

PRODUCT DATA

LAN-XI Front Panels — UA-2100 to 2105, UA-2107 to 2109 and UA-2112 to 2114 LAN-XI Array Front Panel – UA-2145

LAN-XI Modules (Types 3050, 3052, 3053 and 3160) have a range of front panels that can easily be interchanged. Each panel has a variety of connectors that can be used for different transducers and applications.

Interchangeable front panels let you decide which cable type to use and make swapping transducers easy, meaning less hardware is needed. This results in fewer patch panels, less cable 'spaghetti', fewer cable adaptors and faster system setup.

LAN-XI Array Front Panel UA-2145 is an extra panel that can be connected to the front of 11 LAN-XI modules in a Type 3660-D Frame. It is intended for use with hand-held microphone arrays.



Concept

The LAN-XI Front Panel concept means that most of the connector panels can be used on more than one module.

Not all the front panels are compatible with every module, however, so a compatibility table has been provided for reference at the end of this Product Data.






If an illegal combination is used, such as connecting a front panel that has LEMO (multipurpose) connectors to a module that only supports DeltaTron and voltage (B-versions), the module will stop during power-up and display an error message.

Replacing the LAN-XI Front Panel

All the front panels on the LAN-XI modules are interchangeable and to help you decide which front panel is compatible with which LAN-XI module, a compatibility chart is provided on page 15.

Refer to the LAN-XI System Information Flash file (**Start>All Programs>PULSE>Get Started>LAN-XI System Overview>How to**) to change a module's front panel, or follow the procedure in :

Table 1 Replacing the LAN-XI Front Panel

| | | |
|---|--|---|
| <p>1) Remove the Allen key from the right side of the module.</p>  <p>110605</p> | <p>2) Unscrew the screw in the hole at the bottom of the front panel.</p>  <p>110606</p> | <p>3) Remove the front panel, bottom first.</p>  <p>110607</p> |
| <p>4) Insert the new panel.</p>  <p>110608</p> | <p>5) Tighten the screw and replace the Allen key.</p>  <p>110609</p> | |

Store unused front panels in the holster in which they were delivered, in order to protect the gold connectors on the rear of the panel.

LAN-XI Front Panel, General Purpose – UA-2100

Fig. 1
UA-2100 family



The UA-2100 family is the default front panel on all LAN-XI modules with the exception of the 12-channel Type 3053.

Industry standard BNC connectors allow for easy connection for Direct Voltage, Generator Output, CCLD Accelerometer, Charge Accelerometer (using charge adaptor), CCLD Microphone, CCLD Tacho Probe.

Uses

- General purpose sound and vibration measurements
- Direct voltage
- CCLD microphone
- CCLD accelerometer
- CCLD tacho probe
- Generator output

Features

- 3, 4 or 6 × BNC connectors (-022 can be configured as 4 inputs or 2 × inputs and 2 × outputs, -060 can be configured as 6 inputs or 4 × inputs and 2 × outputs)
- LED indicators for input/output/overload

| Front Panel | Compatible LAN-XI Module |
|-------------|--|
| UA-2100-022 | 3160-A-022 3160-B-022 |
| UA-2100-030 | 3052-A-030 3052-B-030 |
| UA-2100-040 | 3050-A-040 3050-B-040 |
| UA-2100-060 | 3050-A-060 3050-B-060 3160-A-042 3160-B-042 |

Order Numbers

- UA-2100-022
- UA-2100-030
- UA-2100-040
- UA-2100-060

LAN-XI Front Panel, 200 V Microphones with LEMO Connectors – UA-2101

Fig. 2
UA-2101 family



The UA-2101 family is designed to be used in conjunction with microphones that require 200 V polarization voltage.

It features circular 7-pin (F) LEMO Microphone connectors.

However, adaptor cable AO-0091 allows this front panel to be used with a host of other signals and transducers including Direct Voltage, CCLD Accelerometer, CCLD Microphone, CCLD Tacho Probe, DC responding accelerometers.

