



**ADVANCING
VENTILATION®**

Percentage Timer Control with Furnace Interlock (SFM)

Installation and Operation Manual: TR90/TR130/TR200/TR300/TRe200/TRe300/
TRLPe100/TRLPe100c

OPERATION

The Percentage Timer Control with indicator lights and furnace interlock (SFM) is the primary control for S&P USA Energy Recovery Ventilator (ERV) models TR90, TR130, TR200, TR300, TRe200, TRe300, and TRLPe100/TRLPe100c when Furnace Interlock is needed and no Push Button Lighted (SPBL) controls are used. This proportional runtime control will operate your ERV an adjustable amount of time each hour as well as tell your furnace or air-conditioner to circulate air throughout your home at the same time, if not already doing so. When the "Runtime %" light is on, the SFM control is telling your ERV and furnace/air-conditioning blower to operate. Additionally, the SFM can be set to turn your ERV off or to operate constantly. ERV operation time will vary from application to application as well as time of year, lifestyle, indoor air quality concerns, and other factors. Discuss any questions with your HVAC professional or contact S&P USA directly.

FOR CONSTANT OPERATION: Press the S&P logo until the light next to "100" is lit.

OPERATION EACH HOUR: Run time of your ERV and furnace/air-conditioning blower can be adjusted from 10%, or 6 minutes each hour, up to 100% operation in 10% increments. Simply press the S&P logo until the light next to the desired percentage amount is lit. You can increase or decrease the run time based upon daily, weekly, or monthly variations in occupancy levels, indoor odors, cold weather winter humidity, or other indoor air quality concerns as needed.

NO OPERATION: Press the logo until all lights are off. The control is off. When set to off, your furnace/air-conditioning blower will run based upon your thermostat or other controls.

INSTALLATION

1. Install control in a standard 2" x 4" electrical box, with a minimum depth of 1.5", with the two screws provided.
2. Wire Size: 18–22 gauge, no more than 500 feet. Wiring is non-polar.
3. See the wiring schematics for your specific installation.
4. Use Lutron Decora™ cover plate to complete installation (single cover plate included).



PERCENTAGE RUN TIME TABLES

Runtime % Setting	Minutes of operation (PER HOUR)	EQUIVALENT CONTINUOUS OPERATION CFM						
		TRLPe100/TRLPe100c	TR90	TR130	TR200	TR300	TRe200	TRe300
10	6	7	9	13	18	30	21	24
20	12	14	18	26	36	59	42	48
30	18	21	27	39	54	89	63	72
40	24	28	36	52	72	119	84	96
50	30	35	45	65	91	149	105	120
60	36	42	54	78	109	178	126	144
70	42	49	63	91	127	208	147	168
80	48	56	72	104	145	238	168	192
90	54	63	81	117	163	267	189	216
100	60	70	90	130	181	297	210	240

"ASHRAE 62.2 2013/16 RESIDENTIAL VENTILATION AIR REQUIRE- MENTS CONTINUOUS CFM"					
FLOOR AREA (FT2)	BEDROOMS				
	1	2	3	4	5
<500	30	38	45	53	60
501-1000	45	53	60	68	75
1001-1500	60	68	75	83	90
1501-2000	75	83	90	98	105
2001-2500	90	98	105	113	120
2501-3000	105	113	120	128	135
3001-3500	120	128	135	143	150
3501-4000	135	143	150	158	165
4001-4500	150	158	165	173	180
4501-5000	165	173	180	188	195

