

Appendix A.2

Maximum Wiring Lengths by Wire Type

Volt Ampere (VA) at 24VAC

Wire Size	Device VA	Maximum Length (feet)
16 AWG	100	100
	75	150
	50	250
	25	500
18 AWG	50	150
	25	300
	15	500
	5	1000

Relay Modules

Part Number	Description	Wire Type (feet)		
		16AWG	18AWG	Cat5
A9012010	Boiler Relay, On/Off	---	---	200
A9012020	Boiler Relay, Modulating 0-10VDC	---	---	100
A9013030	Pump Relay, On/Off	---	---	200
A9013040	Variable Speed Pump Relay, Modulating 0-10VDC	---	---	100
A9013051	Snow Melt Control	---	---	100
A9013021	¾" Three-way Modulating Valve with Control	---	---	100
A9013022	1" Three-way Modulating Valve with Control	---	---	100
A9013023	1¼" Three-way Modulating Valve with Control	---	---	100
A9013024	1½" Three-way Modulating Valve with Control	---	---	100
A9063020	Modulating Valve Control, 0-10VDC	---	---	100
A9070000	Touch Panel Interface	---	150 (power)	250 (comm)
A9010510	Surface-mount Thermostat, vertical display	---	50	---
A9010520	Flush-mount Thermostat, vertical display	---	50	---
A9010530	Flush-mount Thermostat, horizontal display	---	50	---
A9010540	Wall Sensor, no display	---	50	---

Sensors

Part Number	Description	Wire Type (feet)		
		16AWG	18AWG	Cat5
A9010599	Slab Sensor, 10K	---	100	---
A9012002	Domestic Hot Water Sensor, 10K	---	150 ¹	100
A9012003	Domestic Hot Water Recirculation Sensor, 10K	---	---	200
A9012004	System Pressure Sensor	---	---	150
A9012005	Outdoor Sensor	---	---	100
A9013001	Supply and Return Sensor, 10K	---	---	100
A9013052	Automatic Snow and Ice Sensor	500 ²	250 ²	---
A9013053	Snow-melt Slab Sensor, 10K	500 ²	250 ²	---
N/A	Remote Push Button for Snow Melt	---	500	---

Notes: ¹Maximum distance if the wire is spliced.

²Distance must include Cat5 wire from Snow Melt Control to Snow Melt Control.

Field Modules

Part Number	Description	Wire Type (feet) ¹	
		18AWG ²	Cat5
A9011100	Furnace and Air Conditioning (FAC) Control	3,000	1,500
A9011200	Heat Recovery Ventilator (HRV) Control		
A9011400	Zone Valve and Damper (ZVD) Control		
A9011600	Generic Input and Output (GIO) Control		
A9011500	Digital Zone Control Module (DZCM)	3,000	1,500

Notes: ¹Total length must include all wire segments for field modules.

²Use Network Wire Converters for 18/2 communication wiring.