

PRODUCT CATALOG





DATCON IS A HIGH-QUALITY BRAND PRODUCED BY MAXIMA TECHNOLOGIES. Maxima is a global manufacturer and full-service supplier of electronic controls, monitoring systems and vehicle accessories. Maxima's products are preferred by leading original equipment manufacturers (O.E.M.s) in the off-highway (construction, agricultural & mining equipment), specialty vehicle and motorcycle, on-highway (truck & bus), industrial, power turf equipment, emergency vehicle and marine market segments as well as the heavy-duty and automotive aftermarket.

Products include electronic control units (ECUs); digital-to-analog (D/A) instrument controllers and data-bus instruments (DATLINK™, INFOTRAK 2000™ & AST CAN-bus systems); battery monitoring systems (Sentry™ line); warning/engine shut-down systems (Smart Instrument® line); analog and digital instrument clusters and displays (including standard Universal Cluster, 4GC, 5GC & Compattino™ products); electrical, mechanical and digital fuel, temperature, pressure and specialty vehicle gauges (2" & 2-5/8" diameters); electrical and mechanical tachometers (with or without hourmeters) and speedometers (with or without odometers) (2", 3-3/8" & 4-5/8" diameters); digital tachometers; voltmeters/ammeters; fully sealed, anti-fog instruments (IllumaSeal® line); hourmeters (electronic round & mini versions & quartz-stepper motor type called Sentinel™); pyrometers/thermocouples; round and modular warning light products (2" diameter 4-in-one type & single lights); fuel/temperature/pressure senders; electronic tank-level sensors (IntelliSensor® line); speed sensors; pressure and temperature switches; ignition switches; flashers and relays; miscellaneous accessories; steering column modules; Hobbs lighting products, switches and hourmeters for the heavy-duty SW-brand U.S. aftermarket; and custom-designed O.E.M. products.

Datcon brand traces its roots to the original Hamilton Watch Company and in 1970, a separate company was formed—Datcon Instrument Company—to manufacture automotive clocks and hourmeters. "DATCON" is an acronym for "Dimension And Time CONTROL". In 1995, Datcon acquired Industrias Jorda, S.L. (Barcelona, Spain) and in 1998, the company was merged with Stewart Warner Instrument Corporation to form MAXIMA TECHNOLOGIES. Today, Datcon is regarded as a premier O.E.M. brand and in fact, many of our products are privately labeled for market-leading manufacturers.

Maxima's operations are ISO 9001 and QS-9000 certified. Manufacturing locations include Barcelona, Spain; Juarez, Mexico; Lancaster, Pennsylvania; and Sant Celoni, Spain. Other facilities include a Technology Center in Lancaster and central warehouse operation in El Paso, Texas. Regional sales offices are located in Barcelona, Spain; Chicago, Illinois; Greensboro, North Carolina; Houston, Texas; El Paso, Texas; Lancaster, Pennsylvania; and Los Angeles, California. Products are marketed globally through a network of distributor partners.



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GLOSSARY OF TERMS & ACRONYMS

