

Electronic Tempering Valve Control with Safeguard

- *Electronic Tempering Valve Control for Domestic Hot Water*
- *Stainless-Steel Motorized Valves*
- *Optional Alarm Condition Safeguard with Solenoid Valve*
- *Optional Communication over the Internet or BACnet*

ETV-Plus



Description

The ETV-Plus can operate in one of the following modes:

- ETV-Plus (Temperature Control and Alarm Condition Safeguard).
- TMC (Alarm Condition Safeguard only).

Designed for temperature critical applications.

The ETV-Plus accurately regulates the water temperature using its modulating stainless-steel motorized valve. Typical uses include:

- Domestic hot water temperature control
- Heating and cooling applications
- Industrial processes

Safeguard against high temperature system conditions.

When the temperature reaches a critical point, the ETV-Plus activates an optional solenoid valve to shut the hot water supply close. In addition, it can trigger two alarm outputs.

Manual reset.

To resume normal operation after an alarm condition, the ETV-Plus must be reset manually by pressing the Manual reset button.

Built-in setback schedule.

By having the capability to lower the target temperature during low usage periods, the ETV-Plus is now greener than ever. It is equipped with a 7-day setback schedule to increase savings during off-peak periods. You can adjust up to 4 setback schedules per day

Stainless-Steel valves.

The ETV-Plus is packaged with a rugged Stainless-Steel valve body and a reliable electronic actuator. These valves are designed to provide lead-free domestic hot water use. These valves have passed some of the most stringent code requirements.

Internet communication capability.

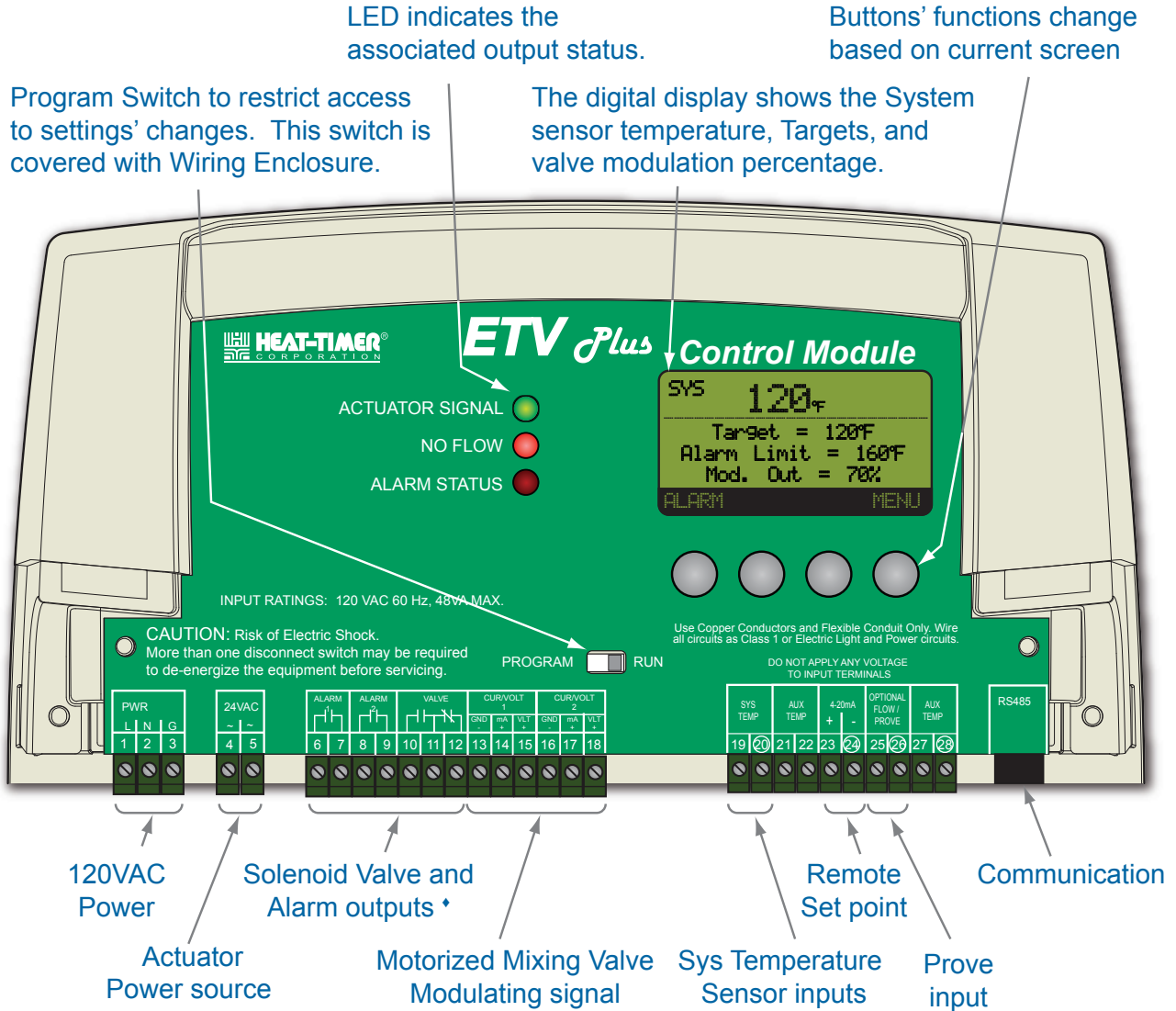
The ETV-Plus connects to an existing Heat-Timer control equipped with the Internet. An optional Internet Communication Module is required. Additionally, you can receive system critical alarms as an e-mail or as a text message.

