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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----|
| Model Number<br><b>485B36</b>                                                                                                                                                                                                                 | <b>USB, DUAL-CHANNEL, ICP® SENSOR SIGNAL CONDITIONER</b> |                                          |                                                                                                                                                                                                                      |                                                                                                                                                                                                               | Revision: B<br>ECN #: 43617 |     |
| <b>Performance</b>                                                                                                                                                                                                                            | <b>ENGLISH</b>                                           | <b>SI</b>                                | <b>OPTIONAL VERSIONS</b>                                                                                                                                                                                             |                                                                                                                                                                                                               |                             |     |
| Channels                                                                                                                                                                                                                                      | 2                                                        | 2                                        | Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.                                                         |                                                                                                                                                                                                               |                             |     |
| Input Range                                                                                                                                                                                                                                   | ± 5 V                                                    | ± 5 V                                    |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
| Frequency Range(± 2 %)                                                                                                                                                                                                                        | 2 to 50,000 Hz                                           | 2 to 50,000 Hz                           |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             | [2] |
| Frequency Range(± 5 %)                                                                                                                                                                                                                        | 1 to 50,000 Hz                                           | 1 to 50,000 Hz                           |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             | [2] |
| Non-Linearity                                                                                                                                                                                                                                 | ± 1 %                                                    | ± 1 %                                    |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
| Voltage Gain(± 0.5 %)                                                                                                                                                                                                                         | 1:1                                                      | 1:1                                      |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
| Phase Response(± 5 °)                                                                                                                                                                                                                         | 5 to 50,000 Hz                                           | 5 to 50,000 Hz                           | [2]                                                                                                                                                                                                                  |                                                                                                                                                                                                               |                             |     |
| Phase Response(± 10 °)                                                                                                                                                                                                                        | 1 to 50,000 Hz                                           | 1 to 50,000 Hz                           | [2]                                                                                                                                                                                                                  |                                                                                                                                                                                                               |                             |     |
| <b>Environmental</b>                                                                                                                                                                                                                          |                                                          |                                          |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
| Temperature Range(Operating)                                                                                                                                                                                                                  | +32 to +122 °F                                           | 0 to +50 °C                              |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
| <b>Electrical</b>                                                                                                                                                                                                                             |                                                          |                                          |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
| Excitation Voltage(To Sensor)                                                                                                                                                                                                                 | 18.5 to 20.5 VDC                                         | 18.5 to 20.5 VDC                         |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
| Constant Current Excitation(To Sensor)                                                                                                                                                                                                        | 3.8 to 5.8 mA                                            | 3.8 to 5.8 mA                            |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
| DC Offset                                                                                                                                                                                                                                     | <80 mV                                                   | <80 mV                                   |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
| Spectral Noise(1 Hz)                                                                                                                                                                                                                          | 150 nV/√Hz                                               | 150 nV/√Hz                               | [1]                                                                                                                                                                                                                  | <b>NOTES:</b><br>[1]Typical.<br>[2]Un-buffered output, read out device input impedance affects discharge time constant and low frequency response of unit.                                                    |                             |     |
| Spectral Noise(10 Hz)                                                                                                                                                                                                                         | 50 nV/√Hz                                                | 50 nV/√Hz                                | [1]                                                                                                                                                                                                                  |                                                                                                                                                                                                               |                             |     |
| Spectral Noise(100 Hz)                                                                                                                                                                                                                        | 35 nV/√Hz                                                | 35 nV/√Hz                                | [1]                                                                                                                                                                                                                  |                                                                                                                                                                                                               |                             |     |
| Spectral Noise(1000 Hz)                                                                                                                                                                                                                       | 270 nV/√Hz                                               | 270 nV/√Hz                               | [1]                                                                                                                                                                                                                  |                                                                                                                                                                                                               |                             |     |
| Spectral Noise(10,000 Hz)                                                                                                                                                                                                                     | 210 nV/√Hz                                               | 210 nV/√Hz                               | [1]                                                                                                                                                                                                                  |                                                                                                                                                                                                               |                             |     |
| Broadband Electrical Noise(1 to 10,000 Hz)(Gain x1)                                                                                                                                                                                           | 6 µV/rms                                                 | 6 µV/rms                                 | [1]                                                                                                                                                                                                                  |                                                                                                                                                                                                               |                             |     |
| Power Required                                                                                                                                                                                                                                | DC power                                                 | DC power                                 |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
| Total Harmonic Distortion(at 100 Hz with full-scale input)                                                                                                                                                                                    | 0.75 %                                                   | 0.75 %                                   | [1]                                                                                                                                                                                                                  |                                                                                                                                                                                                               |                             |     |
| DC Power                                                                                                                                                                                                                                      | 5 VDC                                                    | 5 VDC                                    |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
| Crosstalk                                                                                                                                                                                                                                     | <-92 dB                                                  | <-92 dB                                  |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
| Current Consumption                                                                                                                                                                                                                           | 69 mA                                                    | 69 mA                                    | [1]                                                                                                                                                                                                                  | <b>SUPPLIED ACCESSORIES:</b><br>Model 009M130 Output cable 3.5mm stereo jack to 3.5mm stereo jack, 1ft long. (1)<br>Model 009M131 Cable output 3.5mm stereo jack to 2 phono plugs/BNC adaptors, 3ft long. (1) |                             |     |
| Output Impedance(Parallel)                                                                                                                                                                                                                    | 1.1 MOhm                                                 | 1.1 MOhm                                 | [1]                                                                                                                                                                                                                  |                                                                                                                                                                                                               |                             |     |
| Output Impedance(Series)                                                                                                                                                                                                                      | 2.2 µF                                                   | 2.2 µF                                   | [1]                                                                                                                                                                                                                  |                                                                                                                                                                                                               |                             |     |
| <b>Physical</b>                                                                                                                                                                                                                               |                                                          |                                          |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
| Electrical Connector(Input, sensor)                                                                                                                                                                                                           | BNC Jack                                                 | BNC Jack                                 |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
| Electrical Connector(Output, scope)                                                                                                                                                                                                           | 3.5 mm Stereo Jack                                       | 3.5 mm Stereo Jack                       |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
| Electrical Connector(External Power, DC)                                                                                                                                                                                                      | Integral Cable with USB Plug Termination                 | Integral Cable with USB Plug Termination |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
| Size (Depth x Height x Width)                                                                                                                                                                                                                 | 1.33 in x 1.18 in x 3.67 in                              | 3.4 cm x 3.0 cm x 9.3 cm                 |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
| Weight                                                                                                                                                                                                                                        | 2.5 oz                                                   | 70 gm                                    | [1]                                                                                                                                                                                                                  |                                                                                                                                                                                                               |                             |     |
| All specifications are at room temperature unless otherwise specified.<br>In the interest of constant product improvement, we reserve the right to change specifications without notice.<br>ICP® is a registered trademark of PCB Group, Inc. |                                                          |                                          |                                                                                                                                                                                                                      |                                                                                                                                                                                                               |                             |     |
|                                                                                                                                                                                                                                               |                                                          |                                          | <br>3425 Walden Avenue, Depew, NY 14043<br><b>Phone: 716-684-0001</b><br><b>Fax: 716-684-0987</b><br><b>E-Mail: info@pcb.com</b> |                                                                                                                                                                                                               |                             |     |