- "A" = Heavy Duty Automotive instrument (used for Smart Instrument® reference)
- "A" = Amps if used next to a number (e.g. 40A)
- "AB" = Heavy Duty Automotive product line with black anodized metal bezel
- "AC" = Alternating current
- "AC" = AC (Rochester) electrical match (original)
- "AC1" = AC (Rochester) electrical match (revised)
- "AC2" = AC (Rochester) electrical match (revised for 12 or 24 VDC)
- "ALWH" = Allison World Transmission High (range) oil temperature gauge or sender
- "AWG" = American wire gauge
- "BAR" = Barometric pressure (where one bar = 14.50 PSI)
- "Black" = Black anodized metal bezel
- "C" = Centigrade
- "CE" = European Community standard
- "DAEH" = Datcon match, extra high range (> 330°F) temperature sender
- "DAH" = Datcon match, high range (up to 320°F) temperature sender
- "DAL" = Datcon match, low range (up to 240°F) temperature sender
- "DC" = Direct current
- "DD" = Deep draw bezel, either black anodized metal or polished stainless steel
- "E" = Electronic speedometer
- "F" = Fahrenheit
- "Hysteresis" = Failure of a property (e.g. a gauge pointer) that has been changed by an external agent to return to its original value when the cause of the change is removed
- "I" = Heavy Duty Industrial instrument (used for Smart Instrument® reference)
- "IB" = Heavy Duty Industrial product line with black anodized metal bezel
- "In Hg" = Inches mercury (for a turbo pressure gauge, for example)
- "IP" = Heavy Duty Industrial product line with polished stainless steel bezel
- "IP" = International Electrotechnical Commission's (IEC) requirement to "indicate (I) the degree of protection (P)." (For example, IP 67 for a fully sealed—water/dust intrusion—unit.)
- "ISO" = International Standards Organization
- "LCD" = Liquid crystal display
- "LED" = Light emitting diode
- "LS" = IllumaSeal® instrument (used for Smart Instrument® reference)
- "Ohm" (Ω) = Unit of electrical resistance equal to that of a conductor in which a current of one ampere is produced by a potential of one volt across its terminals
- "Match" = Reference to electrical match of system (ohms/resistance) between senders & gauge/meter
- "NPTF" = National Pipe Thread Fine (dry seal American standard taper pipe thread)
- "UL" = Underwriters Laboratory
- "mm" = Millimeters
- "P" = Polished stainless steel bezel (used for Smart Instrument® reference)
- "P-High" = Programmable speedometer, high range
- "P-Low" = Programmable speedometer, low range
- "Polished" = Polished stainless steel bezel
- "PPK" = Pulses per kilometer
- "PPM" = Pulses per mile
- "PSI" = Pounds per square inch
- "RPM" = Revolutions per minute
- "RTZ" = Return to zero feature for tachometer or speedometer (pointers)
- "SAE" = Society of Automotive Engineers
- "SMT" = Surface mount technology
- "SW2" = Stewart Warner electrical match
- "Trip Point" = Predetermined level (e.g. temperature or pressure) at which a switch function is triggered (tripped)
- "UNF" = Unified National Fine thread (straight thread)
- "V" = Volts
- "VDC" = Volts, direct current
- "VD3" = European match (custom)



STANDARD PRODUCT LINES

HEAVY DUTY AUTOMOTIVE GAUGES & METERS

Electrical & mechanical gauges, tachometers & speedometers with automotive-style white-on-black English scale graphics, standard perimeter lighting, white pointers, black or polished stainless steel, corrosion-resistant bezels, & 12- or 24-volt light kits, standard.

HEAVY DUTY INDUSTRIAL GAUGES & METERS

Electrical & mechanical gauges, tachometers & speedometers with classic white-on-black dual-scale graphics (English/metric) & SAE symbols, standard perimeter lighting, white pointers, black or polished stainless steel, corrosion-resistant bezels, & 12- or 24-volt light kits, optional.

ILLUMASEAL® GAUGES & METERS

Fully sealed, anti-fog electrical gauges, tachometers & speedometers with bold white-on-black English-scale graphics & SAE symbols, translucent dials, white pyramidal-shaped pointers (for better light reflection), black corrosion-resistant bezels, & 12- or 24-volt integral light kits or wedge-base incandescent lamps.

HEAVY DUTY & DELUXE MARINE GAUGES & METERS

Heavy-duty & deluxe electrical & mechanical marine gauges, tachometers & speedometers with sleek white-on-black or black-on-white English-scale graphics, rocket red pointers, black anodized or white powder-coated bezels, & 12- or 24-volt light kits (optional on heavy-duty line) or integral wedge-base incandescent lamps (standard on deluxe line). Deluxe units are fully sealed using IllumaSeal® technology.

STREAMLINE™ GAUGES & METERS

Electrical & mechanical gauges, tachometers & speedometers (4-5/8" diameter) with stylish "retro" white-on-black or black-on-white English-scale graphics, lighted orange-backed pointers, translucent dials, integral "flush-mount" bezels, domed (convex) lenses & 12- or 24-volt integral wedge-base incandescent lamps.

