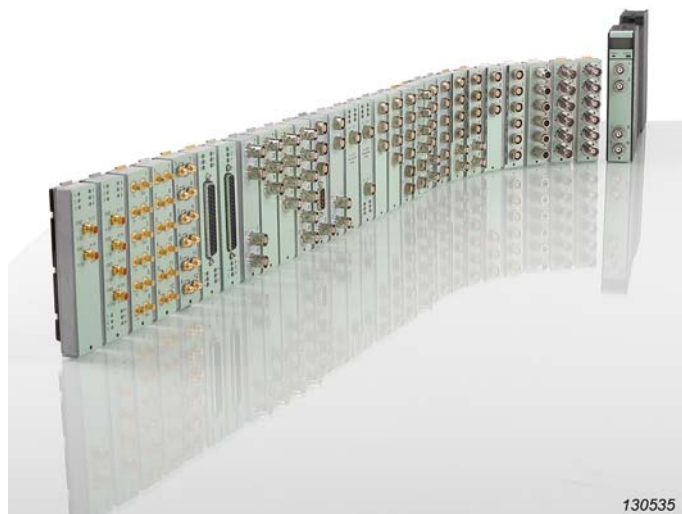


LAN-XI Front Panels UA-2100 to -2105, UA-2107 to -2114, UA-2116 to -2121, UA-3100 and UA-3102; LAN-XI Array Front Panel UA-2145-D

LAN-XI Modules Type 3050, 3052, 3053, 3056, 3057, 3160 and 3161 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-D 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.



Overview

Part No.	LAN-XI Front Panel	
UA-2100	General Purpose	page 3
UA-2101	200 V Microphone	page 3
UA-2102	Generator, for 200 V Microphones*	page 4
UA-2103	6-channel Sub-D Connector	page 5
UA-2104	Sound Intensity	page 6
UA-2105	Charge Accelerometer	page 7
UA-2107	12-channel High Density	page 7
UA-2108	Triaxial Accelerometer	page 8
UA-2109	12-channel Sub-D Connector	page 8
UA-2110	Auxiliary Connectors with 200 V Microphone Inputs	page 9
UA-2111	Auxiliary Connectors	page 10
UA-2112	Array Connectors	page 10
UA-2113	Monitor Connectors	page 11
UA-2114	Dynamic Bridge Transducer	page 12
UA-2116	12-channel Charge	page 14
UA-2117	1-ch. Input/1-ch. Output	page 15
UA-2118	Headphone Test, 2 +2 Channel	page 16
UA-2119	6-ch. Differential Charge Input	page 17
UA-2120	6-ch. Charge Input	page 18
UA-2121	For Bridge Module	page 19
UA-3100	Generator, General Purpose	page 20
UA-3102	Generator, for 200 V Microphones	page 20
UA-2145-D	Array (for 11 Modules)	page 21

* Note that UA-3102-042 is the preferred front panel for Generator Module Type 3160-042






The LAN-XI front panel concept means that most of the front panels can be used on more than one module. Not all the front panels are compatible with every module, however, so a compatibility table is provided on page 23.

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

Replacing the LAN-XI Front Panel

Refer to the LAN-XI System Information Flash file (available from the **Help** menu of the PULSE Front-end Setup program) to change a module's front panel, or follow the procedure in Table 1.

Table 1 Replacing the LAN-XI front panel

<p>1) Remove the hex wrench 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 hex wrench.</p>  <p>110609</p>	

Store unused front panels in the holsters or cases 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 4/6-ch. Input Modules Type 3050, 3-ch. Input Module Type 3052 and Generator, 2/2-ch. Input/Output Module Type 3160-A-022.

Industry standard BNC connectors allow easy connection for direct voltage, generator output, CCLD accelerometers, charge accelerometers (using charge adaptor), CCLD microphones, and CCLD tacho probes.

Uses

- General purpose sound and vibration measurements
- Direct voltage
- CCLD microphones
- CCLD accelerometers
- CCLD tacho probes
- Generator output

Features

- 3, 4 or 6 × BNC connectors (UA-2100-022 can be configured as 4 inputs **or** 2 × inputs and 2 × outputs; UA-2100-060 can be configured as 6 inputs **or** 4 × inputs and 2 × outputs)
- LED indicators for input/output/overload/cable break

Front Panel/Order No.	Fully Compatible LAN-XI Modules
UA-2100-022	3160-A-022
UA-2100-030	3052-A-030
UA-2100-040	3050-A-040
UA-2100-060	3050-A-060 3160-A-042*

* Note that UA-3100-042 is the preferred (BNC) front panel for Generator Module Type 3160-042

LAN-XI Front Panel, 200 V Microphone 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 accelerometers, CCLD microphones, CCLD tacho probes, and DC responding accelerometers.

Uses

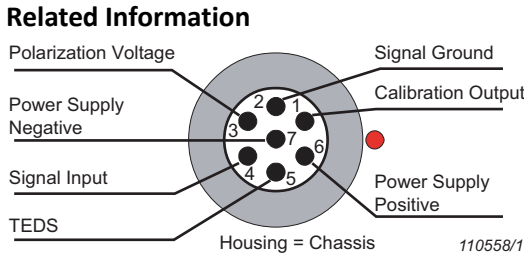
- Microphones requiring 200 V external polarization
- General purpose sound and vibration measurements
- Direct voltage
- CCLD accelerometers
- DC responding accelerometers
- CCLD microphones
- CCLD tacho probes

Features

- 3, 4 and 6 × LEMO (7-pin) connectors
- LED indicators for input/overload/cable break

