

# MTL4781+

## FOR FOUR SWITCHES

solid-state output



The MTL4781+ is a barrier with four switch channels plus one supply channel. It has electronic overvolt protection and is designed solely for switch applications. It can interface with up to four hazardous-area switches or two relay/changeover contacts, providing four solid-state open-collector returns to the safe area. The status of all four switches is indicated by a bank of four LEDs on top of the module. The fifth channel is a single power output channel for all switches made available through two hazardous-area terminals. The module includes a current limit circuit which prevents the safety fuse blowing if short-term overvoltages are inadvertently applied to any of the safe-area terminals. It is also reverse polarity protected. The module is capable of operating from bussed power.

### SPECIFICATION

(See also common specification)

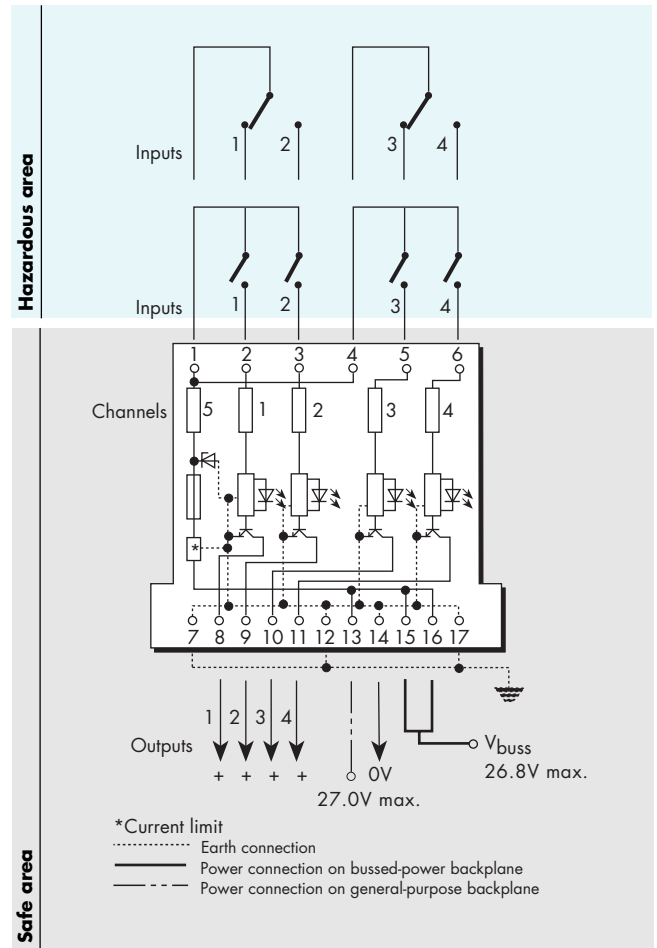
<b>Channel numbers</b> 5	<b>Channel numbers</b> 1 to 4
<b>Safety description</b> 28V, 300Ω, 93mA	<b>Safety description</b> 28V, 11.6kΩ, 2.4mA
<b>Polarity</b> Positive	<b>Polarity</b> Positive
<b>Max. end-to-end resistance</b> 394Ω + 0.4V	<b>Max. end-to-end resistance</b> -
<b>Supply voltage range</b> 20 to 26.8V using bussed-power backplane connections 20 to 27.0V on general-purpose or custom backplanes	<b>Supply voltage range</b> -
<b>Fuse rating</b> 50mA	<b>Fuse rating</b> -
<b>Matched power</b> 0.72W (total)	<b>Matched power</b> -
<b>Input characteristics</b>	
Output on if <200Ω in sensor circuit Output off if >30kΩ in sensor circuit	
<b>Output characteristics (channels 1 to 4)</b>	
Operating frequency: dc to 5kHz Maximum off-state voltage: $V_{supply}$ Maximum off-state leakage current: 10μA Maximum on-state voltage drop: 0.1 x current in mA, (V) Maximum on-state current: 50mA <i>Note: all outputs are protected from inductive loads</i>	
<b>LED indicators (channels 1 to 4)</b>	
Amber: One provided for each return channel ON when switch closed	
<b>Supply current (channel 5)</b>	
33mA typical at 24V dc 40mA maximum at 27V dc	

### MAXIMUM CABLE PARAMETERS

(for each of channels 1 to 4, when connected to channel 5)

BASEEFA (group IIC)			FM (groups A & B)	
Capacitance (μF)	Inductance (mH) or L/R ratio (μH/Ω)		Capacitance (μF)	Inductance (mH)
0.39	4.0	39.0	0.13	4.0

### DIGITAL (ON/OFF) INPUTS



See also approvals, dimensions and ordering information