

# COMPACT NX7 SERIES

## MULTIFUNCTIONAL TEST GENERATOR FOR TRANSIENTS (EFT/BURST, SURGE, POWER FAIL & RINGWAVE) UP TO 7 KV



### FOR TESTS ACCORDING TO ...

- › ANSI/IEEE C62.41
- › IEC 61000-4-4
- › IEC 61000-4-5
- › IEC 61000-4-8
- › IEC 61000-4-9
- › IEC 61000-4-11
- › IEC 61000-4-12
- › IEC 61000-4-29
- › EN 61000-6-1
- › EN 61000-6-2
- › ECE-R10
- › EN 300329
- › EN 300340
- › EN 300342-1
- › EN 300386 V1.3.2
- › EN 301489-1
- › EN 301489-17
- › EN 301489-24
- › EN 301489-7
- › ITU-T K.41

### COMPACT NX7 - COMPACT TESTER FOR EFT/BURST, SURGE AND POWERFAIL









The compact Next Generation NX7 is the most versatile tester to address transient and power fail requirements for both international and commercial standards.

Featuring an easy-to-use color touch screen, the NX7 provides an economical solution for pre-compliance immunity testing as well as full-compliance testing and CE Marking. Its internal single-phase Coupling/Decoupling Network (CDN) can be extended for testing three-phase EUTs by means of an automatically controlled external CDN up to 200 A per phase. AMETEK CTS supplies a large range of accessories for various applications such as magnetic field tests and more.

### HIGHLIGHTS

- › **Smallest compact generator with 7" touch screen**
- › **Burst 5.5 kV, Surge & Ringwave 7.0 kV, Power Fail**
- › **Selective test library adapted to the EUT setting**
- › **Built-in single phase CDN up to 400 V/32 A**
- › **Coupling modes IEC, ANSI A and ANSI B**
- › **Separate key for START/STOP operation with LED**
- › **Monitor outputs for peak voltage and current**

### APPLICATION AREAS

- |   |  |
|---|--|
|  INDUSTRY    |  COMPONENTS       |
|  MEDICAL     |  BROADCAST        |
|  RESIDENTIAL |  RENEWABLE ENERGY |
|  TELECOM     |  AUTOMOTIVE       |

## TECHNICAL DETAILS

### BENEFITS

#### ALL IN ONE - ALL YOU NEED FOR YOUR TESTS

The compact NX7 is a standalone generator which includes everything necessary to perform fully compliant tests. With separate power mains supply inputs, it allows the utilization of different EUT supply voltages for maximum flexibility.

The NX7 can be operated manually from the intuitive front touch screen or remotely via its built-in Ethernet, USB or optical interface. Failure inputs allow control of an ongoing test sequence based on the state of the EUT. Monitoring outputs (BNC) offer easy signal verification and measurements. For enhanced safety requirements, features like interlock and a warning lamp are available.

NX7 is the first generator that recognizes the connected EUT power configuration. Only coupling selections to active lines are enabled. Non existing lines will be disabled from the menu settings. Pre-programmed routines with common Test Standards allow maximum user convenience. Quick Start Test routines where parameters can be changed during susceptibility level evaluation are also available.

### OPERATION

#### EASY TO OPERATE

An innovative color touch screen with intuitive menu structure and defined keys for Start / Stop / Break, indicated by LED bars, enables the user to program test routines quickly and accurately. The touch screen and knob allow fast control of all test parameters of the programmed routine, ensuring that test procedures are simplified and confidence is high that every step is carried out correctly.



### SOFTWARE

#### IEC.CONTROL SOFTWARE FOR CONTROL AND DOCUMENTATION

Outstanding user convenience, clearly structured windows and operation features, EM TEST's comprehensive standards library along with the flexibility to easily generate user specific test sequences are the main features of iec.control software. The software will be automatically configured in accordance with the connected EM TEST generators. Extensive reporting capabilities help the user to create test reports that meet international requirements.

The iec.control is supported by Windows 7, Windows 8 and Windows 10. Remote control is achieved either via Ethernet or optical interface with USB connector at the PC side.

The iec.control supports various interfaces for the communication to external measuring devices.



### OTHER MODELS

#### COMPACT NX5/NX7 SERIES - COMPACT GENERATORS UP TO 5 KV OR 7 KV

The compact NX series simulators for Burst, Surge, Telecom Surge and Power Fail are available in two different versions, with a maximum test voltage of up to 5.5 kV or 7.0 kV.