Front Panel/Order No.	Fully Compatible LAN-XI Modules
UA-2101-030	3052-A-030
UA-2101-040	3050-A-040
UA-2101-060	3050-A-060

Fig. 3
7-pin LEMO connector



LAN-XI Front Panel, Generator, for 200 V Microphones UA-2102

Fig. 4
UA-2102 family



The UA-2102 family combines two or four 7-pin LEMO connectors with two BNC connectors. These front panels allow input and conditioning for direct voltage, generator output, CCLD accelerometers, CCLD microphones, CCLD tacho probes (using Adaptor Cable AO-0091), charge accelerometers (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 accelerometers
- Charge accelerometers (using charge adaptor)
- Microphone preamplifiers
- CCLD microphones
- CCLD tacho probes

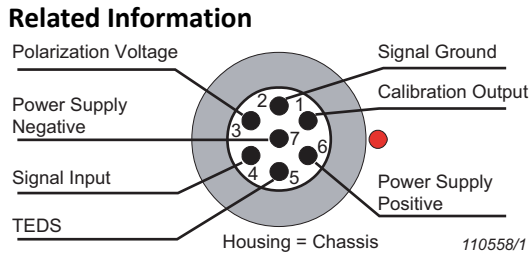
Features

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

Front Panel/Order No.	Fully Compatible LAN-XI Modules
UA-2102-022	3160-A-022
UA-2102-042	3160-A-042* 3050-A-060

* Note that UA-3102-042 is the preferred (LEMO) front panel for Generator Module Type 3160-042

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 backward 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 accelerometers
- Charge accelerometers (using charge adaptor)
- Microphone preamplifiers
- CCLD microphones
- CCLD tacho probes

Features

- 1 × sub-D connector (37-pin)
- LED indicators for input/output/overload/cable break

Front Panel/Order No.	Fully Compatible LAN-XI Modules
UA-2103	3050-A-060 3160-A-042

Fig. 7
37-pin sub-D connector

Related Information

Ch1 V Preamp +	1	20	Ch1 CIC
Ch1 REF	2	21	Ch1 Input
Ch1 V Preamp -	3	22	Ch1 TEDS
Ch2 V Preamp +	4	23	Ch2 CIC
Ch2 REF	5	24	Ch2 Input
Ch2 V Preamp -	6	25	Ch2 TEDS
Ch3 V Preamp +	7	26	Ch3 CIC
Ch3 REF	8	27	Ch3 Input
Ch3 V Preamp -	9	28	Ch3 TEDS
Ch4 V Preamp +	10	29	Ch4 CIC
Ch4 REF	11	30	Ch4 Input
Ch4 V Preamp -	12	31	Ch4 TEDS
Ch5 V Preamp +	13	32	Ch5 CIC
Ch5 REF	14	33	Ch5 Input / Out 1
Ch5 V Preamp -	15	34	Ch5 TEDS
Ch6 V Preamp +	16	35	Ch6 CIC
Ch6 REF	17	36	Ch6 Input / Out 2
Ch6 V Preamp -	18	37	Ch6 TEDS
V POL	19		

110556

Acoustic Holography

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

Fig. 8
UA-2104



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

Uses

- Sound intensity measurements using PULSE
- Selective intensity measurements using third input for reference signal
- Building acoustics and leak detection measurements, for example, sealing in vehicles using generator output

Features

- 3 × LEMO (7-pin) input connectors
- 1 × sub-D connector (9-pin)
- 1 × BNC generator output connector
- LED indicators for input/output/overload/cable break

Front Panel/Order No.	Fully Compatible LAN-XI Modules
UA-2104-031	3050-A-060* 3160-A-042

* Only compatible with serial number above 3050-101213

Related Information

Fig. 9
Left: Block diagram of UA-2104-031

Right: Pinout for the LEMO (7-pin) connector

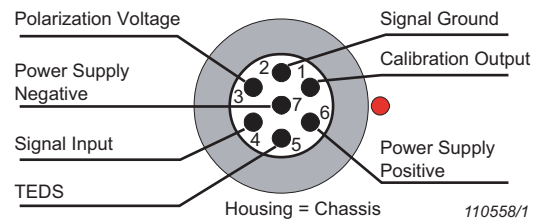
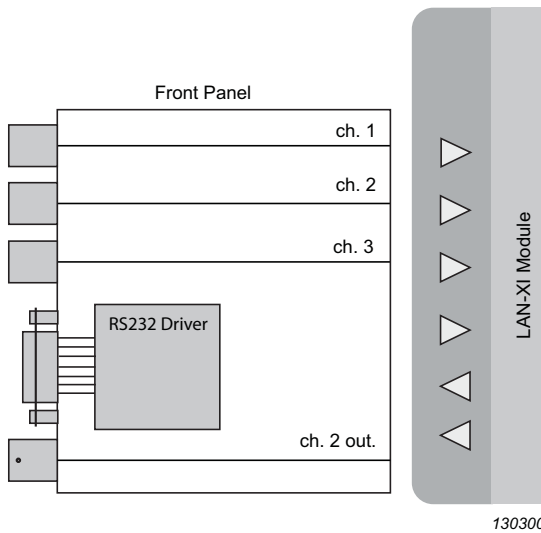


Fig. 10
Sound Intensity Probe Kit Type 3599



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

LAN-XI Front Panel, Charge Accelerometer UA-2105

Fig. 11
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
- LED indicators for input/output/overload

Front Panel/Order No.	Fully Compatible LAN-XI Module
UA-2105-060	3050-A-060

Related Information

Fig. 12
UA-2105 with In-line
Charge Amplifiers
Type 2647



In-line Charge Amplifiers Type 2647

For further related information please see the '[Charge to CCLD Converter – Type 2647](#)' page on bksv.com.

