



한국전기안전공사
안전인증센터

시험 성적서
TEST REPORT



KESCO Safety Test Center
Tel : 82-31-240-4500 Fax : 82-31-240-4590

성적서 번호: STC-B09-142
(Report No.)

페이지(Page of) : (1) / (총 6)

1. 신청자 :

Customer

기관명 : 건흥전기(주)
Name

주소 : 서울 동대문구 장안동 113-4
Address

의뢰일자 : 2009. 04. 28
Date of Receipt

2. 시험성적서 용도 : 품질관리용
Use of Test Report

3. 시험대상품목 : 누름버튼스위치
Product(s)

모델명 : KEPB22ER
Type Designation(s)

제조번호 : Not applicable
Serial No(s).

4. 시험기간 : 2009. 04. 29 ~ 2009. 04. 30
Date(s) of performance of test

5. 시험항목/방법 : IEC 60529: 2001 / IP65 (Front)
Test Item(s)/Method(s)

6. 시험환경

Test Environment

온도 : (20 ± 3) °C
Temperature

상대습도 : (40 ± 5) % R. H.
Relative Humidity

7. 시험결과 : 적합

Test Result Pass

확 인 Conformation	작성자 Tested by	승인자 Approved by	직책: 기술책임자 Position
	성명 석 현 일 (서명)  Name H. I. Sok Signature	성명 최 재 혁 (서명)  Name J. H. Choi Signature	

2009. 04. 30

한국전기안전공사 안전인증센터장
The head of Korea Electrical Safety Corporation Safety Test Center



위 성적서는 고객이 제공한 시료에 대한 시험 결과이며, 용도이외의 사용은 금합니다.
This is certified that the above mentioned products have been tested for the sample provided by customer and forbid the use except for original purpose.

위 성적서는 안전인증센터의 승인 없이는 복제 및 재발급이 금지됩니다.
No part of this document may be duplicated or reproduced by any means without the express written permission of the KESCO Safety Test Center.

440-819 경기도 수원시 장안구 영화동 338-1
338-1, Yeonghwa Dong, Jangan Gu, Suwon City, Gyeonggi Do, 440-819, Korea

TEST DATA

IEC 60529: 2001



Safety Test Center

Report No.: STC-B09-142 Customer: 건흥전기(주)
Page No.: 2 / 6 Product: 누름버튼 스위치
Model: KEPB22ER

1. 시험 환경 (Test Environment)

- 온도 (Temperature): (20 ± 3) °C, 습도 (Relative Humidity): (40 ± 5) % R. H.
- 시험장소 (Location): Dust Chamber, IP 주수 시험장(IP Water Test Lab.)

2. 시험에 사용된 장비 명세 (List of Used Equipment)

장비번호 Equipment	사용장비명 Description	제조회사 Manufacturer	형식 Model	제조번호 Serial No.	교정유효일자 Calibration Valid Until
A-74-01	Dust Chamber	PTL	P14	5040172	2009. 07. 05
A-75-04	Jet Nozzle	ED & D	JET-03	W0750119	2010. 03. 16
B-01-01	Stop Watch	Time Art	PC-80A	TPST002	2009. 11. 05

3. 시험일자 (Test Date)

Date of receipt of test item.....:	2009. 04. 29
Date(s) of performance test.....:	2009. 04. 29 ~ 2009. 04. 30

4. 시험 조건 (Test Condition): IP65 (Front)

5. 시험 결과 (Test Result): Pass

1) Dust Test

Test results for dust protection (first characteristic numeral 6)
Description of test:
1. Degree of protection. No ingress of dust
2. Category for enclosure; <input checked="" type="checkbox"/> Category 1 <input type="checkbox"/> Category 2 <input type="checkbox"/> Category 1 and Category 2
3. Testing method:
- The talcum powder used shall be able to pass through a square-meshed sieve the nominal wire diameter of which is 50 μm and the nominal width between wires was 75 μm
- The amount of talcum powder was 2 kg per cubic meter of the chamber volume.
- The amount of talcum powder to be used is 2 kg per cubic metre of the test chamber volume.
Category 1
<input type="checkbox"/> If an extraction rate of 40 to 60 volumes per hour is obtained the duration of the test is 2 h
<input checked="" type="checkbox"/> If, with a maximum depression of 2 kPa (20 mbar), the extraction rate is less than 40

TEST DATA

IEC 60529: 2001



Safety Test Center

Report No.: STC-B09-142 Customer: 건흥전기(주)
Page No.: 3 / 6 Product: 누름버튼 스위치
Model: KEPB22ER

volumes per hour, the test is continued until 80 volumes have been drawn through, or a period of 8 h has elapsed.