## TECHNICAL DETAILS

### AUXILIARY DEVICES

#### **COUPLING NX7 - 3PHASE COUPLING/DECOUPLING NETWORKS FOR BURST AND SURGE**

AMETEK CTS offers a range of fully automatic 3-phase coupling/decoupling networks for burst, surge and ringwave to extend the test capability for three-phase EUTs. The networks have a rated current of up to 200 A.

#### **VARIAC NX 1-260-16 - MOTORISED VARIAC FOR VOLTAGE VARIATION**

A motorized variac is offered as an alternative to the tapped autotransformers for voltage dips/interruptions and voltage variation tests as per IEC/EN 61000-4-11. The motorized variac can also be used for automated magnetic field tests.

#### **V 4780 - TAPPED VOLTAGE TRANSFORMER FOR VOLTAGE DIPS**

The V 4780 tapped autotransformer is designed to supply the required voltages as per IEC/EN 61000-4-11 to perform voltage dips.

#### **V 4780S2 - TAPPED STEP TRANSFORMER AUTOMATIC FOR VOLTAGE DIPS**

The V 4780S2 is an automatic tapped auto transformer, designed to supply the required voltages as per IEC/EN 61000-4-11 to perform voltage dips and interruptions. Compared to the manually operated V 4780, the V 4780S2 model offers automatic change of taps according to the selected voltage level.

#### **DCD 5 SR- AND ST-SERIES - SURGE COUPLING/DECOUPLING NETWORKS FOR SIGNAL/DATA LINES**

DCD 5 sr- and st-series coupling/decoupling networks are available to perform surge tests on I/O lines, signal/data lines and telecom lines as per IEC/EN 61000-4-5 Ed 3.0

The DCD 5 sr- series couples surge and ring wave impulses to unsymmetrical signal and datalines for 4 or 8 lines.

The DCD 5 st- series couples surge and telecomsurge impulses to symmetrical signal and datalines for 2 or 4 pairs of signal lines.

### ACCESSORIES

#### **MFC 1000 - MAGNETIC FIELD COIL FOR POWER-FREQUENCY AND PULSED MAGNETIC FIELDS**

The MFC 1000 is a 1m x 1m magnetic field coil as specified in IEC/EN 61000-4-8 and IEC/EN 61000-4-9. Its design allows easy moving of the coil. The field coil is adjustable in height and allows for 360 degree rotation. To generate power-frequency magnetic fields in the lower range the current transformer MFT 30 is used while high-field strength above 100 A/m up to 1000 A/m requires the MFT 100 current transformer.

#### **CCI - CAPACITIVE COUPLING CLAMP**

Capacitive coupling clamp as per specification IEC/EN 61000-4-4.

#### **ITP - IMMUNITY TEST PROBES**

ITP is a tool being used for development test. It consists of a variety of electrical field probes. The probes allow to locate weak points within a system or on a PCB. The burst pulse is used to generate the disturbance signal.

#### **PVF BKIT 1 - VERIFICATION KIT FOR EFT/BURST PULSES**

As per IEC/EN 61000-4-4 the characteristic of the burst generator needs to be verified with two different loads, 50 ohm and 1,000 ohm. EM TEST offers a calibration kit consisting of the two loads and an adapter to verify the pulses at the EUT output.

#### **CCI PVKIT 1 - VERIFICATION KIT FOR CAPACITIVE COUPLING CLAMP**

The IEC/EN 61000-4-4 Ed 3.0 standard published in 2012 recommends the calibration of the capacitive coupling clamp into a 50 ohm coaxial load.

The capacitive coupling clamp (CCI or HFK) is connected to the 50 ohm output of the EFT generator. A flexible insulated plate inside the capacitive coupling clamp is connected to a coaxial 50 ohm load resistor for verifying the EFT/Burst wave of the capacitive coupling clamp.

