

KELVIN- READY FOR QFP, SO, SOT AND OTHER LEADED-STYLE APPLICATIONS

The Test Solution That Drives Higher Test Yields for Any Application

As a designer of high-performance devices, you know that applications across industries are growing in both number and complexity. From Automotive systems to industrial, communications, consumer, computing, aerospace, and other semiconductor applications, device performance requirements continue to expand. As this trend continues, it is more important than ever to demand exceptional versatility and superior reliability from your test solutions.

Whether you are testing Automotive applications such as Audio & Infotainment, Vehicle Networking, Powertrain, electrification, or advanced driver-assistance systems—or devices used in other demanding markets—look for a solution that drives higher test yields and delivers superior production throughput.

Johnstech's Leaded ROL® 200KR2 XT Contactor is designed to help meet those requirements. This Xtreme Temperature (XT)-capable solution is engineered to maximize test performance across a broad range of applications and tri-temperature test objectives. Even when testing within the temperature limits of standard contactors and sockets, the robust XT design provides additional design margin to support reliable performance today and evolving roadmap requirements tomorrow.

The Leaded ROL® 200KR2 XT Contactor improves test yields and increases test reliability through several features.

Features & Benefits (0.5 Pitch)

Inductance	Force	Force + Sense
	Self: 0.719 nH Mutual: 0.258 nH	Self: 3.90 nH Mutual: 0.24 nH
Pitch	≥0.5mm	
Temperature	-65°C to 175°C	
CCC @ 100%	1.8A Force Contact 0.8A Sense Contact	

Electrical Reliability Improves Yields

- ▶ Patented, One-Piece ROL® Contacts
- ▶ Lowest Contact Resistance (CRES)
- ▶ High Current Carrying Capability
- ▶ Low Inductance
- ▶ Extremely Stable Contact Resistance (CRES)
- ▶ High Frequency Capability
- ▶ Wiping Contact Clears Debris
- ▶ Temperature Test Stability

Kelvin-Ready Versatility

- ▶ Configurable Application Flexibility
- ▶ Two Contact Profiles Optimize Performance
- ▶ Superior Load Board Design (see back)
- ▶ Kelvin Only When And Where Needed
- ▶ Determine When To Clean
- ▶ Eliminate / Minimize Retests
- ▶ Redundant Sense Contact Reliability
- ▶ Self Cleaning Contacts Clear Debris

Solutions for Any Application in Every Industry

ROL® 200KR2 XT

Leaded
Contacting
Solution

23SEP26 REV. 9.0

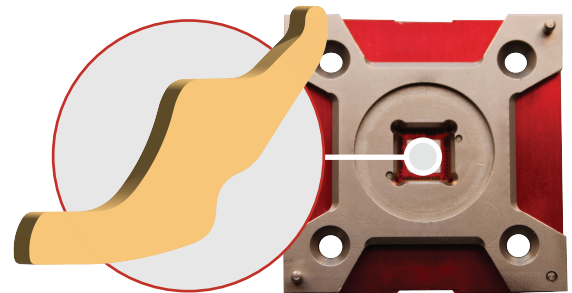
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Electrical Specifications	Force Contact Only (Non-Kelvin I/O's)	Force + Sense (Kelvin I/O's)
Inductance:	Self: 0.719 nH Mutual: 0.258 nH	Self: 3.90 nH Mutual: 0.24 nH
Capacitance:	Ground: 0.301 pF Mutual: 0.090 pF	Ground: 0.30 pF Mutual: 0.13 pF
Average DC Contact Resistance (CRES):	<40 mΩ Force Contact <330 mΩ Sense Contact	< 1 mΩ System
Current Carrying Capability*: (Duty Cycle 100%, 50%, 1%)	1.8 A, 2.4 A, 4.9 A Force Contact 0.8 A, 1.2 A, 1.6 A Sense Contact	
RMS Current Carrying Capability**: (Duty Cycle 100%, 50%, 1%)	1.8 A, 2.5 A, 17.6 A Force Contact 0.8 A, 1.1 A, 8.0 A Sense Contact	
Current Leakage:	<1 pA @ 10 V	
Nearest Decoupling Area:	1.62 mm	

Mechanical Specifications	Matte Tin and NiPdAu Configurations
Compressed Height*** (Force Contact)	1.34 mm APPLICATION ALERT
Electrical Length:	2.00 mm (Force Contact)
Contact Force**** (per contact): Force Contact Only	50 Grams
Contact Compliance:	0.20 mm
Temperature:	-65°C to +175°C

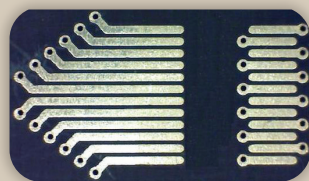
NOTE: Specifications for 0.5 mm pitch configurations shown here. These specifications are based on a combination of internal and third-party measured testing. Contact your Johnstech Representative or Application Engineer for further information and assistance with specific application configurations and performance requirements. * Test conditions: 300 msec pulse, 20°C temperature rise. Higher currents allowed for higher temperature rises. ** RMS current carrying capacity for pulsed applications. Values based on measured steady state current capacity, standardized to 1 Hz test cycle, 20°C temperature rise. Higher currents allowed for higher temperature rises. *** APPLICATION ALERT - The Leaded ROL 200 KR2 contactor is drop-in compatible in many applications. However, some applications of this contactor may require handler system plunger and/or manual actuator lead-backer modifications to be fully drop-in compatible. Contact your Johnstech Representative or Application Engineer for further information and assistance with handler plunger and/or manual actuator lead-backer modifications and setup for the Leaded ROL 200 KR2 contactor. **** Typical values based on Johnstech internal testing. ***** Contact, elastomer, and housing life values are TYPICAL based on Johnstech internal testing. Actual production life will vary based on a wide range of variables including: handler, contactor, and load board interface; handler plunge depth and velocity; device presentation; alignment plate condition; package plating material and characteristics; test floor conditions; maintenance activities; mounting/fastening techniques; site-to-site coplanarity; docking coplanarity; and temperature extremes. ***** Contact force is dependent on many variables.

The contact force listed is typical and may not represent your test solution.



Kelvin-Ready Load Boards More Reliable, Less Expensive

The **Leaded ROL® 200KR2** load board solution separates the Force and Sense load board traces in a front and back format, allowing standard size load board traces to route test signals. These relatively larger traces maintain testing reliability and simplify load board design, reducing load board manufacturing expenses relative to other socket designs. For I/Os where Kelvin is not needed, removing the Sense line creates additional load board real estate and can also provide a straight line path to high speed connectors when testing RF and other high speed signals.

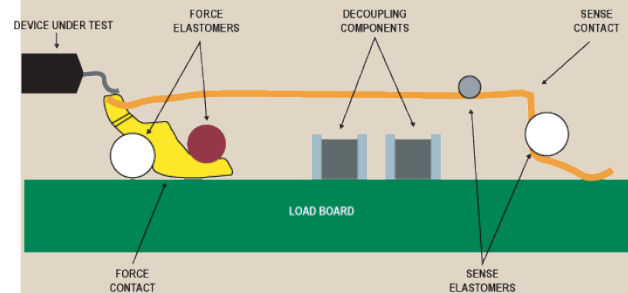


Kelvin-Ready™ Front/Back Design



Spring Pin Side-by-Side Design

Methodology



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