2.4 General specification

2.4.1 Features

The following section gives a brief overview of the functionality available within SM-PROFIBUS DP-V1.

- Supported data rates (bits/s): 12M, 6.0M, 3.0M, 1.5M, 500k, 187.5k, 93.75k, 45.45k, 19.2k, 9.6k.
- Maximum of 32 input and 32 output cyclic data words supported
- PROFIdrive profiles (V2 and V4) supported
- Non-cyclic data channel supported
- Parallel acyclic/cyclic data communication

The SM-PROFIBUS DP-V1 is powered from the host drive's internal power supply.

2.4.2 Main differences between DP-V0 and DP-V1

The main differences between DP-V0 and DP-V1 supported by SM-PROFIBUS DP-V1 are:

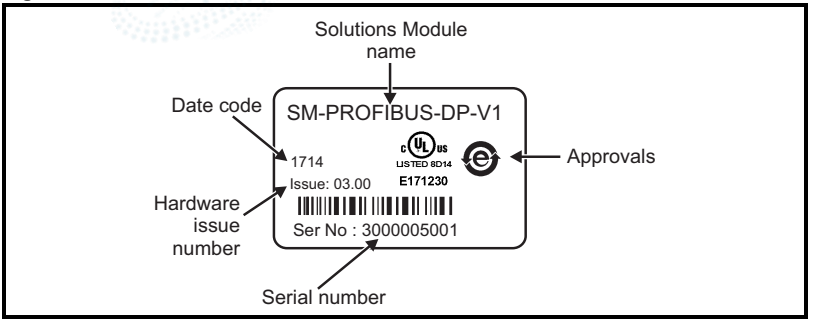
- PROFIdrive profile V4 support, which consists of
  - Standard Telegram 1
  - PROFIdrive PNU Access
  - Drive Identification
  - Fault Buffer
  - Identification and Maintenance Functions
- Non-cyclic data channel access

2.5 Solutions Module identification

The SM-PROFIBUS DP-V1 can be identified by:

1. The label located on the underside of the Solutions Module.
2. The color coding across the front of the SM-PROFIBUS DP-V1 (purple).

Figure 2-4 SM-PROFIBUS DP-V1 labels



2.5.1 Date code format

The date code is four numbers. The first two numbers indicate the year and the remaining numbers indicate the week of the year in which the drive was built.

Example:

A date code of 1710 would correspond to week 10 of year 2017.

4 Electrical installation

4.1 Terminal descriptions

The SM-PROFIBUS DP-V1 has a standard 9-way female D-type connector for the PROFIBUS-DP network.

Figure 4-1 SM-PROFIBUS DP-V1 terminals

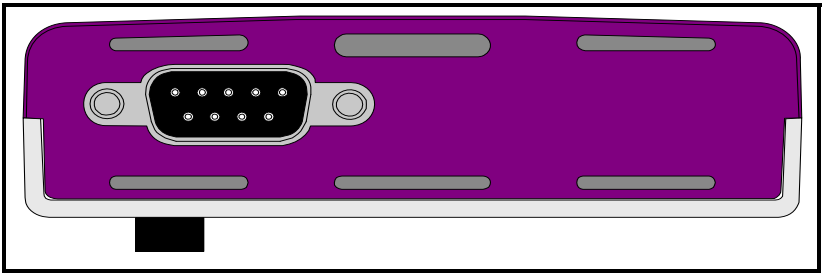


Figure 4-2 SM-PROFIBUS DP-V1 D-Type pin out

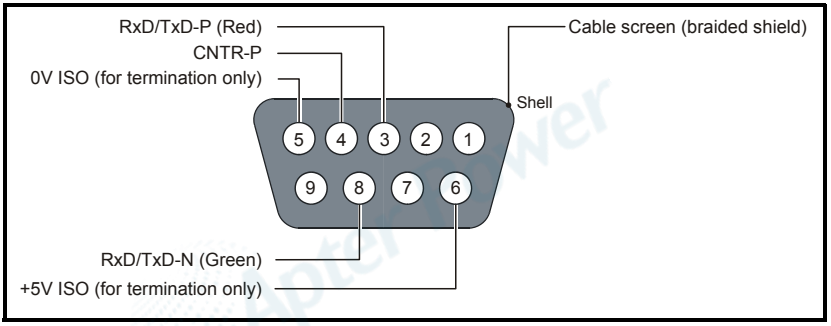


Table 4.1 D-Type connections

D-type Terminal	Function	Description
3	RxD/TxD-P	Positive data line (B) - Red
8	RxD/TxD-N	Negative data line (A) - Green
6	+5V ISO	+5V isolated, use only for termination resistors
5	0V ISO	0V isolated, use only for termination resistors
4	CNTR-P	RTS line
1, Shell	Shield	Cable shield connection

Control Techniques recommend using connectors approved by Profibus International at all times.

4.2 PROFIBUS-DP connectors

There are many manufacturers of PROFIBUS-DP connectors. Always ensure that any connectors used on the network are fully approved for use with PROFIBUS-DP. Some of the connector types available include built in termination that allows the network to be isolated, this can be very useful when fault finding. For data rates above 1.5Mbs connectors installed with integrated inductors should be used.