## TECHNICAL DETAILS

## ELECTRICAL FAST TRANSIENTS

| BURST MODULE     |   |
|------------------|---|
|                  | As per IEC/EN 61000-4-4 and EN 61000-6-1, -6-2                      |
| Test voltage     | 200 V - 5,500 V $\pm$ 10%;<br>100 V - 2,750 V $\pm$ 10% into 50 ohm |
| Pulse shape      | 5/50 ns into 50 ohm and 1,000 ohm                                   |
| Rise time tr     | 5 ns $\pm$ 30% into 50 ohm;<br>5 ns $\pm$ 30% into 1,000 ohm        |
| Pulse width td   | 50 ns $\pm$ 30% into 50 ohm;<br>50 ns -15/+100 ns into 1,000 ohm    |
| Source impedance | 50 ohm  |
| Polarity         | Positive, negative  |

| TRIGGER CIRCUIT      |   |
|----------------------|---|
| Trigger of bursts    | Automatic, manual, external                           |
| Synchronization      | 0° - 360°, resolution 1° (16 - 500 Hz)                |
| Burst duration (td)  | td = 0.10 ms - 9,999 ms                               |
| Repetition rate (tr) | tr = 10 ms - 9,999 ms                                 |
| Spike frequency      | f = 1 Hz - 1,000 kHz                                  |
| Test duration        | T = 0:01 min - 99:59 min<br>T > 99:59 min --> endless |

| OUTPUTS       |   |
|---------------|---|
| Direct        | Via 50 ohm coaxial connector  |
| Coupling mode | L, N, PE; all combinations  |
| EUT supply    | AC: 300 V / 400 V, 50/60 Hz<br>DC: 300 V / 400 V,<br>Current: 16 A / 32 A |
| CRO trigger   | 5 V trigger signal for oscilloscope                                       |

## ELECTRICAL FAST TRANSIENTS

| TEST ROUTINES          |  |
|------------------------|--|
| Quick Start            | On-line adjustable parameters, easy-to-use   |
| Standard Test routines | As per IEC/EN 61000-4-4, Levels 1 - 4<br>As per IEC/EN 61000-6-1, -6-2<br>As per ECE R-10 Rev5   |
| Extended Test routines | Change voltage after T,<br>Frequency sweep within one burst,<br>Frequency sweep with constant number of pulses,<br>Frequency sweep with constant burst duration,<br>Synchronous burst release,<br>Random burst release |

| OPTIONS     |  |
|-------------|--|
| CCI         | Capacitive coupling clamp as per IEC/EN 61000-4-4  |
| CCI PVKIT 1 | Adapter set for capacitive coupling clamp calibration included:<br>- Transducer plate as per IEC/EN 61000-4-4 Ed 3.0,<br>- Support for positioning the PVF 50 on 100 mm height as the capacitive coupling clamp,<br>- PVF AD 3 to match the Transducer plate to the PVF 50 |
| PVF 50      | 100:1 divider, 50 ohm  |
| PVF 1000    | 500:1 divider, 1,000 ohm   |
| PVF BKIT 1  | Kit for burst pulse verification consisting of PVF 50, PVF 1000 and adapter for EUT port in a plastic case for storage   |
| PVF AD 1    | Adapter to match PVF 50 load resistor to the EUT supply of NX-series coupling network, 3-phase coupling network  |
| ITP         | Immunity test probes (electrical field generation)   |
| ITP/H       | Immunity test probe (magnetic field generation)  |

## TECHNICAL DETAILS

## COMBINATION WAVE / SURGE

## SURGE MODULE

|                  |  |
|------------------|--|
|                  | As per IEC/EN 61000-4-5 and IEC/EN 61000-6-1, -6-2 |
| Voltage (o.c.)   | 200 V - 7,000 V $\pm$ 10%                          |
| Pulse front time | 1.2 $\mu$ s $\pm$ 30%                              |
| Pulse duration   | 50 $\mu$ s $\pm$ 20%                               |
| Current (s.c.)   | Max. 3,500 A $\pm$ 10%                             |
| Pulse front time | 8 $\mu$ s $\pm$ 20%                                |
| Pulse duration   | 20 $\mu$ s $\pm$ 20%                               |
| Polarity         | Positive, negative, alternate                      |

## TRIGGER CIRCUIT

|                   |                             |
|-------------------|-----------------------------|
| Release of pulses | Automatic, manual, external |
| Synchronization   | 0° - 360°, resolution 1°    |
| Repetition rate   | max. 1 Hz (1 s - 9,999 s)   |
| Event counter     | 1 - 99,999, selectable      |

