# TEST RESULT SUMMARY EUROPEAN STANDARD EN 61000-3-2: 1995 + A14: 2000 EUROPEAN STANDARD EN 61000-3-3: 1995 

MANUFACTURER'S NAME

NAME OF EQUIPMENT

MODEL NUMBER(S)

MANUFACTURER'S ADDRESS

TEST REPORT NUMBER

## TEST DATE

## Digi International

Digi one SP Coldfire - Ethernet to Single Serial Port

55001037-01 Rev2

11001 Bren Road East
Minnetonka, MN 55343

NC203976.1

08 August 2002

According to testing performed at TÜV Product Service Inc, the above-mentioned unit is in compliance with the electromagnetic compatibility requirements defined in European Standards EN 61000-3-2: 1995 + Amendment A14: 2000 and EN 61000-3-3: 1995.

It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical characteristics. Any modifications necessary for compliance made during testing on the above mentioned date(s) must be implemented in all production units for compliance to be maintained.

TÜV Product Service Inc, as an independent testing laboratory, declares that the equipment tested as specified above complies with the requirements of European Standard EN 61000-3-2: 1995: Electromagnetic Compatibility - Part 3-2: Limits for Harmonic Current Emissions (Equipment Input Current $\leq 16$ Amps Per Phase), and with European Standard EN 61000-3-3: 1995: Electromagnetic Compatibility - Limitation of Voltage Fluctuations and Flicker in Low-Voltage Supply Systems for Equipment with Rated Current $\leq 16$ Amps.

Date: 06 September 2002


Doug L Dahl
EMC Technician


Curt D Propson
EMC Engineer

Not Transferable


| Product: <br> Serial no: | $55001037-01$ |  | Aug 082002 8:06am Page 1 of 1 |
| :---: | :---: | :---: | :---: |
| Description: <br> Result Name: | 10 / 100 Ethernet to single serial port terminal adapter.3976FH01 |  |  |
| Voltech IEC1000-3 Windows Software 3.02.03 |  | Test Date: | Aug 082002 8:00am |
| Type of Test: Power Analyzer: AC Source: | Fluctuating Harmonics Test - Worst Case Table (1995) <br> Voltech PM3000A v1.71 s/n 6802 <br> Mains / Manual Source |  |  |
| Overall Result: <br> PASS |  |  |  |
| Class | Class A |  |  |
| Class Multiplier | 1 |  |  |


| Harm | Reading | Limit 1 | Limit 2 | $\left\lvert\, \begin{array}{lll} <L 1 & & \\ & >L 1 & \\ & & \rightarrow L 1 \\ & & >L 2 \end{array}\right.$ | Result | Harm | Reading | Limit 1 | Limit 2 |  | Result |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 0.08 mA | 1.080A | 1.620A |  | N/A | 3 | 6.64 mA | 2.300 A | 3.450A | $\checkmark$ | Pass |
| 4 | 0.03 mA | 430 mA | 645 mA |  | N/A | 5 | 5.75 mA | 1.140A | 1.710A | $\checkmark$ | Pass |
| 6 | 0.04 mA | 300 mA | 450 mA |  | N/A | 7 | 0.72 mA | 770 mA | 1.155A |  | N/A |
| 8 | 0.02 mA | 230 mA | 345 mA |  | N/A | 9 | 0.53 mA | 400 mA | 600mA |  | N/A |
| 10 | 0.01 mA | 184 mA | 276 mA |  | N/A | 11 | 0.86 mA | 330 mA | 495 mA |  | N/A |
| 12 | 0.02 mA | 153 mA | 153 mA |  | N/A | 13 | 0.22 mA | 210 mA | 315mA |  | N/A |
| 14 | 0.01 mA | 131 mA | 131 mA |  | N/A | 15 | 0.22 mA | 150 mA | 225 mA |  | N/A |
| 16 | 0.01 mA | 115 mA | 115 mA |  | N/A | 17 | 0.25 mA | 132 mA | 199 mA |  | N/A |
| 18 | 0.02 mA | 102 mA | 102 mA |  | N/A | 19 | 0.10 mA | 118 mA | 178 mA |  | N/A |
| 20 | 0.01 mA | 92mA | 92 mA |  | N/A | 21 | 0.13 mA | 107 mA | 107 mA |  | N/A |
| 22 | 0.01 mA | 84 mA | 84 mA |  | N/A | 23 | 0.11 mA | 98 mA | 98 mA |  | N/A |
| 24 | 0.01 mA | 77 mA | 77 mA |  | N/A | 25 | 0.08 mA | 90 mA | 90 mA |  | N/A |
| 26 | 0.01 mA | 71 mA | 71 mA |  | N/A | 27 | 0.08 mA | 83 mA | 83 mA |  | N/A |
| 28 | 0.01 mA | 66 mA | 66 mA |  | N/A | 29 | 0.06 mA | 78 mA | 78 mA |  | N/A |
| 30 | 0.02 mA | 61 mA | 61 mA |  | N/A | 31 | 0.06 mA | 73 mA | 73 mA |  | N/A |
| 32 | 0.01 mA | 58 mA | 58 mA |  | N/A | 33 | 0.05 mA | 68 mA | 68 mA |  | N/A |
| 34 | 0.01 mA | 54 mA | 54mA |  | N/A | 35 | 0.03 mA | 64 mA | 64 mA |  | N/A |
| 36 | 0.01 mA | 51 mA | 51mA |  | N/A | 37 | 0.05 mA | 61 mA | 61 mA |  | N/A |
| 38 | 0.01 mA | 48 mA | 48 mA |  | N/A | 39 | 0.04 mA | 58mA | 58mA |  | N/A |
| 40 | 0.01 mA | 46 mA | 46 mA |  | N/A |  |  |  |  |  |  |

