DIGITAL LOAD INDICATING SYSTEMS

DIR Digital Load Indicator

The DIR digital is a basic, easy-to-use, budget-minded load indicator. The DIR model simultaneously displays both live load and rate of load in force units per second during a test and peak load automatically at the end of a test.

The DIR is one of the easiest-to-use digitals available, featuring automatic test reset—eliminating the need to zero between tests—and automatic peak-load display at the end of a test through the pre-set sample-break detector function. The digital's face is set on a 60° angle for easier reading of load values, and the display uses 3/8" (9.5 mm) characters protected by a nonglare, scratch-resistant window. Users can select from load-value engineering units of lbs., kN, kg, and N. Designed for years of dependable service, the digital's tactile keys have a life cycle of greater than two million uses, and accuracy is ±.5% of indicated load from 1% to 100% of machine capacity, exceeding ASTM C-39 and E-4 requirements.

The calibration program is password protected in permanent, non-volatile memory. The DIR digital has no hardcopy test documentation capabilities.

SD Digital Load Indicator

The SD Digital System was designed for production-testing laboratories where dependability, accuracy, and minimal operator input is required. During a test it indicates live load or stress and rate of load simultaneously, and at the end of a test it automatically displays both peak stress and load. Plus, if activated, the average rate of load applied to a specimen during a test can also be displayed.

The SD is truly operator-friendly; using menu-driven scroll-through prompts. A pre-set menu lists six common specimen types from which to select: cylinder, cube, beam center or third point, round, and cross-sectional area.

All test information is easily read on the indicator's back-lit LCD display, which can show test data in any of the selectable engineering units, including lbs., kN, N, kg, psi, MPa, Kpa, kg/cm2, in, mm, cm, seconds, or minutes. A durable membrane keypad allows you to scroll, enter, store, print, or enter numbers manually.

Accuracy is achieved through a five-point calibration program using piece wise linear fit between points to exceed ASTM C-39 and E-4 requirements at better than ±.5% of indicated load from 1% to full machine capacity. The linearity of the calibration in specific areas is further improved through a unique edit-calibration program, which allows the on-site calibrator to re-enter the program and reset an individual value assigned to a point.

For added dependability, if the digital's calibration is ever changed or lost, its original calibration can be reinstalled in the field by reentering the original A/D conversion values into the program. Up to four separate calibration programs can be stored in the SD, allowing it to be used with multiple transducer/load cell combinations in one or more load frames.

For hard-copy test documentation, up to 750 tests can be stored in memory and printed directly on an optional serial-port printer or transferred to a PC through an RS-232 serial port. The print function allows the operator to print only the current test or all stored tests at once.

The standard test report uses a spreadsheet format and lists sequential test number, date and time, specimen ID number, specimen type, specimen area and length, peak load and stress, cylinder correction factor, and cylinder break type. Optional information includes average rate of load applied to a test specimen, specimen age and weight, job ID number, and a statistical summary of peak load and stress.