

## DT-2100 Contact/Non-Contact Tachometer - USB Output

**The Series DT-2100 Data-Logging Tachometer is the most highly advanced tachometer ever developed by Nidec-SHIMPO.**

Providing an unequalled level of user flexibility, the DT-2100 is the premium tachometer for engineers and maintenance professionals. Aiding the diagnosis of the most difficult machinery measurements with its on-board data-logging, graphing and statistical analysis, the user can examine the results of their testing on site and determine if additional data is required. Data can be downloaded to the optional software to further analyze and diagnose system performance.

If simplicity is required, the DT-2100 can accommodate with its selectable display styles allowing results to be viewed in standard numerical, chart, bar graph or gauge modes. Max., Min. and Ave. can be quickly scrolled through in any display mode for additional test feedback. Data recording can be set for single point or continuous logging. Often the user may need to adjust the machinery during testing. Simply mount the DT-2100 on its tri-pod connection, select continuous logging and adjust machinery as necessary. After the test, you can easily review results on unit or download to the computer. Two people are no longer required to perform a test that one can now conveniently complete. The DT-2100 even allows multiple users to store their programmed settings. There is no need to spend time checking all settings to ensure proper performance.

The DT-2100 Tachometer is 2 units in 1 with the included 6" circumference contact adapter utilized in linear rate measurement. Most impressive, the DT-2100 provides convenient switching between non-contact and contact operation with its auto-detect function that instantly recognizes if contact adapter is installed. If the larger 12" circumference wheel is desired for detecting finer resolution at higher speeds, simply select in the menu the appropriate wheel and the DT-2100 will properly calculate the sensed speeds.

The DT-2100 possesses many cutting-edge features. One feature that is unique to this instrument is the ability to calculate lengths remotely in non-contact laser operation. This feature adds a level of convenience and capability as often it is dangerous or not pos-

sible to take a reading by physical contact. Another very beneficial feature that will alleviate user adjusted calculations after the test is the DT-2100's scaling function. This will benefit those that need a manual override of the data for any of a number of application specific requirements. Whether the scaling makes the values more logical to the user or if there is an impossibility to measure at a desired specific point, but another point of a different scale provides measurement access, this feature produces the desired calculated reading. Another common example where the scaling function is very applicable is when measuring product length where every set amount of distance there is a non-product gap that should be eliminated from the total. The scaling feature factors this gap out to provide the accurate total length at the end of the test. The user can factor this gap out and come up with the accurate length at the end.

PC software for the DT-2100 is available separately. The software provides the user the ability to program the tachometer to their requirements, as well as enables more refined analysis of the data.



### Features

- Data storage in selected groups allows testing of multiple machinery without mixing data
- View data and statistics on display or utilize optional software for additional analysis on a PC
- Max., Min., Ave., standard deviation & number of recordings as well as acceleration are calculated and reviewable
- Bright, graphical LED rotatable display with multiple display modes provides testing flexibility in any application indoor or outdoor setting
- Compact and light weight for comfortable handheld testing, or for extended tests mount with threaded insert to tri-pod or machinery fixture.
- Auto-detect feature instantly identifies if contact adapter is installed, allows rapid changing from contact to non-contact testing.
- Comparator setting enables upper/lower limit threshold icon indicators to appear; provides immediate pass/fail analysis
- Length (distance) measurement function in non-contact mode allows length measuring in applications where making contact with the machinery is difficult and/or dangerous
- Scale adjustment provides ability to override the data in situations where known offsets are required or multiples make more sense to the user.

## DT-2100 Specifications

|                             |                                                                                                                                        |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Range</b>                | 6-99,999 rpm Non-contact<br>0.8-25,000 rpm Contact                                                                                     |
| <b>Accuracy</b>             | ±0.006% of reading ±1 least significant digit                                                                                          |
| <b>Measuring Units</b>      | Speed: rpm, m/min., cm/min., inch/min., ft/min., yds/min., rps, m/sec, cm/sec, inch/sec, km/hr, mph<br>Distance: cm, m, km, in, ft, yd |
| <b>Memory</b>               | Continuous Mode: 1000<br>Single Mode: 100<br>Statistics Mode: 100                                                                      |
| <b>Measuring Distance</b>   | 2" to 13.1' (50 to 4,000 mm)                                                                                                           |
| <b>Display</b>              | Graphical Blue Light OLED, reversible                                                                                                  |
| <b>Display Update Time</b>  | 100 ms, 500 ms, 1 sec, 5 sec                                                                                                           |
| <b>Power Requirement</b>    | 2 AA 1.5V batteries or USB                                                                                                             |
| <b>Battery Life</b>         | Approx: 20 hours with brightness set to 20%                                                                                            |
| <b>Temperature Limits</b>   | 32° - 113°F (0° - 45°C)<br>Non-Condensing                                                                                              |
| <b>Construction</b>         | Polycarbonate                                                                                                                          |
| <b>Dimensions</b>           | 6.1" x 2.2" x 1.4"<br>(155 x 55 x 35 mm)                                                                                               |
| <b>Product Weight</b>       | 5.6 oz (159 g)                                                                                                                         |
| <b>Package Weight</b>       | 1.25 lb (567 g)                                                                                                                        |
| <b>Approvals</b>            | CE, RoHs                                                                                                                               |
| <b>Warranty</b>             | 2-Year                                                                                                                                 |
| <b>Included Accessories</b> | 2 cone adapters, funnel adapter, 3½" extension shaft, carrying case, master wheel (6" cir.), 2 AA batteries, contact adapter           |

## Ordering Details

|                       |                                                                                    |
|-----------------------|------------------------------------------------------------------------------------|
| <b>DT-2100</b>        | Data-Logging, Contact, Non-Contact Laser Tachometer with USB Output, 6" cir. wheel |
| <b>DT-2100-OP-PCS</b> | PC Software for DT-2100 Tachometer with USB Cable                                  |
| <b>NIST-TACH</b>      | NIST traceable certificate with data                                               |

## Accessories

|                       |                                                      |
|-----------------------|------------------------------------------------------|
| <b>DT-2100-OP-CAS</b> | Replacement Contact Adapter for DT-2100 Tachometer   |
| <b>CONE</b>           | 1/2 inch cone adapter                                |
| <b>CONE-3/4</b>       | 3/4 inch cone adapter                                |
| <b>CONE-1-1/4</b>     | 1-1/4 inch cone adapter                              |
| <b>EXT-SHAFT</b>      | 3.5 inch extension shaft for handheld tachometers    |
| <b>FPM-12</b>         | 12 inch circumference measuring wheel                |
| <b>FPM-6</b>          | 6 inch circumference measuring wheel                 |
| <b>FPM-6-GV</b>       | 6 inch circumference grooved measuring wheel         |
| <b>FUNNEL</b>         | 1/2 inch funnel adapter                              |
| <b>FUNNEL-3/4</b>     | 3/4 inch funnel adapter                              |
| <b>TAB</b>            | Sheet of thirty five 1/2 inch square reflective tabs |
| <b>TAPE</b>           | 1" x 7.75" strip of reflective tape                  |



**View of Captured Statistics**



**View of Graph Mode**



**DT-2100 Shown with Contact Adapter & Cone**