

| EVISIONS                   |                                 |                                  |   |                                     |   |  |  |  |  |
|----------------------------|---------------------------------|----------------------------------|---|-------------------------------------|---|--|--|--|--|
| PTION                      |                                 | BY/DATE                          | СНК   | APPR                                |   |  |  |  |  |
| ELEASE                     |                                 | JS<br>11/02/16                   | LA  | LN                                  | п |  |  |  |  |
| E 2 (WEIGH                 | T)                              | KG<br>06/06/19                   | æ   | La                                  | U |  |  |  |  |
|                            |                                 |                                  |   |                                     |   |  |  |  |  |
| MO                         |                                 |                                  |   |                                     |   |  |  |  |  |
| 3                          |                                 |                                  | mV/a  |                                     |   |  |  |  |  |
| 3                          | 093D2                           | 5                                | mV/a  |                                     |   |  |  |  |  |
| 3                          | 093D3                           | 10                               | ) mV/g  |                                     |   |  |  |  |  |
| 3                          | 093D4                           | 20                               | ) mV/g  |                                     |   |  |  |  |  |
| 3                          | 093D5                           | 25                               | 5 mV/g  |                                     |   |  |  |  |  |
| 3                          | 093D6                           | 50                               | 50 mV/g   |                                     |   |  |  |  |  |
| 3                          | 093D7                           | 10                               | 0 mV/g  |                                     |   |  |  |  |  |
|                            |                                 | <b>A</b>                         | Ē   |                                     | 5 |  |  |  |  |
|                            |                                 |                                  |   |                                     | В |  |  |  |  |
| OUTL<br>DR<br>2W033<br>4:1 | Chatsworth,<br>INE/ IN<br>AWING | CA ONI<br>STALI<br>3093<br>127-3 | <b>AST</b><br>LY IF II<br>LATIOI<br>D1-7<br>3093D | REV<br>REV<br>N<br>REV<br>B<br>OF 1 | A |  |  |  |  |
| <u></u>                    |                                 |                                  |   |                                     |   |  |  |  |  |
|                            |                                 |                                  | -   |                                     |   |  |  |  |  |

| Model Number                   |           |                            |                  |                  |                               |                               |                              |  | DOC NO  |                               |                        |
|--------------------------------|-----------|----------------------------|------------------|------------------|-------------------------------|-------------------------------|------------------------------|--|---|-------------------------------|------------------------|
|                                |           |                            |                  |                  |                               |                               |                              |  | PS3093D7  |                               |                        |
| 3093D7                         |           |                            |                  |                  | Accelerometer, Triaxial, IEPE |                               |                              | <u>                                     </u> |   | REV G, ECN 15119, 06/07/19    |                        |
|                                |           |                            |                  |                  |                               | This family a                 | also includes:               |  | •   |                               |                        |
|                                |           | • CASE IS                  | OLATED           |                  |                               | Model                         | Sensitivity (mV/g)           | Range (Gpeak)                                | Resolution (Grms)                               | Oper. Temp (°F)               | TC                     |
|                                |           | <ul> <li>HERMET</li> </ul> | ICALLY SEAL      | ED               |                               | 3093D1                        | 1                            | 5000   | 0.07  | -60 to +250                   | 0.7 to 1.7             |
|                                | (Free     | • STUD MO                  | DUNTED           |                  |                               | 3093D2                        | 5                            | 1000   | 0.014   | -60 to +250                   | 0.7 to 1.7             |
|                                |           |                            |                  |                  |                               | 3093D3                        | 10                           | 500  | 0.007   | -60 to +250                   | 0.7 to 1.7             |
|                                |           |                            |                  |                  |                               | 3093D4                        | 20                           | 250  | 0.0035  | -60 to +250                   | 0.7 to 1.7             |
|                                |           | EN                         | GLISH            |                  | SI                            | 3093D5                        | 25                           | 200  | 0.0028  | -60 to +235                   | 0.7 to 1.7             |
| PHYSICAL                       |           |                            | 1                |                  | 1                             | 3093D6                        | 50                           | 100  | 0.0014  | -60 to +225                   | 0.7 to 1.7             |
| Weight, Max.                   |           | 0.49                       | oz               | 14.0             | grams                         | Refer to perf                 | ormance specificatio         | ons of products in t                         | his family for detailed                         | d description                 |                        |
| Mounting Stud Mount            |           | 10-32 UNF-2A               |                  | 10-32 UNF-2A     | -                             | Supplied Ac                   | cessories:                   |  |   |                               |                        |
| Connector [1]                  | Туре      | 4-pin, 1/4-28              |                  | 4-pin, 1/4-28    | -                             | 1) Model 620                  | 0 Mounting Stud Su           | pplied, Qty: 1                               |   |                               |                        |
| Housing                        | Material  | Titanium                   |                  | Titanium         | -                             | <ol><li>Accredited</li></ol>  | d Calibration Certifica      | ate (ISO 17025)                              |   |                               |                        |
| riousing                       | Isolation | Case Isolated              |                  | Case Isolated    | 4                             | Notes:                        |                              |  |   |                               |                        |
| Sensing Element                | Material  | Ceramic                    |                  | Ceramic          | 1                             | [1] Glass to M                | Metal seal connector         | . Mates with Dytra                           | n cable Model 6811A                             | XX (XX=length in fe           | et)                    |
|                                | Mode      | Shear                      |                  | Shear            | ]                             | [2] Measured                  | at 100 Hz, 1 Grms            | per ISA RP 37.2                              |   | _                             |                        |
| PERFORMANCE                    |           |                            |                  |                  |                               | [3] Measured<br>[4] Do not an | l using zero-based s         | traight line method                          | 1, % of F.S. or any les<br>it limiting 20mA Max | sser range.⊔<br>To do so will |                        |
