

tekmar[®] Submittal

Difference Setpoint Control 157



Alt. Energy

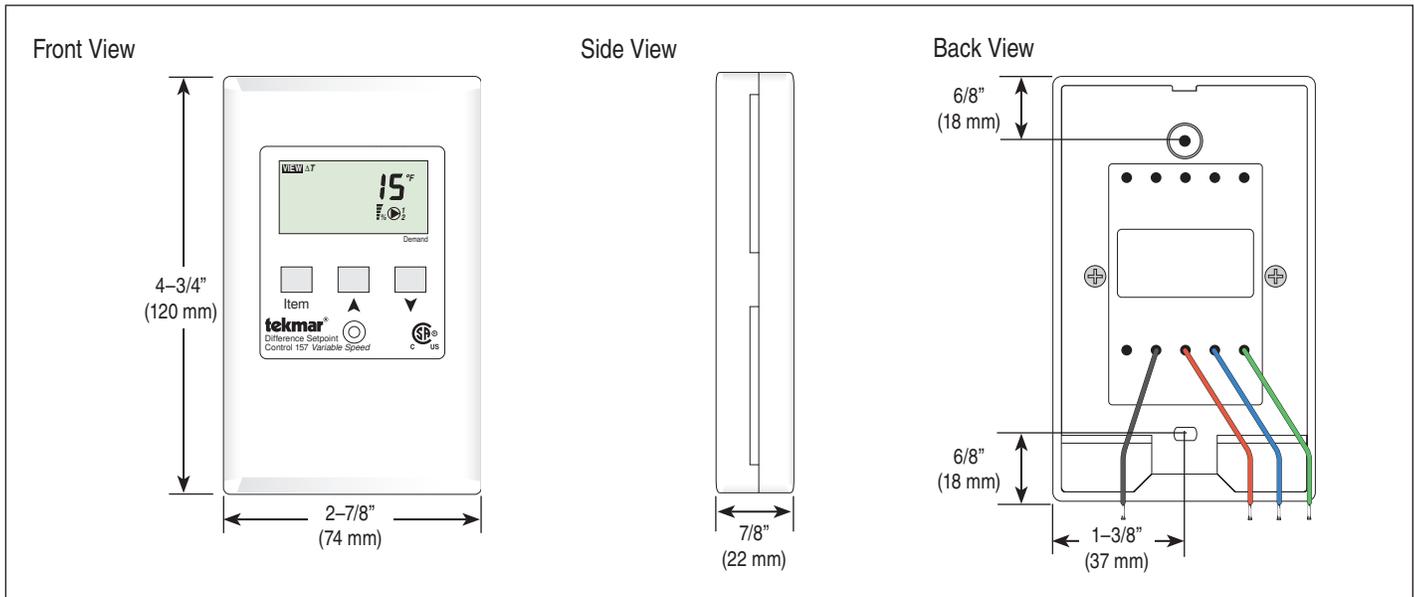
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Replaces: New

Job _____ Designer _____ Contact _____

The Difference Setpoint Control 157 is designed to use a variable speed pump to transfer heat from an intermittent heat source to a storage tank. It can be used in many different solar applications, including closed systems, drainback, or heat dump installations. Two sensors are used to measure the temperature at the source and at the storage location, and begin heat transfer when there is a positive difference between them. This product uses variable speed technology to operate a permanent capacitor wet rotor circulator to vary the rate at which heat transfer occurs.



Specifications

Difference Setpoint Control 157 Variable Speed	
Literature	D157, A157, D001, D070, D085
Control	Microprocessor control. This is not a safety (limit) control
Packaged weight	1.5 lb. (670 g)
Dimensions	4-3/4" H x 2-7/8" W x 7/8" D (120 x 74 x 22 mm)
Enclosure	White PVC plastic, NEMA type 1
Approvals	CSA C US, meets class B: ICES & FCC Part 15
Ambient conditions	Indoor use only, 32 to 104°F (0 to 40°C), RH ≤90% Non-condensing
Power supply	24 V (ac) ±10%, 50/60 Hz, 3 VA
Var. pump	120 V (ac) 2.4 A (FLA), 5 A (LRA), 1/6 hp
Pump 2	120 V (ac) 5 A, 1/6 hp
Demand	24 V (ac) 2 VA
Sensors	NTC thermistor, 10 kΩ @ 77°F (25°C ±0.2°C) β=3892
-Included	1 x Solar Sensor 085, 1 x Universal Sensor 071
Warranty	Limited 3 Year (See D157 for full warranty)

Features

- Drainback capability
- Heat dump operation
- Heat supplement mode
- External heat exchanger mode
- 120 V (ac) powered pump outputs
- Second On/Off pump with 4 modes of operation
- Optional auxiliary sensor input to be used in heat dump and heat supplement modes
- Freeze Protection
- Displays and logs total amount of energy transfer in BTU or kWh
- Certified to CSA and UL standards for use in the USA and Canada
- Solar Sensor 085 immersion type sensor included

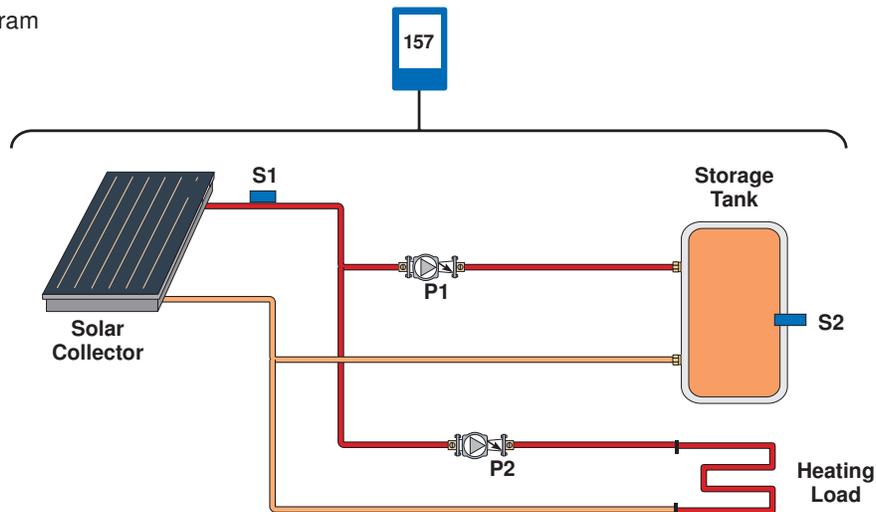
SPECIAL REQUIREMENTS

This control is designed to mount on a 2" x 4" electrical box. This control is designed to operate permanent capacitor, impedance protected (standard wet rotor type) or equivalent pump.

Sample Application Drawing

Below is a sample application drawing for this product. This application may include other tekmar products that are required for installation. More sample applications can be found at www.tekmarcontrols.com.

Sample Mechanical diagram



Sample Electrical diagram

Legend:

- S1 = Source Sensor
- S2 = Storage Tank Sensor
- P1 = Storage Tank Pump (variable speed)
- P2 = Heat Dump Pump