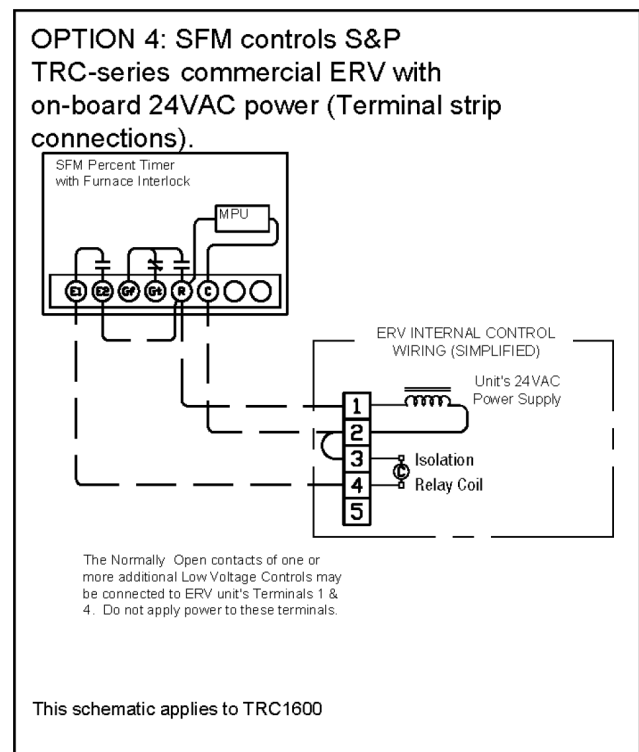
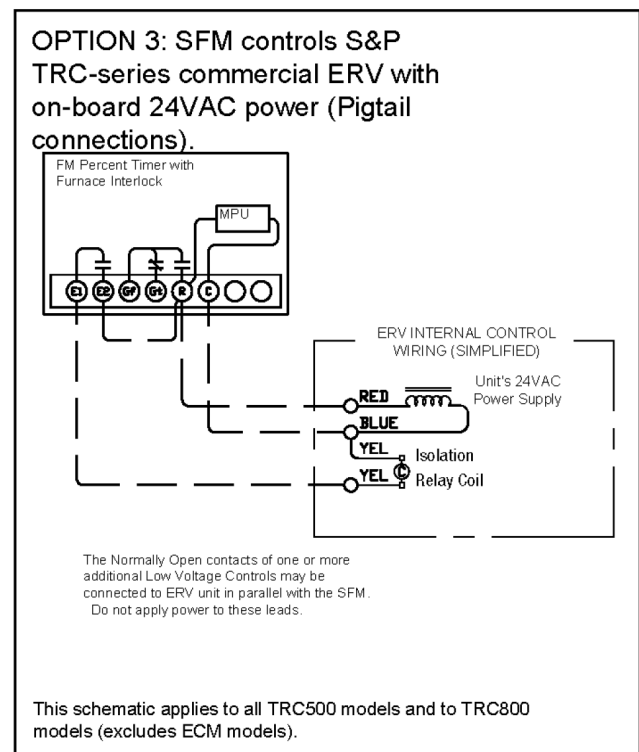
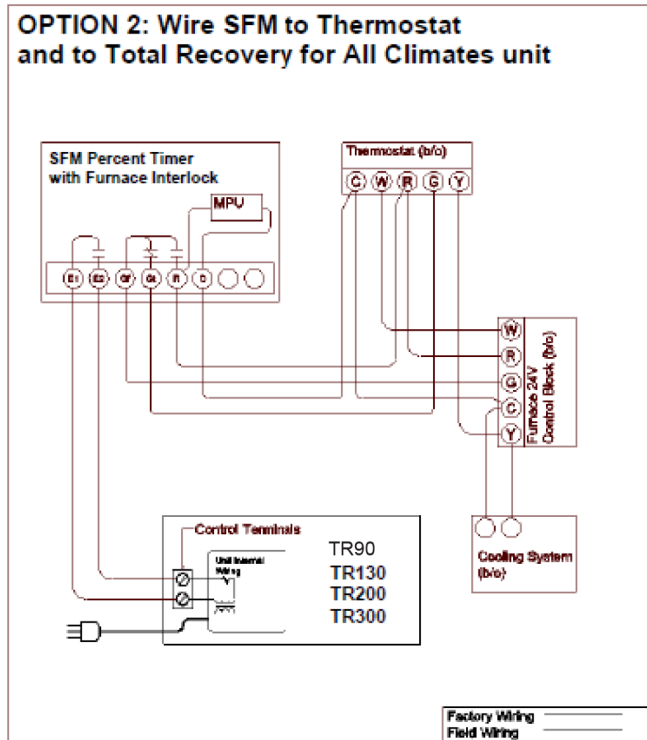
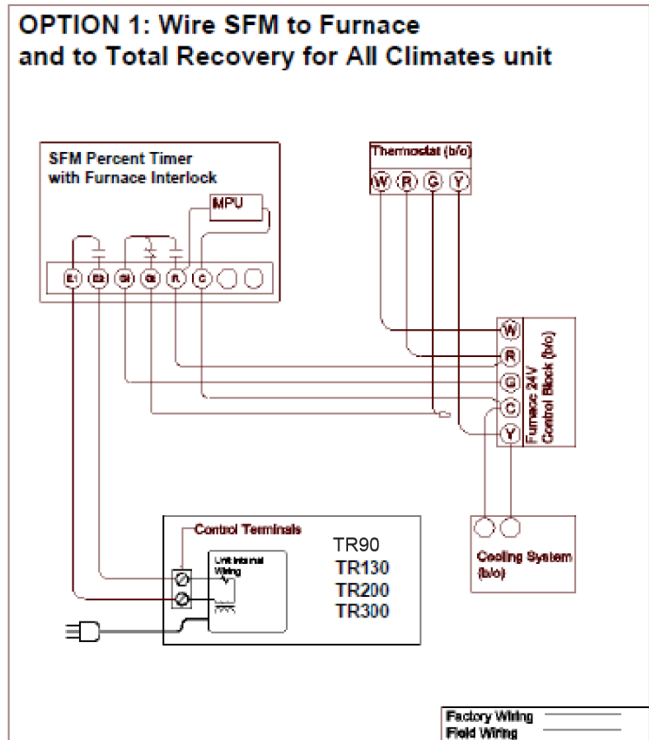
All specifications are subject to change without notice unless approved in submittal by S&P USA.

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WIRING OPTIONS 1 AND 2: In most Furnace/Thermostat systems, if a circuit is made between R and G on the furnace, in an attempt to make the furnace blower operate, the Y contacts are also energized, because the thermostat has an internal connection between its G and Y terminals. This will cause the air conditioning unit to operate as well. The Furnace Interlock in the SFM takes the thermostat's G terminal out of the circuit whenever there is a call for the Energy Recovery Ventilator to operate.

WIRING OPTIONS 3 AND 4: The SFM requires 24 VAC power to operate. This is usually provided by the furnace control. If there is no Furnace connection, it is possible to power the SFM with an external transformer; in this case, make no connections to any appliance other than the TR90, TR130, TR200, TR300. Use Option 3 or 4 when connecting a larger commercial Energy Recovery Ventilator unit.



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