ESD 30N
ELECTROSTATIC DISCHARGE SIMULATOR UP TO 30KV

FOR TESTS ACCORDING TO ...

- BMW 600 13.0 (Part 2)
- BMW GS 95002 (1999)
- DaimlerChrysler DC-10613
- DaimlerChrysler DC-10614
- DaimlerChrysler DC-11224
- EN 61000-4-2
- Ford EMC-CS-2009.1
- Ford ES-XW7T-1A278-AB
- Ford ES-XW7T-1A278-AC
- GMW 3097
- GMW 3097 (2001)
- GMW 3097 (2004)
- GMW 3097 (2006)
- GMW 3100
- GMW 3100 (2001)
- Hyundai/Kia ES 96100-02 (2006)
- IEC 61000-4-2
- IEC 61326
- ISO 10605
- JASO D001-94
- Mazda MES PW 67600
- ...

ESD 30N - GENERATES ESD PULSES ABOVE EN/IEC 61000-4-2 TEST LEVELS

Electrostatic discharges either from a human body to any other part or between two different objects can cause persistent disturbances or even destruction to sensitive electronics or controls.

ESD 30N is an ESD tester to simulate ESD pulses at higher voltages up to 30kV in both air and contact discharge mode. It therefore satisfies requirements exceeding the EN/IEC 61000-4-2 test levels and complies to automotive test applications.

HIGHLIGHTS

- Test voltage up to 30kV for air and contact discharge
- Discharges up to 20Hz
- Easy-to-change R/C-networks and tips
- Bleed-Off function
- Measurement of temperature and humidity
- AC mains supply and DC supply
- Battery operated
- External trigger function

APPLICATION AREAS

- AUTOMOTIVE
- INDUSTRY
- MEDICAL
- BROADCAST
- RESIDENTIAL
- COMPONENTS
- TELECOM
- RENEWABLE ENERGY
- MILITARY
- AVIONICS
## TECHNICAL DETAILS

### TEST LEVEL

| Test voltage | 200V - 30,000V ± 5% for contact discharge |
| Test voltage | 200V - 30,000V ± 5% for air discharge |
| Resolution | 100V steps |
| Holding time (AD) | More than 5s |

### MAINFRAME ESD 30N

| HV power supply | Up to 30kV DC |
| Battery | Approx. 1 hour operation; Buffer battery is automatically recharged when connected to AC mains supply |
| Interface | USB to control the ESD generator and to download pre-programmed test routines from esd.control |

### DISCHARGE UNIT P 30N

- Hand held discharge unit
- Controls | 2 function keys and one control wheel |
- Display | Graphic LCD display |
- Test level | 200V to 30,000V |
- Polarity | Positive, negative; selectable |
- Discharge mode | Air or Contact discharge, selectable |
- Discharge tip | Point and ball type |
- Indicators | Integrated sensor to measure temperature and rel. humidity |

### OUTPUT

| Contact | Discharge Pulse | As per EN/IEC 61000-4-2; 150pF/330ohm |
| Rise time | As per EN/IEC 61000-4-2 Ed.2 0.8ns +/- 25% |
| First peak current value | As per EN/IEC 61000-4-2 Ed.2 7.5A ± 15% @2kV 15A ± 15% @4kV 22.5A ± 15% @6kV 30A ± 15% @8kV |
| Current value at 30ns | As per EN/IEC 61000-4-2 Ed.2 4.0A ± 30% @2kV 8.0A ± 30% @4kV 12.0A ± 30% @6kV 16.0A ± 30% @8kV |
| Current value at 60ns | As per EN/IEC 61000-4-2 Ed.2 2.0A ± 30% @2kV 4.0A ± 30% @4kV 6.0A ± 30% @6kV 8.0A ± 30% @8kV |

### TRIGGER

| Single pulse | Release of a single pulse |
| Multiple pulses | Continuous discharge up to 20Hz |
| Counter | 0 - 9,999 for discharge pre-selection |

### GENERAL

| Weight | Approx. 5.1kg (ESD 30N control unit) |
| Weight | Approx. 1.250g (P 30N discharge gun) |
| Supply voltage | AC: 88V - 264V, 50/60Hz DC: 11V - 16VDC |
| Fuses | 2x 0.5A T |

