MTL4544D – MTL5544D
REPEATER POWER SUPPLY
single channel, 4/20mA, HART®
for 2- or 3-wire transmitters, two outputs

The MTLx544D provides a fully-floating dc supply for energising a conventional 2- or 3-wire 4/20mA transmitter located in a hazardous area, and repeats the current in other circuits to drive two safe-area loads. For HART 2-wire transmitters, the unit allows bi-directional transmission of digital communication signals superimposed on the 4/20mA loop current. Separately powered current sources, such as 4-wire transmitters, can be connected but will not support HART communication.

SPECIFICATION
See also common specification

Number of channels
One

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
@ 24mA: 0 to 360Ω
@ 20mA: 0 to 450Ω
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)
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, output Ch 1 only)

LED indicator
Green: power indication

Maximum current consumption (with 20mA signals)
96mA at 24V dc

Power dissipation within unit (with 20mA signals)
1.4W @ 24V dc

Safety description
Terminals 2 to 1 and 3:
$U_o=28V$  $I_o=93mA$  $P_o=651mW$  $U_m=253V$ rms or dc
Terminals 1 to 3:
Simple apparatus ≤1.5V, ≤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. SIL3 capable for a single device (HFT=0) See data on MTL web site and refer to the safety manual.