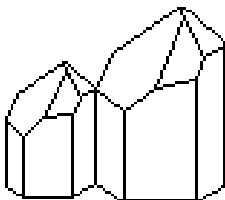


Typical Maximum Cable Drive Distances for Digiquartz® Transducers and Intelligent Transmitters



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Typical Maximum Cable Drive Distances for Digiquartz® Transducers and Intelligent Transmitters

RS-232 / RS-485 Drive Distances

The following tables list the typical maximum drive distances for Digiquartz® Intelligent Transmitters with RS-232 and RS-485 ports. The data are based on cable characteristics as noted. We cannot guarantee that these distances can be successfully driven in an actual application. Actual maximum drive distances are a function of many factors, which include:

- Distributed cable capacitance
- Output impedance of host transmitter
- Wire gage
- Shielded versus unshielded cabling
- Common mode voltage
- Cable termination
- Electrical noise conducted or radiated from environment

Typical Maximum RS-232 Drive Distance

Baud Rate	150 - 4800	9600	19200	38400	57600	115200
Distance feet (meters)	1500 (457)	1000 (305)	300 (91)	150 (46)	75 (23)	30 (9)

Based on 20 AWG, 0.01 Ohm/foot (0.034 Ohm/m), 23 pF/ft (75pF/m) distributed cable capacitance.

Typical Maximum RS-485 Drive Distance

Baud Rate	150 - 9600	19200	38400	57600	115200
Distance feet (meters)	4000 (1220)	3200 (975)	3000 (914)	2300 (701)	1600 (488)

Based on 24 AWG twisted shielded pair, 0.026 Ohm/ft (0.085 Ohm/m), 13 pF/ft (41pF/m) conductor to conductor, 22 Pf/ft (72pF/m) conductor to shield.

Transducer Signal Drive Distances

The following table lists the typical maximum drive distances for the pressure and temperature signals from Digiquartz® Transducers with buffered outputs. The data are based on cable characteristics as noted. We cannot guarantee that these distances can be successfully driven in an actual application. Actual maximum drive distances are a function of many factors, which include:

- Distributed cable capacitance
- Impedance of host input
- Wire gage
- Shielded versus unshielded cabling
- Twisted versus untwisted wire and number of twists per inch
- Electrical noise conducted or radiated from environment

Typical Maximum Transducer Signal Drive Distance

Signal	Distance feet (meters)
Pressure (30-42 kHz)	900 (274)
Temperature (165-172 kHz)	90 (27)

Based on 30 pF/ft (100 pF/m) twisted pair shielded cable, driving a Paroscientific intelligent board or Model 735 display.