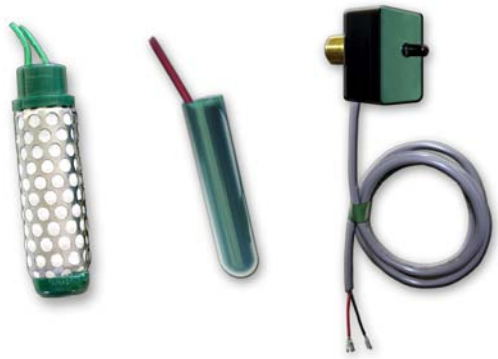
IRROMETER®

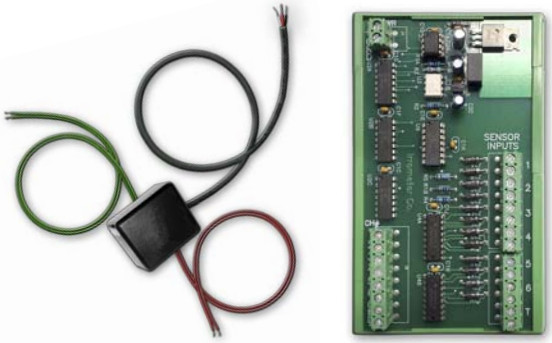
When extending wire/cable from WATERMARK Sensors (200SS), Temperature Sensors (200TS), Voltage Adapters (200SS-VA), Voltage Isolators (200SS-V-6) or Remote Sensing Units (RSU-C or RSU-V), use the following recommendations:



WATERMARK Sensors – Model 200SS, Temperature Sensors (200TS) and Models RSU-C

Multi-conductor wire can be used. Twisted wire pairs are not necessary for WATERMARK Sensors and Temperature Sensors, however; twisted wire pairs ARE recommended for the Current version Remote Sensing Unit, RSU-C. All splices should be made with direct burial type waterproof splices, Spears DBY® or similar. Be sure to record each pair of sensor wires indicating what type of sensor is attached and the placement depth per station.

DISTANCE	WIRE SIZE
Up to 1000 ft. (305 m)	AWG UF 18 (1.02 mm, 0.82 sq mm)
Up to 2000 ft. (610 m)	AWG UF 16 (1.29 mm, 1.31 sq mm)
Up to 3000 ft. (914 m)	AWG UF 14 (1.63 mm, 2.08 sq mm)



Voltage Adapters – Model 200SS-VA / Model 200SS-V-6

All splices from sensor to adapter as described above. Wire extensions from adapter to reading device and Model 200SS-V-6 should be made with UF wiring and direct burial type waterproof splices, Spears DBY® or similar if outside of an enclosure. Multi-conductor wire can be used and twisted pairs are recommended. Following these guidelines should ensure that the voltage loss created by the wire length will not exceed 1 Centibar (kPa) of the calibrated value. The table below is based on the loss to the analog signal returned from the sensor. Extending the cable also creates loss on the voltage supplied to the sensor. In order to use the table as a guideline we recommend the minimum supplied voltage be at least 3.3V for the 200SS-VA and 12V for 200SS-V-6.

DISTANCE	WIRE SIZE
Up to 150 ft. (46 m)	AWG 26 (0.40 mm, 0.13 sq mm)
Up to 200 ft. (61 m)	AWG 24 (0.51 mm, 0.20 sq mm)
Up to 300 ft. (91 m)	AWG 22 (0.65 mm, 0.33 sq mm)
Up to 500 ft. (152 m)	AWG 20 (0.81 mm, 0.52 sq mm)
Up to 1000 ft. (305 m)	AWG UF 18 (1.02 mm, 0.82 sq mm)
Up to 1500 ft. (457 m)	AWG UF 16 (1.29 mm, 1.31 sq mm)
Up to 2000 ft. (610 m)	AWG UF 14 (1.63 mm, 2.08 sq mm)

Remote Sensing Units – RSU-V

Multi-conductor wire can be used and twisted pairs are recommended. All splices should be made with direct burial type waterproof splices, Spears DBY® or similar. The following table presents recommended maximum limits for cable extensions to RSU-V transducers. Following these guidelines should ensure that the voltage loss created by the wire length will not exceed 1 Centibar (kPa) of the calibrated value.

DISTANCE	WIRE SIZE
Up to 200 ft. (61 m)	AWG UF 18 (1.02 mm, 0.82 sq mm)
Up to 300 ft. (91 m)	AWG UF 16 (1.29 mm, 1.31 sq mm)
Up to 400 ft. (121 m)	AWG UF 14 (1.63 mm, 2.08 sq mm)

WATERMARK

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