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Advanced Snow Melt Control

The Viega Advanced Snow Melt Control provides full automatic snow and ice-detection in open air spaces such as driveways, parking areas, ramps, stairs, and flat roofs. The control operates a variable speed injection pump or a floating action actuator to provide both boiler and slab protection. Viega's Advanced Snow Melt control is equipped with one Snow/Ice Sensor which measures the slab temperature, sensor surface temperature and sensor surface moisture level. The control has a Liquid Crystal Display (LCD) to view system status and operating information.

Functions include:

- Slab protection for the snow melting system
- Remote display and adjustment capabilities
- Boiler protection
- Test sequence to ensure proper component operation
- Manual override
- Pump excercising
- Warm Weather Shut Down (WWSD)
- Viscosity compensation
- Cold Weather Cut Out (CWCO)
- CSA C US Certified (approved to applicable UL standards)

Technical Information

Control
Microprocessor PID control; this is not a safety (limit) control

Packaged Weight
3.1 lb. (1400 g), Enclosure A, black PVC plastic

Dimensions
6⅝" H x 7⁹⁄₁₆" W x 2¹³⁄₁₆" D (170 x 193 x 72 mm)

Approvals
CSA C US, meets ICES & FCC regulations for EMI/RFI

Ambient Conditions
Indoor use only, 32 to 104°F (0 to 40°C), <90% RH non-condensing

Power Supply
115 V ± 10% 50/60 Hz 600 VA

Relays
230 V(AC) 5 A 8 ⅓ hp, pilot duty 240 VA

Variable Pump
230 V(AC) 2.4 A ⅛ hp, fuse T2.5 A 250 VA

Demand
20 to 260 V(AC) 2 VA

Sensors
NTC thermistor, 10k Ω 77°F (25°C ± 0.2°C) ß=3892
Outdoor Sensor (Viega #16017)
Universal Sensor (Viega #16018)
Advanced Snow Melt Control Sensor (Viega #17016) and Housing (Viega #17017)

Viega LLC, 100 N. Broadway, 6th Floor • Wichita, KS 67202 • Ph: 800-976-9819 • Fax: 316-425-7618

