APPLICATION GUIDE

AG010 - RS485 WIRING AND TERMINATING

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SUMMARY

This document describes the wiring and terminating for RS485 interfaces of protection devices.

Title	Name	Signature	Date
RS485 Wiring and Terminating	A.W. Hassall BSc MIET		09/02/12

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1. GUIDANCE LINKS

1.1. POINT-TO-POINT LINK / FULL-DUPLEX OPERATION / 4-WIRE CONNECTION

For point-to-point links a separate twisted pair of wires is required for each transmission direction between two communication partners (e.g. direct link between two Line Differential Protection devices).
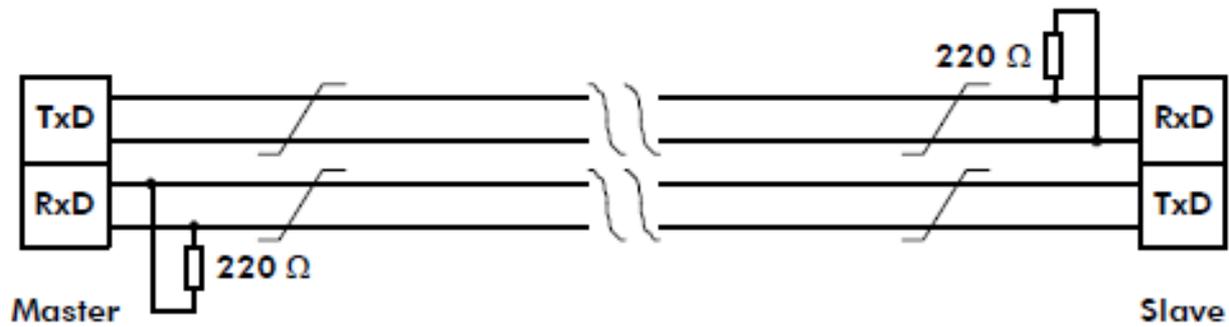
2.   COMMUNICATION LINKS

2.1.   MULTI-POINT LINK / FULL-DUPLEX OPERATION / 4-WIRE CONNECTION

Full-duplex operation is normally not applied on RS485 interfaces of protection devices.
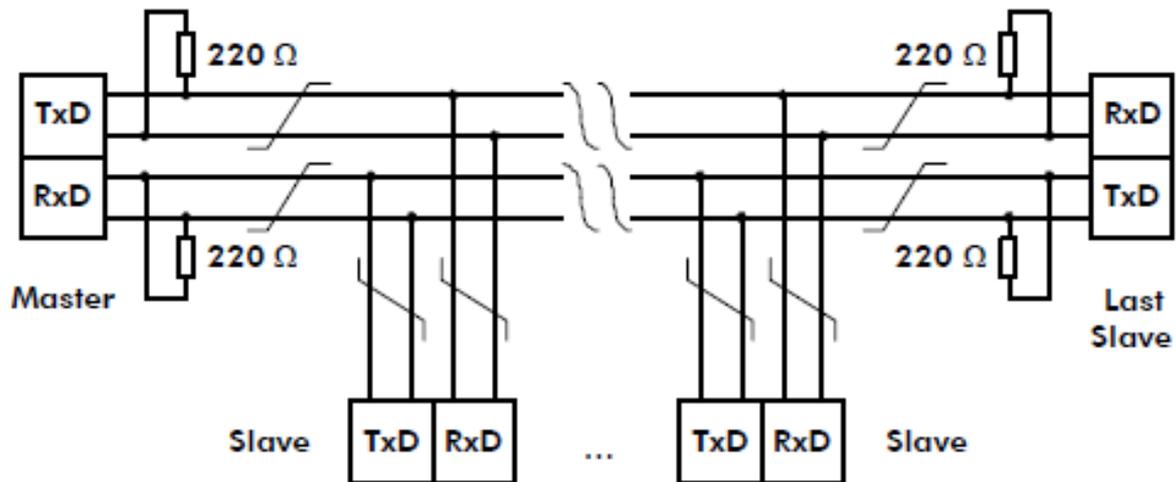

