

Appendix E - Protocol Stations Wire Gauge Chart

Recommended maximum number of PS Series stations (or other nodes such as DCI-16's, DCO-4's, PT Series Patch Panels and RAU-96's) per home run when using a 10 VOLT AC transformer. Computations are based on an even distribution of nodes along the 10 VAC power line.

Maximum Number Of Stations (Nodes) Versus Cable Length and Gauge

Cable Length	50'	100'	150'	200'	250'	300'	400'	500'	600'	800'
22 Gauge	23	11	8	6	5	4	3	2	2	1
20 Gauge	36	18	12	9	7	6	5	4	3	2
18 Gauge	58	29	19	14	12	10	7	6	5	4
16 Gauge	92	46	31	23	18	15	11	9	8	6
14 Gauge	145	73	48	36	29	24	18	15	12	9
12 Gauge	231	116	77	58	46	39	29	23	19	14

NOTE:

MAXIMUM LENGTH OF DATA TWISTED PAIR MUST NOT EXCEED 1500' PER HOME RUN. Two 18 Gauge or thicker twisted pairs are recommended for the PROTOCOL System, one pair data, one pair power. A shielded cable may be used to provide a ground for all stations. Carol Cable #C3362 or Equivalent 4-Wire (2 Twisted Pairs) Shielded Network Bus Cable may be used