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

Fig. 13
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, CCLD accelerometers, charge accelerometers (using charge adaptor), CCLD microphones, and CCLD tacho probes.

Uses

- General purpose sound and vibration measurements
- Direct voltage
- CCLD microphones
- CCLD accelerometers
- CCLD tacho probes

Features

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

Front Panel/Order No.	Fully Compatible LAN-XI Module
UA-2107-120	3053-B-120

LAN-XI Front Panel, Triaxial Accelerometer UA-2108

Fig. 14
UA-2108 family



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

Uses

- CCLD triaxial accelerometers

Features

- 2 and 4 × triaxial accelerometer connectors (4-pin)
- LED indicators for input/overload/cable break

Front Panel/Order No.	Fully Compatible LAN-XI Modules
UA-2108-060	3050-A-060
UA-2108-120	3053-B-120

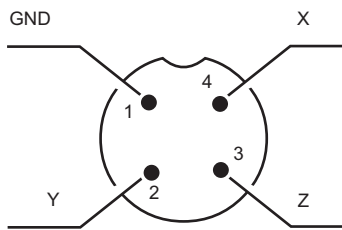
Note:

Please use triaxial cable AO-0528 with this front panel.

110548

Related Information

Fig. 15
Triaxial connector



Triaxial Accelerometers

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

110549

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

Fig. 16
UA-2109



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

Uses

- General purpose sound and vibration measurements
- Direct voltage
- CCLD accelerometers
- Charge accelerometers (using charge adaptor)
- CCLD microphones
- CCLD tacho probes

Features

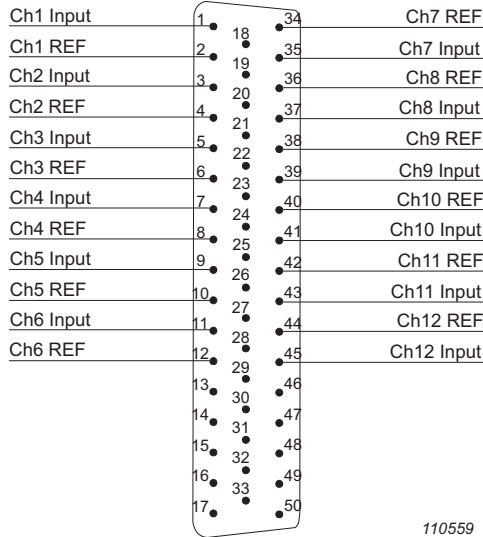
- 1 × sub-D connector (50-pin)
- LED indicators for input/overload/cable break

Front Panel/Order No.	Fully Compatible LAN-XI Module
UA-2109-120	3053-B-120

110550

Fig. 17
50-pin Sub-D
connector

Related Information



Note:
Do not connect unused pins; they are for internal use only.

LAN-XI Front Panel, Auxiliary Connectors with 200 V Microphone Inputs UA-2110

Fig. 18
UA-2110



110551

UA-2110 is an auxiliary front panel designed for applications combining auxiliary data with microphones that require 200 V polarization voltage.

It features four 7-pin LEMO connectors for 200 V microphones and/or angle encoders for high-speed tacho signals. It also has two 10-pin LEMO connectors for 8-channel auxiliary signal inputs.

The auxiliary channels are connected using aux. cable AO-0738-D-010.

Uses

- Low-frequency auxiliary data
- 200 V microphones
- General purpose sound and vibration measurements
- Angle encoders/high-speed tacho signal

Features

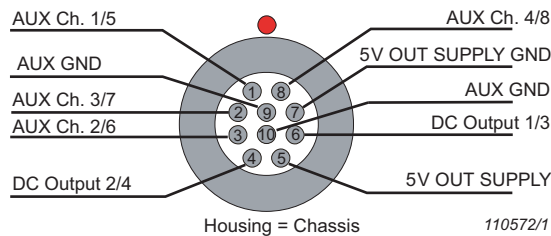
- 4 × LEMO (7-pin) connectors
- 2 × LEMO (10-pin) auxiliary connectors
- LED indicators for input/overload/cable break

Front Panel/Order No.	Fully Compatible LAN-XI Module
UA-2110-040	3056-A-040

Related Information

The pinout for the 7-pin LEMO connector is shown in Fig. 5.

Fig. 19
10-pin LEMO Aux.
connector



Housing = Chassis

110572/1

LAN-XI Front Panel, Auxiliary Connectors UA-2111

Fig. 20
UA-2111



UA-2111 is the default front panel on LAN-XI auxiliary module Type 3056-A-040. It features four BNC connectors for general purpose sound and vibration measurements and/or angle encoders for high-speed tacho signals. It also has two 10-pin LEMO connectors for 8-channel auxiliary signal inputs.

The auxiliary channels are connected using aux. cable AO-0738-D-010.

Uses

- Low-frequency auxiliary data
- General purpose sound and vibration measurements
- Direct voltage
- Generator output
- CCLD accelerometers
- Charge accelerometers (using charge adaptor)
- CCLD microphones
- CCLD tacho probes
- Angle encoders/high-speed tacho signal

Features

- 4 × BNC general purpose connectors
- 2 × LEMO (10-pin) auxiliary connectors
- LED indicators for input/overload/cable break

Front Panel/Order No.	Fully Compatible LAN-XI Module
UA-2111-040	3056-A-040

Related Information

The pinout for the 10-pin LEMO auxiliary connector is shown in Fig. 19.

