



# PRODUCT SPECIFICATION

## M12 CAT6A CORDSETS and RECEPTACLES

### 1.0 SCOPE

This Product Specification covers the M12 CAT6A series with cordsets and receptacles.

### 2.0 PRODUCT DESCRIPTION

The M12 CAT6A series receptacles and cordsets are for high speed data transmission suited to transmit up to 10Gbit Ethernet Data.

The design covers the need for POE Transmission, and keeps the benefit of sealing and form Factor coming from the M12 standard.

### 2.1 PRODUCT NAME AND SERIES NUMBER(S)

#### CORDSETS:

|            |                                           |
|------------|-------------------------------------------|
| 1203410300 | M12 CAT6A CORDSET STANDARD PUR AWG26 0.5M |
| 1203410301 | M12 CAT6A CORDSET STANDARD PUR AWG26 1M   |
| 1203410302 | M12 CAT6A CORDSET STANDARD PUR AWG26 2M   |
| 1203410303 | M12 CAT6A CORDSET STANDARD PUR AWG26 3M   |
| 1203410304 | M12 CAT6A CORDSET STANDARD PUR AWG26 4M   |
| 1203410305 | M12 CAT6A CORDSET STANDARD PUR AWG26 5M   |
| 1203410306 | M12 CAT6A CORDSET STANDARD PUR AWG26 10M  |



#### RECEPTACLES:

1203410075 M12 CAT6A REC ASSY FRONT MOUNT

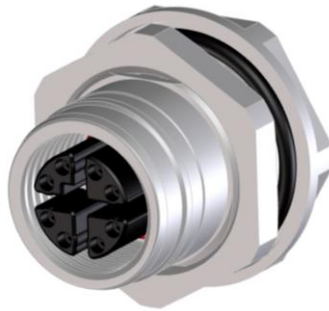


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| <b>PS-120341-001</b> | <b>Z. ISMAYILOV</b>                                       | <b>C. BURGER</b>                                                             | <b>A. VOGT</b> |



# PRODUCT SPECIFICATION

1203410150 M12 CAT6a REC ASSY BACK MOUNT



## 2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See the appropriate sales drawings for information on dimensions, materials, platings and markings

## 2.3 SAFETY AGENCY APPROVALS

none

## 3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

See the sales drawings and the other sections of this specification for the necessary referenced documents and specifications

IEC 61076-2-109 Ed 1.0  
IEC 60512-29-100 Ed 1.0

## 4.0 RATINGS

### 4.1 VOLTAGE

48 Volts AC (RMS)  
Test voltage 500 V RMS

### 4.2 CURRENT

0.5 Amps

### 4.3 TEMPERATURE

Operating: - 40°C to + 70°C (Cable limit this)

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| <b>PS-120341-001</b> | <b>Z. ISMAYILOV</b>                                       | <b>C. BURGER</b>                                                             | <b>A. VOGT</b> |



# PRODUCT SPECIFICATION

## 5.0 PERFORMANCE

### 5.1 ELECTRICAL REQUIREMENTS

| ITEM | DESCRIPTION                                                    | TEST CONDITION                                                                      | REQUIREMENT                                                                  |
|------|----------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| 1    | Rated voltage –<br>Rated impulse voltage<br>– Pollution degree | Mated connectors<br>IEC 60664-1                                                     | Rated voltage – 48V<br>Rated impulse voltage – 1.5kV<br>Pollution degree - 3 |
| 2    | Voltage proof                                                  | Mated connectors<br>IEC 60512-4-1, Test 4a<br>Standard atmospheric conditions       | 0.5 kV                                                                       |
| 3    | Current-carrying<br>capacity                                   | IEC 60512, Test 5a<br>All contacts<br>Values at 40 °C ambient temperature           | 0.5 A                                                                        |
| 4    | Contact<br>Resistance                                          | IEC 60512, Test 2a<br>Standard atmospheric conditions                               | 5mΩ<br>MAXIMUM                                                               |
| 5    | Insulation<br>Resistance                                       | Mated connectors<br>IEC 60512, Test 3a, Method A<br>Standard atmospheric conditions | 100 MΩ<br>MINIMUM                                                            |

