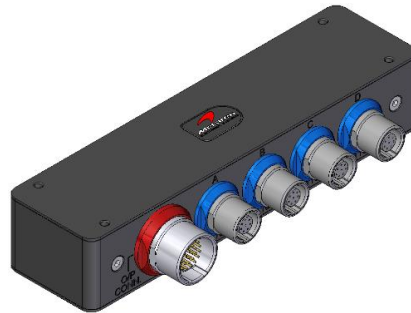


24-CHANNEL ACCELEROMETER INTERFACE UNIT

O 030 345 008 006

The AIU is to be used with IEPE (Integrated Electronics Piezo-Electric) accelerometers and strain gauges. The unit provides a stabilised supply for excitation. The voltage output from the IEPE is attenuated and buffered by the AIU at fix gain of 0.4 to convert the 10V full scale measurement from an IEPE device to an output in the range of 0.5 to 4.5V



ELECTRICAL

- Supply voltage: 8VDC to 16VDC
- Reverse polarity protection
- Supply current: 315mA @ 12V typical
- Excitation Voltage: $24V \pm 0.2V$
- Excitation Current: $4mA \pm 0.1mA$ per channel
- Output voltage per channel
 - $0.5V \pm 0.025V$ Full scale positive
 - $2.5V \pm 0.025V$ 0 g
 - $4.5V \pm 0.025V$ Full scale negative

The above tolerance does not include the sensitivity tolerance and sensitivity drift of the IEPE accelerometer

- AC coupled
- Filter Characteristics
- High pass Filter: -3dB at 11Hz
- Low Pass Filter: -3dB at 5.2kHz
- Output Impedance: 100Ω
- Gain fixed at 0.4

MECHANICAL

- See attached drawing No. D100 345 008 003-00A
- Weight less than 0.150kg
- HE30 aluminium alloy body, anodised and dyed black

ENVIRONMENTAL

- Splash resistant to standard motorsport fluids
- Maximum humidity 100%
- Vibration 100Hz to 1000Hz Random Spectrum

100Hz:	$0.00797 \text{ g}^2/\text{Hz}$
200Hz	$0.17157 \text{ g}^2/\text{Hz}$
300Hz	$0.54279 \text{ g}^2/\text{Hz}$
650Hz	$0.00965 \text{ g}^2/\text{Hz}$
1000Hz	$0.02080 \text{ g}^2/\text{Hz}$
- Operating temperature 0°C to 125°C

CABLE AND CONNECTOR DEFINITION

- Input Connector (A): Lemo HEN.1F.308.XLNP

Pin 1	Excitation Ground
Pin 2	Excitation Ground
Pin 3	IEPE Channel 1
Pin 4	IEPE Channel 2
Pin 5	IEPE Channel 3
Pin 6	IEPE Channel 4
Pin 7	IEPE Channel 5
Pin 8	IEPE Channel 6
- Input Connector (B): Lemo HEN.1F.308.XLNP

Pin 1	Excitation Ground
Pin 2	Excitation Ground
Pin 3	IEPE Channel 7
Pin 4	IEPE Channel 8
Pin 5	IEPE Channel 9
Pin 6	IEPE Channel 10
Pin 7	IEPE Channel 11
Pin 8	IEPE Channel 12
- Input Connector (C): Lemo HEN.1F.308.XLNP

Pin 1	Excitation Ground
Pin 2	Excitation Ground
Pin 3	IEPE Channel 13
Pin 4	IEPE Channel 14
Pin 5	IEPE Channel 15
Pin 6	IEPE Channel 16
Pin 7	IEPE Channel 17
Pin 8	IEPE Channel 18
- Input Connector (D): Lemo HEN.1F.308.XLNP

Pin 1	Excitation Ground
Pin 2	Excitation Ground
Pin 3	IEPE Channel 19
Pin 4	IEPE Channel 20
Pin 5	IEPE Channel 21
Pin 6	IEPE Channel 22
Pin 7	IEPE Channel 23
Pin 8	IEPE Channel 24

For more information contact:

McLaren Applied Ltd

Victoria Gate, Chobham Road, Woking Surrey GU21 6JD, United Kingdom

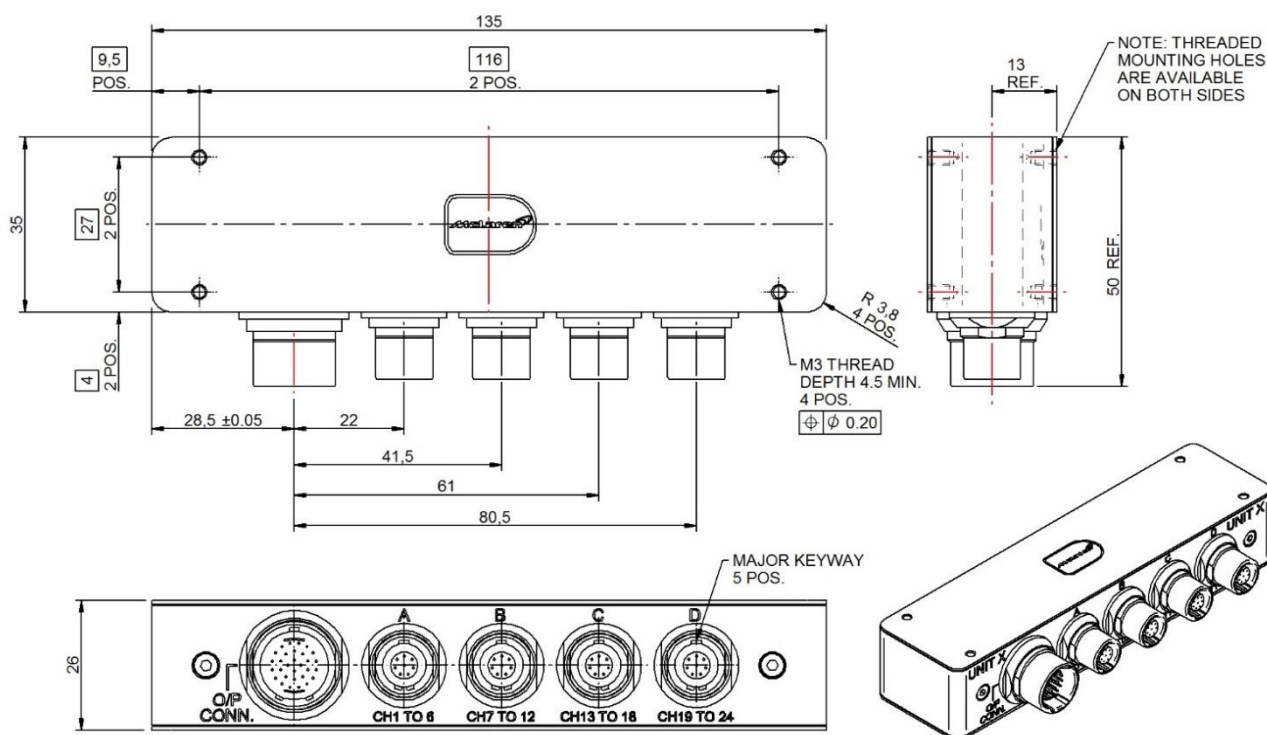
Tel: +44(0) 1483 261 400

Email: applied_enquiries@mcclaren.com www.mcclaren.com/applied

24-CHANNEL ACCELEROMETER INTERFACE UNIT

■ Output Connector: Lemo HES.3F.330.XLDP

Pin 1	Supply	Pin 16	Output Channel 13
Pin 2	Supply Ground	Pin 17	Output Channel 14
Pin 3	Signal Ground	Pin 18	Output Channel 15
Pin 4	Output Channel 1	Pin 19	Output Channel 16
Pin 5	Output Channel 2	Pin 20	Output Channel 17
Pin 6	Output Channel 3	Pin 21	Output Channel 18
Pin 7	Output Channel 4	Pin 22	Output Channel 19
Pin 8	Output Channel 5	Pin 23	Output Channel 20
Pin 9	Output Channel 6	Pin 24	Output Channel 21
Pin 10	Output Channel 7	Pin 25	Output Channel 22
Pin 11	Output Channel 8	Pin 26	Output Channel 23
Pin 12	Output Channel 9	Pin 27	Output Channel 24
Pin 13	Output Channel 10	Pin 28	CAN +
Pin 14	Output Channel 11	Pin 29	CAN -
Pin 15	Output Channel 12	Pin 30	NC



Order Code	Model Description
O 030 345 008 006	24-Channel AIU

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