

**PROFIBUS COMPETENCY CENTRE, AUSTRALIA TECHNICAL SERIES**

**DATE: Feb, 09**

**ORIGINATOR: GRANT WEYMAN**

**DOCUMENT REF: 09/002**

**SUBJECT: PROFIBUS TRANSMISSION**

There are 3 main transmission types which are used by Profibus.

**RS485 (H2) – Used by DP and FMS**

Simple yet robust, high speed communication (up to 12Mbits/s). Balanced two wire data transmission using shielded twisted pair wire. Up to 32 stations can be connected together on a single cable (segment).

**Fibre optic (FO) – Used by DP and FMS**

Plastic or glass fibre-optic cable can be used giving high speed, interference free communication with electrical isolation.

**MBP (H1) – Used by PA**

Manchester Bus Powered transmission using shielded twisted pair wire, up to 32 stations per segment. Power supply and data over same cable. Can be used in hazardous environments (explosive environments) - Intrinsically safe certification very simple to implement.<sup>i</sup>

Wireless transmission is also available

References:

---

<sup>i</sup> CPIC Presentation L02 Verwer Training & Consultancy Ltd.  
The New and Rapid Way to PROFIBUS DP, Manfred Popp

<http://www.profibuscentre.com.au>

<http://www.profibus.com/>