## OUTPUTS

|               |   |
|---------------|---|
| Direct        | Via HV connectors for external coupling networks  |
| Coupling mode | IEC<br>Line to Line: 2 Ohm, 18 $\mu$ F<br>Line to PE: 12 Ohm, 9 $\mu$ F<br>ANSI A<br>Line to Line: 12 Ohm, 9 $\mu$ F<br>Line to GND: 12 Ohm, 9 $\mu$ F<br>ANSI B<br>Line to Line: 2 Ohm, 18 $\mu$ F<br>Line to GND: 2 Ohm, 18 $\mu$ F |
| EUT supply    | AC: 300 V / 400 V, 50/60 Hz<br>DC: 300 V / 400 V,<br>Current: 16 A / 32 A   |
| CRO trigger   | 5 V trigger signal for oscilloscope   |

## MEASUREMENTS

|                            |  |
|----------------------------|--|
| CRO $\hat{U}$ -monitor     | 10 Vp at 7,000 V   |
| CRO $\hat{I}$ -monitor     | 10 Vp at 3,500 A   |
| Peak voltage               | 7,000 V in the touch display   |
| Peak current               | 3,500 A in the touch display   |
| Overcurrent protection     | Breaks the Surge test when the surge current is over the limit, Limiter for differential mode, Limiter for common mode |
| EUT current                | RMS current, Range 50 A, $\pm$ 5%  |
| EUT overcurrent protection | Breaks the test when the EUT current is over the limit,  |

## TECHNICAL DETAILS

## COMBINATION WAVE / SURGE

| TEST ROUTINES          |  |
|------------------------|--|
| Quick Start            | One-line adjustable parameters, easy-to-use  |
| Standard Test routines | As per IEC/EN 61000-4-5, As per IEC/EN 61000-6-1, As per IEC/EN 61000-6-2, Manual Standard Test routine  |
| Extended Test routines | Voltage iteration after n pulses, Angle iteration stepwise, Phase angle randomiteration, Change coupling after n pulses, Change phase angle after n pulses |
| Pulsed Magnetic Field  | as per IEC/EN 61000-4-9<br>Test levels 100, 300 and 1,000A/m<br>Test level continuously adjustable under Quick Start                                       |

| OPTIONS      |   |
|--------------|---|
| DCD 7 sr-4-x | Coupling network for 4 signal/data lines as per IEC/EN 61000-4-5 Ed 3.0   |
| DCD 7 sr-8-x | Coupling network for 8 signal/data lines as per IEC/EN 61000-4-5 Ed 3.0   |
| DCD 7 st-4-1 | Coupling/decoupling network for 4 unshielded symmetrical lines (communication lines) as per IEC/EN 61000-4-5 Ed 3.0 (fig. 10) |
| DCD 7 st-8-1 | Coupling/decoupling network for 8 unshielded symmetrical lines (communication lines) as per IEC/EN 61000-4-5 Ed 3.0 (fig. 10) |
| HSC 4-8      | Coupling/decoupling network for testing unshielded and shielded high-speed communication lines (Ethernet lines)               |
| SPN 508N1    | Surge protection network to reduce the surge voltage <10 V at the AE  |

## POWER FAIL, DIPS &amp; INTERRUPTIONS, VOLTAGE VARIATIONS

| POWER FAIL MODULE |  |
|-------------------|--|
| As per            | IEC/EN 61000-4-11, IEC/EN 61000-4-29 and IEC/EN 61000-6-1, -6-2  |
| Channel PF1/PF2   | AC voltage: max. 300 V / 400 V<br>AC current: max. 16 A / 32 A<br>DC voltage: max. 300 V / 400 V<br>DC current: max. 16 A / 32 A |
| Frequency         | 16 Hz - 500 Hz and DC  |
| Switching time    | > 1 $\mu$ s < 5 $\mu$ s into a 100 ohm resistive load (SVP 100)  |
| Inrush current    | > 500 A  |
| Protection        | Both channels are protected against short-circuit conditions.  |

| TRIGGER CIRCUIT   |  |
|-------------------|--|
| Trigger of events | Automatic, manual, external            |
| Synchronization   | 0° - 360°, resolution 1° (16 - 500 Hz) |
| Repetition rate   | 10 ms - 9,999 s                        |
| Event duration    | 10 $\mu$ s - 99,999 s                  |
| Event counter     | 1 - 99,999, selectable                 |

| OUTPUTS       |                                     |
|---------------|-------------------------------------|
| EUT terminals | L, N and PE                         |
| CRO trigger   | 5 V trigger signal for oscilloscope |

| MEASUREMENTS      |  |
|-------------------|--|
| EUT voltage (rms) | In the touch screen  |
| EUT current (rms) | In the touch screen  |
| MON V             | Measurement of the EUT voltage, built-in divider:<br>300 V: 42,5:1, 10 V =425 Vpk,<br>400 V: 56.6:1, 10 V =566 Vpk |
| MON I             | Measurement of the EUT current,<br>16 A: 7 A/V; 10 V =70 Apk,<br>32 A: 10 A/V; 10 V =100 Apk                       |

