

Report No. : H23034E-1

9th May, 2003

TEST REPORT

ON

Push Button Switch

- Note : 1. This report is valid for the apparatus.
2. Only the original report is guaranteed.

KOREA INSTITUTE OF MACHINERY AND MATERIALS
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“원본은 응원서 플러이 있음”

KOREA INSTITUTE OF MACHINERY & MATERIALS(KIMM)	An independent, government designated, nonprofit institute for ship safety
	(Additional information or details)

TEST CERTIFICATE

OF

ELECTRICAL APPARATUS FOR EXPLOSIVE GAS ATMOSPHERES

(Issued under Authority vested by the Government of Republic of Korea)

Cert. No. : EX23IP906 Date : 9th May, 2003
 Description of apparatus : Push Button Switch
 Model(Type) : KPB25W Series, KPB30W Series
 Manufacturer(name) : KUN HUNG ELECTRIC CO., LTD.
 (address) : #113-4, Changan-dong, Dongdaemoon-ku, Seoul, Korea
 Drawing No. : CS-25M-051
 Manufacturer's serial No. : not applicablle

THIS IS TO CERTIFY that the above mentioned apparatus has been tested and
 inspected by **KIMM** in accordance with the standard of IEC 60529
 and has been found to comply with the requirements of the standard.

Type of protection : IP65
 Test report No. : KIMM No. H23034E-1
 Marking : KIMM No. EX23IP906, IP65



B. S. Choi

Beom - Shik Choi

Engineer, Explosion Proof Department,
 Industrial Safety Research Center

Chun-Ha Lee

Chun-Ha Lee, Ph. D.

Director, Explosion Proof Department,
 Industrial Safety Research Center

TEST REPORT

Date : 9th May, 2003

1. Name of test : Dust & Water Protection Test
2. Applicant (name) : KUN HUNG ELECTRIC CO., LTD.
(address) #113-4, Changan-dong, Dongdaemoon-ku, Seoul, Korea
3. Manufacturer : ditto
4. Test specimen
 - 1) Name : Push Button Switch
 - 2) Model(Type) : KPB25W Series, KPB30W Series
 - 3) Type of protection : IP65
 - 4) Construction : Refer to Appendix 4.
5. Applied Standard : IEC 60529
6. Test Period : 1st May, 2003 ~ 9th May, 2003
7. Test Result : Test specimen satisfied the performance criteria in IEC-Pub. 60529
(Refer to test results of Appendix 1.)

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

Tested by :

Approved by :

B. S. Choi

Beom-Shik, Choi
Engineer, Explosion Proof Department,
Industrial Safety Research Center

Chun-Ha Lee

Chun-Ha Lee, Ph. D.
Director, Explosion Proof Department
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(This report consists of 5 pages)

TEST RESULTS

Test Item	Tested	Results	Remarks
I. Degree of protection			
1. First characteristic numeral	○	Satisfactory	Refer to Appendix 2.
2. Second characteristic numeral	○	Satisfactory	Refer to Appendix 3.
II. Marking	○	Satisfactory	IP65

Test results for dust protection (first characteristic numeral 6)

Description of test

1. Degree of protection :

No ingress of dust.

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

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

The equipment under test was supported in its normal operating position inside the test chamber, but is not connected to a vacuum pump. Any drain-hole normally open shall be left open for the duration of test. The test shall be continued for a period of 8h.

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.

