



CERTIFICATE OF ACCREDITATION

ANSI-ASQ National Accreditation Board

500 Montgomery Street, Suite 625, Alexandria, VA 22314, 877-344-3044

This is to certify that

TE Connectivity - Empalme
Carretera Internacional, Km. 1969, Guad-Nog, Km 2
Sonora, C.P. 85340 Mexico

has been assessed by ANAB
and meets the requirements of international standard

ISO/IEC 17025:2005

while demonstrating technical competence in the field(s) of

CALIBRATION & TESTING

Refer to the accompanying Scope(s) of Accreditation for information regarding the types of calibrations and/or tests to which this accreditation applies.

ACT-1173

Certificate Number

ANAB Approval

Certificate Valid To: 05/03/2016
Version No. 001 Issued: 05/26/2015



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

TE Connectivity - Empalme

Carretera Internacional Km.1969 Guad-Nog. Km.2, Sonora, C.P. 85340, Mexico
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CALIBRATION & TESTING

Valid to: May 3, 2016

Certificate Number: ACT-1173

I. Mechanical Testing

ITEMS, MATERIALS OR PRODUCTS TESTED	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(\pm)]	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	*DETECTION LIMIT/ RANGE/ EQUIPMENT
Wiring Harnesses, Plastic and Metal Automotive Components	0.12 lbf	Force	Equipment Manual	Force Gage (0 to 200) lbf
Plastic and Metal Automotive Components	4 g	Mass	Equipment Manual	Scales Up to 4 kg
Plastic Automotive Components	0.009 g	Moisture Content	Work Instruction AEW021T-LB, Equipment Manual.	Ohaus MB 45 Moisture Analyzer 45 g (50 to 200) °C
Plastic Automotive Components	N/A	Melt Flow Rate	Work Instruction AEW022T-LB based on ASTM D1238, Equipment Manual	Extrusion Plastometer Oven



II. Dimensional Inspection / Measurement

ITEMS, MATERIALS OR PRODUCTS TESTED	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	*DETECTION LIMIT/ RANGE/ EQUIPMENT
Plastic and Metal Automotive Components	0.0052 mm	Dimensions	ASME Y14.5M, Engineering Drawing, Equipment Manual	Vision Systems 210 mm (X) 215 mm (Y) 100 mm (Z)
Plastic and Metal Automotive Components	0.0021 mm	Dimensions	ASME Y14.5M, Engineering Drawing, Equipment Manual	Digital Height Indicator Up to 50 mm
Plastic and Metal Automotive Components	0.012 mm	Dimensions	ASME Y14.5M, Engineering Drawing, Equipment Manual	Dial Test Indicator Up to 0.8 mm
Plastic and Metal Automotive Components	0.023 mm	Dimensions	ASME Y14.5M, Engineering Drawing, Equipment Manual	Calipers Up to 200 mm
Plastic and Metal Automotive Components	0.0016 mm	Dimensions	ASME Y14.5M, Engineering Drawing, Equipment Manual	Micrometers Up to 25.4 mm
Plastic and Metal Automotive Components	0.0034 mm	Dimensions	ASME Y14.5M, Engineering Drawing, Equipment Manual	CMM 609 mm (X) 609 mm (Y) 457 mm (Z)
Wiring Harnesses Automotive Components	0.32 mm / 50 cm	Dimensions	ASME Y14.5M, Engineering Drawing.	Steel Measuring Tapes Up to 8 m
Wiring Harnesses, Automotive Components	0.06 mm / 50 cm	Dimensions	ASME Y14.5M, Engineering Drawing.	Steel Rule Up to 1 220 mm

III. Dimensional Calibration

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Steel Measuring Tapes	Up to 8 m	0.32 mm / 50 cm	Digital Scale	Work Instruction AEW001T-LB Tyco Spec 117-95 Calibration Steel Measuring Tapes. JIS B 7512 (1993)
Steel Rules	Up to 1 220 mm	0.060 mm / 50 cm	Master Height Gage Digital Scale	Work Instruction AEW001T-LB Tyco Spec. 117-94 Calibration Steel Rules, JIS B 7516 (1987)
Granite Surfaces Plates Repeatability Resolution 0.00001 in	(12 x 18) in to (40 x 60) in	36 µin	Mahr Repeatometer Precision Dial Indicator	Work Instruction AEW002T-LB, JIS B 7513 (1992), GGG-P-463c-1973
Dial Test Indicator (lever-type)	Up to 1 mm	0.012 mm	Height Master	Work Instruction AEW004T-LB, JIS B 7533 (1990), Tyco Spec 117-14 Dial Indicator, Electronic and Mechanical
Calipers	Up to 200 mm	0.023 mm	Gage Blocks Ring Gages	Work Instruction AEW005T-LB, JIS B 7507 (1993), Tyco Spec 117-9 Caliper, Vernier, Dial and Digital
Micrometer	Up to 25.4 mm	0.0016 mm	Gage Blocks Grade 2	Work Instruction AEW006T-LB, JIS B 7502 (1994), Tyco Spec 117-5 Micrometer, Inch/Metric, Outside, Blade and Flange
Optical Comparator	Up to 300 mm (X,Y)	0.0046 mm	Glass Scale	Work Instruction AEW007T-LB, JIS B 7184:1999, Tyco Spec 117-19 Optical Comparators



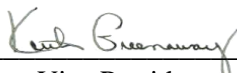
PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(\pm)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Video Comparator	Up to 300 mm (X,Y,Z)	0.0052 mm	Glass Scale	Work Instruction AEW007T-LB. JIS B 7184:1999
Digital Height Indicator (Travel-Type)	Up to 50 mm	0.0021 mm	Gage Blocks	Work Instruction AEW008T-LB, Tyco Spec. 117-14 Dial Indicator Electronic and Mechanical

IV. Mechanical Calibration

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(\pm)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Force Gage	Up to 200 lb·f	0.12 lb·f	Master Weights	Work Instruction AEW003T-LB, Tyco Spec 117-70 Force Gages
Scales	Up to 4 kg	4.0 g	Master Weights Class M3	Work Instruction AEW013T-LB, NOM-010-SCFI-1994

Notes:

1. Calibration and Measurement Capabilities (Expanded Uncertainties) are based on approximately a 95% confidence interval, using a coverage of $k=2$.
2. *L* in uncertainties represents length in inches.
3. The uncertainty associated when calibrating a balance/scale is dependent on local conditions, such as the resolution of the unit being calibrated and the environment in which the balance/scale is operating. The uncertainty listed in the scope here represents the best uncertainty for a balance/scale which the organization typically calibrates in its lab. Since field (on-site) conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected in the field (on-site) than what is reported on the accredited scope.
4. This scope is formatted as part of a single document including the Certificate of Accreditation No. ACT-1173.


Vice President