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# PRODUCT SPECIFICATION

## 5.2 MECHANICAL REQUIREMENTS

| ITEM | DESCRIPTION                     | TEST CONDITION                                                                                                                                                                                                                                                      | REQUIREMENT                                                                                                                                                                                                             |
|------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7    | IP degree of protection         | According to IEC 60529 connectors in mated and locked position                                                                                                                                                                                                      | IP65 and IP67                                                                                                                                                                                                           |
| 8    | Mechanical operation            | IEC 60512, Test 9a<br>Standard atmospheric conditions<br>Max. speed of operations = 10 mm/s<br>Rest: 30 s, unmated.                                                                                                                                                 | 100 (gold)                                                                                                                                                                                                              |
| 9    | Insertion and withdrawal forces | IEC 60512, Test 13b<br>Standard atmospheric conditions<br>Max. speed = 10 mm/s                                                                                                                                                                                      | 30 N<br>MAXIMUM                                                                                                                                                                                                         |
| 10   | Contact retention in insert     | Not applicable                                                                                                                                                                                                                                                      | Not applicable                                                                                                                                                                                                          |
| 11   | Polarizing method               | IEC 60512, Test 13e                                                                                                                                                                                                                                                 | Engaging force:<br>1,5 x total insertion force<br>but 35 N min.                                                                                                                                                         |
| 12   | Vibration (sinusoidal)          | IEC 60512, Test 6d<br>Standard atmospheric conditions<br>Connectors in mated and locked position<br>The fixed and free connector shall be rigidly installed in a suitable fixture as specified in dynamic stress tests.<br>F = 10 Hz to 500 Hz<br>Ampl. = 0.35 mm   | Contact disturbance:<br>Discontinuity 10 $\mu$ s. maximum<br>No damage<br>Dielectric withstanding voltage:<br>No breakdown<br>Contact Resistance:<br>Max. change from initial<br>5 m $\Omega$ (shield. 100 M $\Omega$ ) |
| 13   | Shock                           | IEC 60512 Test 6c<br>Connectors in mated and locked position<br>The fixed and free connector shall be rigidly installed in a suitable fixture as specified in dynamik stress tests.<br>Half sine shock acceleration 490m/s <sup>2</sup><br>Duration of impact: 11ms | Visual: No Damage<br>Contact Resistance:<br>Max. change from initial<br>4.5M $\Omega$ (SHIELD. 100 M $\Omega$ )                                                                                                         |

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# PRODUCT SPECIFICATION

## 5.3 TEST SCHEDULE

According to: IEC 61076-2-109 Ed 1.0 and IEC 60512-29-100 Ed 1.0

### 5.3.1 TEST GROUP P-PRELIMINARY

| Test phase | Test                |                    |                                                               | Measurement to be performed                 |                    | Requirements                                                |
|------------|---------------------|--------------------|---------------------------------------------------------------|---------------------------------------------|--------------------|-------------------------------------------------------------|
|            | Title               | IEC 60512 Test No. | Severity or condition of test                                 | Title                                       | IEC 60512 Test No. | All connector styles                                        |
| P1         | General examination | 1                  | Unmated connectors                                            | Visual examination                          | 1a                 | There shall be no defect that would impair normal operation |
|            |                     |                    |                                                               | Dimensional examination                     | 1b                 | The dimensions specified in IEC 61076-2-109 Ed1             |
| P2         |                     |                    | Connection points according to dwg all contacts per specimens | Contact resistance – Millivolt level method | 2a                 | Initial value according to 5.1.4                            |
| P3         |                     |                    | Test voltage 500 V $\pm$ 15 V d.c. Method A                   | Insulation resistance                       | 3a                 | Initial value according to 5.1.5                            |
| P4         |                     |                    | Contact/ contact same measuring points as for P3              | Voltage proof                               | 4a                 | According to 5.1.2                                          |

|                      |                                                           |                                                                              |                |
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# PRODUCT SPECIFICATION