4. Test condition

The enclosure shall be deemed category 1 whether reductions in pressure below the atmospheric pressure are present or not.

5. Acceptance conditions

The protection is satisfactory if no deposit of dust is observable inside the enclosure at the end of the test.

6. Test result: Pass (Front)

2) Water Test

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
- Nozzle internal diameter: 6,3 mm
- Delivery rate: 12,5 L/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: 1 min
- Minimum test duration: 3 min
- Distance from the nozzle to the enclosure surface: between 2,5 m and 3 m

3. Acceptance conditions:

Dielectric strength test: N/A

It shall not;

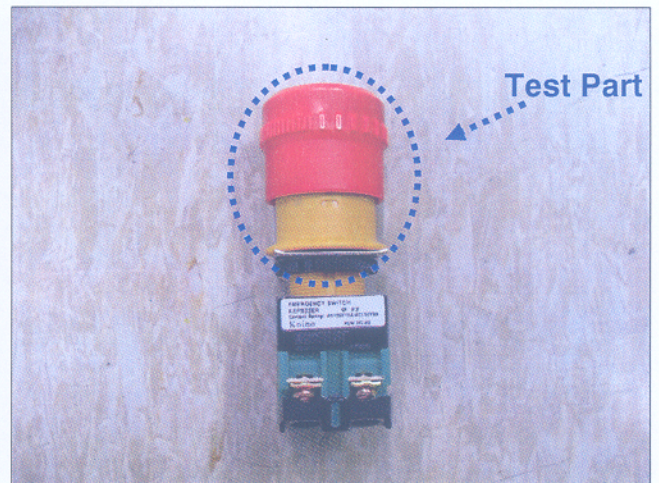
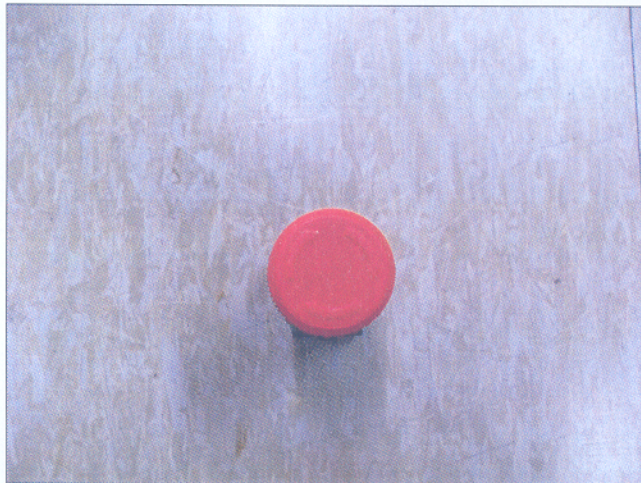
- be sufficient to interfere with the correct operation of the equipment for impair safety;
- deposit on insulation parts where it could lead to tracking along the creepage distances;
- reach live parts or windings not designed to operate when wet;
- accumulate near the cable end or enter the cable if any.

4. Test result: Pass (Front)

Photo Documentation

Report No.: STC-B09-142
Page No.: 4 / 6

Customer: 건흥전기(주)
Product: 누름버튼 스위치
Model: KEPB22ER



[Sample]

1. Test Condition (IP Test)

- Test Date: 2009. 04. 29 ~ 2009. 04. 30
- IP Code: IP65
- 1) Dust test for first characteristic numerals 6
 - Depression: 20 mbar
 - Duration of time: 8 h
- 2) Water test for second characteristic numeral 5 with the 6,3 mm nozzle
 - Internal diameter of the nozzle: 6,3 mm
 - Delivery rate: 12,5 L/min
 - Duration of time: 3 min

2. Applicant & Model

- 건흥전기(주) / 누름버튼스위치 (KEPB22ER)

3. Test Equipment

- A-74-01, A-75-04, B-01-01

Photo Documentation

Report No.: STC-B09-142
Page No.: 5 / 6

Customer: 건흥전기(주)
Product: 누름버튼 스위치
Model: KEPB22ER

4. Test Figure

1) Dust Test



[Before Test]



[After Test]

Photo Documentation

Report No.: STC-B09-142
Page No.: 6 / 6

Customer: 건흥전기(주)
Product: 누름버튼 스위치
Model: KEPB22ER

2) Water Test



[Before Test]



[During Test]