Uses

- Microphones requiring 200 V external polarization
- General purpose sound and vibration measurements
- Direct voltage
- CCLD accelerometer
- DC responding accelerometers
- CCLD microphone
- CCLD tacho probe

Features

- 3, 4 and 6 × 7-Pin LEMO connectors
- LED indicators for input/overload

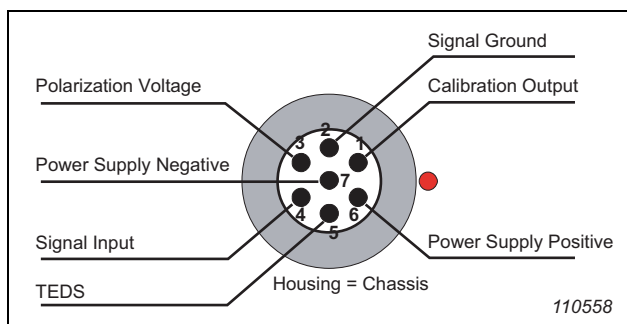
| Front Panel | Compatible LAN-XI Module |
|-------------|--------------------------|
| UA-2101-030 | 3052-A-030 |
| UA-2101-040 | 3050-A-040 |
| UA-2101-060 | 3050-A-060 3160-A-042 |

Order Numbers

- UA-2101-030
- UA-2101-040
- UA-2101-060

Related Information

Fig. 3
7-pin LEMO connector



LAN-XI Front Panel, 200 V Microphones with LEMO/BNC Connectors – UA-2102

Fig. 4
UA-2102 family



The UA-2102 family combines up to four 7-pin LEMO connectors and two BNC connectors. These front panels allow input and conditioning for Direct Voltage, Generator Output, CCLD Accelerometer, CCLD Microphone, CCLD Tacho Probe (using adaptor cable AO-0091), Charge Accelerometer (using In-line Charge Adaptor Type 2647 and AO-0091), DC responding accelerometers, and Microphone Preamplifiers.

Uses

- 200 V Microphones
- General purpose sound and vibration measurements
- Direct voltage
- Generator output
- CCLD accelerometer
- Charge accelerometer (using charge adaptor)
- Microphone preamplifier
- CCLD microphone
- CCLD tacho probe

Features

- 4 and 2 × LEMO (7-pin) microphone connectors
- 2 × BNC output connectors
- LED indicators for input/output/overload

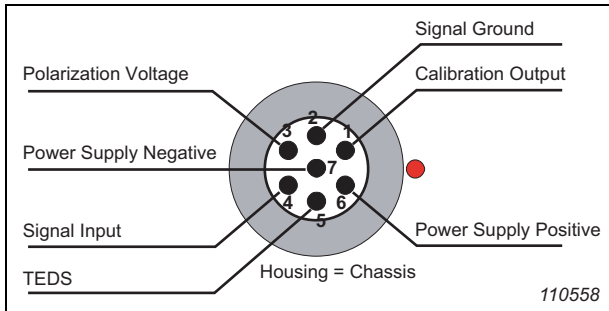
| Front Panel | Compatible LAN-XI Module |
|-------------|--------------------------|
| UA-2102-022 | 3160-A-022 |
| UA-2102-042 | 3160-A-042 3050-A-060 |

Order Numbers

- UA-2102-022
- UA-2102-042

Related Information

Fig. 5
7-pin LEMO connector



LAN-XI Front Panel, 6-channel Sub-D Connector – UA-2103

Fig. 6
UA-2103



Front Panel UA-2103 features a single 37-pin Sub-D connector. It is primarily intended for backwards compatibility with our previous Array Acoustic systems.

Uses

- Array acoustics
- General purpose sound and vibration measurements with user customized cables.
- Direct voltage
- Generator output
- CCLD accelerometer
- Charge accelerometer (using charge adaptor)
- Microphone preamplifier
- CCLD microphone
- CCLD tacho probe

Features

- 37-pin Sub-D connector
- LED indicators for input/output/overload

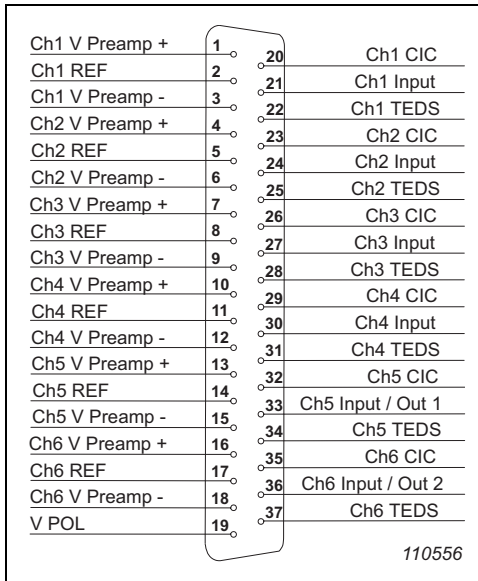
| Front Panel | Compatible LAN-XI Module |
|-------------|--|
| UA-2103 | 3050-A-060 3050-B-060 3160-A-042 3160-B-042 |

Order Number

- UA-2103

Related Information

Fig. 7
37-pin Sub-D
connector



Acoustic Holography

For further related information please see the 'Acoustic Holography' page on bksv.com.

