TYPE APPROVAL CERTIFICATE

This is to certify that the mechanical endurance of the

GKN-Series Safety Interlock Switch

manufactured by

Honeywell International Inc

315 East Stephenson Street,
Freeport, Illinois,
IL61032,
USA.

has been assessed by Sira Certification Service.

The reliability data herein is certified subject to the stated conditions and scope in this certificate.

Certification Manager:

W Thomas

Date of Original Certification: 28 July 2010
Date of re-issue: 03 July 2015

This certificate may only be reproduced in its entirety without any change.

Sira Certification Service
CSA Group UK
Unit 6 Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom.
Tel: +44 (0) 1244 670900
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org

Product description and scope of certification

The GKN Series (part numbers are identified as GKN**) safety interlock switch is a standard offering, key operated, three conduit switch used for many applications in industrial machinery. The switch is fitted with up to three pairs of switching contacts (available in several configurations). It has an enclosure made of glass filled polyester, sealed to IP67. The switch is provided with field wiring terminals. The customer has to use a conduit plug rated for IP67 and above to ensure the integrity of sealing.

The scope of certification is for the mechanical endurance against the tests specified below.

Safety function(s)

The safety function of the certified device is to open normally closed (NC) contacts on removal of the key.

Identification of certified equipment

This certificate applies to all devices defined in the manufacturer's assembly drawing numbers 50017783, type E, Rev C, dated 02-Aug-2011.

Mechanical endurance reliability data

The following reliability data has been established by test.

GKN-XX [2]	
Mean Cycles To Failure [1]	$>10^6$ cycles with Single Sided Confidence Limit of 100% [3]
B_{10d} [4]	2×10^6 cycles

[1] 'Failure' is defined as a failure to meet either the mechanical or electrical acceptance criteria in the test plan (below).

[2] For 'XX', refer to manufacturer's assembly drawings stated above for details of product variant.

[3] Tests were time-truncated at the number of cycles per switch shown in the test plan below.

Notes: the data in the table above indicates a statistical probability of failure (Mean Cycles To Failure) based on endurance testing a number of samples under specified conditions (see below). The figures therefore cannot be used to guarantee the lifetime of a particular device.

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Mechanical endurance test plan

The devices were installed in accordance with the manufacturer's user instructions and tested in accordance with the following test plan.

No. of test samples:	20
No. of test cycles per switch:	2,000,000
Rate of test cycles:	60 cycles per minute
Monitoring Loads:	None
Acceptance Criteria:	1. No failure of NC contacts to open; 2. Dielectric Voltage Withstand: 2,200VAC checked after every 500,000 cycles, up to a total of 2,000,000 cycles.

Conditions of Certification

The manufacturer of the certified equipment shall observe the following conditions of certification:

1. This Type Approval Certificate is valid only for products which are identical with the products assessed in Sira report number R56A18220A and conform to the assembly drawings referred to in this certificate. The manufacturer is responsible for ensuring that on-going production provides identical products.

General Notes

1. This certificate is based upon an assessment of the certified equipment described in Sira Test & Certification confidential assessment report number R56A18220A.
2. This Certificate and the Sira Certification Mark are subject to the 'Regulations Applicable to the Holders of Sira Certificates'.
3. This document remains the property of Sira and shall be returned when requested by the company.

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