LAN-XI Front Panel, Array Connectors UA-2112

Fig. 21
UA-2112 family



The UA-2112 family features one and two 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 × LEMO (7-pin) microphone array connectors
- LED indicators for input/overload/cable break

Front Panel/Order No.	Fully Compatible LAN-XI Modules
UA-2112-060	3050-A-060
UA-2112-120	3053-B-120

Related Information

Fig. 22
7-pin LEMO array connector

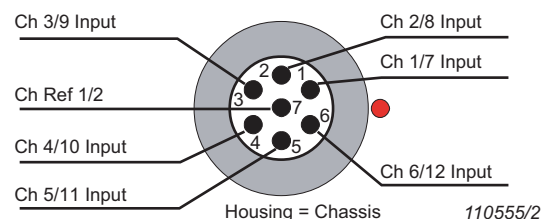


Fig. 23
Front Panel UA-2112
being used in an array
application



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

LAN-XI Front Panel, Monitor Connectors UA-2113

Fig. 24
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 microphones
- CCLD accelerometers

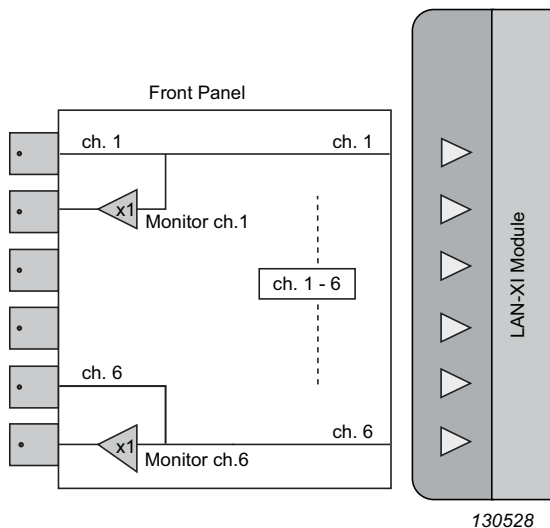
Features

- 6 × SMB input connectors: general purpose connectors
- 6 × SMB connectors: monitor outputs
- LED indicators for input/output/overload/cable break

Front Panel/Order No.	Fully Compatible LAN-XI Module
UA-2113-066	3050-A-060

Related Information

Fig. 25
Block diagram of
UA-2113-066



Note:

At input voltages greater than $10 V_{peak}$, the monitor output will be clipped. You should therefore avoid using the monitor output when the LAN-XI module is in its extended $31.6 V_{peak}$ input range.

Fig. 26
UA-2114 family



The UA-2114 family is 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 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 – optimized for the LAN-XI modules.

Note:

- The 30 dB gain has to be manually entered in the transducer database.
- UA-2114 is only intended for use with bridge transducers, and only with transducers that are self-powered.

Uses

- Kulite bridge transducers

Features

- 3, 4 or 6 \times LEMO (7-pin) input connectors
- 2 \times BNC generator output connectors on UA-2114-042
- Provides ± 5 V excitation voltage to Kulite transducers
- Gain 30 dB – optimized for LAN-XI modules
- LED indicators for input/output/overload

Front Panel/Order No.	Fully Compatible LAN-XI Modules
UA-2114-030	3052-A-030
UA-2114-060	3050-A-060
UA-2114-042	3160-A-042 3050-A-060

Related Information

Fig. 27

Left: Block diagram of:
UA-2114-042

Right: UA-2114-060

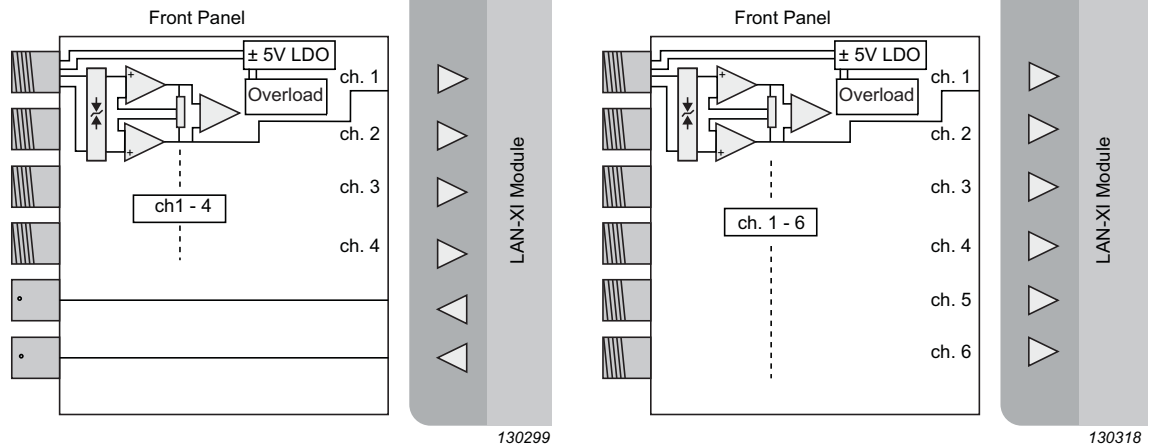
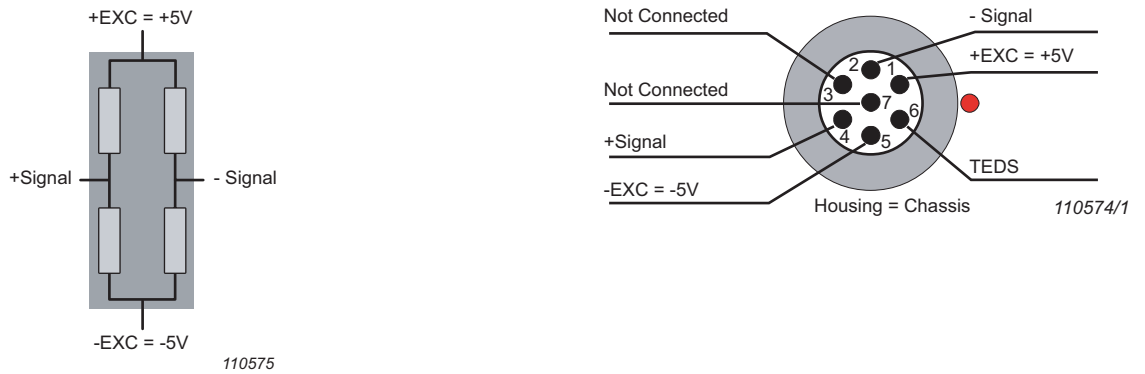


