

Integrated Control System™ (ICS) Wire Path Design

Recommended to load balance wire path.

Do not utilize the full system capacity of 750 ICMs on one wire path. Instead, leave room to expand the system and add sensing capability in the future.

The wire distance is the “trunk length” of the wire path.

The trunk length is the “longest single run of wire” needed for accommodating the installed ICMs.

Branches can be added to the trunk wire.

Branches do not increase the maximum number of ICMs on the wire path.

Wire Distance in Feet (ft)

No. of Units	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000	11,000	12,000	13,000	14,000	15,000
50	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG
100	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG
150	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG
200	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG
250	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG
300	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG
350	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG
400	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG
450	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG
500	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	10 AWG
550	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	10 AWG	10 AWG	10 AWG
600	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	10 AWG	10 AWG	10 AWG	10 AWG
650	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	10 AWG	10 AWG	10 AWG	—	—
700	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	10 AWG	10 AWG	10 AWG	—	—	—
750	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	10 AWG	10 AWG	10 AWG	10 AWG	—	—	—

Wire Distance in Meters (m)

No. of Units	1,000	1,250	1,500	1,750	2,000	2,250	2,500	2,750	3,000	3,250	3,500	3,750	4,000	4,250	4,500
50	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²
100	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²
150	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²
200	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²
250	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²
300	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	4.0 mm ²	4.0 mm ²
350	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²
400	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²
450	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²
500	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²
550	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	6.0 mm ²
600	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	6.0 mm ²	6.0 mm ²
650	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	6.0 mm ²	6.0 mm ²	6.0 mm ²	6.0 mm ²
700	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	6.0 mm ²	6.0 mm ²	6.0 mm ²	6.0 mm ²	—
750	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	4.0 mm ²	6.0 mm ²	6.0 mm ²	6.0 mm ²	6.0 mm ²	—	—