SMART INSTRUMENT® SERIES 2000™, 2001™ & 2002™ GAUGES

Smart Instrument® gauges include either an integral ultra-bright LED warning light for high temperature, low pressure, low fuel or low voltage (Series 2000™); a combination integral LED warning light for high temperature or low pressure & 2-amp MOSFET switch output for powering an accessory (Series 2001™); or combination pre-alarm warning light for high temperature or low pressure plus a shut-down function activated by a 2-amp MOSFET switch output also denoted by a second LED warning light (Series 2002™).

COMPATTINO™ (3TA & 3SA)/UNIVERSAL CLUSTERS (UC-3A, UC-4A & UC-5A)

Compact cluster (Compattino™)—9" wide x 4-1 1/16" high—is configured in an elliptical shape with two gauges & one tachometer or speedometer, white-on-black English-scale graphics with SAE symbols, translucent lighting, orange pointers, provisions for 19 warning lights & 24-pin connector. Standard Universal Clusters—9.7" wide x 5.4" high—feature bold white-on-black English-scale graphics & SAE symbols, translucent lighting, orange pointers, 12-volt incandescent lamps, provisions for up to 16 warning lights & 24-pin connector.

HEAVY DUTY HOURMETERS/SENTINEL™ HOURMETERS

Electronic hourmeters, round (52 mm diameter) & mini versions, with either U-bracket, 3-hole flange, 4-hole aircraft, 2-hole or clip mounting; & electronic, stepper motor, quartz type hourmeters, round (52 mm)(Sentinel™ models).

INTELLISENSOR® & SENDERS/SENSORS

Fully electronic liquid (hydrocarbon-based) tank-level measuring systems—IntelliSensor®—designed for rugged off-highway & industrial applications; fuel level, temperature, pressure & speed senders & sensors that can be matched with Datcon brand & other brands of vehicle instruments.

SPECIALTY PRODUCTS & ACCESSORIES

Wide range of products include gauge panels, hardware & gasket kits, hourmeter accessories, lighting products, mechanical tube kits, meter programming kit, mounting kits & panels, point-of-purchase displays, pyrometer accessories, shunts, switches, terminal/voltage adapters/connectors & thread adapters.



PRODUCT FEATURES/CONTENT

| | HEAVY DUTY AUTOMOTIVE | HEAVY DUTY INDUSTRIAL | ILLUMASEAL® | MARINE | STREAMLINE™ | SMART INSTRUMENTS® |
|--|--------------------------|--------------------------|-------------|---------|-------------|-----------------------|
| DIAL | | | | | | |
| • Metal, Black | Std | Std | | Std | | Std |
| • Metal, White | | | | Std | | |
| • Polycarbonate, Black | | | Std | | Std | |
| • Polycarbonate, White | | | | | Std | |
| LETTERING/SYMBOLS | | | | | | |
| • White, English/Metric Dual Scale | | Std | | | | Std |
| • White, English Scale | Std | | Std | Std | Std | Std |
| • Black, English Scale | | | | | Std | |
| • SAE Symbols | | Std | Std | Std | | Std |
| POINTER | | | | | | |
| • Standard, White | Std | Std | | | | Std |
| • Standard, Rocket Red | | | | Std | | |
| • Pyramidal-shaped | | | Std | | | |
| • Pyramidal, Lighted | | | | | Std | |
| • RTZ Feature (Select Products) | Std/Opt | Std/Opt | Std/Opt | Std/Opt | Std/Opt | Std/Opt |
| BEZEL | | | | | | |
| • Black, Anodized, SAE "Step" | Std | Std | Std | Std | | Std |
| • Black, Deep Draw | | Std | | | | |
| • Stainless Steel, Polished, SAE "Step" | Std | Std | Std | Std | | Std |
| • White, Powder-coated, SAE "Step" | | | | Std | | |
| • Black, Low-profile, Plastic | | | | | Std | |
| LENS | | | | | | |
| • Glass, Flat | Std | Std | Std | Std | | Std |
| • Glass, Domed | | | | | Std | Opt |
| • Polycarbonate, Flat | | | Std | | | |
| • Polycarbonate, Domed | | | Opt | Std | | Opt |
| LIGHTING | | | | | | |
| • Incandescent, 5/8" light kit, 12 or 24 VDC, Flood Type | Std | Opt | Std | Opt/Std | | Opt |
| • Incandescent, Wedge-base 12 or 24 VDC, Flood Type | Std | Opt | Std | Opt/Std | Std | Opt |
| • Integral Warning Light(s) For Smart Instrument® Versions | Opt | Opt | Opt | Opt | | Std |
| ELECTRICAL CONNECTIONS | | | | | | |
| • 6-32 Studs, Male | Std | Std | Std | Std | Std | Std |
| HARDWARE | | | | | | |
| • Hardware Kit (Bracket, Lock- Washers and Nuts-Zinc-Plated) | Std | Std | Std | Std | Std | Std |
| • Non-ferrous Hardware On Select Marine Products | | | Std | Opt/Std | | |
| SEALING | | | | | | |
| • Front Sealed, Gasketed | Std | Std | | Std | Std | Std |
| • Fully Sealed Front/Rear With Antifog and Anti-scratch Coated Lens | | | Std | Opt/Std | | |
| BOBBIN ASSEMBLY | | | | | | |
| • Fully Sealed, Internally Dampened | Std | Std | Std | Std | Std | Std |
| • High-torque Magna-Torque™ air-core Movement | Std | Std | Std | Std | Std | Std |
| CASE | | | | | | |
| • High-impact Moisture-resistant Polyester | Std | Std | Std | Std | Std | Std |
| GENERAL PERFORMANCE | | | | | | |
| • Gauges: SAE J1810 Compliant | Std | Std | Std | Std | Std | Std |
| • Tach/Speedo: SAE J1399/J1226 Compliant | Std | Std | Std | Std | Std | Std |

