

Customer:

Hager Electro GmbH & Co. KG
Mr. Fischer
Im Hofgarten
66131 Saarbrücken Ensheim

Environmental Lab

RST Rail System Testing GmbH

Philipp-Pfarr-Straße 10

16761 Hennigsdorf



Materials Lab



Fire Lab

Fon +49 (0)3302 49982 0

Fax +49 (0)3302 49982 15



New Technologies

www.rst-labs.deinfo@rst-labs.de**Test Report No. P50-11-0158e Environmental Tests**Order No.: 50-11-0137-2 (3039)
Date: 13/07/2011
Test engineer: Mr. Huster
Documentation: hw/hbThis report contains
4 pages.

phone: 03302 49982 50

Delivery date specimen: 11/07/2011**Test date:** 11/07/2011 until 12/07/2011**Specimen:** 1 piece distribution board series "Vector II"
VE112PN (specimen No. 50-11-3039-2)**Relevant specification:** Degrees of protection provided by enclosures (IP-Code) according to DIN
EN 60529 (edition 09/2000)
(for details see page 2)**Objective:** Proof of the degree of protection IP6X**Results:** No dust penetrated into the distribution board VE112PN during the dust
test. The access to the hazardous parts with an access probe was not
possible.
The protection degree IP6X is ensured for the tested distribution board
series "Vector II" VE112PN (specimen No. 50-11-3039-2) (for details see
page 4).**Bernd Sommerfeld**
Head of the Environmental Lab

The results refer only to the specimens above mentioned.

This Test Report must always be copied entirely. Any copying of extracts and publication require the prior consent of the Laboratory.

1 Specimen

1 piece distribution board series "Vector II" VE112PN (specimen No. 50-11-3039-2)



fig. 1
type plate

RST/5B50Q89L/25927

2 Relevant specification

2.1 Degrees of protection provided by enclosures (IP-Code) acc. IEC 60529 (edition 11/89)

2.1.1 First characteristic numeral: 6, protected against access to hazardous parts with a wire and dust-tight

protection against access:

test means:	access probe (rigid steel wire 1.0 mm diameter, 100 mm length, edges rounded off)
test force:	1 N ± 10 %
acceptance conditions:	The access probe must not be able to penetrate.

protection against foreign objects:

test means:	dust chamber
underpressure in the enclosure:	20 mbar
extraction rate:	≤ 60 enclosure volumes / hour
sucked air volume:	≤ 80 enclosure volumes
test duration:	2 hours ... 8 hours
test dust:	talcum powder
acceptance conditions:	no penetration of dust (dust-tight)

2.2 Visual evaluation

An evaluation of the specimen after the dust tests IP6X (according to clause 2.1) is to be carried out regarding the penetration of dust into the enclosure. The operability and the safety must not be reduced.

3 Test procedure

3.1 Test setup

- test of the protection against access: see fig. 2
- dust test: see fig. 3

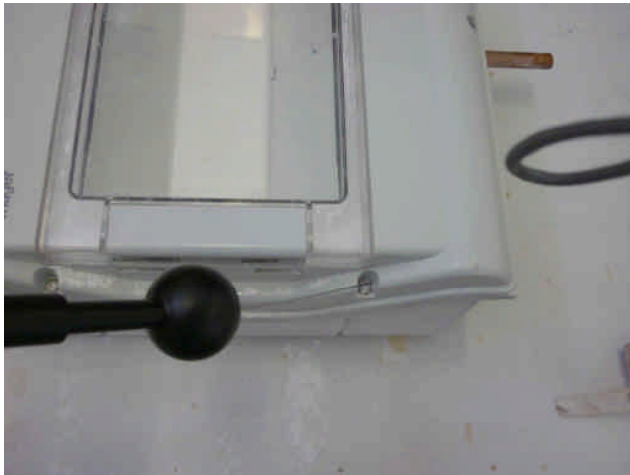


fig. 2
test of the protection against access with an access probe (IP6X)

RST/5B50Q89L/25918



fig. 3
specimen in the dust chamber after the dust test (IP5X)

RST/5B50Q89L/25925

3.2 Test equipment

The test and measuring instruments as well as the calibration status were checked before using.

test instruments	
access/object probe according to DIN EN 60529	
dust test chamber according to DIN EN 60529	

3.3 Parameters for the dust test

For the specimen following parameters were determined:

- underpressure in the enclosure: 17 mbar
- extraction rate: 0,93 enclosure volumes / hour
- resulting test duration: 8 hours

4 Results

4.1 Visual examination

IP6X: No dust penetrated into the distribution board VE112PN during the dust test (see fig. 4 and fig. 5). The access to the hazardous parts with an access probe was not possible.

4.2 IP-degree of protection

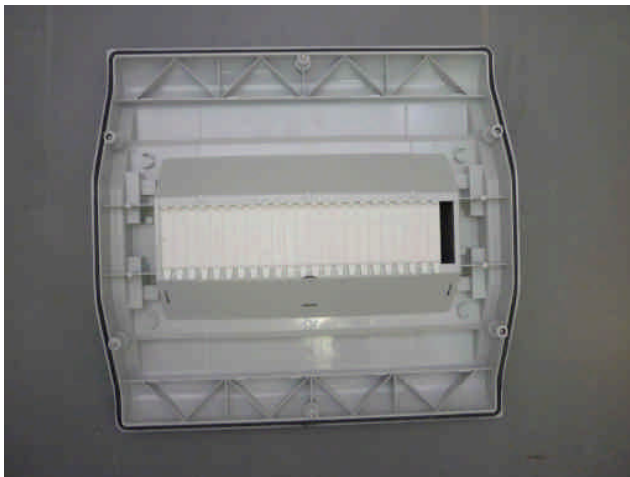
The protection degree IP6X is ensured for the tested distribution board series "Vector II" VE112PN (specimen No. 50-11-3039-2).

4.3 Photographic representation of the results



RST/5B50Q89L/25923

fig. 4
after the dust test:
no dust penetrated



RST/5B50Q89L/25924

fig. 5
after the dust test:
seals of the distribution board are effective
(no penetration of dust)