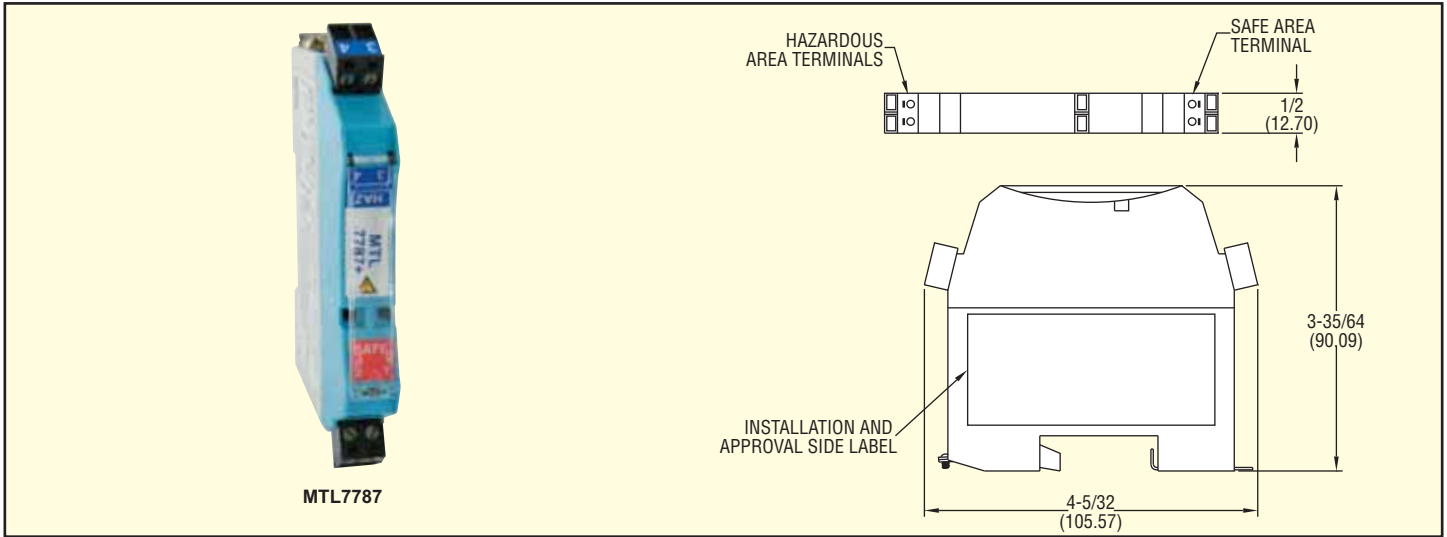




Series  
MTL7706/  
7787

# Zener Barrier

Intrinsically Safe Barriers for Hazardous Locations



MTL7787

The **MTL7706/7787** is an intrinsically safe (IS) shunt-diode barrier that can be used to communicate with and provide isolations for certain Dwyer® transmitters approved for use in hazardous areas. These barriers limit the amount of energy allowed to pass into the hazardous area, which inhibit ignition in flammable atmospheres.

### SPECIFICATIONS

**Transmitter Voltage:** 16.2 V at 20 mA with 250Ω load (negative w.r.t. earth); 11.0 V at 20 mA with 500Ω load (negative w.r.t. earth).

**Safe Area Output:** 4 to 20 mA.

**Load Resistance:** 0 to 500Ω.

**Power Requirement:** 20 to 35 VDC w.r.t. earth.

**Accuracy:** ±2 μA under all conditions.

**LED Indicator:** Green: Power Indication.

**Temperature Limits:**

Operating: -4 to 140°F (-20 to 60°C).

Storage: -40 to 176°F (-40 to 80°C).

**Humidity:** 5 to 95% RH.

**Terminals:** Accommodate up to 2.5 mm<sup>2</sup> stranded or single-core.

**Safety Description:** 28 μV, 300Ω, 93 mA.

**Weight:** 4.9 oz (140 g).

**Agency Approvals:** See table below.

### Compatible Models: 637, 638, 608, SBLTX, PBLTX, IS626

MTL Zener Barrier	Approval	Dwyer Series
MTL7706	FM for Class I, II, III; Div. 1 Groups C, D, F, G	638
MTL7706	UL for Class I; Div. 1 Groups A, B, C, D CL II; Div. 1 Groups E, F, G; CL III Div. 1	IS626 SBLTX PBLTX
MTL7706	FM for Class I, II, III; Div. 1 Groups B, C, D, E, F, G	637
MTL7706	FM for Class I, II, III; Div. 1 Groups A, B, C, D, E, F, G	608

MTL7706	FM	
	Group μF	mH
A & B	0.083	4.2
BASEEFA (ATEX)		
MTL7786	FM	
	Group μF	mH
A & B	0.083	3.05
BASEEFA (ATEX)		
MTL7706	FM	
	Group μF	mH
IIC	0.083	4.2
MTL7786	FM	
	Group μF	mH
IIC	0.083	3.05

Region (Authority)	Standard	Approved For	Certificate/file no.
USA (FM)	3600, 3610 entity 3611, 3810	AIS/I,II,III/1/Entity ABCDEFG-SCI-942; NI/I/@/ABCD/T4 [I/O] AEx[ia]IIC-SCI-942 Entity; NI/1/2/IIC/T4; Ta=140°F (60°C)	3010737
Canada (CSA)	CAN/CSA E60070, UL698, UL913, UL1604, IEC60079, C22.2	Class I, Div.2, Gps A, B, C, D; Ex nA [ia] IIC T4 Class I, Xone 2, Aex nA IIC T4	1345550
UK (BASEEFA)	EN 50014, EN 50020	EEx ia IIC	BAS01ATEX7217
UK (BASEEFA) Systems	EN 50039	EEx ia IIC	Ex01E2219