<L1: Reading is below limit 1.
$>$ L1: Reading is above limit 1 for less than $10 \%$ of a $21 / 2$ minute window.
$\rightarrow L 1$ : Reading is above limit 1 for more than $10 \%$ of a $21 / 2$ minute window.
$>$ L2 : Reading is above limit 2.
N/A : Harmonic current below $0.6 \%$ of rated current or 5 mA , whichever is greater, are disregarded.



| Product: <br> Serial no: <br> Description: <br> Result Name | $\begin{aligned} & \text { 55001037-01 } \\ & \text { DLD } \end{aligned}$ |  |  |  |  | Aug 082 <br> Page 1 | 8:07am |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 10 / 100 Ethemet to single serial port terminal adapter. 3976FH01 |  |  |  |  |  |  |
| Voltech IEC1000-3 Windows Software 3.02.03 |  |  |  |  | Test Date | Aug 082002 8:00am |  |
| Type of Test: F <br> Power Analyzer: V <br> AC Source: M |  | Fluctuating Harmonics Test - Source Qualification (1995) Voltech PM3000A v1.71 s/n 6802 <br> Mains / Manual Source |  |  |  |  |  |
| Overall Resu <br> PASS |  |  |  |  |  |  |  |
|  | Nominal |  | Measured | Deviation | Allowed Deviation |  | Result |
| Supply Voltage |  | 230.00 V | 230.40 V | 0.40V |  |  | Pass |
| Supply Frequency |  | 50.00 Hz | 50.01 Hz | 0.01 Hz | $\overline{0.25 \mathrm{~Hz}}$ |  | Pass |
| Harmonic | Reading | Limit | Result | Harmonic | Reading | Limit | Result |
| 2 | 0.03\% | 0.20\% | Pass | 3 | 0.05\% | 0.90\% | Pass |
| 4 | 0.03\% | 0.20\% | Pass | 5 | 0.02\% | 0.40\% | Pass |
| 6 | 0.02\% | 0.20\% | Pass | 7 | 0.01\% | 0.30\% | Pass |
| 8 | 0.02\% | 0.20\% | Pass | 9 | 0.02\% | 0.20\% | Pass |
| 10 | 0.02\% | 0.20\% | Pass | 11 | 0.02\% | 0.10\% | Pass |
| 12 | 0.03\% | 0.10\% | Pass | 13 | 0.01\% | 0.10\% | Pass |
| 14 | 0.02\% | 0.10\% | Pass | 15 | 0.01\% | 0.10\% | Pass |
| 16 | 0.01\% | 0.10\% | Pass | 17 | 0.02\% | 0.10\% | Pass |
| 18 | 0.01\% | 0.10\% | Pass | 19 | 0.02\% | 0.10\% | Pass |
| 20 | 0.01\% | 0.10\% | Pass | 21 | 0.01\% | 0.10\% | Pass |
| 22 | 0.02\% | 0.10\% | Pass | 23 | 0.02\% | 0.10\% | Pass |
| 24 | 0.01\% | 0.10\% | Pass | 25 | 0.01\% | 0.10\% | Pass |
| 26 | 0.01\% | 0.10\% | Pass | 27 | 0.02\% | 0.10\% | Pass |
| 28 | 0.01\% | 0.10\% | Pass | 29 | 0.01\% | 0.10\% | Pass |
| 30 | 0.02\% | 0.10\% | Pass | 31 | 0.01\% | 0.10\% | Pass |
| 32 | 0.01\% | 0.10\% | Pass | 33 | 0.02\% | 0.10\% | Pass |
| 34 | 0.01\% | 0.10\% | Pass | 35 | 0.02\% | 0.10\% | Pass |
| 36 | 0.02\% | 0.10\% | Pass | 37 | 0.02\% | 0.10\% | Pass |
| 38 | 0.02\% | 0.10\% | Pass | 39 | 0.02\% | 0.10\% | Pass |
| 40 | 0.02\% | 0.10\% | Pass |  |  |  |  |


| Product: <br> Serial no: | $\begin{aligned} & 55001037-01 \\ & \text { DLD } \end{aligned}$ |  |  | Aug 082002 8:22am Page 1 of 1 |
| :---: | :---: | :---: | :---: | :---: |
| Description: Result Name: | 10/100 Ethernet to single serial port terminal adapter. 3976FM01 |  |  |  |
| Voltech IEC1000-3 Windows Software 3.02.03 |  |  | Test Date: | Aug 082002 8:09am |
| Type of Test: Power Analyzer: AC Source: | Flickermeter Test - Table <br> Voltech PM3000A v1.71 s/n 6802 <br> Mains / Manual Source |  |  |  |
| Overall Result: <br> PASS | Notes: <br> Measurement method - Voltage |  |  |  |
|  | Pst | dc (\%) | dmax (\%) | $\mathrm{d}(\mathrm{t})>3 \%(\mathrm{~ms})$ |
| Limit | 1.000 | 3.000 | 4.000 | 200 |
| Reading 1 | 0.076 | 0.017 | 0.069 | 0 |