BACnet communication capability.

The ETV-Plus connects to the BACnet MSTP networks giving you the capability to change settings and monitor sensors. An optional BACnet Communication Module is required.



ETV-Plus Layout

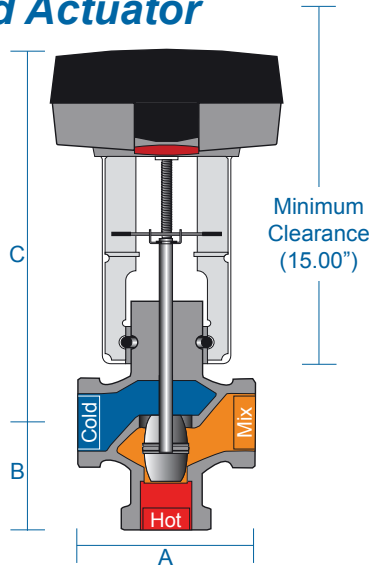


♦ Outputs do not source power. A separate power source must be provided.

ETV-Plus Control Specifications

Voltage Input:	120 VAC 60 Hz
Maximum Input Rating:	.48 VA Max
Fuse:	20 mm 2.5 Amp
Display:	Graphical Display
Display Units:	Temperature (°F and °C)
Modes of Operation:	ETV+TMC, ETV, TMC
Alarm Set Point:	80°F/27°C to 200°F/93°C
ETV Set Point:	60°F/16°C to 180°F/82°C
Offset:	0F°/0C° to 80F°/44C°
Gain:	from -10 to +10
Modulation Output Signal:	0-10V, 2-10V, 0-5V, 1-5V, 4-20mA
LED:	3 (Actuator Signal, No Flow, Alarm Status)
Inputs:	System Temperature, Flow Prove, Remote Set pint (4-20mA)
Buttons:	.4 (buttons' functions vary)
Dimensions:	11"W x 9"H x 3 3/4"
Weight:	2.5 pounds

3-Way Stainless-Steel Mixing Valve and Actuator



Sizing Recommendations:

To maintain accuracy, Heat-Timer recommends a valve size with a design flow rate as close as possible to 5 psi drop.