## 5.3.2 TEST GROUP AP – DYNAMIC/ CLIMAT

| Test phase | Test                        |                    |                                                                            | Measurement to be performed                 |                    | Requirements                                                |
|------------|-----------------------------|--------------------|----------------------------------------------------------------------------|---------------------------------------------|--------------------|-------------------------------------------------------------|
|            | Title                       | IEC 60512 Test No. | Severity or condition of test                                              | Title                                       | IEC 60512 Test No. | All connector styles                                        |
| AP1        |                             |                    | See 5.2.9                                                                  | Insertion and withdrawal forces             | 13b                | Requirements see 5.2.9                                      |
| AP2        | Gauge retention force       |                    | Female contacts only 3 contacts/ specimen sizing and retention force gauge | Engaging and separating forces              | 16e                |                                                             |
| AP3        | Vibration                   | 6d                 | Sweep cycles: 10<br>Full duration: 6 h<br>See 5.2.12                       | Contact disturbance                         | 2e                 | Duration of disturbance 1 $\mu$ s max.                      |
|            |                             |                    |                                                                            | Contact resistance – Millivolt level method | 2a                 | Rise in relation to initial values $\leq 10$ m $\Omega$     |
|            |                             |                    |                                                                            | Visual examination                          | 1a                 | There shall be no defect that would impair normal operation |
| AP4        | Shock                       | 6c                 | See 5.2.13                                                                 | Contact disturbance                         | 2e                 | Duration of disturbance 1 $\mu$ s max.                      |
|            |                             |                    |                                                                            | Contact resistance – Millivolt level method | 2a                 | Rise in relation to initial values $\leq 10$ m $\Omega$     |
|            |                             |                    |                                                                            | Visual examination                          | 1a                 | There shall be no defect that would impair normal operation |
| AP5        | Rapid change of temperature | 11d                | -25 °C to 85 °C<br>t = 30 min.<br>5 cycles                                 | Contact resistance – Millivolt level method | 2a                 | Rise in relation to initial values $\leq 10$ m $\Omega$     |
|            |                             |                    |                                                                            | Insulation resistance                       | 3a                 | Initial value according to 5.1.5                            |
|            |                             |                    |                                                                            | Voltage proof                               | 4a                 | According to 5.1.2                                          |
|            |                             |                    |                                                                            | Visual examination                          | 1a                 | There shall be no defect that would impair normal operation |

|                      |                                                           |                                                                              |                |
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# PRODUCT SPECIFICATION

