

# Electrical / Environmental

# HM31

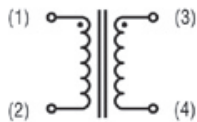


## Encapsulated Current Sense Transformers

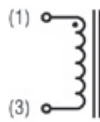
- Insulation Resistance, Minimum 100 M $\Omega$
- Operating Temperature Range -25°C to +105°C
- Dielectric Withstanding Voltage 4.2 kV Pri to Sec

## Schematics

**Schematic A**



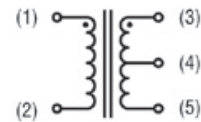
**Schematic B**



**Schematic C**



**Schematic D**

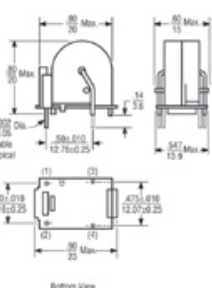


## Specifications @ 25°C / Packaging

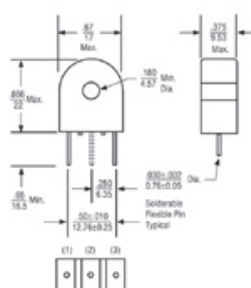
| Part Number | Turns Ratio<br>$\pm 1\%$ or $\pm 1$ turn<br>whichever<br>is greater | Secondary<br>Inductance<br>@ 10 kHz<br>mH min. | Secondary<br>DC<br>Resistance<br>$\Omega$ Max. | Schematic | Figure | Secondary<br>V- $\mu$ S Max. | Current<br>I Turn<br>Primary<br>Amps | Carton<br>Box<br>Quantity<br>(Units) |
|-------------|---------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|-----------|--------|------------------------------|--------------------------------------|--------------------------------------|
| HM31-10050  | 1:50                                                                | 5                                              | 0.7                                            | A         | 1      | 300                          | 5                                    | 360                                  |
| HM31-10100  | 1:100                                                               | 20                                             | 1.4                                            | A         | 1      | 600                          | 5                                    | 360                                  |
| HM31-20050  | 1:50                                                                | 5                                              | 0.7                                            | B         | 2      | 330                          | 20                                   | 600                                  |
| HM31-20100  | 1:100                                                               | 20                                             | 1.4                                            | B         | 2      | 660                          | 20                                   | 600                                  |
| HM31-20200  | 1:200                                                               | 85                                             | 4.5                                            | B         | 2      | 1,300                        | 20                                   | 600                                  |
| HM31-21050  | 1:25:25                                                             | 1.3                                            | 0.7                                            | C         | 2      | 150                          | 20                                   | 600                                  |
| HM31-21100  | 1:50:50                                                             | 5                                              | 1.4                                            | C         | 2      | 330                          | 20                                   | 600                                  |
| HM31-21200  | 1:100:100                                                           | 20                                             | 4.5                                            | C         | 2      | 660                          | 20                                   | 600                                  |
| HM31-20050L | 1:50                                                                | 5                                              | 0.7                                            | B         | 2A     | 330                          | 20                                   | 900                                  |
| HM31-20100L | 1:100                                                               | 20                                             | 1.4                                            | B         | 2A     | 660                          | 20                                   | 900                                  |
| HM31-20200L | 1:200                                                               | 85                                             | 4.5                                            | B         | 2A     | 1,300                        | 20                                   | 900                                  |
| HM31-21050L | 1:25:25                                                             | 1.3                                            | 0.7                                            | C         | 2A     | 150                          | 20                                   | 900                                  |
| HM31-21100L | 1:50:50                                                             | 5                                              | 1.4                                            | C         | 2A     | 330                          | 20                                   | 900                                  |
| HM31-21200L | 1:100:100                                                           | 20                                             | 4.5                                            | C         | 2A     | 660                          | 20                                   | 900                                  |
| HM31-30050  | 1:50                                                                | 5                                              | 0.7                                            | A         | 3      | 330                          | 20                                   | 90                                   |
| HM31-30100  | 1:100                                                               | 20                                             | 1.4                                            | A         | 3      | 660                          | 20                                   | 90                                   |
| HM31-30200  | 1:200                                                               | 85                                             | 4.5                                            | A         | 3      | 1,300                        | 20                                   | 90                                   |
| HM31-30300  | 1:300                                                               | 195                                            | 11.0                                           | A         | 3      | 2,000                        | 20                                   | 90                                   |
| HM31-31050  | 1:25:25                                                             | 1.3                                            | 0.7                                            | D         | 3      | 160                          | 20                                   | 90                                   |
| HM31-31100  | 1:50:50                                                             | 5                                              | 1.4                                            | D         | 3      | 330                          | 20                                   | 90                                   |
| HM31-31200  | 1:100:100                                                           | 20                                             | 4.5                                            | D         | 3      | 660                          | 20                                   | 90                                   |
| HM31-31300  | 1:150:150                                                           | 48                                             | 11.0                                           | D         | 3      | 1,000                        | 20                                   | 90                                   |

## Outline Dimensions (Inch/mm)

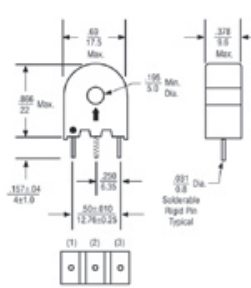
**Figure 1**



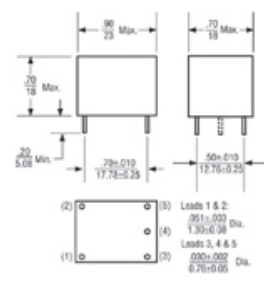
**Figure 2**



**Figure 2A**



**Figure 3**



Note: Add suffix 'LF' for lead-free parts (e.g. HM31-10050 changes to HM31-10050LF).