



**한국전기안전공사
안전인증센터**

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

**시험 성적서
TEST REPORT**

성적서 번호: STC-B11-136
(Report No.)

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1. 신청자 :

Customer

○ 기 관 명 : 건흥전기(주)
Name

○ 주 소 : 서울특별시 동대문구 장안동 113-4
Address

○ 의뢰일자 : 2011. 05. 04
Date of Receipt

2. 시험성적서 용도 : 품질관리용
Use of Test Report

3. 시험대상품목 : Emergency Stop Switch
Product(s)

○ 모델명 : KEPB160ERS
Type Designation(s)

○ 제조번호 : Not applicable
Serial No(s).

4. 시험기간 : 2011. 05. 16 ~ 2011. 05. 19
Date(s) of performance of test

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

6. 시험환경

Test Environment

○ 온 도 : (20 ± 3) °C
Temperature

○ 상대습도 : (50 ± 5) % R. H.
Relative Humidity

7. 시험결과 : 적합
Test Result Pass

확 인 Conformation	작성자 Tested by	승인자 Approved by	직책: 기술책임자 Position
	성명 김 두 현 Name	성명 장 호 철 Name	(서명) Signature

2011. 06. 09

한국전기안전공사 안전인증센터장

The head of Korea Electrical Safety Corporation Safety Test Center



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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.

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TEST DATA

IEC 60529: 2001



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Customer: 건흥전기주

Product: Emergency Stop Switch

Model: KEPB160ERS

1. 시험 환경 (Test Environment)

- 온도 (Temperature): $(20 \pm 3) ^\circ\text{C}$, 습도 (Relative Humidity): $(50 \pm 5) \% \text{ R. H.}$
- 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	2011. 07. 15
A-75-04	Jet Nozzle	KINS	-	008101	2012. 03. 21
B-01-01	Stop Watch	Time Art	PC-80A	TPST002	2011. 10. 14
B-03-03	Tape Measure	HIBO	-	-	2012. 04. 19

3. 시험일자 (Test Date)

Date of receipt of test item.....:	2011. 05. 04
Date(s) of performance test.....:	2011. 05. 16 ~ 2011. 05. 19

4. 시험 조건 (Test Condition): IP65

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;

☒ Category 1

☐ Category 2

☐ 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 $50 \mu\text{m}$ and the nominal width between wires was $75 \mu\text{m}$
- 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

TEST DATA

IEC 60529: 2001



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	Model: KEPB160ERS

- ☐ If an extraction rate of 40 to 60 volumes per hour is obtained the duration of the test is 2 h
- ☒ If, with a maximum depression of 2 kPa (20 mbar), the extraction rate is less than 40 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

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 or 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

Photo Documentation

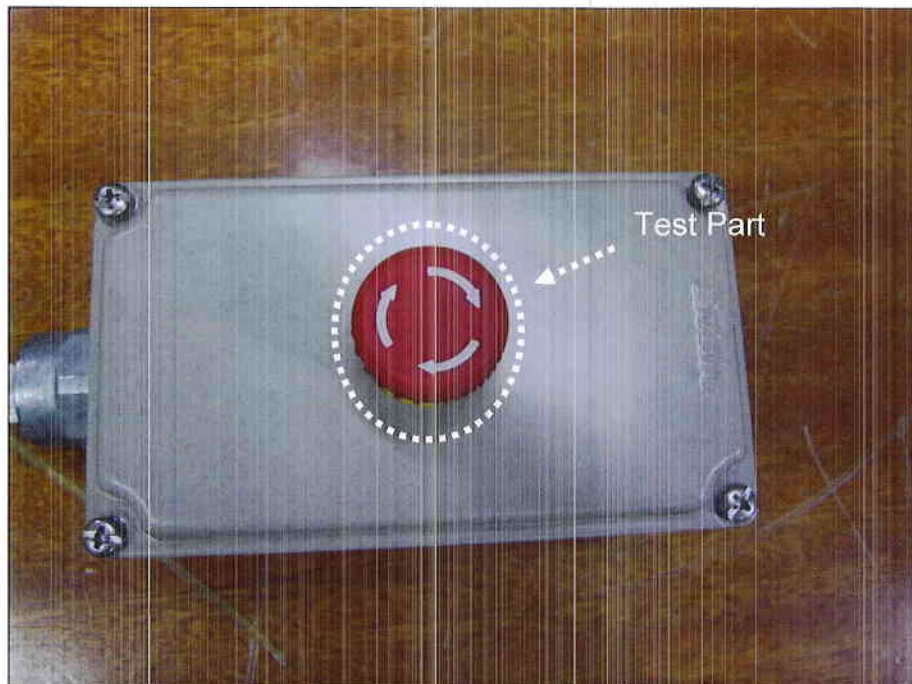
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Product: Emergency Stop Switch

Model: KEPB160ERS



[Specimen]

1. Test Condition (IP65 Test)

- 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) / Emergency Stop Switch (KEPB160ERS)

3. Test Equipment

- A-74-01, A-75-04, B-01-01, B-03-03

Photo Documentation

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Customer: 건흥전기㈜

Product: 누름버튼 스위치

Model: KEPB160ERS

4. Test Figure

1) Dust Test



[Before Test]



[After Test]

Photo Documentation

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Customer: 건흥전기㈜

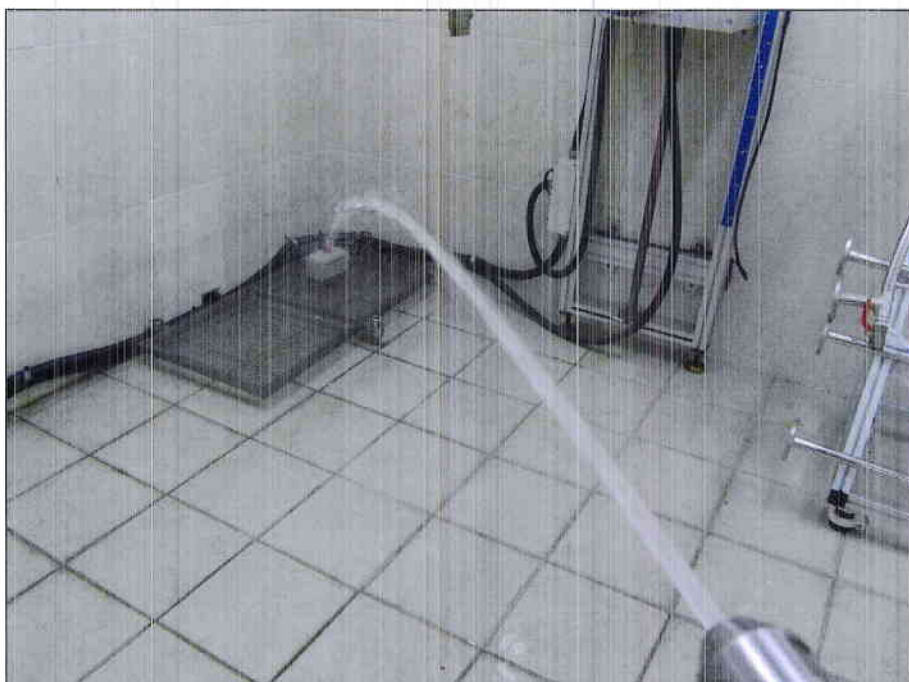
Product: 누름버튼 스위치

Model: KEPB160ERS

2) Water Test



[Before Test]



[During Test]