2.2.   MULTI-POINT LINK / HALF-DUPLEX OPERATION / 4-WIRE CONNECTION

Multi-point links are generally formed by electrical cables containing two twisted pairs. Both line pairs carry the same information and thus form a 2-wire connection. This simplifies connection to different interface designs and the placement of terminating resistors.
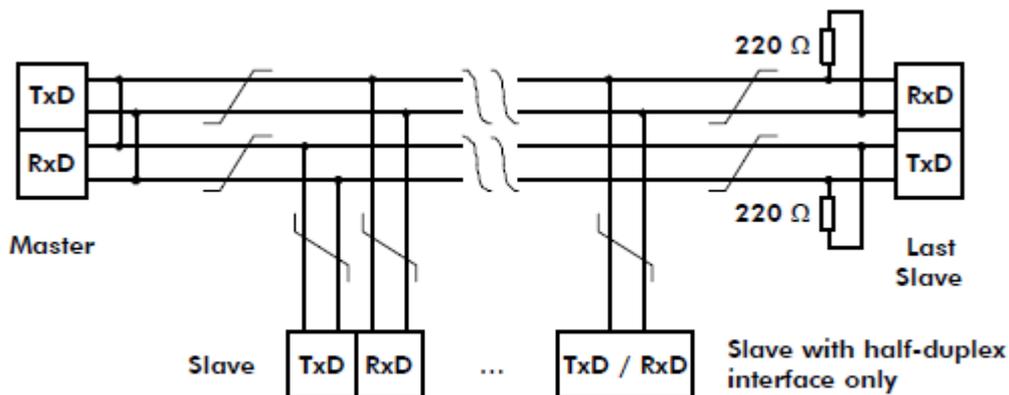
2.3.   MULTI-POINT LINK / HALF-DUPLEX OPERATION / 2-WIRE CONNECTION
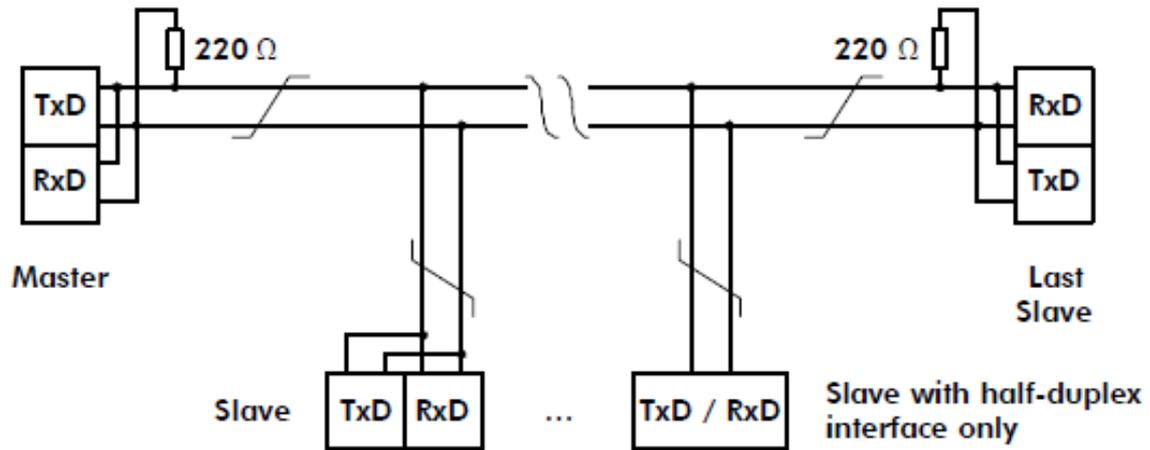
With a 2-wire connection all data are transferred on one pair of wires.

REVIEW HISTORY

Issue	Name	Position
A	A.W. Hassall	Senior Applications Engineer

VERSION CONTROL

Issue	Author(s)	Reason for change	Date
A	A.W. Hassall	Original	09/02/12