

Next Generation Multi-Gauges

Simple, Compact, Reliable



Standard Features...

- Any combination of electrical gauges
- Reliable, accurate stepper motor pointer drives
- Shallow-depth case
- 180° and 270° pointer sweeps, 10° oversweep for pointer re-zero
- U.S. or metric scales
- White-on-black graphics (black-on-white optional)
- Choice of black, bright chrome, or satin chrome (shown) bezels
- LED backlighting and tip-to-hub illuminated orange pointers
- Red warning LED with black dead-front in each gauge
- All NGI gauges are front-mounting and feature O-ring sealing
- Conventional U-clamp mounting into 3³/₈- and 5-inch panel cutouts
- All gauges perform a self-test when ignition switched on

A METEK Dixon's NGI technology is now available in space-saving multi-gauges that provide two, three, or four independent gauge functions in one shallow-depth 3³/₈-inch or 5-inch case. Multi-gauges feature the same technology and reliability that has made NGI so successful in all commercial and industrial vehicular applications, with stepper-motor pointer drive, light-piped LEDs for backlighting and pointer illumination, O-ring sealing, red warning LEDs, and locking plug-in connectors. Backlighting intensity can be varied by the dashlight dimming control.

How They Work...

Multi-gauges receive their pointer data from the NGI System Control Unit (SCU) over an internal, serial NGI bus. The pointer data is applied to a stepper motor control circuit to drive the stepper motor and pointer. As with all NGI gauges, calibration, configuration and maintenance are things of the past.

NGI multi-gauges include red warning LEDs, freeing up valuable telltale space for other uses. The LEDs can be on, off, or flashing, and are controlled by the SCU.

Each gauge package connects to the NGI system over the NGI Bus (six-conductor cables that link one module to the next). The NGI bus carries power, data, backlight power, and grounds from the SCU to the housing where it is distributed to the internal gauges. A second identical connector on the multi-gauge housing is wired in parallel to the first to route the NGI bus to other NGI modules in the system.

The photograph shows only a few configurations. Other possibilities include multiple pressure, temperature, fuel level gauges, and ammeter/voltmeter combination. The gauges are powered by the SCU and can be used in 12- or 24-volt systems.

Standard Specifications

Physical Characteristics

Bezel	PVC/ABS plastic
Case	PVC/ABS plastic
Lens	Flat glass with rubber O-ring seal
Pointers	Tip-to-tail illuminated orange
Dial graphics	Flat black with white scale
Backlighting	Amber LED with light pipe
Pointer sweep	Depends upon the gauge (180° and 270° typical, 180° maximum for 2-in-1 versions)

Electrical Characteristics

Input current	120 milliamperes maximum
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 #J1113/41

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

Inputs

Power and ground	From SCU over NGI bus
Backlighting and 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

Warning LED Characteristics (non-mechanical)

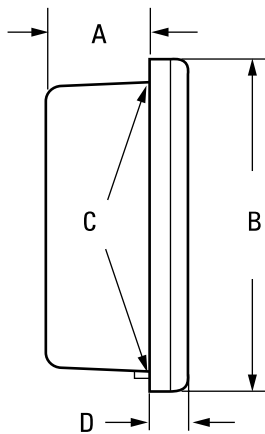
States	On, off, blink
Blink rates:	
Slow	2.0 second period
Fast	0.5 second period

Other Characteristics

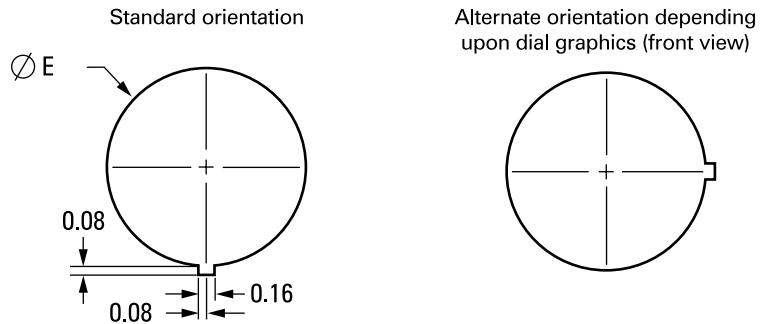
Pointer ballistics	Fully controlled by NGI system
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Installation Data

Gauge Dimensions



Panel Cut-Out Dimensions



All dimensions are inches. Mounting hardware not shown.

Dimension	A	B	C	D	E
3" Gauge	1.32	3.82	3.39	0.31	3.41
5" Gauge	1.44	4.74	4.36	0.32	4.39