LAN-XI Front Panel, Sound Intensity – UA-2104

Fig. 8
UA-2104



Front Panel UA-2104 is intended for use with Sound Intensity Probe Type 3599.

Uses

- Sound intensity measurements using PULSE

Features

- 3 × LEMO (7-pin) input connectors
- 1 × 9-pin Sub-D connector

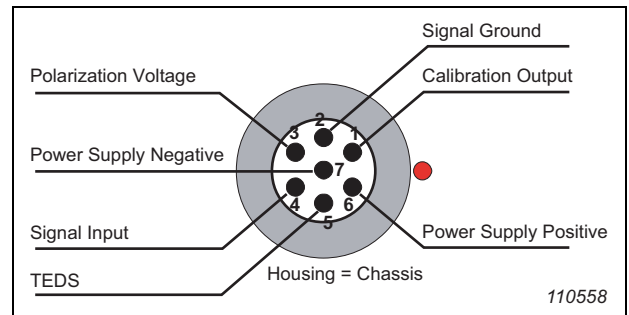
| Front Panel | Compatible LAN-XI Module |
|-------------|--|
| UA-2104-030 | 3050-A-060 3050-A-040 3052-A-030 3160-A-042 |

Order Number

- UA-2104-030

Related Information

Fig. 9
Left: Sound Intensity
Probe Kit Type 3599
Right: Pin-out for the
LEMO (7-pin)
connector



Sound Intensity Probe Kit

For further related information please see the 'Type 3599 Sound Intensity Probe Kit' page on bksv.com.

LAN-XI Front Panel, Charge Accelerometer – UA-2105

Fig. 10
UA-2105



Front Panel UA-2105 is intended for use with charge accelerometers. It features six slots for direct mounting of up to six In-line Charge Amplifiers Type 2647.

Uses

- Charge accelerometers

Features

- 6 × slots for direct mounting of In-line Charge Amplifiers Type 2647

| Front Panel | Compatible LAN-XI Module |
|-------------|--------------------------|
| UA-2105-060 | 3050-A-060 3050-B-060 |

Order Number

- UA-2105-060

Related Information

Fig. 11
UA-2105 with In-line
Charge Amplifiers
Type 2647



In-line Charge Amplifiers Type 2647

For further related information please see the '2647 Charge to DeltaTron Converter' page on bksv.com.

LAN-XI Front Panel, 12-channel High Density – UA-2107

Fig. 12
UA-2107



UA-2107 is the default front panel for the 12-channel Type 3053 input module. Compact SMB connectors allow easy connection for Direct Voltage, Generator Output, CCLD Accelerometer, Charge Accelerometer (using charge adaptor), CCLD Microphone, CCLD Tacho Probe.

Uses

- General purpose sound and vibration measurements
- Direct voltage
- CCLD microphone
- CCLD accelerometer
- CCLD tacho probe
- Generator output

Features

- 12 × SMB connectors
- LED indicators for input/overload

| Front Panel | Compatible LAN-XI Module |
|-------------|--------------------------|
| UA-2107-120 | 3053-B-120 |

Order Number

- UA-2107-120

LAN-XI Front Panel, Triax Accelerometer – UA-2108

Fig. 13
UA-2108 family



The UA-2108 family features two and four (4-pin) Triax accelerometer connectors. It reduces the number of cables by two thirds when used with CCLD Triax accelerometers.

Uses

- CCLD Triax Accelerometer

Features

- 2 and 4 × 4-pin Triax accelerometer connectors
- LED indicators for input/overload

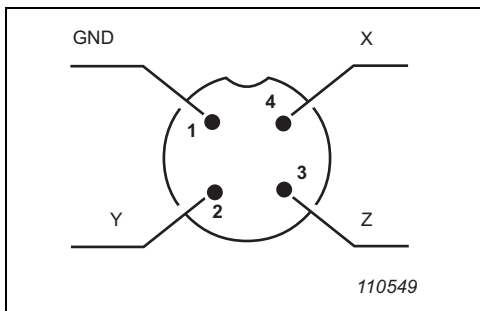
| Front Panel | Compatible LAN-XI Module |
|-------------|--------------------------|
| UA-2108-060 | 3053-A-060 3050-B-060 |
| UA-2108-120 | 3053-B-120 |

Order Numbers

- UA-2108-060
- UA-2108-120

Related Information

Fig. 14
Triax connector



Triaxial Accelerometers

For further related information please see the 'Accelerometers' page on bksv.com.