Fig. 28





Left: Kulite Bridge
transducer

Right: 7-pin LEMO
connector



Specifications – Dynamic Bridge Transducer UA-2114, Input

Frequency Range	0 – 102.4 kHz (–0.15 dB @ 20 kHz, –0.5 dB @ 102.4 kHz), typical
Bridge Supply	± 5 V DC $\pm 4.5\%$ @ max. 10 mA per channel
Input Impedance	>3 M Ω , 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/ $\sqrt{\text{Hz}}$
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:    

LAN-XI Front Panel, 12-channel Charge UA-2116-120

Fig. 29
UA-2116-120



UA-2116-120 allows up to twelve charge type transducers to be mounted directly to the LAN-XI front end, simplifying the setup and performance.

Ideal for high-channel-count charge accelerometer applications and in power-train applications, it is also ideal for combustion-pressure monitoring on up to 12-cylinder engines.

The charge input front has twelve integrated charge amplifiers each with a fixed gain of 0 dB (-1 mV/pC) and a fixed high-pass filter of 0.1 Hz. Setting up the fronts in PULSE works in the same way as using an external Type 2647.

The front-panel has $12 \times 10-32$ UNF(F) microdot connectors.

Uses

- Charge type transducers: accelerometers, pressure sensors, hydrophones
- Combustion-pressure monitoring on up to 12-cylinder engines
- High-channel-count charge accelerometer applications

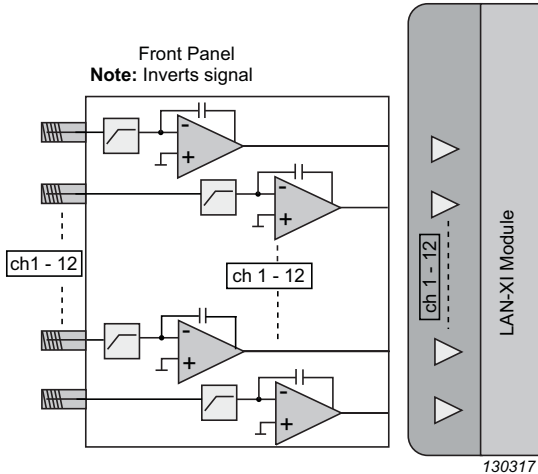
Features






- $12 \times 10-32$ UNF(F) microdot connectors
- Built-in charge amplifiers 0 dB (-1 mV/pC)/0.1 Hz high-pass filter
- LED indicators for input/overload

Front Panel/Order No.	Fully Compatible LAN-XI Module
UA-2116-120	3053-B-120

Related Information

Fig. 30
Block diagram of
UA-2116-120



With associated LAN-XI module:     

LAN-XI Front Panel, 1-ch. Input/1-ch. Output UA-2117-011

Fig. 31
UA-2117-011



UA-2117-011 is the default front panel for 200 kHz LAN-XI Module Type 3161-A-011.

The front panel has three different input connectors, BNC, LEMO and TNC, which allow connection of a range of different transducers: Direct, CCLD, 200 V, Charge.

Two output BNC connectors give access to a generator signal and an input monitor output.

Built-in LEDs show input status such as overload, cable break, etc.

Uses

- High-frequency sound and vibration measurements
- Underwater acoustics applications
- High-energy impact measurements
- High-frequency system excitation and transducer calibration

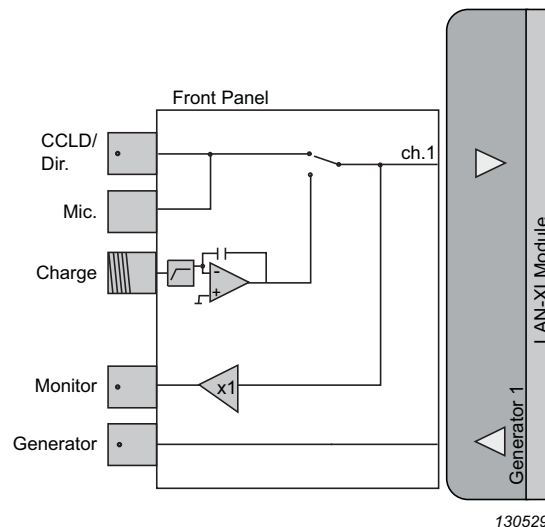
Features

- 1 × Direct/CCLD input connector BNC(F)
- 1 × 200V mic input connector 7-pin LEMO
- 1 × Charge input connector TNC(F)
- 1 × Generator output connector BNC(F)
- 1 × input signal monitor output connector BNC(F)
- LED indicators for input/output/overload/cable break

Front Panel/Order No.	Fully Compatible LAN-XI Module
UA-2117-011	3161-A-011

Related Information

Fig. 32
Block diagram of
UA-2117-011







With associated LAN-XI module:    

Fig. 33
UA-2118-022



UA-2118-022 is a dedicated analogue interface for headphone testing allowing simultaneous testing of left and right headphones. A three-position switch on the front panel switches the output of Generator 1 between left earphone, both earphones and right earphone.

