

**Department**  
I&S IS OLM RC TCS E

**City**  
91058 Erlangen

**Page**  
1/1

**Date**  
02.03.2005

**Processor**  
Weise

**Phone**  
09131-7-32878

**File No.**  
I&S IS OLM RC TCS E / 042996-4

**Release**  
Leitner

**Test date**  
December 2000

**Encl. (test description)**  
3

## Customer:

Phoenix Contact      Mr Alessandro Alberani

## Test of the spring cage modular terminal block ST

Spring cage modular terminal blocks ST 2,5 and ST 2,5-PE

Manufacturer: Phoenix Contact Blomberg

### Summary

The spring cage modular terminal block ST 2,5 provided by Phoenix Contact was to be tested resp. examined for capability.

The evaluation includes the results of the previously conducted tests by Phoenix Contact documented in Test Report 0806 of 25.04.2003.

In addition to the tests carried out by Phoenix Contact, the below tests relevant for practice use were also carried out by the company Siemens AG, Dept. A&D GT 24, File No. A&D GT 24/00-014:

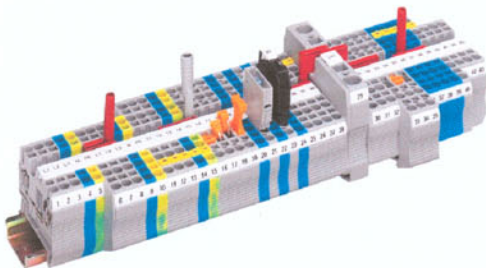
Handling, ageing, wiring, contact resistance test, conductor movement, industrial climate, quick change of temperature, pull-out forces.

The tests referred to the spring cage modular terminal ST 2,5.

### Résumé

The described direct connection terminal block of the company Phoenix Contact is suitable for the use in industrial applications.

Product range for the spring cage modular terminal ST 1,5 - ST 35



- Feed-through terminal blocks
- TWIN terminals with single-sided double connection
- QUATTRO terminals with double connection on both sides
- Double-level terminal
- Fuse and disconnect terminals
- Ground terminal blocks (PE)

Hinweise: Die Prüfergebnisse beziehen sich ausschließlich auf den im Bericht genannten Prüfling.  
Der Prüfbericht darf ohne die schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.  
Der Prüfbericht bescheinigt die Ergebnisse der durchgeführten Prüfungen, ist jedoch keine Zusicherung von Eigenschaften im Sinne des Produkthaftungsgesetzes.

## Description

The spring cage modular terminal block ST 2,5 covers a conductor cross section of 0,08 mm<sup>2</sup> to 4 mm<sup>2</sup>. It is possible to use flexible conductors with and without ferrule as well as rigid conductors for the terminal. The ground terminals effect contacting by just snapping onto the carrier. The terminals may be connected with each other using 2-50 pos. bridges.

### The below tests were carried out at A&D GT 24:

- ⇔ Wiring of terminals
- ⇔ Repeated wiring of the terminals
- ⇔ Moving of the conductor
- ⇔ Conductor pull-out forces out of the terminal
- ⇔ Ageing of the terminals at +125°C, 13 days
- ⇔ Climatic load of the connection
- ⇔ Spring force of the tension spring
- ⇔ Vibration load of the ground terminal
- ⇔ Contact resistance

During testing, the terminals were assembled with the below conductor cross sections:

	• AWG 20, 7-wire		
with ferrule	• 0,5 mm <sup>2</sup> fine-strand	• 1,5 mm <sup>2</sup> fine-strand	• 2,5 mm <sup>2</sup> fine-strand
without ferrule	• 0,5 mm <sup>2</sup> fine-strand	• 1,5 mm <sup>2</sup> fine-strand	• 2,5 mm <sup>2</sup> fine-strand

Ageing of the terminals was carried out acc. to EN 60352-1: 1997 (s. report A&D GT 24/99-010 as well as report A&D GT 24/00-014). In line with the characteristic curve for the loss in contact force of the wire wrap connection of a soft-annealed copper wire of 50%, the conducted ageing test over the period of 13 days at +125°C corresponds to a period of time of 40 years at +68°C.