

1-UTD 8/8-UT-S

ELMAC  
GmbH

Best. No. - 4500102978



Reg.-Nr.: DAT-P-033/93-00

### Cat. 5 Test Report No. 66103-1-C5E

April 12, 1996

<b>Prepared for:</b>	IC Intracom Vertriebs GmbH Löhbacher Str. 7 D-58553 Halver/Germany	
<b>Equipment under Test:</b>	LAN-Socket	
<b>Type:</b>	Lan-PDU 2002	
<b>Date tested:</b>	February 1996	
<b>Test Specifications:</b>	ISO/IEC 11801 First Edition 1995-07-15 EN 50173/08.95 SP 2840-A/03.94	
<b>Tests performed:</b>		<b>Test passed:</b>
ATTENUATION		YES
NEXT LOSS		YES
The samples tested complies with the requirements above for transmission parameters specified for category 5.		
<b>Test Report No.:</b>	66103-1-C5E	
<b>Testing Location:</b>	ELMAC GmbH Boschstraße 2 D-71149 Bondorf Germany	Tel. ..49(0)7457/8041 Fax ..49(0)7457/8044 Engineer in charge: <u>J. Bühne</u> J. Bühne

- This test report includes 6 pages. -

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**Notes:**

ELMAC GmbH informs the client that testing is done in accordance with the standard procedures stated under paragraph 2. All deviations will be listed separately.

The test results of this report exclusively refer to the specific sample tested under stated test conditions. ELMAC GmbH shall have no liability for any deductions, inferences or generalisations drawn from the test results.

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## 2. Test Specifications

**ISO/IEC 11801 First Edition 1995-07-15:**  
Information technology; Generic cabling for customer premises

**EN 50173/08.95:**  
Information technology; Generic cabling systems

**SP 2840-A/03.94:**  
Commercial building telecommunications cabling standard  
(Standards proposal)

**Limits:** Relating to 100- $\Omega$ -connecting hardware category 5

**Samples tested:** 4

**Tests performed:**

- Maximum Attenuation
- Minimum Next Loss

## 3. Specification of the Equipment Under Test (EUT)

**Equipment under test:**

**Type:** Lan Socket Mod.: LAN-PDU 2002

## 4. Test Results

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### 4.0. Remarks about test setup

The 8 pins of each tested device were combined to 4 twisted pairs signed in the tables and diagrams as AP1 ... AP4 (or P1 ... P4). The color code of the pairs is given in table 2.

Measuring is accomplished by connecting 2 pairs of the tested device to the port of the analyzer and changing the combination of pairs until all combinations had been tested.

Graphs of the measurements were taken and plotted. For a simple presentation of test results the worst case values of the 5 samples tested were listed in table 1 for the frequency range 1 MHz to 100 MHz.

### 4.1. Maximum Attenuation

The attenuation was measured as the signal power loss due to the connecting hardware and was derived from swept frequency voltage measured on short lengths of test leads before and after splicing in the connector.

A calibration sweep was performed before the transmission data were collected.

The summarized test results see table 1.

The required limits were met: YES

### 4.2. Minimum Next Loss

The Next loss was measured as the signal coupling from one cable pair to another. A balanced input signal was applied to a disturbing pair of the connector while the induced signal on the disturbed pair was measured.

A calibration sweep was performed before the transmission data were collected.

The summarized test results see table 1.

The required limits were met: YES

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**Table 1: Summarized Test Results**

Transmission Performance Parameter	Component or test standard	Requirements and Test Results		
		Frequency [MHz]	Cat. 5 Requ.	EUT Results
1. Maximum Attenuation [dB]	ISO/IEC 11801 Annex A, A.2.3.1  EN 50173 Annex B, B.1.3.1	1,0	0,1	0,02
		4,0	0,1	0,02
		10,0	0,1	0,02
		16,0	0,2	0,02
		20,0	0,2	0,04
		31,25	0,2	0,04
		62,5	0,3	0,22
		100,0	0,4	0,36
2. Minimum Next Loss [dB]	ISO/IEC 11801 Annex A, A.2.3.2  EN 50173 Annex B, B.1.3.2	1,0	>65	66,04
		4,0	>65	65,57
		10,0	60	60,04
		16,0	56	56,01
		20,0	54	54,08
		31,25	50	50,18
		62,5	44	44,27
		100,0	40	40,43

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**Table 2:** Color codes and pair combination (conform to T568A)

Color	Twisted-pairs
W-G	AP 3 (Pair 3)
G	
W-O	AP 1 (Pair 1)      AP 2 (Pair 2)
BL	
W-BL	
O	
W-BR	AP 4 (Pair 4)
BR	