## TECHNICAL DETAILS

## POWER FAIL, DIPS &amp; INTERRUPTIONS, VOLTAGE VARIATIONS

## TEST ROUTINES

|                         |  |
|-------------------------|--|
| Quick Start             | On-line adjustable parameters, easy-to-use   |
| Standard Test routines  | As per IEC/EN 61000-4-11 for AC supplies<br>As per IEC/EN 61000-4-29 for DC supplies<br>As per EN 61000-6-1, -6-2 Manual Standard Test routine                                       |
| Extended Test routines  | Voltage variation, control of an external variac,<br>Phase angle iteration,<br>Reduced time iteration,<br>Angle inverse mode,<br>Random by step and list<br>Inverse mode             |
| 50/60 Hz magnetic field | As per IEC/EN 61000-4-8<br>Test levels 1, 3, 10 and 30 A/m with external current transformer MFT 30,<br>Test levels 100, 300 and 1,000 A/m with external current transformer MFT 100 |

## OPTIONS

|                    |   |
|--------------------|---|
| TVT 1-250-16       | Tapped autotransformer as per IEC/EN 61000-4-11 Ed 2.0                              |
| TVT 1-250-16       | Tapped autotransformer as per IEC/EN 61000-4-11 Ed 2.0 with automatic change of tap |
| variac NX 1-260-16 | Motorized variac (0 - 260 V, 16 A)  |
| variac NX 1-260-32 | Motorized variac (0 - 260 V, 32 A)  |
| MFC 1000           | Magnetic field coil, 1 m x 1 m, up to >1000 A/m (with trolley)                      |
| MFC 1000.1         | Magnetic field coil, 1 m x 1 m, up to >1000 A/m (with stand)                        |
| MFT 30             | Current transformer for magnetic fields up to 30 A/m                                |
| MFT 100            | Current transformer for magnetic fields up to 1,000 A/m                             |
| SVP 1700           | Calibration box for inrush current verification as per IEC/EN 61000-4-11            |
| SVP 100            | 100 ohm low inductive load resistor, for rise and fall time verification            |

## RINGWAVE

## RINGWAVE MODULE

|                       |  |
|-----------------------|--|
|                       | As per ANSI/IEEE C62.41 and EN/IEC 61000-4-12  |
| Test voltage          | 200 V - 7,000 V $\pm$ 10%  |
| Voltage               | Wave shape (open circuit)  |
| Rise time             | 0.5 $\mu$ s $\pm$ 30% (first peak)   |
| Oscillation frequency | 100 kHz $\pm$ 10%  |
| Decaying              | Peak 2 to peak 1 = 40 - 110%<br>Peak 3 to peak 2 = 40 - 80%<br>Peak 4 to peak 3 = 40 - 80% |
| Current               | Wave shape (short circuit)   |
| Rise time             | 0.2 $\mu$ s < tr $\leq$ 1.0 $\mu$ s  |
| Oscillation frequency | 100 kHz $\pm$ 10%  |
| Source impedance      | 12 ohm,<br>30 ohm,<br>50 ohm   |
| Peak current          | As per selected source impedance   |
| Polarity              | Positive, negative, alternate  |

## TECHNICAL DETAILS

## RINGWAVE

| TRIGGER CIRCUIT   |                             |
|-------------------|-----------------------------|
| Release of pulses | Automatic, manual, external |
| Synchronization   | 0° - 360°, resolution 1°    |
| Repetition rate   | max. 1 Hz (1 s - 9999 s)    |
| Event counter     | 1 - 99,999, selectable      |

| OUTPUTS       |   |
|---------------|---|
| Direct        | Via HV-safety lab connectors  |
| Coupling mode | L, N, PE; line to line and line(s) to ground                              |
| DUT supply    | AC: 300 V / 400 V, 50/60 Hz<br>DC: 300 V / 400 V,<br>Current: 16 A / 32 A |
| CRO trigger   | 5 V trigger signal for oscilloscope                                       |

