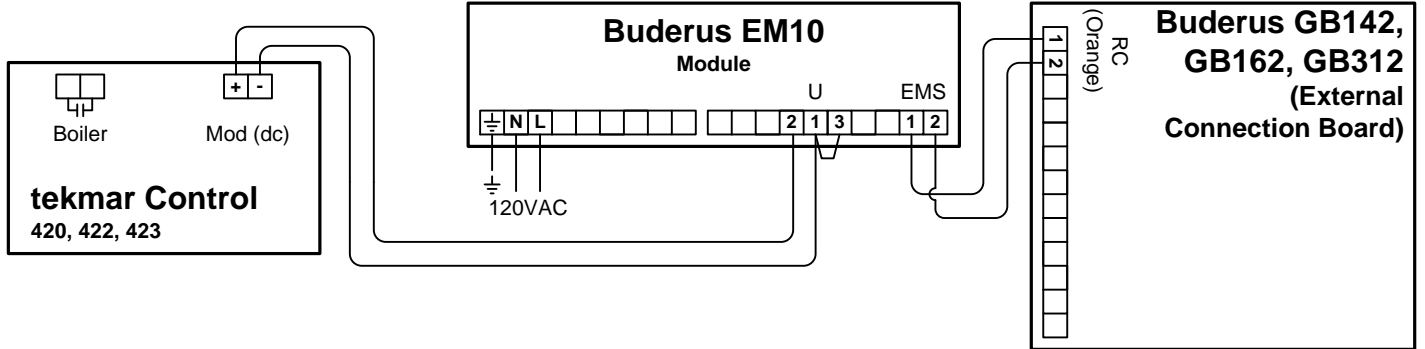


Fig 2: tekmar tN4 Reset Module to Dunkirk Q95M-200

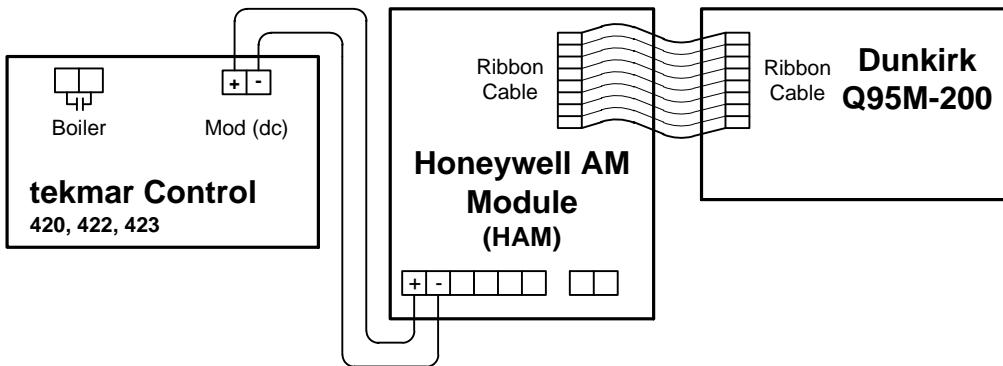


Fig. 3: tekmar tN4 Reset Module to HTP Elite

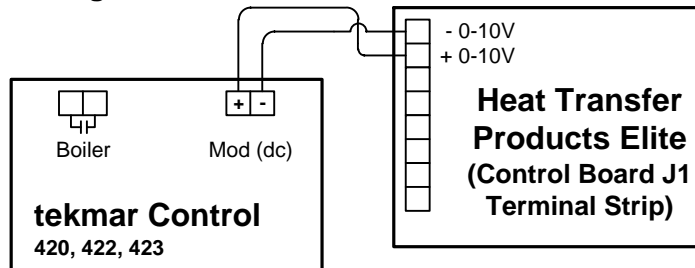


Fig. 4: tekmar tN4 Reset Module to Lochinvar Knight

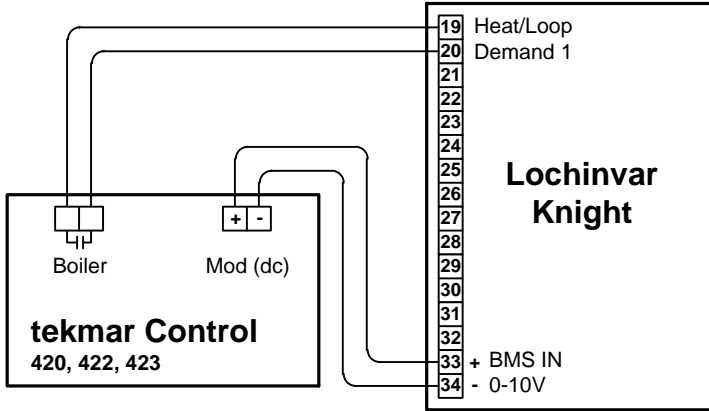


Fig. 5: tekmar tN4 Reset Module to Lochinvar Sync

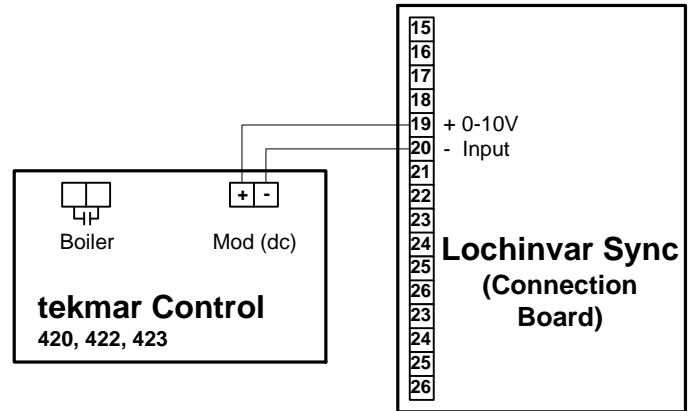


Fig. 6: tekmar tN4 Reset Module to Peerless PureFire

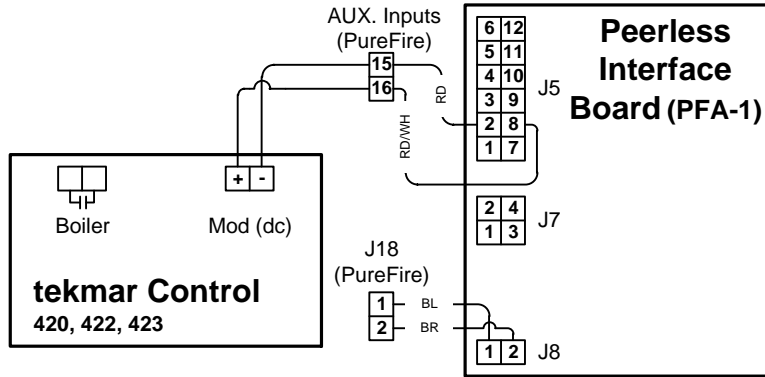
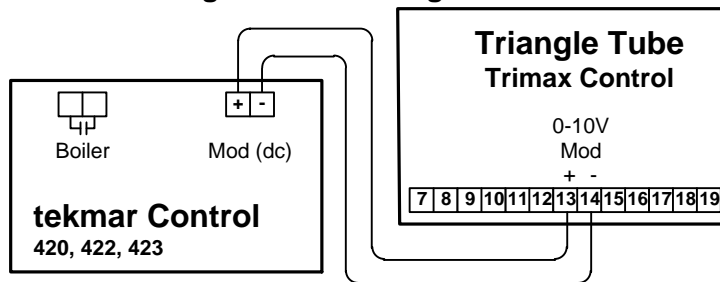
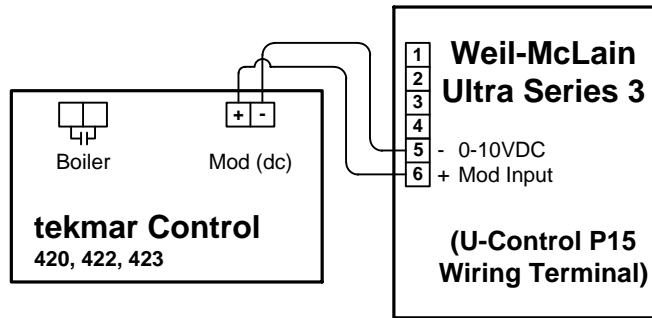


Fig.7: tekmar tN4 Reset Control to Triangle Tube Prestige Solo & Prestige Excellence



**Fig. 8: tekmar tN4 Reset Module to
Weil-McLain Ultra Series 3**



PLEASE NOTE: Due to published changes made without notice by Boiler Manufacturers to their specifications and capabilities, tekmar Control Systems does not assume any responsibility for boiler manufacturers' amendments, modifications, deletions or changes nor does tekmar Control Systems accept any responsibility for the damage or personal injury due to unsafe and improper boiler operation that is guided by this 'Note' and by the manufacturer's installation and operating instructions.