## 5.3.2 TEST GROUP AP – DYNAMIC/ CLIMAT (continued)

| Test phase | Test                                |                    |                                                                 | Measurement to be performed                 |                    | Requirements                                                                                                                                                                                                             |
|------------|-------------------------------------|--------------------|-----------------------------------------------------------------|---------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | Title                               | IEC 60512 Test No. | Severity or condition of test                                   | Title                                       | IEC 60512 Test No. | All connector styles                                                                                                                                                                                                     |
| AP6        | Climatic sequence                   | 11a                |                                                                 |                                             |                    |                                                                                                                                                                                                                          |
| AP6.1      | Dry heat                            | 11i                | Temperature: 85 °C<br>Duration: 16 h                            | Insulation resistance at high temperature   | 3a                 | Initial value according to 5.1.5                                                                                                                                                                                         |
| AP6.2      | Damp heat, cyclic, first cycle      | 11m                | Method Db<br>Temperature: 40 °C<br>Recovery time: 2 h           | Visual examination                          | 1a                 | There shall be no defect that would impair normal operation                                                                                                                                                              |
| AP6.3      | Cold                                | 11j                | Temperature: -25 °C<br>Duration: 2 h<br>Recovery time: 2 h      | Visual examination                          | 1a                 | There shall be no defect that would impair normal operation                                                                                                                                                              |
| AP6.4      | Damp heat, cyclic, remaining cycles | 11m                | Conditions according to AP6.2<br>5 cycles<br>Recovery time: 2 h | Contact resistance – Millivolt level method | 2a                 | Rise in relation to initial values<br>≤15 mΩ                                                                                                                                                                             |
|            |                                     |                    |                                                                 | Insulation resistance                       | 3a                 | Initial value according to 5.1.5                                                                                                                                                                                         |
|            |                                     |                    |                                                                 | Voltage proof                               | 4a                 | According to 5.1.2                                                                                                                                                                                                       |
|            |                                     |                    |                                                                 | Insertion and withdrawal forces             | 13b                | Requirements see 5.2.9                                                                                                                                                                                                   |
|            |                                     |                    |                                                                 | Visual examination                          | 1a                 | There shall be no defect that would impair normal operation                                                                                                                                                              |
| AP7        | IP Protection degree                | IEC 60529          |                                                                 | Table 1 of IEC 60529                        |                    | According to 5.2.7                                                                                                                                                                                                       |
| AP8        |                                     |                    |                                                                 | Visual examination                          | 1a                 | There shall be no defect that would impair normal operation                                                                                                                                                              |
| AP9        | Polarizing method                   | 13e                | See 5.2.11                                                      |                                             |                    | It shall be possible to correctly align and mate the appropriate mating connectors.<br>It shall not be possible to mate the connectors in any other than the correct manner. The insertion and withdrawal forces acc.AP1 |

|                                          |                                                           |                                                                              |                                 |                                |
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# PRODUCT SPECIFICATION

## 5.3.3 TEST GROUP BP – MECHANICAL ENDURANCE

| Test phase | Test                                                              |                    |                                                                                                                       | Measurement to be performed               |                    | Requirements                                                 |
|------------|-------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------|--------------------------------------------------------------|
|            | Title                                                             | IEC 60512 Test No. | Severity or condition of test                                                                                         | Title                                     | IEC 60512 Test No. | All connector styles                                         |
| BP1        |                                                                   |                    | Female contacts only 3 contacts/specimen sizing and retention force gauge                                             | Gauge retention force                     | 16e                |                                                              |
| BP2        | Mechanical operation (half of the specified number of operations) | 9a                 | Speed 10 mm/s max.<br>Rest 30 s (unmated)<br>Operations see 5.2.8<br>Speed: 10 mm/s max.<br>Rest time: 30 s (unmated) |                                           |                    |                                                              |
|            |                                                                   |                    |                                                                                                                       | Contact resistance-Millivolt level method | 2a                 | Rise in relation to initial values $\leq 15 \text{ m}\Omega$ |
|            |                                                                   |                    |                                                                                                                       | Visual examination                        | 1a                 | There shall be no defect that would impair normal operation  |
| BP3        | Climatic test                                                     |                    |                                                                                                                       |                                           |                    |                                                              |
| BP3.1      | Corrosion industrial atmosphere                                   | 11g                | Flowing mixed gas corrosion - 4 days, test method 4 according IEC 60068-2-60                                          | Contact resistance-Millivolt level method | 2a                 | Rise in relation to initial values $\leq 15 \text{ m}\Omega$ |

|                                          |                                                           |                                                                              |                                 |                                |
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# PRODUCT SPECIFICATION