Note: The above features and specifications may change in the future with or without notice depending on the type of change.

Note: Certain products include the older style Datcon logo and newer products may include the new style logo.

Note: Certain new Smart Instrument® products may not include the words Smart Instrument® on the dial.

HEAVY DUTY AUTOMOTIVE

HEAVY DUTY AUTOMOTIVE INSTRUMENTS

Specially designed products for O.E.M. automotive styling

DESCRIPTION:

Full line of purpose-built gauges, tachometers & speedometers are ideally suited for O.E.M. applications requiring high-performance & automotive styling • Superior Magna-Torque™ air-core movement minimizes hysteresis, improves pointer response & assures better accuracy • High-impact moisture-resistant polyester case & sealed bobbin assembly • Bold white-on-black English-scale graphics • Immune to over-voltage or incorrect installation • Optional Smart Instrument® versions

SPECIFICATIONS:

| | |
|---------------------------|---|
| Sizes: | 2" diameter gauges (nominal), panel cut-out 2.098" +/- .02"; 3-3/8" diameter tachometer/speedometer (nominal), panel cut-out 3.400" +/- .02" |
| Dials: | Metal, black |
| Graphics/symbols: | White-on-black, English-scale/SAE symbols |
| Pointer: | Standard white; RTZ feature on select products |
| Bezel: | Black, anodized; SAE "step" or stainless steel, polished "step" |
| Lens: | Glass |
| Case: | High-impact moisture-resistant PBT (polyester) |
| Bobbin assembly: | Fully sealed, internally dampened |
| Movement: | High-torque Magna-Torque™ air-core movement: 90° sweep for gauges & 270° sweep for tachometers & speedometers |
| Lighting: | Perimeter (flood-lit)/Incandescent 12- or 24-volt 5/8" or wedge-base light kits included |
| Supply/operating voltage: | 12 VDC or 24 VDC/10-16 VDC (12-volt) or 20-32 VDC (24-volt) |
| Ohms/resistance: | Datcon "electrical" match (240-33.5Ω, typical) |
| Electrical connections: | #6-32 studs, male |
| Hardware: | "Kit" includes mounting bracket, lock washers & zinc-plated nuts |
| Sealing: | Front sealed, gasketed |
| General performance: | Gauges per SAE J1810; meters per SAE J1399 & J1226 |
| Accuracy: | Per SAE J1810: +/-1.5 angular degrees at primary calibration point & +/-3 angular degrees at secondary calibration point based on nominal input |
| Operating temperature: | -40°C to +85°C |
| Shock & vibration: | Per SAE J1810 |

APPLICATIONS:

Suitability of application is the responsibility of the user. Gauges and meters should be matched with appropriate Datcon brand senders and sensors to assure systems compatibility.