ETV Valve Sizing Chart

Pressure Drop	Valve Size						
	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
3 psi	8	12	20	32	50	80	126
4 psi	9	15	23	37	58	93	145
5 psi	10	16	26	41	64	103	162
6 psi	12	18	28	45	71	113	178
7 psi	13	20	31	50	78	125	192
8 psi	14	21	33	53	83	132	205
9 psi	15	22	35	56	88	140	218
10 psi	16	23	36	58	91	145	230
11 psi	17	24	38	62	97	154	241
12 psi	18	25	40	64	100	160	252

Gallons Per Minute

Stainless Steel Valve Dimensions

3-Way Mixing Valve Size	Part No.	Motor	A	B	C	Inlet/Outlet pipe Sizes		
						Mix	Hot	Cold
1/2"	915640-00	M800	3"	1 7/8"	12 1/2"	1/2"	1/2"	1/2"
3/4"	915641-00	M800	3 1/4"	2"	12 5/8"	3/4"	3/4"	3/4"
1"	915642-00	M800	3 3/8"	2 1/2"	12 7/8"	1"	1"	1"
1 1/4"	915643-00	M800	4"	2 1/2"	12 7/8"	1 1/4"	1 1/4"	1 1/4"
1 1/2"	915644-00	M800	4 3/4"	2 3/4"	13"	1 1/2"	1 1/2"	1 1/2"
2"	915645-00	TR1000	5 3/8"	3 3/8"	13 1/2"	2"	2"	2"
2 1/2"	915646-00	TR1000	6 1/8"	3 3/4"	13 7/8"	2 1/2"	2 1/2"	2 1/2"

Stainless Steel Mixing Valves conform to:

- California Lead Free Plumbing Law (Health and Safety Code AB-1953)
- CSA B 125.3 (NSF/ANSI 61 Section 8 - 2008)
- ASSE 1017-2009



Each of the part numbers include the Motor and a stainless-steel 3-Way Mixing Valve only

M800 Actuator Specifications

Power Input/Consumption: 19 to 26 VAC 60 Hz / 15 VA Max
 Manual Override Red Manual Tab
 Input Signal: 0-10V
 Dimensions: 6 5/8"W x 10"H x 4 5/8"L
 Weight: 2 pound