Uses

- Testing of headphones, small loudspeakers and receivers

Features

- Integrated 2 × 100 mW amplifier for direct drive of headphones and small loudspeakers
- 0 dB output gain eliminates the need to take external gain factor into account
- Integrated load impedance feedback (1 V/A) on channels 3 and 4
- Simultaneous testing of left and right headphones
- 2 × LEMO (7-pin) input connectors
- 1 × 6.35 mm (1/4") TRS(F) connector (three-contact phone/headphone stereo jack connector)
- LED indicators for input/overload

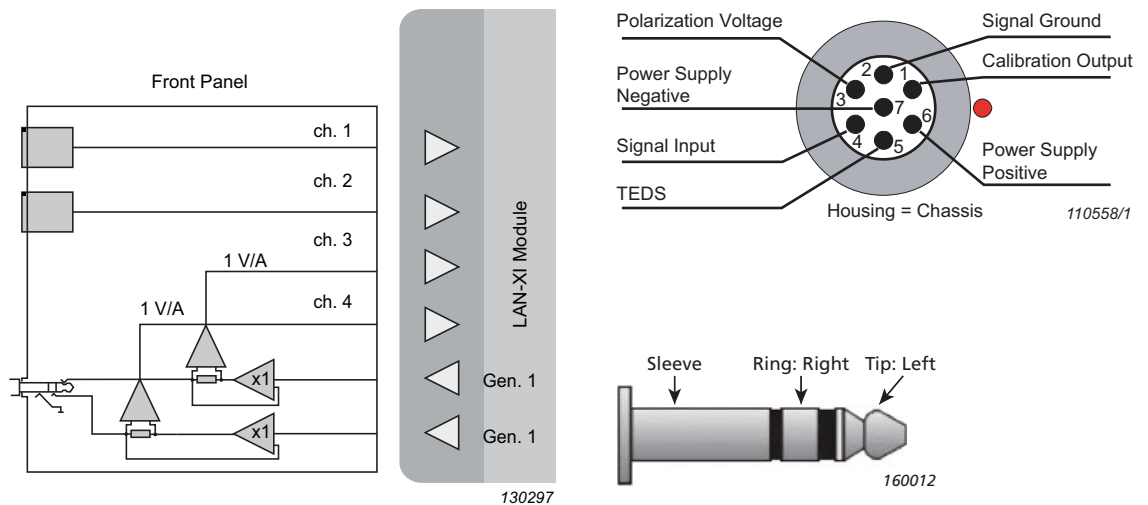
Front Panel/Order No.	Fully Compatible LAN-XI Module
UA-2118-022	3160-A-042

Related Information

Fig. 34
Left: Block diagram of UA-2118-022

Top right: Pinout for the LEMO (7-pin) connectors

Bottom right: The headphone connector is compatible with standard 6.35 mm (1/4") TRS connectors for stereo jacks







Please note that the serial impedance of a jack connector can be significant, and depends heavily on the build quality of the connector. When including such a connector in the measurement path, the measurements should be compensated for the influence of the added impedance of the connector.

Distortion (All Harmonics) – Typical Values

	100 mW _{peak}	10 mW _{rms}	Unclipped Output
4 Ω	< -65 dB	< -80 dB	0.65 V _{peak}
8 Ω	< -70 dB	< -90 dB	1.5 V _{peak}
16 Ω	< -75 dB	< -90 dB	2.5 V _{peak}
32 Ω	< -80 dB	< -90 dB	2.5 V _{peak}
unloaded			3.5 V _{peak}

Typical Output Impedance: < 0.05 Ω

With associated LAN-XI module:    

LAN-XI Front Panel, 6-ch. Differential Charge Input UA-2119-060

Fig. 35
UA-2119-060



UA-2119-060 allows up to six differential charge accelerometers, such as Type 8347-C, to be connected directly to the LAN-XI front end, simplifying the setup and optimizing the performance.

The front panel has six integrated differential charge amplifiers each with a fixed gain of 0 dB (-1 mV/pC) and a fixed high-pass filter of 0.1 Hz. Setting up the fronts in PULSE works in the same way as using an external Type 2647.

Built-in LEDs show input status such as overload, cable break, etc.

The front panel has 6×2 -pole TNC(M) connectors.

Uses

- Differential charge accelerometers
- Environments with high levels of electromagnetic noise
- Applications where good ground connections are difficult to achieve
- High immunity to electromagnetic interference (EMI)

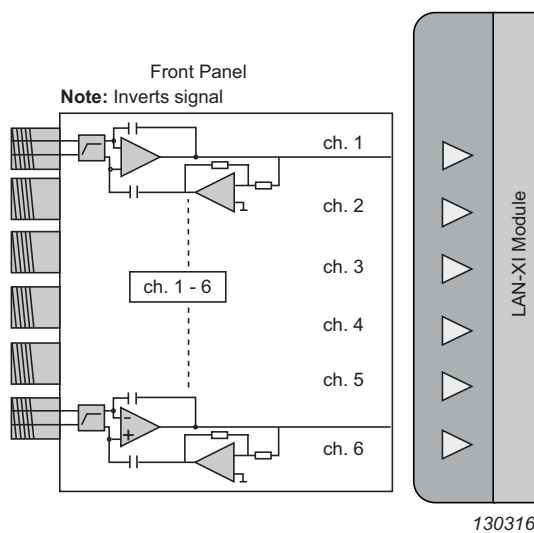
Features






- 6×2 -pole TNC(M) connectors
- Built in differential charge amplifiers 0 dB (-1 mV/pC)/0.1 Hz high-pass filter
- LED indicators for input/overload

Front Panel/Order No.	Fully Compatible LAN-XI Module
UA-2119-060	3050-A-060

Related Information

Fig. 36
Block diagram of
UA-2119-060



With associated LAN-XI module:     

LAN-XI Front Panel, 6-ch. Charge UA-2120-060

Fig. 37
UA-2120-060



UA-2120-060 allows up to six charge type transducers to be connected directly to the LAN-XI front end, simplifying the setup and the performance.