| Sensitivity, +/-5% [2]         |           | 100                        | mV/g             | 10.2             | mV/m/s^2                      | destroy th                    | e integral IC amplifie       | er.  |   |                               |                        |
| Acceleration Range, ±          |           | 50                         | Gpeak            | 491              | m/s^2 peak                    | [5] In the inte               | rest of constant proc        | duct improvement,                            | we reserve the right                            | to change specifica           | ations without notice. |
| Frequency Range, ±5%           |           | .6-5000                    | Hz               | .6-5000          | Hz                            | It is the custo               | omer's responsibility        | to validate that a                           | particular product with                         | h the properties des          | cribed in the produc   |
| Resonance Frequency            |           | > 30                       | kHz              | > 30             | kHz                           | specification                 | is suitable for use in       | a particular applications and                | cation. Parameters pi                           | rovided in datashee           | ts and / or            |
| Linearity [3]                  |           | 1                          | %F.S.            | 1                | %F.S.                         | including typ                 | ical parameters. mus         | st be validated for                          | each customer appli                             | cation by the custon          | ner's technical        |
| Transverse Sensitivity Max.    |           | 6                          | %                | 6                | %                             | experts.                      | , , ,                        |  |   | ·····                         |                        |
| Noise floor                    |           | 0.0007                     | Grms             | 0.01             | m/s^2 rms                     |                               | TYPICAL LOW FREQUE           | NCY RESPONSE                                 | TYPI  | CAL SENSITIVITY RESP          | ONSE                   |
| Spectral Noise                 | 1Hz       | 200                        | µGrms/sqr(Hz)    | 1962             | µm/s^2 rms/sqr(Hz)            | 10                            |                              |  | 15  | OVER TEMPERATURE              |                        |
|                                | 10Hz      | 140                        | µGrms/sqr(Hz)    | 1373.4           | µm/s^2 rms/sqr(Hz)            | (%)                           |                              |  | ŝ 10  |                               |                        |
|                                | 100Hz     | 90                         | µGrms/sqr(Hz)    | 882.9            | µm/s/2 rms/sqr(Hz)            | 01- ation                     |                              |  | 5 ation   |                               |                        |
|                                | 1000HZ    | 50                         | μGrms/sqr(Hz)    | 490.5            | µm/s/2 rms/sqr(Hz)            | -20<br>D                      |                              |  | 0 6   |                               |                        |
|                                | 10000HZ   | 20                         | µGrins/sqr(Hz)   | 196.2            | µm/s/2 rms/sqr(Hz)            | Vi -30                        |                              |  | -5  |                               |                        |
| Supply Current Range [4]       |           | 2 to 20                    | mA               | 2 to 20          | mA                            | -40                           | /                            |  | 2 -10   |                               |                        |
| Compliance Voltage Range       |           | +18 to +30                 | VDC              | +18 to +30       | VDC                           | -50                           | 1 1                          | 10 10  | 0 -60 -13                                       | 3 35 83 13                    | 30 178 225             |
| Output Impedance, Tvp.         |           | 100                        | 0                | 100              | 0                             |                               | Frequency                    | (Hz)   |   | Temperature (°F)              |                        |
| Output Bias Voltage            |           | +11 to +13                 | VDC              | +11 to +13       | VDC                           |                               |                              | [15]   | -   |                               |                        |
| Discharge Time Constant        |           | 0 7 to 1 7                 | sec              | 0.7 to 1.7       | sec                           |                               | 1                            |  |   |                               |                        |
| Electrical Isolation, Min.     |           | 10                         | GΩ               | 10               | GΩ                            |                               |                              |  |   |                               |                        |
| · ·                            |           |                            | 1                |                  | 1                             |                               | <br>.5<br>[12                | 9  | - 11 INN -                                      |                               |                        |
| ENVIRONMENTAL                  |           |                            |                  |                  |                               |                               | Ĩ                            | ·  |   |                               |                        |
| Shock Max., ±                  |           | 1000                       | g pk             | 9810             | m/s^2                         |                               | ļ                            |  |   |                               |                        |
| Vibration Max., ±              |           | 60                         | g pk             | 589              | m/s^2                         |                               |                              | 96   |   |                               |                        |
| Operating Temperature          |           | -60 to +225                | °F               | -51 to +107      | °C                            |                               |                              |  | z4 Pi   | N CONNECTOR                   |                        |
| Seal                           |           | Hermetic                   |                  | Hermetic         |                               |                               | -                            | ŧ (]   | 14.3  | 28 UNF-2A                     |                        |
| Magnetic Sensitivity at 100 Ga | uss       | 0.00007                    | g/Gauss          | 0.0007           | m/s^2/Gauss                   |                               |                              |  |   |                               |                        |
| Base Strain Sensitivity        |           | 0.05                       | g/με             | 0.4905           | m/s^2/με                      |                               | [12                          | 54<br>86]                                    | j llanne j                                      |                               |                        |
|                                |           |                            |                  |                  |                               |                               |                              |  | (9.4  | 1                             |                        |
|                                |           |                            |                  |                  |                               |                               | _                            |  |   |                               |                        |
| L                              |           |                            |                  |                  |                               | Units on the line             | drawing are in inches, units | in brackets are in millin                    | neters. Refer to 127-3093D                      | for more information.         |                        |
|                                |           | 2                          | 1592 Marilla Str | eet, Chatswort   | h, California 913             | 11 Phone: 8                   | 18.700.7818 Fax              | :818.700.7880 v                              | www.dytran.com                                  | For                           |                        |
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