

## 6.5 Analogue Output modules

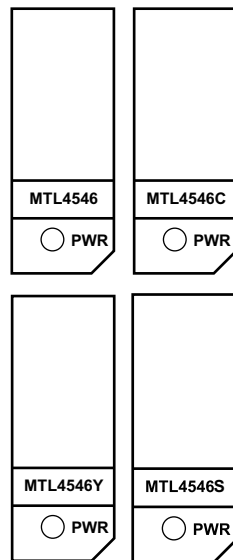
The analogue output (AO) modules accept 4/20mA floating signals from safe-area controllers to drive current/pressure converters (or any other load up to 800Ω) in a hazardous area.

### 6.5.1 MTL4546/MTL4546C/MTL4546S/MTL4546Y/MTL4545Y - Isolating Driver

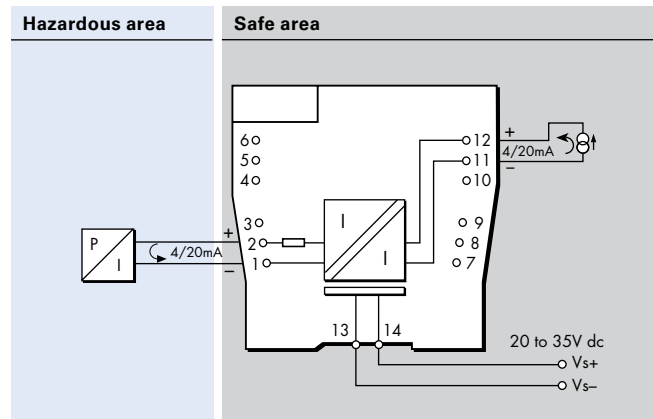
*Single channel, 4/20mA, HART® for valve positioners with line-fault detection*

The MTL4546 accepts a 4/20mA floating signal from a safe-area controller to drive a current/pressure converter (or any other load up to 800Ω) in a hazardous area. For HART valve positioners, the module also permits bi-directional transmission of digital communication signals so that the device can be interrogated either from the operator station or by a hand-held communicator. Process controllers with a readback facility can detect open or short circuits in the field wiring; if these occur, the current taken into the terminals drops to a preset level. The MTL4546C and MTL4546Y are identical to the MTL4546 except that they provide open circuit detection only (no short-circuit detection).

The MTL4546S has a reduced maximum open-circuit voltage which permits the usage of longer field lines compared to the MTL4546.



**Figure 6.31:**  
Top labels for  
MTL4546,  
MTL4546C,  
MTL4546Y &  
MTL4546S



Terminal	Function	Term	MTL4545Y only
1	Output -ve	1	Output -ve
2	Output +ve	2	Output +ve
11	Input -ve	8	Input -ve
12	Input +ve	9	Input +ve
13	Supply -ve	12	ID resistor
14	Supply +ve	13	Supply -ve
		14	Supply +ve

#### Input Characteristics

Field wiring state	MTL4546	MTL4546C	MTL4545Y/ MTL4546Y
Normal	< 6.0V	< 6.0V	< 6.0V
Open-circuit	< 0.9mA	< 0.9mA	< 0.5mA
Short-circuit	< 0.9mA	N.A.	N.A.