| MEASUREMENTS           |                                     |
|------------------------|-------------------------------------|
| CRO $\hat{U}$ -monitor | 10 V <sub>p</sub> at 7,000 V        |
| CRO $\hat{I}$ -monitor | 10 V <sub>p</sub> at 3,500 A        |
| Peak voltage           | 500 V - 7000 V in the touch display |

| OPTIONS      |   |
|--------------|---|
| DCD 7 sr-4-x | Coupling network for 4 signal/data lines as per IEC/EN 61000-4-12 Ed 3.0  |
| DCD 7 sr-8-x | Coupling network for 4 signal/data lines as per IEC/EN 61000-4-12 Ed 3.0  |
| HSC 4-8      | Coupling/decoupling network for testing unshielded and shielded high-speed communication lines (Ethernet lines) |
| SPN 508N1    | Ringwave protection network to reduce the surge voltage <10 V at the AE   |

## TELECOM SURGE

| TSURGE MODULE, (OPTIONAL)     |                                     |
|-------------------------------|-------------------------------------|
| Test voltage (o.c.)           | 200 V - 7,000 V ± 10%               |
| Energy storage capacitor      | 20 µF                               |
| Polarity                      | Positive, negative, alternating     |
|                               | As per ITU and ETSI recommendations |
| Front time                    | 10 µs ± 30%                         |
| Pulse duration                | 700 µs ± 20%                        |
|                               | As per FCC part 68, Pulse B         |
| Front time                    | 9 µs ± 30%                          |
| Pulse duration                | 720 µs ± 20%                        |
| Output current @25 ohm output | 5 A - 175 A (short circuit)         |
| Rise time                     | 5 µs ± 30%                          |
| Pulse duration                | 320 µs ± 20%                        |
|                               | As per IEC 61000-4-5                |
| Rise time                     | 10 µs ± 30%                         |
| Pulse duration                | 700 µs ± 20%                        |
| Output current @25 ohm output | 5 A - 175 A (short circuit)         |
| Rise time                     | 5 µs ± 20%                          |
| Pulse duration                | 320 µs ± 20%                        |



## TECHNICAL DETAILS

## TELECOM SURGE

## TRIGGER CIRCUIT

|                   |                             |
|-------------------|-----------------------------|
| Trigger of events | Automatic, manual, external |
| Repetition rate   | max. 0.33 Hz (3 s - 999 s)  |
| Event counter     | 1 - 99,999, selectable      |

## OUTPUTS

|                             |  |
|-----------------------------|--|
| As per ITU                  | For 2-wire T1/T2 with 25 ohm each                                  |
| As per FCC part 68          | For 2-wire T1/T2 with 25 ohm each                                  |
| As per IEC 61000-4-5 Ed 3.0 | For 4-wire T1/T2/T3/T4 with 25 ohm each                            |
|                             | For other requirements special output configurations are available |

## OPTIONS

|              |  |
|--------------|--|
| DCD 7 st-4-1 | Coupling/decoupling network for unshielded symmetrical lines (communication lines) as per IEC/EN 61000-4-5 Ed.3 (fig. 10) for 4 lines. |
| DCD 7 st-8-1 | Coupling/decoupling network for unshielded symmetrical lines (communication lines) as per IEC/EN 61000-4-5 Ed.3 (fig. 10) for 8 lines. |

## GENERAL DATA

## INTERFACES

|                  |   |
|------------------|---|
| Serial interface | 2 x USB A for memory stick, 1 x USB B for service only, Opto - Link to USB for remote |
| Lan              | Ethernet for remote   |
| Analog output    | 0 - 10 VDC to control an external transformer   |
| Sys.link         | 26 pin high density connector to control an external coupling network                 |
| Fail inputs      | EUT monitoring via input (one each)<br>EUT Monitor 1<br>EUT Monitor 2                 |
| Ext. Trigger     | BNC Ext. Trigger IN<br>pos slope 5 V  |
| Ext. Sync Input  | Differential input,<br>50 V - 690 VAC,<br>2 x 4 mm MC Safety connectors               |

## DIMENSIONS AND WEIGHT

|             |   |
|-------------|---|
| 16 A models | 19"/6 HU, 500 mm deep,<br>19"/9 HU, with telecom module,<br>approx. 30 kg |
| 32 A models | 19"/6 HU, 500 mm deep,<br>19"/9 HU, with telecom module,<br>approx. 40 kg |