LAN-XI Front Panel, 12-channel Sub-D Connector – UA-2109

Fig. 15
UA-2109



Front Panel UA-2109 features a 50-pin Sub-D connector; it is primarily to be used for applications where it is required to use customised, non-standard, cables.

Uses

- General purpose sound and vibration measurements
- Direct voltage
- Generator output
- CCLD accelerometer
- Charge accelerometer (using charge adaptor)
- CCLD microphone
- CCLD tacho probe

Features

- 1 × 50-pin Sub-D connector
- LED indicators for input/overload

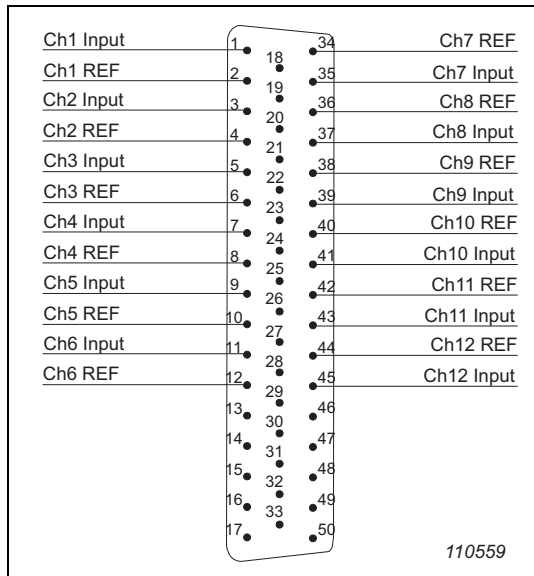
| Front Panel | Compatible LAN-XI Module |
|-------------|--------------------------|
| UA-2109-120 | 3053-B-120 |

Order Number

- UA-2109-120

Related Information

Fig. 16
50-pin Sub-D
connector



Note: Do not connect unused pins, these are for internal use only.

LAN-XI Front Panel, Array Connectors – UA-2112

Fig. 17
UA-2112 family



The UA-2112 family features 1 and 2 multi-pin connectors for six array microphones. They are primarily intended for use with our Array Acoustic systems.

Uses

- Array acoustics

Features

- 1 and 2 × 7-pin LEMO microphone array connectors
- LED indicators for input/output/overload

| Front Panel | Compatible LAN-XI Module |
|-------------|--------------------------|
| UA-2112-060 | 3050-A-060 3050-B-060 |
| UA-2112-120 | 3160-A-042 3050-A-060 |

Order Numbers

- UA-2112-060
- UA-2112-120

Related Information

Fig. 18
7-pin LEMO Array connector

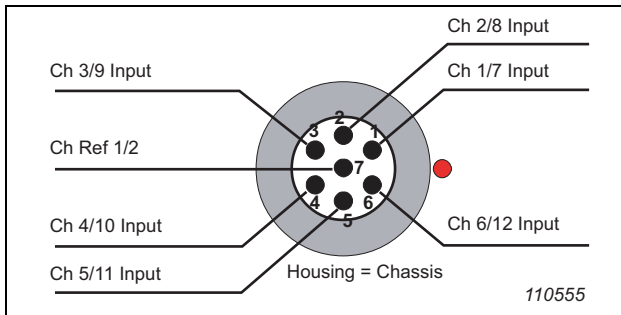


Fig. 19
Front Panel UA-2112 being used in an array application



Acoustic Holography

For further related information please see the 'Acoustic Holography' page on bksv.com.

LAN-XI Front Panel, 6-channel In/Monitor Out SMB Connectors – UA-2113

Fig. 20
UA-2113



Front Panel UA-2113 provides buffered monitor outputs in parallel to the inputs. It allows input signals to be simultaneously fed into both the LAN-XI system and also a second system, for example, a recorder.