HEAVY DUTY AUTOMOTIVE

MAXIMA TECHNOLOGIES



101314



101310



101352



101366



AIR BRAKE PRESSURE (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Volts | Bezel |
|--------|-------|-----------|------|-------|----------|
| 101314 | 389 | 0-150 psi | 52 | 12 | Black |
| 101864 | 389 | 0-150 psi | 52 | 12 | Polished |

Note: Voltage listed pertains to light in gauge.

AIR PRESSURE (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Volts | Bezel |
|--------|-------|-----------|------|-------|----------|
| 101310 | 389 | 0-150 psi | 52 | 12 | Black |
| 101860 | 389 | 0-150 psi | 52 | 12 | Polished |
| 101311 | 385 | 0-200 psi | 52 | 12 | Black |
| 101861 | 385 | 0-200 psi | 52 | 12 | Polished |

Note: Voltage listed pertains to light in gauge.

AMMETERS

| P/N | Model | Scale | ∅ mm | Volts | Bezel | Shunt (P/N) |
|--------|-------|-------------|------|-------|----------|-------------|
| 101350 | 861 | 10-0-10 A | 52 | 12 | Black | N/A |
| 101900 | 861 | 10-0-10 A | 52 | 12 | Polished | N/A |
| 101351 | 862 | 20-0-20 A | 52 | 12 | Black | N/A |
| 101901 | 862 | 20-0-20 A | 52 | 12 | Polished | N/A |
| 101352 | 863 | 30-0-30 A | 52 | 12 | Black | N/A |
| 101902 | 863 | 30-0-30 A | 52 | 12 | Polished | N/A |
| 101353 | 864 | 40-0-40 A | 52 | 12 | Black | N/A |
| 101903 | 864 | 40-0-40 A | 52 | 12 | Polished | N/A |
| 101354 | 866 | 60-0-60 A | 52 | 12 | Black | N/A |
| 101904 | 866 | 60-0-60 A | 52 | 12 | Polished | N/A |
| 101355 | 860 | 100-0-100 A | 52 | 12 | Black | 07598-00 |
| 101905 | 860 | 100-0-100 A | 52 | 12 | Polished | 07598-00 |
| 101356 | 867 | 150-0-150 A | 52 | 12 | Black | 07599-00 |
| 101906 | 867 | 150-0-150 A | 52 | 12 | Polished | 07599-00 |
| 101357 | 868 | 200-0-200 A | 52 | 12 | Black | 07600-00 |
| 101907 | 868 | 200-0-200 A | 52 | 12 | Polished | 07600-00 |
| 102381 | 869 | 300-0-300 A | 52 | 12 | Black | 07618-00 |
| 106374 | 869 | 300-0-300 A | 52 | N/A | Polished | 07618-00 |

Note: Shunts are external to ammeters.

Note: Voltage listed pertains to light in gauge.

Note: PHOTOS ARE NOT TO SCALE!

HEAVY DUTY AUTOMOTIVE

FUEL

| P/N | Model | Scale | ∅ mm | Ω Ohms | Volts | Bezel |
|--------|-------|---------|---------|-----------|----------|----------|
| 101347 | 810 | E-1/2-F | 52 | 240-33.5 | 12 | Black |
| 101348 | 810 | E-1/2-F | 52 | 0-90 | 12 | Black |
| 101349 | 810 | E-1/2-F | 52 | 78-10 | 12 | Black |
| 101897 | 810 | E-1/2-F | 52 | 240-33.5 | 12 | Polished |
| 101899 | 810 | E-1/2-F | 52 | 78-10 | 12 | Polished |
| 102650 | 810 | E-1/2-F | 52 | 240-33.5 | 12 (Pos) | Polished |
| 102651 | 810 | E-1/2-F | 52 | 240-33.5 | 12 (Pos) | Black |
| 104353 | 810 | E-1/2-F | 52 | 240-33.5 | 24 | Polished |
| 104354 | 810 | E-1/2-F | 52 | 240-33.5 | 24 | Black |