## 5.3.3 TEST GROUP BP – MECHANICAL ENDURANCE (continued)

| Test phase | Test                                                                    |                    |                                                                              | Measurement to be performed                 |                    | Requirements                                                 |
|------------|-------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------|---------------------------------------------|--------------------|--------------------------------------------------------------|
|            | Title                                                                   | IEC 60512 Test No. | Severity or condition of test                                                | Title                                       | IEC 60512 Test No. | All connector styles                                         |
| BP4        | Mechanical operation (remaining half of specified number of operations) | 9a                 | See BP2                                                                      | Contact resistance – Millivolt level method | 2a                 | Rise in relation to initial values $\leq 10 \text{ m}\Omega$ |
|            |                                                                         |                    |                                                                              | Insulation resistance                       | 3a                 | Initial value according to 5.1.5                             |
|            |                                                                         |                    |                                                                              | Voltage proof                               | 4a                 | According to 5.1.2                                           |
|            |                                                                         |                    | Unmated connectors                                                           | Visual examination                          | 1a                 | There shall be no defect that would impair normal operation  |
| BP5        |                                                                         |                    |                                                                              | Insertion and withdrawal forces             | 13b                | For requirements, see 5.2.9                                  |
| BP6        |                                                                         |                    | Female contacts only<br>3 contacts/specimen sizing and retention force gauge | Gauge retention force                       | 16e                |                                                              |

|                                          |                                                           |                                                                              |                                 |                                |
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# PRODUCT SPECIFICATION

## 5.3.4 TEST GROUP CP – ELECTRICAL LOAD

| Test phase | Test                            |                    |                                                                                                                                             | Measurement to be performed                 |                    | Requirements                                                |
|------------|---------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|--------------------|-------------------------------------------------------------|
|            | Title                           | IEC 60512 Test No. | Severity or condition of test                                                                                                               | Title                                       | IEC 60512 Test No. | All connector styles                                        |
| CP1        | Rapid change of temperature     | 11d                | -25 °C to 85 °C $r = 1$ h<br>5 cycles                                                                                                       | Contact resistance – Millivolt level method | 2a                 | Rise in relation to initial values $\leq 15$ m $\Omega$     |
|            |                                 |                    |                                                                                                                                             | Insulation resistance                       | 3a                 | Initial value according to 5.1.5                            |
|            |                                 |                    |                                                                                                                                             | Voltage proof                               | 4a                 | According to 5.1.2                                          |
| CP2        | Mechanical Operation            | 9a                 | See BP2                                                                                                                                     |                                             |                    |                                                             |
| CP3        | Electrical load and temperature | 9b                 | Duration: 1 000 h<br>Amp.Temp.: 40 °C<br>Current load according to 5.1.3<br>Recovery time: 2 h<br>Temperature: sensor in center of specimen | Contact resistance – Millivolt level method | 2a                 | Rise in relation to initial values $\leq 15$ m $\Omega$     |
|            |                                 |                    |                                                                                                                                             | Insulation resistance                       | 3a                 | Initial value according to 5.1.5                            |
|            |                                 |                    |                                                                                                                                             | Voltage proof                               | 4a                 | According to 5.1.2                                          |
| CP4        |                                 |                    | Unmated connectors                                                                                                                          | Visual examination                          | 1a                 | There shall be no defect that would impair normal operation |

|                      |                                                           |                                                                              |                 |
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# PRODUCT SPECIFICATION

## 5.3.5 TEST GROUP DP – CHEMICAL RESISTIVITY

| Test phase | Test                                       |                    |                                                         | Measurement to be performed          |                    | Requirement                                                  |
|------------|--------------------------------------------|--------------------|---------------------------------------------------------|--------------------------------------|--------------------|--------------------------------------------------------------|
|            | Title                                      | IEC 60512 Test No. | Severity or condition of test                           | Title                                | IEC 60512 Test No. | All connector styles                                         |
| DP1        | Resistance to fluids                       | 19c                | Upon agreement between manufacturer and user            |                                      |                    | Upon agreement between manufacturer and user                 |
| DP2        | Retreatment                                |                    | Clearing of specimen by washing briefly in light petrol | Contact resistance – Millivolt level | 2a                 | Rise in relation to initial values $\leq 15 \text{ m}\Omega$ |
| DP3        |                                            |                    |                                                         | Voltage proof                        | 4a                 | According to 5.1.2                                           |
| DP4        |                                            |                    | Unmated connectors                                      | Visual examination                   | 1a                 | There shall be no defect that would impair normal operation  |
| DP5        | Solderability, wetting, iron method        | 12b                | Iron size B                                             |                                      |                    |                                                              |
| DP6        | Resistance to soldering heat, iron methode | 12e                | Iron size B                                             |                                      |                    |                                                              |