Uses

- Monitor outputs
- General purpose sound and vibration measurements
- Direct voltage
- CCLD microphone
- CCLD accelerometer

Features

- 6 × SMB input connectors: general purpose connectors
- 6 × SMB connectors: monitor outputs
- LED indicators for input/overload on channel

| Front Panel | Compatible LAN-XI Module |
|-------------|--------------------------|
| UA-2113-066 | 3050-A-060 3050-B-060 |

Order Number

- UA-2113-066

LAN-XI Front Panel, Dynamic Bridge Transducer – UA-2114

Fig. 21
UA-2114 family



The UA-2114 family is specifically designed for use with Kulite Bridge Transducers such as the LQ-080 series and the LQ-125 series, used in the aerospace industry for dynamic measurements on aircraft and in wind tunnels.

UA-2114 is supplied from ± 5 V and delivers ± 5 V excitation voltage to the Kulite transducers. This gives the possibility of DC-coupling of the UA-2114 input amplifier, resulting in good noise performance at low frequencies (typically $8 \text{ nV}/\sqrt{\text{Hz}}$).

The lower frequency is set by the high-pass filters of the LAN-XI modules. DC-coupling down to zero is possible, but any DC offset from the transducers must be taken into account. A DC offset greater than about 10 mV will force the Dyn-X input into its upper range resulting in loss of dynamic range.

The gain in the front panel amplifier is 30 dB – optimised for the LAN-XI modules.

Note: UA-2114 is only intended for use with bridge transducers and transducers that are self-powered.

Uses

- Kulite Bridge Transducers

Features

- 3 and 6 × 7-Pin LEMO connectors
- Provides ± 5 V excitation voltage to Kulite transducers
- Gain 30 dB – optimised for LAN-XI modules

| Front Panel | Compatible LAN-XI Module |
|-------------|--------------------------|
| UA-2114-030 | 3052-A-030 |
| UA-2114-060 | 3050-A-060 |

Order Numbers

- UA-2114-030
- UA-2114-060

Related Information

Fig. 22
7-pin LEMO connector

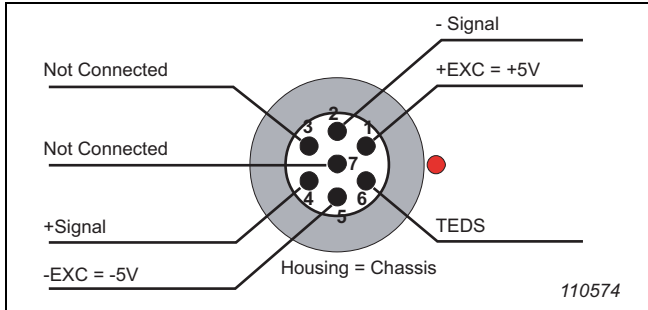
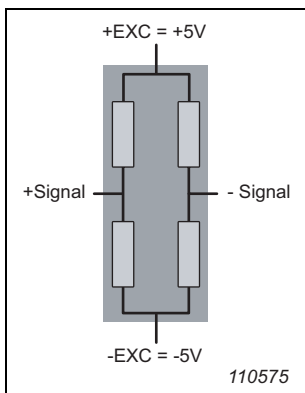


Fig. 23
Kulite Bridge
transducer diagram



Specifications – Dynamic Bridge Transducer – UA-2114

| | |
|--|--|
| Frequency Range: | 0 – 102.4 kHz (–0.15 dB @ 20 kHz, –0.5 dB @ 102.4 kHz), typical |
| Bridge Supply: | ±5 V DC ± 4.5% @ max. 10 mA per channel |
| Input Impedance: | >3 MΩ, protection against transients |
| Differential Gain: | 30.04 dB ± 0.05 dB @ 1 kHz |
| Max. Input without Overload: | ± 0.15 V _{peak} |
| Max. Input without Damage: | ± 5 V _{peak} |
| Noise Floor: | Typical 8 nV/√Hz |
| Excitation Voltage Overload Indication: | If excitation voltage on one of the channels is overloaded (too much current drawn), all channels will be indicated as overloaded as the excitation voltage is common for all channels. Overload indication for signal overload as for LAN-XI modules |

With Associated LAN-XI Module



Compliance with EMC Directive and Low Voltage Directive of the EU



Compliance with the EMC requirements of Australia and New Zealand

LAN-XI Array Front Panel (for 11 Modules) – UA-2145

Fig. 24
UA-2145



The Array Front Panel (for 11 LAN-XI Modules) UA-2145 is intended for use with hand-held microphone arrays together with a LAN-XI Frame Type 3660-D.