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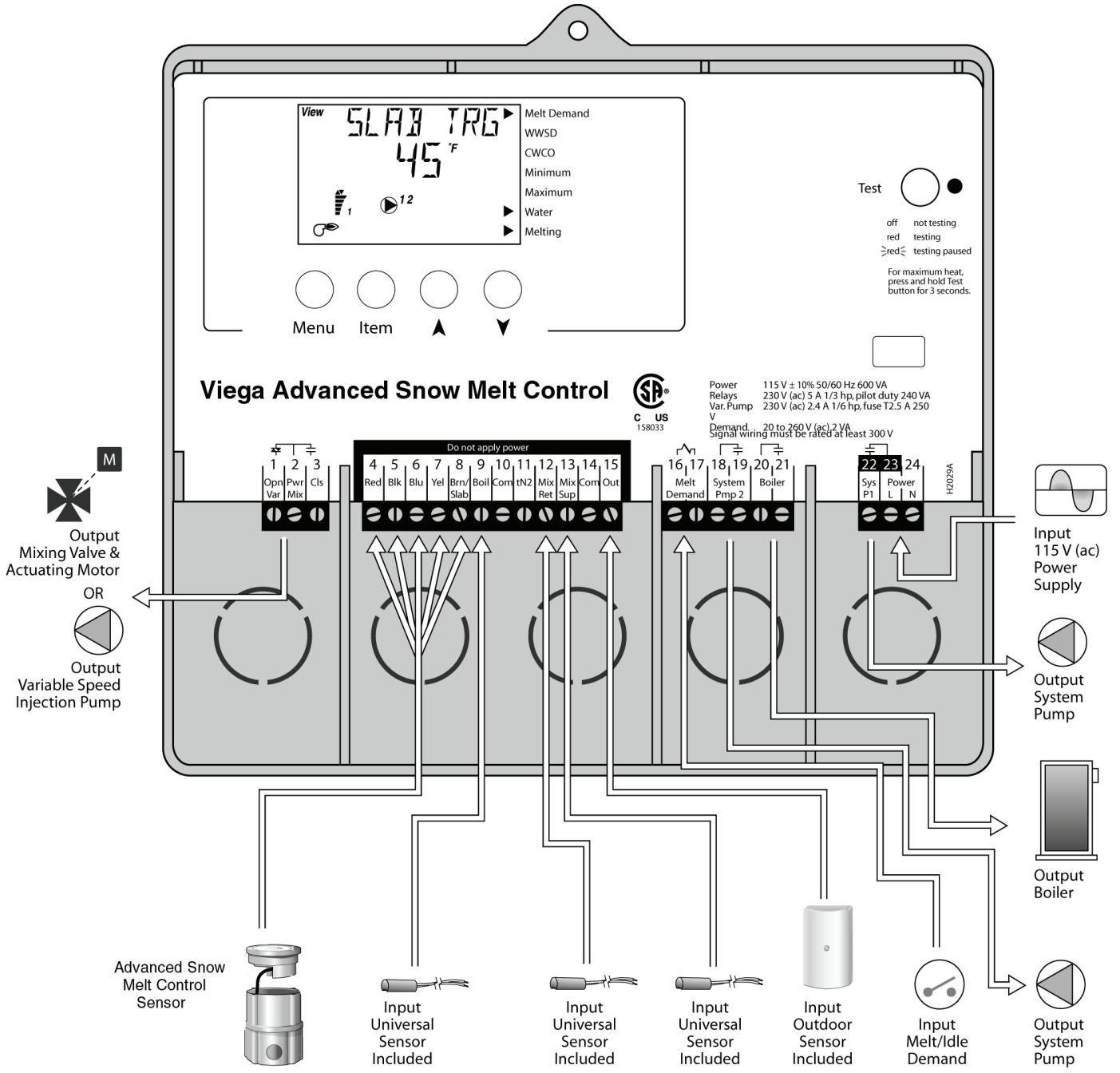

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Advanced Snow Melt Control Sensor

Electrical Connections

The Snow Melt Sensor cable has 5 wires: Red, Black, Blue, Yellow, and Brown. The wires connect to the respective Red, Black, Blue, Yellow and Brown terminals on the Advanced Snow Melt Control.

Test the Sensor

When performing these tests:

- The sensor head should be installed in the slab.
- The five cable wires at the control should be disconnected (unplug terminal plug).
- Use a good quality electrical testing meter with an ohm scale range of 0 to 2,000,000 Ohms. The sensor has two 10k Ohm thermistors. One reads slab surface temperature, and the other checks sensor heater temperature. If the sensor has been disconnected from the control for an hour or more, the readings for both thermistors should be very close.
- Using the ohmmeter and standard testing practices, measure the resistance between: (a) the yellow and black sensor wires (sensor temperature), and (b) the brown and black sensor wires (slab temperature). The table lists the expected resistance values at various sensor temperatures.
- Measure the resistance between the blue and black wires. When the sensor surface is dry, the reading should be 2,000,000 Ohms. When the sensor surface is wet it should be between 10,000 and 300,000 Ohms.
- Measure the resistance between the red and black wires of the heating element. This reading should be close to 50 Ohms.

Temperature		Resistance	Temperature		Resistance	Temperature		Resistance
°F	°C	Ω	°F	°C	Ω	°F	°C	Ω
-49	-45	472,000	5	-15	72,900	59	15	15,700
-40	-40	337,000	14	-10	55,300	68	20	12,500
-31	-35	243,000	23	-5	42,300	77	25	10,000
-22	-30	177,000	32	0	32,600	86	30	8,060
-13	-25	130,000	41	5	25,400	95	35	6,530
-4	-20	97,000	50	10	19,900	104	40	5,330

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