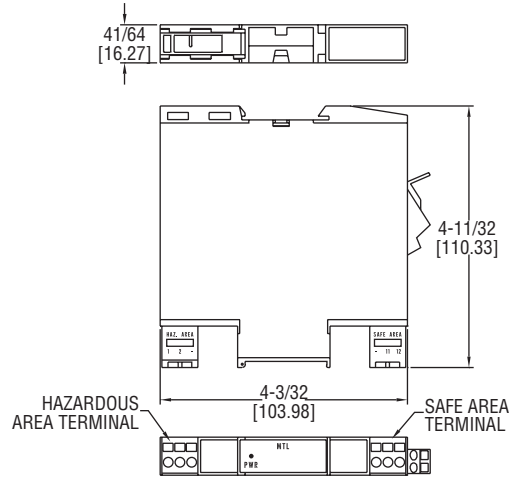


# GALVANIC BARRIER

## Intrinsically Safe Isolators for Hazardous Locations



**MTL5041**



The **SERIES MTL5041/5045** Galvanic Barrier provides intrinsically safe isolation for communication with Dwyer® transmitters approved for use in hazardous areas. This galvanic barrier eliminates the need for a high integrity earth ground required when using shunt type diode type safety barriers. DIN rail mounting and plug-in signal and power connectors simplify installation and maintenance.

**FEATURES/BENEFITS**

- Designed to mount on most standard DIN rails
- Approved for use in hazardous areas

**APPLICATIONS**

- Electrically isolates pressure and level transmitters from unregulated circuits for intrinsically safe applications

**COMPATIBLE MODELS: 637, 638, 608, 2700, 2800, 2900, SBLTX, PBLTX, IS626**

| Model          | Approval  | Dwyer Series        |
|----------------|---|---------------------|
| <b>MTL5041</b> | FM for class I, II, III; div. 1 groups C, D, F, G                                       | 638                 |
| <b>MTL5041</b> | UL for class I; div. 1 groups A, B, C, D class II div. 1 groups E, F, G class III div 1 | IS626, SBLTX, PBLTX |
| <b>MTL5041</b> | FM for class I, II, III; div. 1 groups B, C, D, E, F, G                                 | 637                 |
| <b>MTL5041</b> | FM for class I, II, III; div. 1 groups A, B, C, D, E, F, G                              | 608                 |
| <b>MTL5045</b> | FM for class I, II, III; div. 1 groups C, D, E, F, G                                    | 2900                |
| <b>MTL5045</b> | FM for class I, II, III; div. 1 groups C, D, E, F, G                                    | 2700/2800           |

**MODEL CHART**

| Model               | FM    |      |      | BASEEFA (ATEX) |       |      |      |
|---------------------|-------|------|------|----------------|-------|------|------|
|                     | Group | µF   | mH   | Group          | µF    | mH   | µH/Ω |
| <b>MTL5041/5045</b> | A & B | 0.13 | 4.2  | IIC            | 0.083 | 3.05 | 55   |
|                     | C     | 0.30 | 12.6 | IIB            | 0.85  | 9.15 | 210  |
|                     | D     | 1.04 | 33.6 | IIA            | 2.15  | 244  | 444  |
|                     |       |      |      |                |       |      |      |

| Region (Authority)   | Standard                                  | Approved For   | Certificate/ File no. |
|----------------------|---|--|-----------------------|
| USA (FM) (UL)        | 3600, 3610 entity 3611, 3810 UL913 UL1604 | AIS/I,II,III/1/Entity ABCDEFG-SCI-942; NI/II/@/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, 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             |

**SPECIFICATIONS**

**Hazardous Area Input:** Signal range: 0 to 24 mA (including over-range); Transmitter voltage: 16.5 V at 20 mA.  
**Safe Area Output:** Signal range: 4 to 20 mA; Safe-area load resistance: 0 to 1 kΩ; Safe-area output resistance: > 2 MΩ.  
**Power Requirement:** 20 to 35 VDC.  
**Response Time:** Settles to within 10% of final value within 250 µs.  
**Current Consumption (20 mA signal):** 70 mA at 24 VDC; 85 mA at 20 VDC; 55 mA at 35 VDC.  
**Maximum Power Dissipation (20 mA signal):** 1.2 W at 24 VDC.  
**Isolation:** 250 V RMS between input, output and power supply terminals.  
**Transfer Accuracy at 68°F (20°C):** Better than 20 µA (typically 5 µA).  
**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).  
**Temperature Drift:** <1 µA/°C.  
**Humidity:** 5 to 95% RH.  
**Mounting:** 1.4" (35 mm) top hat rail to: EN 50022-35 x 7.5; BS 5584; 35 x 27 x 7.3 DIN 46277.  
**Terminals:** Accommodate up to 2.5 mm<sup>2</sup> stranded or single-core.  
**Safety Description:** 28 V, 300 Ω, 93 mA; Um=250 RMS or DC.  
**Weight:** 3.9 oz (110 g).  
**Agency Approvals:** See table.

**MODEL CHART**

| Model          | Description      |
|----------------|------------------|
| <b>MTL5041</b> | Galvanic barrier |
| <b>MTL5045</b> | Galvanic barrier |

**ACCESSORY**

| Model        | Description           |
|--------------|-----------------------|
| <b>A-360</b> | Aluminum DIN rail 1 m |