The front panel has six integrated charge amplifiers each with a fixed gain of 0 dB (-1 mV/pC) and a fixed high-pass filter of 0.1 Hz. Setting up the fronts in PULSE works in the same way as using an external Type 2647.

Built-in LEDs show input status such as overload, etc.

The front-panel has $6 \times$ TNC(F) connectors.

Uses

- Charge type transducers: accelerometers, pressure sensors, hydrophones

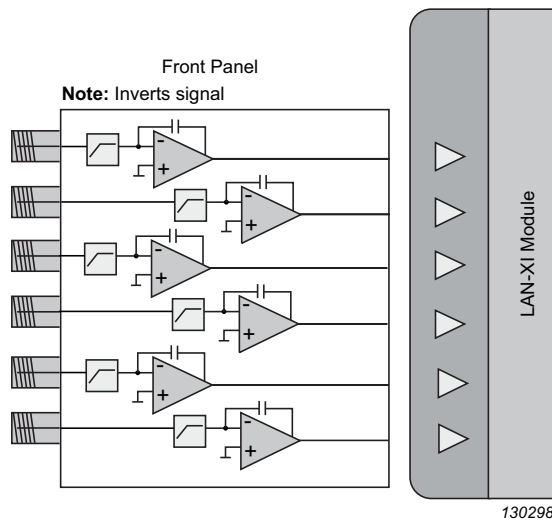
Features

- $6 \times$ TNC(F) connectors
- Built-in charge amplifiers 0 dB (-1 mV/pC)/0.1 Hz high-pass filter
- LED indicators for input/overload

Front Panel/Order No.	Fully Compatible LAN-XI Module
UA-2120-060	3050-A-060

Related Information

Fig. 38
Block diagram of
UA-2120-060







With associated LAN-XI module:    

Fig. 39
UA-2121-030



UA-2121-030 is the front panel used with LAN-XI Bridge Module Type 3057-B-030. The front-panel has 3 × 15-pin sub-D connectors which allow individual configurations of completion resistors to be made directly on the cable plug.

Uses

- Bridge sensor measurements:
 - 1/1, 1/2, 1/4 bridge strain gauges
 - Strain gauge based sensors (force, mass, torque)
 - Piezoresistive accelerometers and pressure sensors
 - Variable capacitance accelerometers
- General sound and vibration measurements:
 - CCLD transducers (microphones, accelerometers, tacho probes)
 - Direct voltage signals

Features

- 3 × 15-pin sub-D connectors
- LED indicators for input/overload/cable break

Front Panel/Order No.	Fully Compatible LAN-XI Modules
UA-2121-030	3057-B-030

Related Information

Fig. 40
Sub-D connector pinouts of UA-2121-030 (front view)

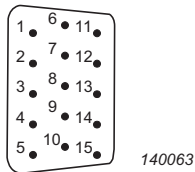
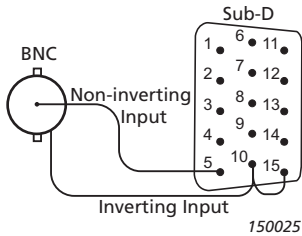






Fig. 41
Pin connections for BNC to sub-D adaptor WB-3603. The sub-D connector is shown as seen from front of panel. Inverting input is permanently grounded. Grounded/floating switching is not available with the BNC adaptor



- | | | |
|--------|-----------------|--|
| 1 | Cal1 (floating) | Shunt calibration resistor, terminal 1 |
| 2 | Exc- | Bridge excitation return |
| 3 | Exc+ | Bridge excitation output |
| 4 | Not used | |
| 5 | In+ | Non-inverting input |
| 6 | TEDS | TEDS communication |
| 7 | RS- | Remote sense low side |
| 8 | RS+ | Remote sense high side |
| 9 | For future use | |
| 10 | In- | Inverting input |
| 11 | Cal2 (floating) | Shunt calibration resistor, terminal 2 |
| 12 | QB midpoint | Midpoint of quarter bridge completion (tied to 3 via completion resistor when enabled) |
| 13 | Mon- | Monitor return |
| 14 | Mon+ | Monitor output |
| 15 | GND | Analogue ground |
| Shield | GND | Analogue ground |

With associated LAN-XI module:    

LAN-XI Front Panel, Generator, General Purpose UA-3100-042

Fig. 42
UA-3100-042



UA-3100-042 is designed for use with Generator, 4/2-ch. Input/Output Module Type 3160-A-042.

Uses

- General purpose sound and vibration measurements
- Direct voltage
- CCLD microphones
- CCLD accelerometers
- CCLD tachometer probes
- Generator output

Features

- 4 × BNC input connectors
- 2 × BNC output connectors
- Output silent on start-up
- LED indicators for input/output/overload/cable break

Front Panel/Order No.	Fully Compatible LAN-XI Modules
UA-3100-042	3160-A-042

LAN-XI Front Panel, Generator, for 200 V Microphone UA-3102-042

Fig. 43
UA-3102-042



UA-3102-042 is designed for use with Generator, 4/2-ch. Input/Output Module Type 3160-A-042.

