TEST CERTIFICATE

Report Reference	71842-20192778
Issue Date	2019/03/27

This is to certify that representative samples when crimped as specified comply with the Class A connector requirements of IEC 61238-1-3:2018.

[See Page 3 of this report for Test Combinations]

Representative Samples	Compression cable lugs, "DIN" Series Compression joints, "DIN" Series
Compression Connector Manufacturer	Gustav Klauke GmbH
Compression Tool	*Milwaukee Tool®* Battery-operated Cable Crimper Model 2778, with Milwaukee Tool DIN13 dies

Test Conducted by:	Test Conducted by:	Results Reviewed by:	Test Laboratory Manager:
Schneider Electric, USA			
David Lambrecht	Robert Barbian	Denise Schwager	Kristopher Erlandson
Engineering Manager	Test Engineer	Sr. Regulatory Engineer	Technical Supervisor
Date:2019/05/24	Date: 2019/03/27	Date: 2019/05/09	Date: 5-9-2019

Summary

Milwaukee Tool carried out type tests according to IEC 61238-1-3:2018 on compression connectors manufactured by Gustav Klauke GmbH.

Testing was completed in Milwaukee Tool's certified testing laboratory at headquarters in Brookfield, WI and Schneider Electric USA Engineering Laboratory.

Test Dates	Test Laboratory	Tests conducted
2018/05/22 – 2018/07/14	Schneider Electric USA Engineering Laboratory 3700 6th Street SW Cedar Rapids, Iowa 52404 DIN EN ISO/IEC 17025	Electrical tests (IEC 61238-1-3 Clause 6)
2019/03/07	Milwaukee Tool 13135 W. Lisbon Rd. Brookfield, WI 53005	Mechanical test (IEC 61238-1-3 Clause 7)

Procedure

A summary of the testing methods are as follows:

Sample Preparation

- Samples of each combination were prepared in accordance to IEC 61238-1-3:2018
- Tool, jaw, dies, connector & conductors were prepared according the chart in "Test Combinations"
- Connectors were crimped according to the manufacturers instructions

Testing

- Testing was completed according to IEC 61238-1-3:2018

Test Combinations

Test	Milwaukee Tool Crimp Tool designation*	Milwaukee Tool Die designation	Klauke Connector designation (Compression cable lug, DIN 46235)	Conductor nominal cross-sectional area
Electrical Class A	Model 2778-20	DIN13 Cu16	103R6	16 mm^2
		DIN13 Cu70	107R10	70 mm^2
Mechanical Class 1		DIN13 Cu150	110R10	150 mm^2
		DIN13 Cu300	113R10	300 mm^2

* Model M18 HCCT109/42 is identical to Model 2778 except the ram is modified to use different styles of crimping and cutting heads, suppression and marking.

Conclusion

After testing of the compression cable lugs (conductor cross section 16 mm^2 , 70 mm^2, 150 mm^2 and 300 mm^2) we declare that the compression cable lugs of the "DIN" Series comply with the IEC 61238-1-3:2018 Class A connector requirements.

- End of Test Report -