Report No.: H99032E-2

19th May., 1999

TEST REPORT

ON ILLUMINATED PUSH BUTTON SWITCH

Note: 1. This report is valid for the apparatus.

2. Only the original report is guaranteed.

KOREA INSTITUTE OF MACHINERY AND METALS INDUSTRIAL SAFETY RESEARCH CENTER 29-1, SECHUL-LI, BAEBANG-MYUN, ASAN-CITY, CHUNGCHEONGNAM-DO,336-795,KOREA

TELEPHONE : (0418) 540-5395 FAX : (0418) 540-5399

TEST RESULTS

Data: 19th May., 1999

- 1. Name of test: Dust & Water Protection Test
- Applicant (name): KUN HUNG ELECTRIC CO., LTD.
 (address) #113-4, Changan-dong, Dongdaemoon-ku, Seoul, Korea
- 3. Manufacturer: ditto
- 4. Test specimen
 - 1) Name: ILLUMINATED PUSH BUTTON SWITCH
 - 2) Type : KH-2204
 - 3) Degree of protection: IP56
 - 4) Construction: Refer to Appendix 4.
- 5. Applied Standard: IEC 529
- 6. Test Period: 4th May., 1999 ~ 19th May., 1999
- 7. Test Result: Test specimen satisfied the performance criteria in IEC 529 resolution(Refer to test results of Appendix 1.)

This is to certify that the above mentioned test have been properly carried out.

Tested and reported by:

Approved by:

Beom-Shik, Choi

Engineer, Explosion Proof Department, Industrial Safety Research Center

B. S. Chor'

Chun-Ha, Lee Ph. D.

Director, Explosion Proof Department Industrial Safety Research Center

(This report consists of 5 pages)

Appendix 2.

Test results for dust protection (first characteristic numeral 5)

Description of test

1. Degree of protection:

Ingress of dust is not totally prevented but dust does not enter in sufficient quantity to interfere with satisfactory operation of the equipment.

2. Testing method:

The test was made using equipment incorporating with the principles in which talcum powder was maintained in suspension in a suitable closed test chamber.

The talcum powder used should pass a square-meshed sieve whose nominal wire diameter was 50μ m and the nominal width between wires was 75μ m.

The amount of talcum powder was 2kg per cubic meter of the chamber volume.

The equipment under test was supported inside the test chamber, and the pressure inside the equipment was maintained below atmospheric pressure by a vacuum pump.

The extraction rate of 200 volumes per hour was maintainde for 2 hours.

3. Test results: No ingress of dust

Test results for water protection (second characteristic numeral 5)

Description of test

1. Degree of protection:

Water from projected by a nozzle against the enclosure from any direction shall have no harmful effect.

2. Testing method:

The test was made by spraying the enclosure from all practicable directions with a stream of water from a standard test nozzle.

The conditions were as follows.

- nozzle internal diameter : 12.5mm;
- delivery rate : $100 \ell / \min \pm 5\%$;
- water pressure : to be adjusted to achieve the specified delivery rate;
- test duration per square metre of enclosure surface area likely to be sprayed : 1min;
- minimum test duration : 3 min;
- distance from the nozzle to the machine surface : approximately 3m.
- 3. Test results: No Harmful immersion was found