## 5.3.6 TEST GROUP EP – CONNECTION METHOD TESTS

| Test phase | Test                                  |                    |                               | Measurement to be performed |                    | Requirement          |
|------------|---------------------------------------|--------------------|-------------------------------|-----------------------------|--------------------|----------------------|
|            | Title                                 | IEC 60512 Test No. | Severity or condition of test | Title                       | IEC 60512 Test No. | All connector styles |
| EP1        | crimp terminations                    |                    |                               |                             |                    |                      |
| EP1.1      | Tensile strength (crimped connection) | 16d                | According to IEC 60352-2      |                             |                    |                      |

|                                          |                                                           |                                              |                                                                     |                                |                 |
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# PRODUCT SPECIFICATION

## 5.3.7 TEST GROUP FP – ELECTRICAL TRANSMISSION REQUIREMENTS

| Test phase | Test  |                    |                                            | Measurement to be performed |                          |                                                                                                                                                                                                                                                                                          |
|------------|-------|--------------------|--------------------------------------------|-----------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | Title | IEC 60512 Test No. | Severity or condition of test              | Title                       | IEC 60512 Test No.       | Requirements                                                                                                                                                                                                                                                                             |
| FP 1       |       |                    | All pairs                                  | Insertion loss              | 60512-29-100<br>Test 29a | Mated connectors<br>All pairs:<br>$\leq 0,02 \sqrt{f}$ dB from 1 to 500 MHz<br><br>Whenever the formula results in a value less than 0,1 dB, the requirement shall revert to 0,1 dB.                                                                                                     |
| FP 2       |       |                    | All pairs, both directions, (pair to pair) | NEXT loss                   | 60512-29-100<br>Test 29c | Mated connectors<br><br>All pair combinations:<br>$\geq 94-20\log(f)$ dB from 1 to 250 MHz<br><br>All pair combinations:<br>$\geq 46,04 -30\log(f/250)$ dB from 250 to 500 MHz<br><br>Whenever the formula results in a value greater than 80 dB, the requirement shall revert to 80 dB. |
| FP 3       |       |                    | All pairs, both directions                 | Return loss                 | 60512-29-100<br>Test 29b | Mated connectors<br><br>All pairs: $\geq 68-20\log(f)$ dB from 1 to 500 MHz<br><br>Whenever the formula results in a value greater than 30 dB, the requirement shall revert to 30 dB.                                                                                                    |
| FP 4       |       |                    | All pairs, both directions, (pair to pair) | FEXT loss                   | 60512-29-100<br>Test 29d | Mated connectors<br><br>All pair combinations:<br>$\geq 83,1-20\log(f)$ dB from 1 to 500 MHz<br><br>Whenever the formula results in a value greater than 75 dB, the requirement shall revert to 75 dB.                                                                                   |

|                      |                                                           |                                                                              |                 |  |
|----------------------|-----------------------------------------------------------|------------------------------------------------------------------------------|-----------------|--|
| REVISION:            | ECR/ECN INFORMATION:                                      | TITLE:                                                                       | SHEET No.       |  |
| <b>1</b>             | EC No: <b>IPG2012-0269</b><br>DATE: <b>2012 / 04 / 13</b> | <b>PRODUCT SPECIFICATION FOR<br/>M12 CAT 6A CORDSETS AND<br/>RECEPTACLES</b> | <b>12 of 14</b> |  |
| DOCUMENT NUMBER:     | CREATED / REVISED BY:                                     | CHECKED BY:                                                                  | APPROVED BY:    |  |
| <b>PS-120341-001</b> | <b>Z. ISMAYILOV</b>                                       | <b>C. BURGER</b>                                                             | <b>A. VOGT</b>  |  |