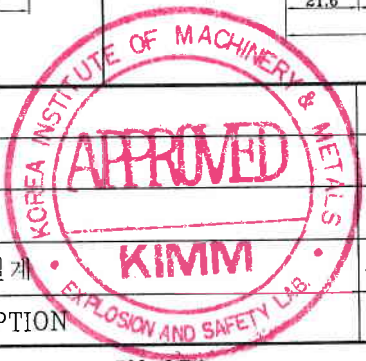
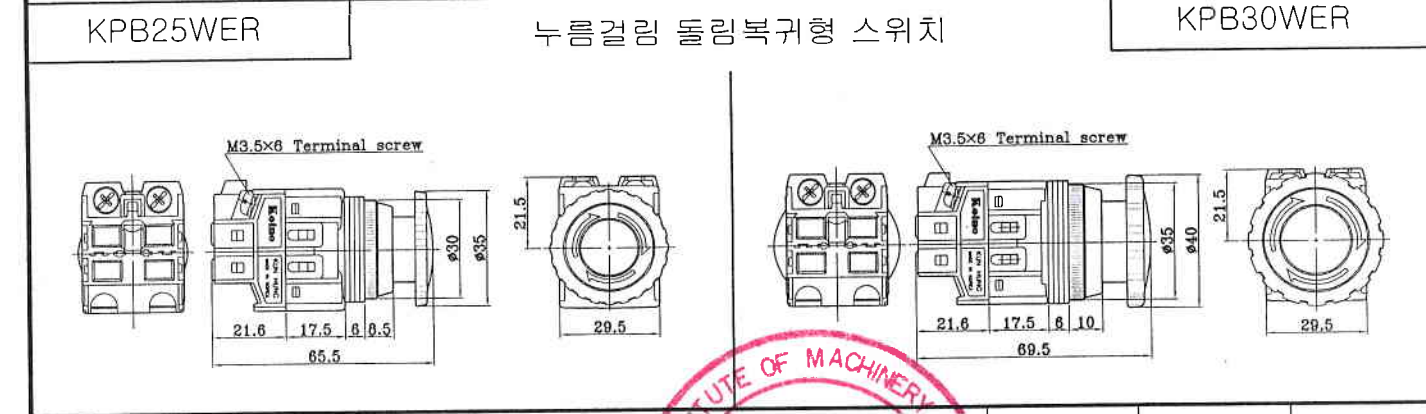
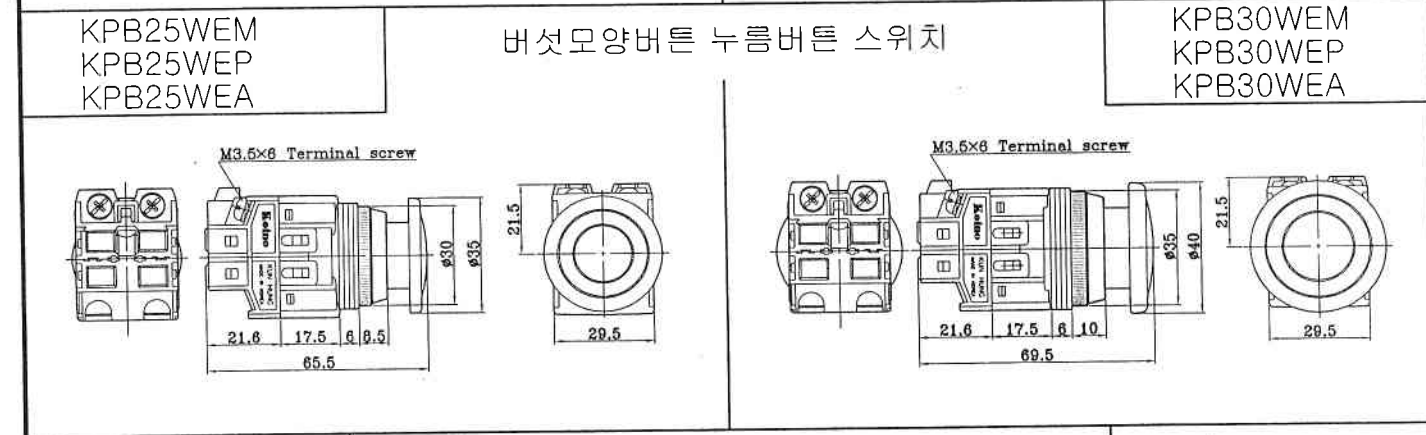
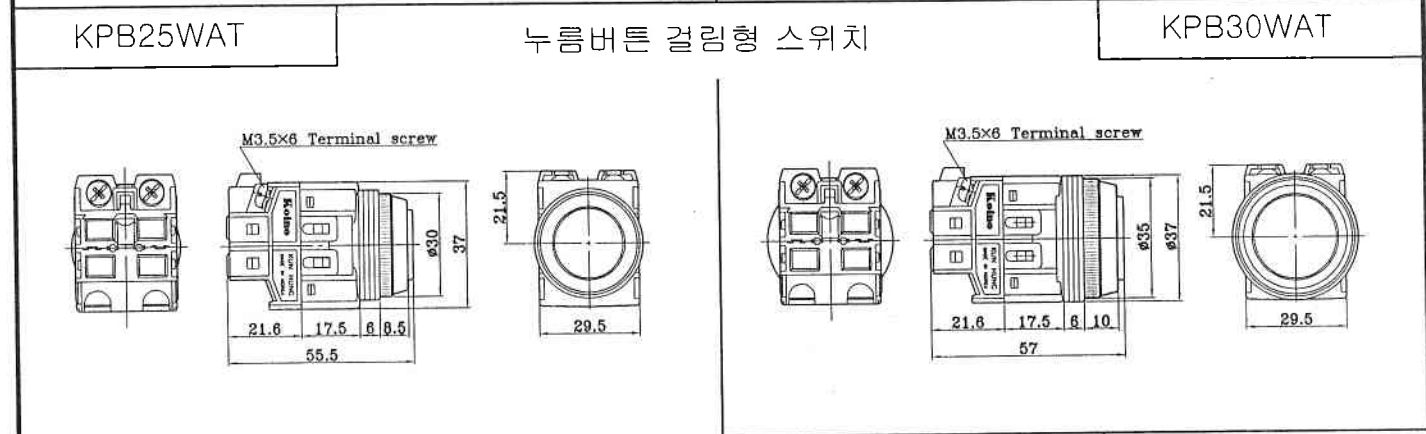
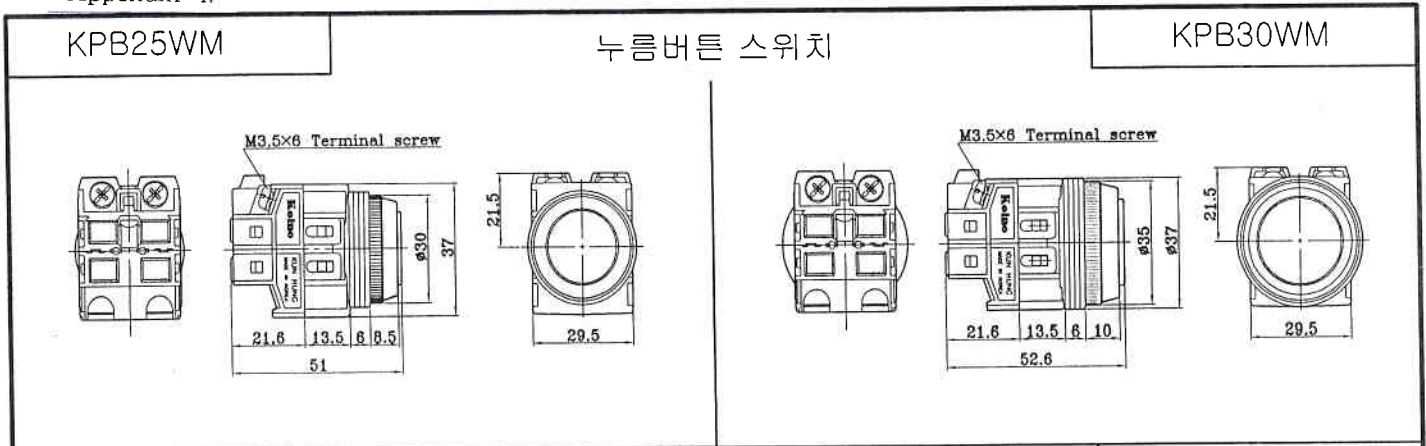
2. Testing method :

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 : 6.3mm;
- 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 : 1min;
- minimum test duration : 3 min;
- distance from the nozzle to the machine surface : approximately 3m.

3. Test results : No Harmful immersion was found



0	2002. 10.25	최초 설계	동채원	2002.10.25	[Signature]
Rev.	DATE	DESCRIPTION	PREPARED	REVIEWED	APPROVED
TITLE: 외형치수도			DWG No.: CS-25M-051		MODEL: KPB Series
TITLE: Koino KUN HUNG ELECTRIC CO., LTD.				Qty. : -	Scale: 45/100