ND 2100G GAGE-CHEK
– the Digital Readouts for Multipoint Inspection Apparatuses

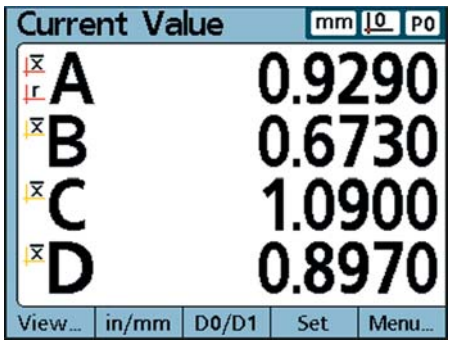
The ND 2100G GAGE-CHEK readouts are versatile metrology displays for measuring and inspection tasks in manufacturing and quality assurance. With inputs for up to eight encoders, they are predestined for multipoint measurements from simple pass/fail detection up to complex SPC evaluation.

Description
The ND 2100G readouts have a robust, diecast aluminum enclosure, and a keyboard suited to their environment. A large, graphic, color screen displays the measured values, the soft-key row and other information.

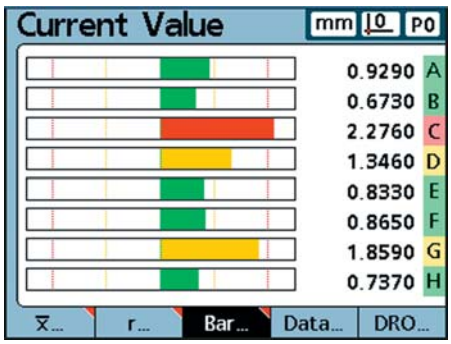
Functions
The inputs can be assigned and combined as desired with mathematical, trigonometric or statistical formulas. This makes it possible to measure even complex dimensions such as thickness, flatness, volume and more. The results are displayed numerically or graphically as a color bar graph or a dial, or archived for statistical process control (SPC). The GAGE-CHEK can be configured for basic or advanced applications. Soft keys and hot keys can be adapted as required. The Min/Max function of the ND 2100G readouts monitors and stores the highest and lowest measured or calculated value. Warning and tolerance limits can be assigned to each display value. Results outside of the tolerance are marked with a different color. An acoustic alarm sounds simultaneously. Tolerance values, SPC parameters and custom formulas are stored for individual parts. GAGE-CHEK can manage up to 100 parts, each with up to 16 visible measurement features and 16 hidden measurement features. The rapid acquisition of measurement data makes monitoring dynamic events, such as the eccentricity of a rotating shaft, possible.

Data interfaces
The GAGE-CHEK features various interfaces for communicating with parent systems:
- RS-232-C/V.24 for PC, also for remote operation of the GAGE-CHEK
- USB

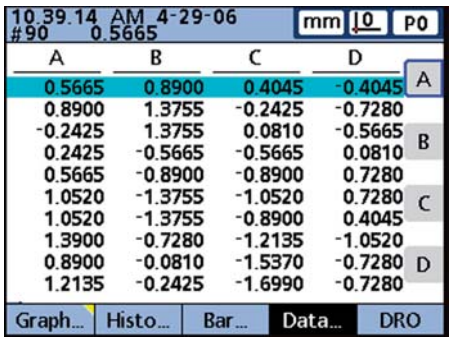
Position display
The display values appear in large, easy-to-read numbers. Values outside the tolerance are color-coded, immediately notifying you of errors.



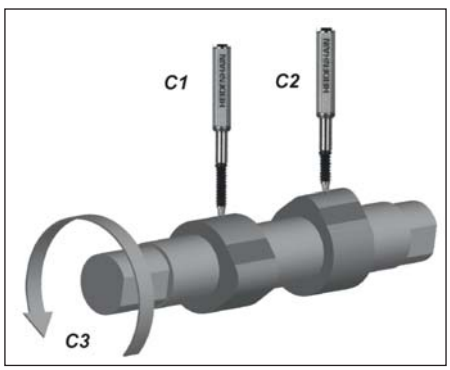
Bar diagram
You can select to have the values shown as a color-enhanced vertical or horizontal bar graph. The defined warning limits and tolerance limits provide instant feedback. If these limits are exceeded, the color of a bar changes from green to yellow or red, informing you explicitly of critical dimensions.



SPC and data storage
GAGE-CHEK includes integrated SPC studies such as mean value charts (X bar) and range charts (R). Min, max, sigma, cp and cpk are also calculated, and are clearly displayed as a graph or histogram. Historical raw data can be saved in a tabular numeric display. Each dimension and all data are time and date stamped.



Formulas and combinations
You can use mathematical and trigonometric formulas, as well as logical conditions, to combine individual measured values or measurement sequences with each other, and so create complex calculations. This can be used, for example, to calculate and display the circumference of a turned part, the volume of a cube, or the angle between two cams, and also to assign tolerance limits to these values.



	ND 2104G	ND 2108G
Axes	4	8
Encoder inputs*	∿ 1 V_{PP} ⊓⊔ TTL or EnDat 2.2 (other interfaces upon request)	
Subdivision factor	10-fold (only for 1 V_{PP})	
Display step[1)]	Adjustable, max. 7 digits *Linear axis:* 1 mm to 0.000 01 mm *Angular axis:* 1° to 0.000 1° or 00° 00′ 01″	
Display	5.7″ color flat-panel display for position values, dialogs and inputs, graphics functions and soft keys	
Functions	• Part programming of up to 100 parts • Graphic display of measurement results • Sorting and tolerance checking using tolerance and warning limits, with display as a bar graph • Measurement series with MIN/MAX display • Mathematical and trigonometric formulas • Functions for statistical process control (SPC) • Graphic display of measurement results and distribution • Data storage of values and formulas • Convenient diagnostics of the connected encoders (only EnDat 2.2)	
Error compensation	• Linear, and segmented linear over up to 60 points	
Data interface	• RS-232-C/V.24 • USB	
Switching inputs	5 TTL inputs (freely definable)	
Switching outputs	12 TTL outputs (freely definable)	
	2 relay outputs	
Other connections	Foot switch for two functions	
Accessories	Mounting base, foot switch, remote keypad, protective cover	
Main power input	100 Vac to 240 Vac (–15 % to +10 %), 43 Hz to 63 Hz	
Operating temperature	0 °C to 45 °C	
Protection EN 60529	IP 40	
Mounting*	Tilting base or mounting base	
Weight	*ND with tilting base:* approx. 4.8 kg; *ND with mounting base:* approx. 2 kg	

***** Please select when ordering
1) Depends on the signal period of the connected encoder as well as the subdivision factor

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