# PRODUCT SPECIFICATION

## 5.3.7 TEST GROUP FP – ELECTRICAL TRANSMISSION REQUIREMENTS (continued)

| Test phase | Test                       |                    |                                                                                     | Measurement to be performed |                       |                                                                                                                                                                                                |
|------------|----------------------------|--------------------|-------------------------------------------------------------------------------------|-----------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | Title                      | IEC 60512 Test No. | Severity or condition of test                                                       | Title                       | IEC 60512 Test No.    | Requirements                                                                                                                                                                                   |
| FP 5       |                            |                    | All pairs, both directions                                                          | TCL                         | 60512-29-100 Test 29f | Mated connectors<br><br>All pairs:<br>$\geq 68-20\log(f)$ dB from 1 to 500 MHz<br><br>Whenever the formula results in a value greater than 50 dB, the requirement shall revert to 50 dB.       |
| FP 6       |                            |                    | All pairs, both directions                                                          | TCTL                        | 60512-29-100 Test 29g | Mated connectors<br><br>All pairs:<br>$\geq 68-20\log(f)$ dB from 1 to 500 MHz<br><br>Whenever the formula results in a value greater than 50 dB, the requirement shall revert to 50 dB.       |
| FP 7       | Input to Output resistance |                    | Measurement points as defined in 6.4.5 All input/output connector paths             | Millivolt level method      | 2a                    | Per 6.4.5                                                                                                                                                                                      |
| FP 8       | Resistance unbalance       |                    | Measurement points as defined in 6.4.6 All input/output connector path combinations | Millivolt level method      | 2a                    | Per 6.4.6                                                                                                                                                                                      |
| FP 9       |                            |                    | All pairs, both directions                                                          | PSANEXT                     | 60512-25-9            | Mated connectors<br><br>All pairs:<br>$\geq 110,5 - 20\log(f)$ dB from 1 MHz to 500 MHz                                                                                                        |
| FP 10      |                            |                    | All pairs, both directions                                                          | PSAFEXT                     | 60512-25-9            | Mated connectors<br><br>All pairs:<br>$\geq 107 - 20\log(f)$ dB from 1 MHz to 500 MHz<br><br>Whenever the formula results in a value greater than 67 dB, the requirement shall revert to 67 dB |

|                      |                                                           |                                                                              |                 |
|----------------------|-----------------------------------------------------------|------------------------------------------------------------------------------|-----------------|
| REVISION:            | ECR/ECN INFORMATION:                                      | TITLE:                                                                       | SHEET No.       |
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| DOCUMENT NUMBER:     | CREATED / REVISED BY:                                     | CHECKED BY:                                                                  | APPROVED BY:    |
| <b>PS-120341-001</b> | <b>Z. ISMAYILOV</b>                                       | <b>C. BURGER</b>                                                             | <b>A. VOGT</b>  |



# PRODUCT SPECIFICATION

## 6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage.  
Please refer to packaging specification:

PK-120341-075 (Receptacles);

PK-120341-300 (Cordsets).

|                      |                                                           |                                                                              |                 |
|----------------------|-----------------------------------------------------------|------------------------------------------------------------------------------|-----------------|
| REVISION:            | ECR/ECN INFORMATION:                                      | TITLE:                                                                       | SHEET No.       |
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| DOCUMENT NUMBER:     | CREATED / REVISED BY:                                     | CHECKED BY:                                                                  | APPROVED BY:    |
| <b>PS-120341-001</b> | <b>Z. ISMAYILOV</b>                                       | <b>C. BURGER</b>                                                             | <b>A. VOGT</b>  |

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,  
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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