



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

Crane Electronics, Inc.
1260 11th Street West, Milan, IL 61264

(Hereinafter called the Organization) and hereby declares that Organization 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 (as outlined by the joint ISO-ILAC-IAF Communiqué dated January 2009):

Calibration of Torque Measuring and Control Equipment
(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen
President/Operations Manager

Initial Accreditation Date:

August 21, 2003

Issue Date:

January 16, 2016

Expiration Date:

May 31, 2018

Accreditation No:

59089

Certificate No:

L16-29

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjllabs.com



Certificate of Accreditation: Supplement

Crane Electronics, Inc.

1260 11th Street West, Milan, IL 61264
Richard Haywood Phone: 309-787-1263

Accreditation is granted to the facility to perform the following calibrations:

Mechanical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Torque Transducers Torque Wrenches Torque Readout Devices	0.1 N•m to 4.7 N•m	0.009 N•m	30 N•m Calibration Beam, M1 class weights and digital multimeter
	4.7 N•m to 30 N•m	0.19 % of Applied Torque	
	30 N•m to 81 N•m	0.050 N•m	300 N•m Calibration Beam, M1 class weights and digital multimeter
	81 N•m to 300 N•m	0.062 % of Applied Torque	
	300 N•m to 308 N•m	0.16 N•m	2500 N•m Calibration Beam, M1 class weights and digital multimeter
	308 N•m to 2 500 N•m	0.052 % of Applied Torque	

- The CMC (Calibration and Measurement Capability) stated for calibrations included on this scope of accreditation represent the smallest measurement uncertainties attainable by the laboratory when performing a more or less routine calibration of a nearly ideal device under nearly ideal conditions. It is expressed at a confidence level of 95 % using a coverage factor k (usually equal to 2). The actual measurement uncertainty associated with a specific calibration performed by the laboratory will typically be larger than the CMC for the same calibration since capability and performance of the device being calibrated and the conditions related to the calibration may reasonably be expected to deviate from ideal to some degree.