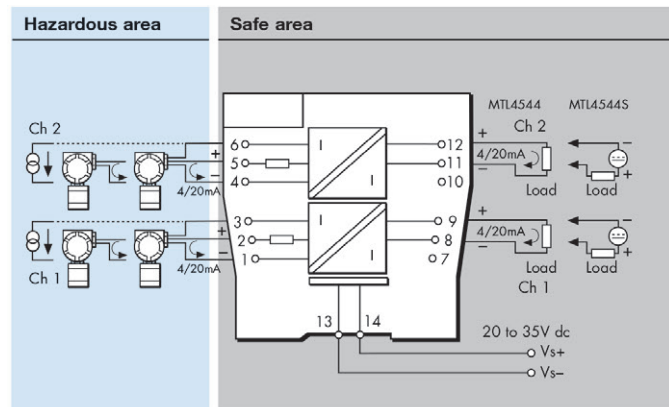


MTL4544/S – MTL5544/S REPEATER POWER SUPPLY

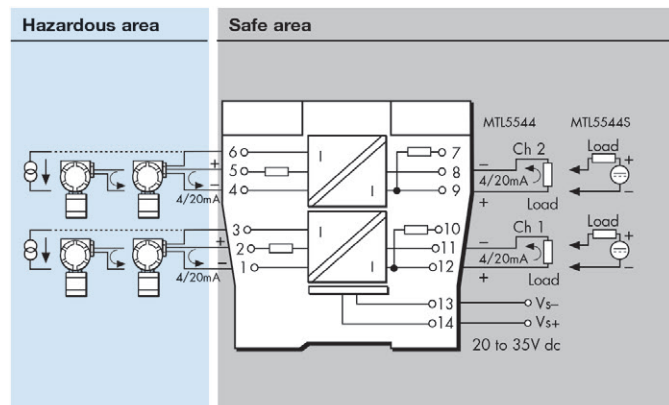
2-channel, 4/20mA, HART®,
2- or 3- wire transmitters

The MTLx544 provides fully-floating dc supplies for energising two conventional 2-wire or 3-wire 4/20mA or HART transmitters located in a hazardous area, and repeats the current in other circuits to drive two safe-area loads. For smart transmitters, the unit allows bi-directional transmission of digital communication signals superimposed on the 4/20mA loop current. Alternatively, the MTLx544S 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.

MTL4544 / MTL4544S



MTL5544 / MTL5544S



SPECIFICATION

See also common specification

Number of channels	Two
Location of transmitter	Zone 0, IIC, T4–6 hazardous area if suitably certified Div. 1, Group A hazardous location
Safe-area output	Signal range: 4 to 20mA Under/over-range: 0 to 24mA Safe-area load resistance (MTLx 544) @ 24mA: 0 to 360Ω @ 20mA: 0 to 450Ω Safe-area load (MTLx544S) Current sink: 600Ω max. Maximum voltage source: 24V dc Safe-area circuit output resistance: > 1MΩ
Safe-area circuit ripple	< 50µA peak-to-peak
Hazardous-area input	Signal range: 0 to 24mA (including over-range) Transmitter voltage: 16.5V at 20mA
Transfer accuracy at 20°C	Better than 15µA
Temperature drift	< 0.8µA/°C
Response time	Settles to within 10% of final value within 50µs
Communications supported	HART (terminals 1 & 2 and 4 & 5 only)
LED indicator	Green: power indication
Maximum current consumption	(with 20mA signals) 96mA at 24V dc
Power dissipation within unit	(with 20mA signals) MTLx544 1.4W @ 24V dc MTLx544S 1.9W @ 24V dc
Safety description (each channel)	Terminals 2 to 1 and 3, and 5 to 4 and 6: $U_o=28V$ $I_o=93mA$ $P_o=651mW$ $U_m = 253V$ rms or dc Terminals 1 to 3 and 4 to 6: Simple apparatus $\leq 1.5V$, $\leq 0.1A$ and 25mW; can be connected without further certification into any IS loop with an open-circuit voltage <28V
SIL capable	These models have been assessed for use in IEC 61508 functional safety applications. See data on MTL web site.