APPLICATIONS TIPS: For 240-33.5 ohm fuel gauges, use either regular duty universal (6-24" adjustable) fuel sender P/N 102535 or heavy-duty sender P/N 104734 for 1 & 3 position configuration, P/N 100438 or 104735 for 2 & 4 position configuration; for 0-90 ohms, use either P/N 100436 or 104742 (2 & 4 position only); for 78-10 ohms, use either P/N 100437 or 104743 (2 & 4 position). All senders provide common ground. Senders include gasket and hardware.

FUEL PRESSURE (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Volts | Bezel |
|--------|-------|----------|---------|-------|----------|
| 101312 | 352 | 0-15 psi | 52 | 12 | Black |
| 101862 | 352 | 0-15 psi | 52 | 12 | Polished |
| 101313 | 350 | 0-30 psi | 52 | 12 | Black |
| 101863 | 350 | 0-30 psi | 52 | 12 | Polished |

Note: Voltage listed pertains to light in gauge.

MANIFOLD PRESSURE (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Volts | Bezel |
|--------|-------|----------|---------|-------|----------|
| 102366 | 386 | 0-40 psi | 52 | 12 | Black |
| 102367 | 386 | 0-40 psi | 52 | 12 | Polished |

Note: Voltage listed pertains to light in gauge.

OIL PRESSURE

| P/N | Model | Scale | ∅ mm | Ω Ohms | Volts | Bezel |
|--------|-------|-----------|---------|-----------|----------|----------|
| 101329 | 886 | 0-40 psi | 52 | 240-33.5 | 12 | Black |
| 101879 | 886 | 0-40 psi | 52 | 240-33.5 | 12 | Polished |
| 101331 | 884 | 0-60 psi | 52 | 240-33.5 | 12 | Black |
| 101881 | 884 | 0-60 psi | 52 | 240-33.5 | 12 | Polished |
| 101882 | 884 | 0-60 psi | 52 | 0-90 | 12 | Polished |
| 101333 | 881 | 0-80 psi | 52 | 240-33.5 | 12 | Black |
| 101334 | 881 | 0-80 psi | 52 | 0-90 | 12 | Black |
| 101883 | 881 | 0-80 psi | 52 | 240-33.5 | 12 | Polished |
| 101884 | 881 | 0-80 psi | 52 | 0-90 | 12 | Polished |
| 102653 | 881 | 0-80 psi | 52 | 240-33.5 | 12 (Pos) | Black |
| 104342 | 881 | 0-80 psi | 52 | 240-33.5 | 24 | Polished |
| 101336 | 882 | 0-100 psi | 52 | 240-33.5 | 12 | Black |
| 101886 | 882 | 0-100 psi | 52 | 240-33.5 | 12 | Polished |

Note: "Match" relates to type of Datcon brand temperature sender. See section on Senders Sensors for references to either "DATCON LOW" (match) or "DATCON HIGH" (match) senders.



101347



101863



102366



101333



101339



HEAVY DUTY AUTOMOTIVE

MAXIMA TECHNOLOGIES



101315

101316

101344

104351

101325



OIL PRESSURE (CONT'D)

| P/N | Model | Scale | ∅ mm | Ω Ohms | Volts | Bezel |
|--------|-------|-----------|---------|-----------|-------|----------|
| 101887 | 882 | 0-100 psi | 52 | 0-90 | 12 | Polished |
| 101888 | 882 | 0-100 psi | 52 | 78-10 | 12 | Polished |
| 104344 | 882 | 0-100 psi | 52 | 240-33.5 | 24 | Polished |
| 101339 | 883 | 0-125 psi | 52 | 240-33.5 | 12 | Black |
| 101340 | 883 | 0-125 psi | 52 | 0-90 | 12 | Black |
| 101889 | 883 | 0-125 psi | 52 | 240-33.5 | 12 | Polished |

OIL PRESSURE (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Volts | Bezel |
|--------|-------|-----------|---------|-------|----------|
| 101316 | 381 | 0-80 psi | 52 | 12 | Black |
| 101866 | 381 | 0-80 psi | 52 | 12 | Polished |
| 101315 | 382 | 0-100 psi | 52 | 12 | Black |
| 101865 | 382 | 0-100 psi | 52 | 12 | Polished |

Note: Voltage listed pertains to light in gauge.