Uses

- Noise source identification using mapping techniques in conjunction with Acoustic Holography Calculations, Conformal Mapping Calculations and a 3D positioning system
- Suitable for use with Handheld Arrays: Type 3662-A-001 (single layer, without microphones, 8 × 8, 25 mm spacing, 5 m cable; Type 3662-A-002 (double layer, without microphones, 8 × 8, 25 mm spacing, 5 m cable
- Designed for use with one to eleven, 12 channel input modules, Type 3053-B-120

Features

- Enables up 132 signal channels to be connected to a LAN-XI D-frame in seconds by means of a single (zero insertion force) connector
- 4 × BNC sockets and 8 × SMB sockets for reference signals on the eleventh module

| Front Panel | Compatible LAN-XI Module |
|-------------|--|
| UA-2145 | One to eleven 3053-B-120 modules in a 3660-D Frame |

Order Numbers

- UA-2145-132

Related Information

Fig. 25
UA-2145 fitted to a Type 3660-D Frame, with 11 × Type 3053-B-120, 12-channel modules (and a Battery Module UA-2106)



Noise Source Identification with Acoustical Array

For further related information please see the 'Noise Source Identification with Acoustical Array' page on bksv.com.

Compatibility of Front Panels

✓: Fully compatible –: Not compatible

| Front Panel/Connectors | Module Type | | | | | | | | | | |
|------------------------------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | 3050-A-060 | 3050-A-040 | 3050-B-060 | 3050-B-040 | 3160-A-042 | 3160-A-022 | 3160-B-042 | 3160-B-022 | 3052-A-030 | 3052-B-030 | 3053-B-120 |
| UA-2100-060 BNC | ✓ | – | ✓ | – | ✓ | – | ✓ | – | – | – | – |
| UA-2100-040 BNC | – | ✓ | – | ✓ | – | – | – | – | – | – | – |
| UA-2100-030 BNC | – | – | – | – | – | – | – | – | ✓ | ✓ | – |
| UA-2100-022 BNC | – | – | – | – | – | ✓ | – | ✓ | – | – | – |
| UA-2101-060 LEMO | ✓ | – | – | – | ✓ | – | – | – | – | – | – |
| UA-2101-040 LEMO | – | ✓ | – | – | – | – | – | – | – | – | – |
| UA-2101-030 LEMO | – | – | – | – | – | – | – | – | ✓ | – | – |
| UA-2102-042 1 – 4: LEMO, 5, 6: BNC | ✓ | – | – | – | ✓ | – | – | – | – | – | – |
| UA-2102-022 1, 2: LEMO, 5, 6: BNC | – | – | – | – | – | ✓ | – | – | – | – | – |
| UA-2103 37-pin sub-D | ✓ | – | ✓ | – | ✓ | – | ✓ | – | – | – | – |
| UA-2104-030 LEMO | ✓ | ✓ | – | – | ✓ | – | – | – | ✓ | – | – |
| UA-2105-060 Charge | ✓ | – | ✓ | – | – | – | – | – | – | – | – |
| UA-2107-120 SMB | – | – | – | – | – | – | – | – | – | – | ✓ |
| UA-2108-060 Triax. | ✓ | – | ✓ | – | – | – | – | – | – | – | – |
| UA-2108-120 Triax. | – | – | – | – | – | – | – | – | – | – | ✓ |
| UA-2109-120 50-pin sub-D | – | – | – | – | – | – | – | – | – | – | ✓ |
| UA-2112-060 Array LEMO | ✓ | – | ✓ | – | – | – | – | – | – | – | – |
| UA-2112-120 Array LEMO | – | – | – | – | – | – | – | – | – | – | ✓ |
| UA-2113-066 SMB | ✓ | – | ✓ | – | – | – | – | – | – | – | – |
| UA-2114-030 1 – 3: LEMO | – | – | – | – | – | – | – | – | ✓ | – | – |
| UA-2114-060 1 – 6: LEMO | ✓ | – | – | – | – | – | – | – | – | – | – |
| UA-2145-132 | – | – | – | – | – | – | – | – | – | – | ✓* |

* 11 Modules in Type 3660-D.

Brüel & Kjær reserves the right to change specifications and accessories without notice. © Brüel & Kjær. All rights reserved.

HEADQUARTERS: Brüel & Kjær Sound & Vibration Measurement A/S · DK-2850 Nærum · Denmark
Telephone: +45 7741 2000 · Fax: +45 4580 1405 · www.bksv.com · info@bksv.com

Local representatives and service organisations worldwide

Brüel & Kjær 