## TECHNICAL DETAILS

## GENERAL DATA

## ENVIRONMENT

|                      |   |
|----------------------|---|
| Temperature          | 10 °C to 35 °C (Operation)<br>-10 °C to 60 °C (Storage) |
| Humidity             | 30 % to 70 %, non condensing                            |
| Atmospheric pressure | 86 kPa (860 mbar) to<br>106 kPa (1,060 mbar)            |

## MAINS

|                |   |
|----------------|---|
| Supply voltage | 85 V - 264 V  |
| Frequency      | 50/60 Hz  |
| Power          | approx. 75 W  |
| Fuses          | 115 V: 2 x 4 A slow blow,<br>230 V: 2 x 2 A slow blow |

## SAFETY

|                  |                                  |
|------------------|----------------------------------|
| Safety standard  | IEC/EN 61010                     |
| Security circuit | Control input (24 VDC)           |
| Warning lamp     | Floating contact (max. 60 V/2 A) |

## ACCESSORIES AND OPTIONS

## ACCESSORIES INCLUDED

|              |  |
|--------------|--|
| Mains supply | Plug depends on the country of use   |
| EUT supply   | Plug depends on the country of use   |
| EUT adapter  | Socket depends on the country of use   |
|              | Operation manual,<br>Calibration certificate,<br>iec.control remote control software |

## OPTIONS

|              |  |
|--------------|--|
| coupling NX7 | 3-phase coupling/decoupling networks as per<br>- IEC/EN 61000-4-4 and<br>- IEC/EN 61000-4-5<br>up to 200 A per phase                         |
| iec.control  | Remote control and documentation software, including standard test routines and reporting capabilities. included: UOC USB-Optolink Converter |
| UOC          | USB-Optolink Converter,<br>Optical Fibre cable, 5 m  |

**TECHNICAL DETAILS**

**MODELS**

| AVAILABLE MODELS: 300 V, 16 A |   |
|-------------------------------|---|
| compact NX7<br>bsp-1-300-16   | Burst, Surge, Power Fail,<br>300 V, 16 A, 19", 6 HU                             |
| compact NX7<br>bspr-1-300-16  | Burst, Surge, Power Fail,<br>300 V, 16 A, 19", 6 HU                             |
| compact NX7<br>bspt-1-300-16  | Burst, Surge, Power Fail, Telecom<br>Surge,<br>300 V, 16 A, 19", 9 HU           |
| compact NX7<br>bsprt-1-300-16 | Burst, Surge, Power Fail, Ringwave,<br>Telecom Surge,<br>300 V, 16 A, 19", 9 HU |
| compact NX7<br>sr-1-300-16    | Surge, Ringwave,<br>300 V, 16 A, 19", 6 HU                                      |
| compact NX7<br>bs-1-300-16    | Burst, Surge,<br>300 V, 16 A, 19", 6 HU   |
| compact NX7<br>bsr-1-300-16   | Burst, Surge, Ringwave,<br>300 V, 16 A, 19", 6 HU                               |
| compact NX7<br>bst-1-300-16   | Burst, Surge, Telecom Surge,<br>300 V, 16 A, 19", 9 HU                          |
| compact NX7<br>sp-1-300-16    | Surge, Power Fail,<br>300 V, 16 A, 19", 6 HU                                    |
| compact NX7<br>st-1-300-16    | Surge, Telecom Surge,<br>300 V, 16 A, 19", 9 HU                                 |
| compact NX7<br>s-1-300-16     | Surge,<br>300 V, 16 A, 19", 6 HU  |