Uses

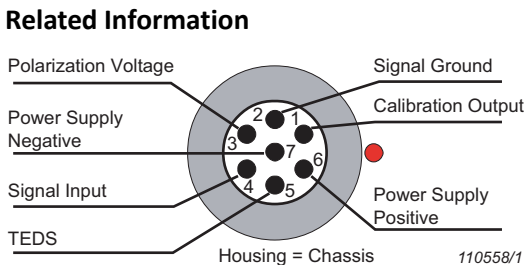
- Microphones requiring 200 V external polarization
- General purpose sound and vibration measurements
- Direct voltage
- CCLD accelerometers
- DC responding accelerometers
- CCLD microphones
- CCLD tachometer probes

Features

- 4 × LEMO (7-pin) input connectors
- 2 × BNC output connectors
- Output silent on start-up
- LED indicators for input/output/overload/cable break

Front Panel/Order No.	Fully Compatible LAN-XI Modules
UA-3102-042	3160-A-042

Fig. 44
7-pin LEMO connectors, seen from front of panel



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

Fig. 45
UA-2145-D



Array Front Panel UA-2145-D for 11 LAN-XI modules 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 hand-held arrays, for example, 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 to 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
- LED indicators for input/output/overload/cable break

Front Panel/Order No.	Fully Compatible LAN-XI Modules
UA-2145-D	One to eleven 3053-B-120 modules in a 3660-D Frame (and Battery Module Type 2831-A)

Related Information

Fig. 46
Left: UA-2145-D fitted to a Type 3660-D frame, with 11 × Type 3053-B-120, 12-channel modules
Right: Double-layer, 8 × 8 hand-held array



Noise Source Identification with Acoustical Array

For details of hand-held arrays see the table in the specifications of [BP 2144](#). For further related information please see the [‘Noise Source Identification with Acoustical Array’](#) page on [bksv.com](#).

Where stated the front panels and associated LAN-XI modules comply with the following standards:



The CE marking is the manufacturer's declaration that the product meets the requirements of the applicable EU directives



RCM mark indicates compliance with applicable ACMA technical standards – that is, for telecommunications, radio communications, EMC and EME



China RoHS mark indicates compliance with administrative measures on the control of pollution caused by electronic information products according to the Ministry of Information Industries of the People's Republic of China



WEEE mark indicates compliance with the EU WEEE Directive

Compatibility of Front Panels

✓ Fully compatible – Not compatible • Partially compatible

Front Panel	Connectors	Module Type								
		3050-A-060	3050-A-040	3052-A-030	3053-B-120	3056-A-040	3057-B-030	3160-A-042	3160-A-022	3161-A-011
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-2104-031	1 – 3: LEMO; 6: BNC	✓	•	•	–	–	–	✓	•	–
UA-2105-060	Charge	✓	•	•	•	–	–	–	–	–
UA-2107-120	SMB	–	–	–	✓	–	–	–	–	–
UA-2108-060	Triaxial	✓	•	•	•	–	–	–	–	–
UA-2108-120	Triaxial	–	–	–	✓	–	–	–	–	–
UA-2109-120	50-pin sub-D	–	–	–	✓	–	–	–	–	–
UA-2110-040	1 – 4: LEMO 7; 1, 2: LEMO 10	–	–	–	–	✓	–	–	–	–
UA-2111-040	1 – 4: BNC; 1, 2: LEMO 10	–	–	–	–	✓	–	–	–	–
UA-2112-060	Array LEMO	✓	•	•	•	–	–	–	–	–
UA-2112-120	Array LEMO	–	–	–	✓	–	–	–	–	–
UA-2113-066	SMB	✓	•	•	–	–	–	–	–	–
UA-2114-030	1 – 3: LEMO 7	•	•	✓	–	–	–	•	•	–
UA-2114-060	1 – 6: LEMO 7	✓	•	•	–	–	–	–	–	–
UA-2114-042	1 – 4: LEMO 7; 5, 6: BNC	✓	•	•	–	–	–	✓	•	–
UA-2116-120	Charge, 10–32 UNF(F) microdot	–	–	–	✓	–	–	–	–	–
UA-2117-011	BNC, LEMO, TNC	–	–	–	–	–	–	–	–	✓
UA-2118-022	LEMO, 1/4" TRS (F)	•	•	•	–	–	–	✓	•	–
UA-2119-060	Charge, TNC	✓	•	•	–	–	–	–	–	–
UA-2120-060	Charge, TNC	✓	•	•	–	–	–	–	–	–
UA-2121-030	Bridge, 15-pin sub-D	–	–	–	–	–	✓	–	–	–
UA-3100-042	BNC	•*	•*	•	•*	–	–	✓	•	–
UA-3102-042	1 – 4: LEMO 7; 5, 6: BNC	•*	•*	•	–	–	–	✓	•	–
UA-2145-D	Array Front	–	–	–	✓	–	–	–	–	–

* Increased distortion on the bottom two connectors if they are used as inputs

Brüel & Kjær and all other trademarks, service marks, trade names, logos and product names are the property of Brüel & Kjær or a third-party company.

Brüel & Kjær Sound & Vibration Measurement A/S
DK-2850 Nærum · Denmark · Telephone: +45 77 41 20 00 · Fax: +45 45 80 14 05
www.bksv.com · info@bksv.com
Local representatives and service organizations worldwide

Although reasonable care has been taken to ensure the information in this document is accurate, nothing herein can be construed to imply representation or warranty as to its accuracy, currency or completeness, nor is it intended to form the basis of any contract. Content is subject to change without notice – contact Brüel & Kjær for the latest version of this document.

Brüel & Kjær 

