



**Glow Wire Evaluation of RAST Positive Lock Housings**

**1. INTRODUCTION**

**1.1 Purpose**

Testing was performed on the TE Connectivity RAST positive lock housings to evaluate its performance molded in different colorants during Glow Wire Testing.

**1.2 Scope**

This report covers the glow wire performance of the RAST positive lock housings. Testing was performed at the Harrisburg Electrical Components Test Laboratory (HECTL) between June 13, 2018 and June 21, 2018. Documentation is on file and maintained and stored at HECTL under EA20180248T.

**1.3 Conclusion**

The specimens in all Test Sets passed with no flame present meeting the requirements of IEC 60335-1 Edition 5.2 dated 2016-05 when tested at 750°C with a maximum allowable flame duration of 2 seconds.

**1.4 Test Specimens**

The specimens submitted for testing are identified in Table 1.

**Table 1 – Specimen Identification**

Test Set	Quantity	Part Number	Description
1	3	5-1969536-1	Receptacle Housing Positive- Lock MKIII, TE RM: 2136700 Green
2	3	5-1969536-2	Receptacle Housing Positive- Lock MKIII, TE RM: 2136700 Yellow
3	3	5-1969536-3	Receptacle Housing Positive- Lock MKIII, TE RM: 2136700 Natural
4	3	5-1969536-4	Receptacle Housing Positive- Lock MKIII, TE RM: 2136700 Black
5	3	5-1969536-5	Receptacle Housing Positive- Lock MKIII, TE RM: 2136700 Blue
6	3	5-1969536-6	Receptacle Housing Positive- Lock MKIII, TE RM: 2136700 Gray
7	3	1-1969789-3	Receptacle Housing Positive- Lock MKIII, TE RM: 2136700 Red

**1.5 Test Sequence**

The specimens in Table 1 were subjected to the testing outlined in Table 2.

**Table 2 – Specimen Test Sequence**

Test or Examination	Test Set
	1,2,3,4,5,6,7
	Test Sequence (a)
Glow Wire at 750°C	1

*(a) The numbers indicate sequence in which tests were performed*

**1.6 Environmental Conditions**

Unless otherwise stated, the following environmental conditions prevailed during testing:

Temperature: 15°C to 35°C  
Relative Humidity: 20% to 80%

**2. SUMMARY OF TESTING**

**2.1 Glow Wire at 750°C**

The specimens in all Test Sets passed with no flame present meeting the requirements of IEC 60335-1 Edition 5.2 dated 2016-05 when tested at 750°C with a maximum allowable flame duration of 2 seconds. Tables 3 through 9 show the results of the testing.

**Table 3 – Test Set 1 Glow Wire Results**

Specimen	Point of Glow Wire Application	Temperature (°C)	Flame Present	Pass/Fail
1-1	Side 1	750	No	Pass
1-2	Side 2	750	No	Pass
1-3	Side 3	750	No	Pass

**Table 4 – Test Set 2 Glow Wire Results**

Specimen	Point of Glow Wire Application	Temperature (°C)	Flame Present	Pass/Fail
2-1	Side 1	750	No	Pass
2-2	Side 2	750	No	Pass
2-3	Side 3	750	No	Pass

**Table 5 – Test Set 3 Glow Wire Results**

Specimen	Point of Glow Wire Application	Temperature (°C)	Flame Present	Pass/Fail
3-1	Side 1	750	No	Pass
3-2	Side 2	750	No	Pass
3-3	Side 3	750	No	Pass

**Table 6 – Test Set 4 Glow Wire Results**

Specimen	Point of Glow Wire Application	Temperature (°C)	Flame Present	Pass/Fail
4-1	Side 1	750	No	Pass
4-2	Side 2	750	No	Pass
4-3	Side 3	750	No	Pass

**Table 7 – Test Set 5 Glow Wire Results**

Specimen	Point of Glow Wire Application	Temperature (°C)	Flame Present	Pass/Fail
5-1	Side 1	750	No	Pass
5-2	Side 2	750	No	Pass
5-3	Side 3	750	No	Pass

**Table 8 – Test Set 6 Glow Wire Results**

Specimen	Point of Glow Wire Application	Temperature (°C)	Flame Present	Pass/Fail
6-1	Side 1	750	No	Pass
6-2	Side 2	750	No	Pass
6-3	Side 3	750	No	Pass

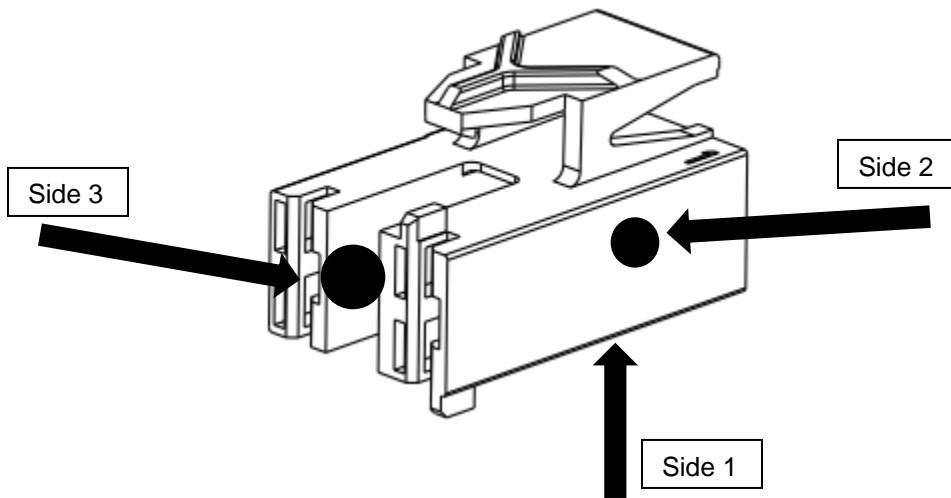
**Table 9 – Test Set 7 Glow Wire Results**

Specimen	Point of Glow Wire Application	Temperature (°C)	Flame Present	Pass/Fail
7-1	Side 1	750	No	Pass
7-2	Side 2	750	No	Pass
7-3	Side 3	750	No	Pass

**3. TEST METHODS**

**3.1 Glow Wire at 750°C**

The parts were conditioned at lab temperature and humidity between 15°C and 35°C with relative humidity between 45% and 75% for a minimum of 24 hours. The specimens were subjected to the Glow Wire test per IEC 60335-1 Edition 5.2 dated 2016-05 and IEC 60695-2-11 Edition 2.0 dated 2014-02 for a duration of thirty seconds at 750°C ± 10°C with a glow wire penetration depth of 7 mm. Test specimens were tested in three orientations as shown in Figure 1. Test specimens were orientated whereas not to impede the material from burning up the test specimen or dripping down to the specified layer (wrapping tissue paper). The tester observed each test specimen for flame height, flame duration, and burning of the specified layer beneath the specimen under test as specified in paragraph 5.3 in IEC60695-2-10 2nd Edition 2014-02.



**Figure 1 – Test Orientations**