

L90 Inter-Relay Communication Specifications

Link Power Budget

Emitter Type ^b	Power Budget
820nm LED, Multimode5	10dB
1300nm LED, Multimode5	9dB
1300nm ELED, Singlemode5	9dB
1300nm LASER, Singlemode5	29dB

*Note: These Power Budgets are calculated from the manufacturers worst-case transmitter power and worst case receiver sensitivity.

Maximum Optical Input Power

Emitter Type ^b	Max. Optical Input Power
820nm LED, Multimode5	-7.6dBm
1300nm LED, Multimode5	-11dBm
1300nm ELED, Singlemode5	-14dBm
1300nm LASER, Singlemode5	-14dBm

Typical Link Distance

Emitter Type ^b	Fiber Type ^b	Connector Type	Typical Distance (km)
820nm LED5	Multimode	ST	1.65 km
1300nm LED5	Multimode	ST	3.8 km
1300nm ELED5	Singlemode	ST	11.4 km
1300nm LASER5	Singlemode	ST	64 km

1. System gain is based on power coupled into fiber using worst case transmit power and worst case receive sensitivity.

2. Typical distances listed are based on the following assumptions for system loss. As actual losses will vary from one installation to another, the distance covered by your system may vary.

Connector Losses (total of both ends):

ST Connector^b 2 dB

Fiber Losses:

850-nm Multimode ^b	3dB/km
1300-nm Multimode ^b	1dB/km
1300-nm Singlemode ^b	0.35dB/km

Splice Losses: One splice every 2 km, at .05 dB loss per splice.

System Margin: 3 dB additional loss added to calculations to compensate for all other losses.

*CPU with 10BaseF option (C00 and D00) is equipped with 820nm LED emitter type.

Shielded Twisted Pair Interface Options

Interface Type ^b	Typical Distance (Meters)
RS485	1200 m
RS4225	1200 m
G.7035	100 m

*RS422 distance is based on transmitter power and does not take into consideration the clock source provided by the user.