### ACCESSORIES (INCLUDED)

- Discharge tips for AD and CD
- Grounding lead 2m
- Test certificate and instruction manual
## TECHNICAL DETAILS

<table>
<thead>
<tr>
<th>OPTIONS (NOT INCLUDED)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RCN 1</td>
<td>150pF/330 Ohm discharge network</td>
</tr>
<tr>
<td>RCN 2</td>
<td>150pF/2000 Ohm discharge network</td>
</tr>
<tr>
<td>RCN 3</td>
<td>330pF/2000 Ohm discharge network</td>
</tr>
<tr>
<td>RCN 4</td>
<td>100pF/1500 Ohm discharge network</td>
</tr>
<tr>
<td>RCN 5</td>
<td>330pF/330 Ohm discharge network</td>
</tr>
<tr>
<td>RCN 6</td>
<td>150pF/150 Ohm discharge network</td>
</tr>
<tr>
<td>RCN x</td>
<td>Customer specific discharge network</td>
</tr>
<tr>
<td>P 30N-30</td>
<td>30mm discharge electrode</td>
</tr>
<tr>
<td>VCP</td>
<td>Vertical coupling plane</td>
</tr>
<tr>
<td>EAS30</td>
<td>Grounding resistors 2 x 470kOhm</td>
</tr>
<tr>
<td>CSL 200</td>
<td>Field coupling plane and field coupling strip as per ISO 10605, Annex F and DC-11224 for ESD powered-up test of electronic modules, requires EAS 30</td>
</tr>
<tr>
<td>esd.control</td>
<td>Remote control and documentation software for ESD testing. Supports the creation of test plans and download of related test sequences into the ESD generator</td>
</tr>
<tr>
<td>OptoLink</td>
<td>Fiber optic link between dito and PC (USB port) fitted with USB A connector, length 3m or 6m, max. baud rate of 19,200.</td>
</tr>
</tbody>
</table>
COMPETENCE WHEREVER YOU ARE

Contact EM Test Directly

Switzerland
EM TEST (Switzerland) GmbH > Sternenhofstraße 15 > 4153 Reinach > Switzerland
Phone +41 (0)61/717919 > Fax +41 (0)61/7179199
Internet: www.emtest.ch > E-mail: sales.emtest@ametek.com

Germany
EM TEST GmbH > Lüninger Straße 211 > 59174 Kamen > Deutschland
Phone +49 (0)2307/26070-0 > Fax +49 (0)2307/17050
Internet: www.emtest.com > E-mail: info.emtest@ametek.de

France
EM TEST FRANCE > Le Trident - Parc des Collines > Immeuble B1 - Etage 3 > 36, rue Paul Cézanne > 68200 Mulhouse > France
Phone +33 (0)389 31 23 50 > Fax +33 (0)389 31 23 55
Internet: www.emtest.fr > E-mail: info@emtest.fr

Poland
EM TEST Polska > ul. Ogrodowa 31/35, 00-893 Warszawa > Polska
Phone +48 (0)518 64 35 12
Internet: www.emtest.com/pl > E-mail: info_polska.emtest@ametek.de

USA / Canada
EM TEST USA > 9250 Brown Deer Road > San Diego > CA 92121
Phone +1 (858) 699 1685 > Fax +1 (858) 458 0267
Internet: www.emtest.com > E-mail: sales.emtest@ametek.com

P.R. China
E & S Test Technology Limited > Rm 913, Leftbank
No. 68 Bei Si Huan Xi Lu > Haidian District > Beijing 100080 > P.R. China
Phone +86 (0)10 82 67 62 27 > Fax +86 (0)10 82 67 62 38
Internet: www.emtest.com > E-mail: info@emtest.com.cn

Republic of Korea
EM TEST Korea Limited > #405 > WooYeon Plaza > #986-8 > YoungDeok-dong > Giheung-gu > YongIn-si > Gyeonggi-do > Korea
Phone +82 (31) 216 8616 > Fax +82 (31) 216 8616
Internet: www.emtest.co.kr > E-mail: sales@emtest.co.kr

Information about scope of delivery, visual design and technical data correspond with the state of development at time of release. Technical data subject to change without further notice.