

NGI® Single-Display Gauges

Electrical and Mechanical

A METEK Dixson's Next Generation Instrumentation single-display, 2-, 3%- and 5-inch gauges are precision-built instruments incorporating the very latest in technology and manufacturing techniques. Reliability is the key word throughout, with stepper-motor pointer drive, light-piped LEDs for backlighting and pointer illumination, o-ring sealing, and locking plug-in connectors. Backlighting intensity can be varied by the dashlight dimming control.



Standard Features

- Reliable, accurate stepper motor pointer drive*
- 270° pointer sweep, 10° oversweep for active pointer re-zero*
- U.S. or metric scales
- White-on-black graphics (black-on-white optional)
- Black bezels (bright chrome or satin chrome optional)
- LED backlighting and tip-to-hub illuminated orange pointer
- Red warning LED with black dead-front*
- All gauges are front-mounting and feature O-ring sealing
- 2-inch gauges feature twist-lock mounting into 2-inch holes
- 3-inch tachometer mounts with U-clamp into 3%-inch hole
- 5-inch tachometer mounts with U-clamp into 5-inch hole
- Self-test on ignition-on*

* Except tachometers and mechanical air pressure gauges

How They Work...

Electrical NGI gauges receive pointer data from the NGI System Control Unit (SCU) over an internal NGI bus. Pointer data is applied to a stepper motor control circuit to drive the stepper motor and pointer. NGI gauges require no calibration, configuration or maintenance.

Mechanical air pressure gauges are available with press-clip quick-release fittings.

Each NGI gauge (except tachometers and mechanical air pressure gauges) contain a red LED to warn the driver of conditions requiring his attention. The LED is controlled by the SCU and can be on, off, or flashing.

Each NGI gauge is connected to the system by the NGI bus that carries power, data, backlight power, and grounds from the SCU to the gauge. A second connector wired in parallel on each gauge allows the NGI bus to be passed to the next gauge. Gauges can be used in 12- or 24-volt systems interchangeably.

Input ranges, pointer deflection, warning LED operation, and validity levels are factory configurable and can be specified at time of order.

Typical Electrical Modules

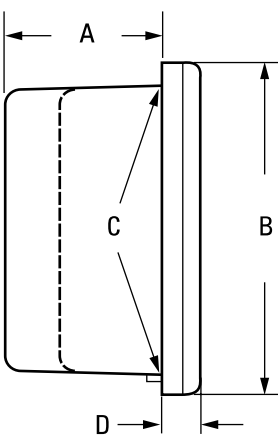
- Tachometer (2-, 3-, and 5-inch versions)
- Air Pressure
- Axle and Transmission Temperature
- Ammeter, Voltmeter, Fuel Level
- Oil Pressure, Oil Temperature
- Coolant Temperature
- Turbo-Boost Pressure

Standard Specifications

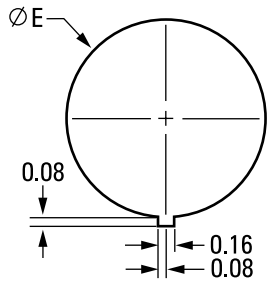
Physical Characteristics					
Bezel		Black PC/ABS plastic			
Case		White PC/ABS plastic			
Lens		Flat glass with rubber O-ring seal			
Pointer		Tip-to-tail illuminated orange			
Dial graphics		Flat black with white scale			
Backlighting		Amber LED with light pipe			
Pointer sweep		270 degrees			
Environmental Characteristics					
Temperature and humidity		Meets or exceeds SAE#J1455-1984-08			
Shock and vibration		Meets or exceeds SAE#J1455-1984-08			
Salt spray		Meets or exceeds SAE#J1455-1984-08			
Electrical Characteristics					
Input current		60 milliamperes			
Jump-start protection:					
12-volt input		Withstands 24 VDC external jump-start for 10 minutes			
24-volt input		Withstands 36 VDC external jump-start for 10 minutes			
Transient protection		Meets or exceeds SAE #J1455-1984-08			
Radiated EMI/RFI		Meets or exceeds SAE #J1113-/14			
Inputs					
Standard NGI Gauge					
Power, ground, and backlighting					From SCU over NGI bus
Warning LED					From SCU over NGI bus
Pointer position data					From SCU over NGI bus
Pointer position data update rate					3 to 10 Hz while maintaining smooth pointer movement
Analog NGI Gauge					
Power, ground, and backlighting					From SCU over NGI bus
Warning LED					Internally programmed into gauge
Signal voltage input					0 to 5 VDC
Resistive sensor input					0 to 5200 ohms
Input linearization					Factory-configurable linearization for non-linear inputs
Mechanical Air Pressure Gauge					
Power, ground, and backlighting					From SCU over NGI bus
Warning LED					None
Pointer position data					Direct air pressure
Fitting					Quick-release 5/32-inch
Optional fitting					Quick release 1/4-inch
Warning LED Characteristics					
States					On, off, blink
Blink rates:					
Slow					2.0 second period
Fast					0.5 second period

Installation Data

Gauge Dimensions



Panel Cut-Out Dimensions



All dimensions are inches. Mounting hardware not shown.

Dimension	A	B	C	D	E
2" Electrical Gauges	1.33	2.46	2.06	0.28	2.07
2" Mechanical Gauges	1.95	2.46	2.06	0.28	2.07
3" Gauge (Tachometer)	1.32	3.82	3.39	0.31	3.41