

6.4 Analogue Input modules

The analogue input (AI) modules support 2-wire or 3-wire 4/20mA or HART transmitters located in a hazardous area; repeating the current in other circuits to drive safe-area loads.

6.4.1 MTL4541/MTL4541S/MTL4541Y - Repeater Power Supply

Single channel, 4/20mA, HART® for 2- or 3-wire transmitters

The MTL4541 provides a fully-floating dc supply for energising a conventional 2- or 3-wire 4/20mA transmitter which is located in a hazardous area, and repeats the current in another floating circuit to drive a safe-area load. For HART 2-wire transmitters, the unit allows bi-directional communications signals superimposed on the 4/20mA loop current. Alternatively, the MTL4541S acts as a current sink for a safe-area connection rather than driving a current into the load. Separately powered current sources, such as 4-wire transmitters, can be connected but will not support HART communication.

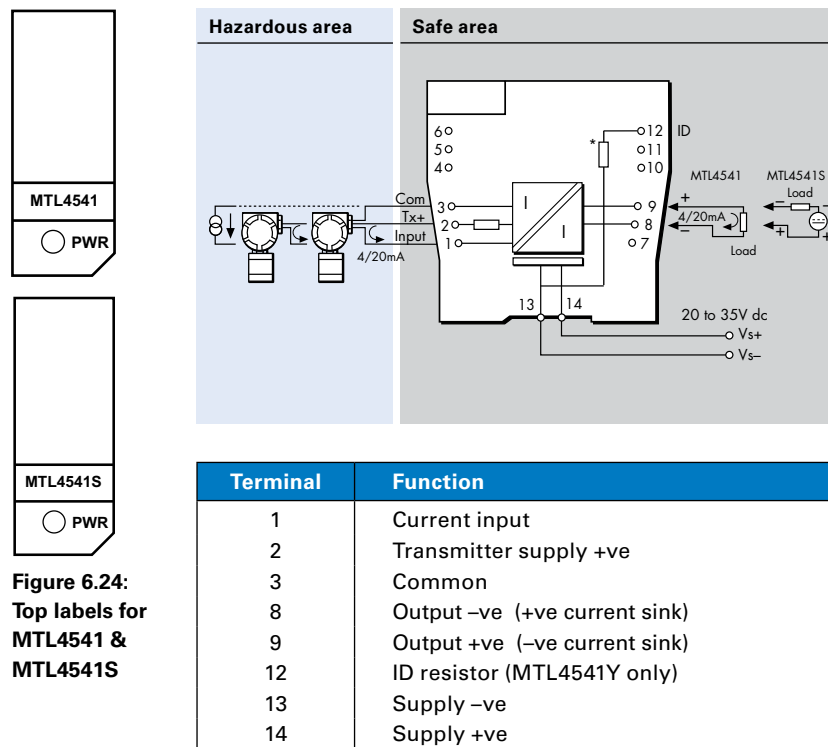


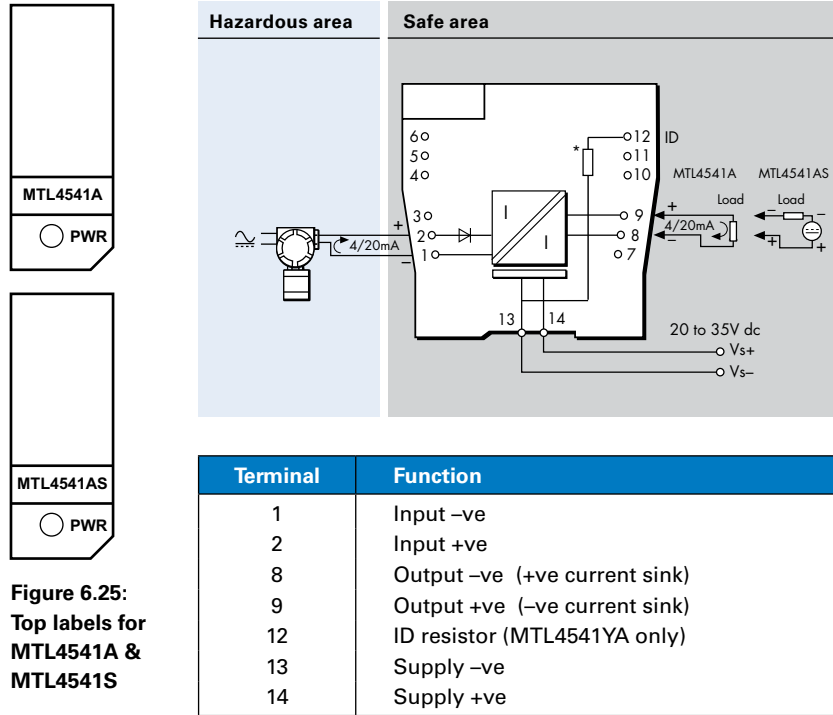
Figure 6.24:
Top labels for
MTL4541 &
MTL4541S

* MTL4541Y is functionally identical to the MTL4541 but has an additional ID resistor connected to terminal 12.

6.4.2 MTL4541A/MTL4541AS/MTL4541YA - Current Repeater

Single channel, 4/20mA, passive input for HART® transmitters

The MTL4541A provides an input for separately powered 4/20mA transmitters and also allows bi-directional transmission of HART communication signals superimposed on the 4/20mA loop current. Alternatively, the MTL4541AS acts as a current sink for a safe-area connection rather than driving a current into the load.



* MTL4541Y is functionally identical to the MTL4541 but has an additional ID resistor connected to terminal 12.