TR1000 Actuator Specifications

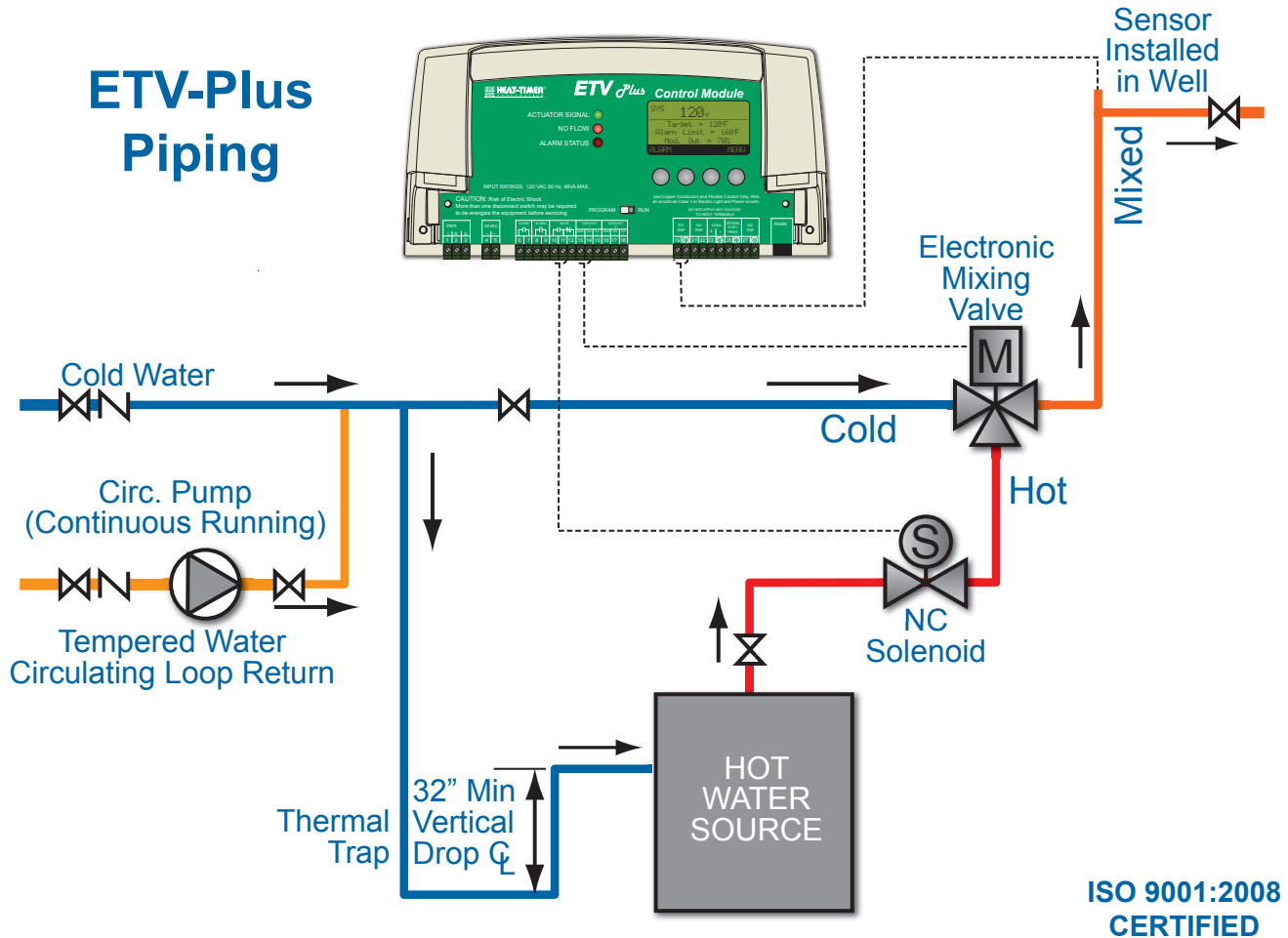
Power Input/Consumption: 19 to 26 VAC 60 Hz / 12 VA Max
 Manual Override Manual Crank Handle
 Input Signal: 0-10V
 Dimensions: 7 1/8"W x 12 3/4"H x 7 1/2"L
 Weight: 11 pound

Stainless-Steel Valve Specifications

Valve Type: 3-way Mixing
 Body and Trim: Stainless Steel
 Maximum Temperature: 300°F/149°C
 Maximum Pressure: 225 psi
 Stem Material: Stainless Steel



ETV-Plus Piping



Ordering Information

Part	ETV Plus Complete Packages
915630-00	with 1/2" Stainless-Steel 3-way Mixing Valve with Actuator
915631-00	with 3/4" Stainless-Steel 3-way Mixing Valve with Actuator
915632-00	with 1" Stainless-Steel 3-way Mixing Valve with Actuator
915633-00	with 1 1/4" Stainless-Steel 3-way Mixing Valve with Actuator
915634-00	with 1 1/2" Stainless-Steel 3-way Mixing Valve with Actuator
915635-00	with 2" Stainless-Steel 3-way Mixing Valve with Actuator
915636-00	with 2 1/2" Stainless-Steel 3-way Mixing Valve with Actuator

Part	Solenoid Valves	C _v
920520-00	1/2" Bronze Solenoid N.C.	4.6
920521-00	3/4" Bronze Solenoid N.C.	9.3
920522-00	1" Bronze Solenoid N.C.	12.3
920523-00	1 1/4" Bronze Solenoid N.C.	21
920524-00	1 1/2" Bronze Solenoid N.C.	28
920525-00	2" Bronze Solenoid N.C.	46.7

See 3-Way Mixing Valve part number on previous page.

Part	Description
915045-00	ETV-Plus Control with Enclosure
915044-00	ETV-Plus Control Module Only (No Enclosure)
905028-00	1/2" - 1 1/2" Replacement Actuator
905029-00	2" - 2 1/2" Replacement Actuator
925011-00	Vis-U-Larm (Audio Visual Alarm)
904220-00	Temperature Sensor 3-in-1