| AVAILABLE MODELS: 300 V, 32 A |   |
|-------------------------------|---|
| compact NX7<br>bsp-1-300-32   | Burst, Surge, Power Fail,<br>300 V, 32 A, 19", 6 HU                             |
| compact NX7<br>bspr-1-300-32  | Burst, Surge, Power Fail, Ringwave,<br>300 V, 32 A, 19", 6 HU                   |
| compact NX7<br>bspt-1-300-32  | Burst, Surge, Power Fail, Telecom<br>Surge,<br>300 V, 32 A, 19", 9 HU           |
| compact NX7<br>bsprt-1-300-32 | Burst, Surge, Power Fail, Ringwave,<br>Telecom Surge,<br>300 V, 32 A, 19", 9 HU |
| compact NX7<br>bs-1-300-32    | Burst, Surge,<br>300 V, 32 A, 19", 6 HU   |
| compact NX7<br>bsr-1-300-32   | Burst, Surge, Telecom Surge,<br>300 V, 32 A, 19", 9 HU                          |
| compact NX7<br>bst-1-300-32   | Surge, Power Fail,<br>300 V, 32 A, 19", 9 HU                                    |
| compact NX7<br>sp-1-300-32    | Surge, Power Fail,<br>300 V, 32 A, 19", 6 HU                                    |
| compact NX7<br>st-1-300-32    | Surge, Telecom Surge,<br>300 V, 32 A, 19", 9 HU                                 |

| AVAILABLE MODELS: 400 V, 16 A |   |
|-------------------------------|---|
| compact NX7<br>bsp-1-400-16   | Burst, Surge, Power Fail,<br>400 V, 16 A, 19", 6 HU                             |
| compact NX7<br>bspr-1-400-16  | Burst, Surge, Power Fail, Ringwave,<br>400 V, 16 A, 19", 6 HU                   |
| compact NX7<br>bspt-1-400-16  | Burst, Surge, Power Fail, Telecom<br>Surge,<br>400 V, 16 A, 19", 9 HU           |
| compact NX7<br>bsprt-1-400-16 | Burst, Surge, Power Fail, Ringwave,<br>Telecom Surge,<br>400 V, 16 A, 19", 9 HU |
| compact NX7<br>sr-1-400-16    | Surge, Ringwave,<br>400 V, 16 A, 19", 6 HU                                      |
| compact NX7<br>bs-1-400-16    | Burst, Surge,<br>400 V, 16 A, 19", 6 HU   |
| compact NX7<br>bsr-1-400-16   | Burst, Surge, Ringwave,<br>400 V, 16 A, 19", 6 HU                               |
| compact NX7<br>bst-1-400-16   | Burst, Surge, Telecom Surge,<br>400 V, 16 A, 19", 9 HU                          |
| compact NX7<br>sp-1-400-16    | Surge, Power Fail,<br>400 V, 16 A, 19", 6 HU                                    |
| compact NX7<br>st-1-400-16    | Surge, Telecom Surge,<br>400 V, 16 A, 19", 9 HU                                 |
| compact NX7<br>s-1-400-16     | Surge,<br>400 V, 16 A, 19", 6 HU  |

| AVAILABLE MODELS: 400 V, 32 A |   |
|-------------------------------|---|
| compact NX7<br>bsp-1-400-32   | Burst, Surge, Power Fail,<br>400 V, 16 A, 19", 6 HU                             |
| compact NX7<br>bspr-1-400-32  | Burst, Surge, Power Fail, Ringwave,<br>400 V, 32 A, 19", 6 HU                   |
| compact NX7<br>bspt-1-400-32  | Burst, Surge, Power Fail, Telecom<br>Surge,<br>400 V, 32 A, 19", 9 HU           |
| compact NX7<br>bsprt-1-400-32 | Burst, Surge, Power Fail, Ringwave,<br>Telecom Surge,<br>400 V, 32 A, 19", 9 HU |
| compact NX7<br>bs-1-400-32    | Burst, Surge,<br>400 V, 32 A, 19", 6 HU   |
| compact NX7<br>bsr-1-400-32   | Burst, Surge, Telecom Surge,<br>400 V, 32 A, 19", 9 HU                          |
| compact NX7<br>bst-1-400-32   | Surge, Power Fail,<br>400 V, 32 A, 19", 6 HU                                    |
| compact NX7<br>sp-1-400-32    | Surge, Power Fail,<br>400 V, 32 A, 19", 6 HU                                    |
| compact NX7<br>st-1-400-32    | Surge, Telecom Surge,<br>400 V, 32 A, 19", 9 HU                                 |

**TECHNICAL DETAILS**

| AVAILABLE MODELS: WITHOUT COUPLER, 400 V (P-N), 3 X 690 V (P-P) |  |
|---|--|
|   | These models requires an external coupler<br>3 x 690 V |
| compact NX7<br>bs-0-400-0                                       | Burst, Surge<br>19", 6 HU                              |
| compact NX7<br>bsr-0-400-0                                      | Burst, Surge, Ring wave<br>19", 6 HU                   |

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