OIL TEMPERATURE

| P/N | Model | Scale | ∅ mm | Match | Volts | Bezel |
|--------|-------|-----------|---------|-------|-------|----------|
| 101344 | 825 | 100-240°F | 52 | DAL | 12 | Black |
| 101345 | 826 | 100-280°F | 52 | DAH | 12 | Black |
| 101895 | 826 | 100-280°F | 52 | DAH | 12 | Polished |
| 104350 | 826 | 100-280°F | 52 | DAH | 24 | Polished |
| 101346 | 828 | 140-320°F | 52 | DAH | 12 | Black |
| 101896 | 828 | 140-320°F | 52 | DAH | 12 | Polished |
| 104351 | 828 | 140-320°F | 52 | DAH | 24 | Black |

OIL TEMPERATURE (MECHANICAL)



| P/N | Model | Scale | ∅ mm | Volts | Bezel | Tubing |
|--------|-------|-----------|---------|-------|----------|--------|
| 101325 | 326 | 100-280°F | 52 | 12 | Black | 72" |
| 101327 | 326 | 100-280°F | 52 | 12 | Black | 120" |
| 101328 | 326 | 100-280°F | 52 | 12 | Black | 144" |
| 101875 | 326 | 100-280°F | 52 | 12 | Polished | 72" |
| 101876 | 326 | 100-280°F | 52 | 12 | Polished | 96" |
| 101877 | 326 | 100-280°F | 52 | 12 | Polished | 120" |
| 101878 | 326 | 100-280°F | 52 | 12 | Polished | 144" |
| 102056 | 326 | 100-280°F | 52 | 12 | Polished | 36" |
| 105771 | 328 | 140-320°F | 52 | 12 | Polished | 72" |

Note: Voltage listed pertains to light in gauge.

Mechanical Oil Temperature Gauge





HEAVY DUTY AUTOMOTIVE**SPEEDOMETERS WITH ODOMETERS**

| P/N | Model | Scale |  Volts |  Bezel | Signal Source |
|------------|-----------------------|-------------------------------|--|--|------------------------------------|
| 103646 | 30L08MI (E) | 0-80 MPH (30000ppm) | 24V | Black | Tach Generator/ Magnetic Sensor |
| 103714 | 30L08MI (E) | 0-80 MPH (30000ppm) | 12V | Polished | Tach Generator/ Magnetic Sensor |
| 103717 | 30L08MI (E) | 0-80 MPH (30000ppm) | 24V | Polished | Tach Generator/ Magnetic Sensor |
| 103647 | 30LP108MI (P-Low) | 0-80 MPH (15360-30600ppm) | 24V | Black | Tach Generator/ Magnetic Sensor |
| 103715 | 30LP108MI (P-Low) | 0-80 MPH (15360-30600ppm) | 12V | Polished | Tach Generator/ Magnetic Sensor |
| 103648 | 30LP208MI (P-High) | 0-80 MPH (30720-61320ppm) | 24V | Black | Tach Generator/ Magnetic Sensor |
| 103716 | 30LP208MI (P-High) | 0-80 MPH (30720-61320ppm) | 12V | Polished | Tach Generator/ Magnetic Sensor |
| 103649 | 30LP013KM (P-Low) | 0-130KM/H (7680-15300ppk) | 12V | Black | Tach Generator/ Magnetic Sensor |
| 103650 | 30LP113KM (P-Low) | 0-130KM/H (15360-30600ppk) | 12V | Black | Tach Generator/ Magnetic Sensor |
| 103654 | 30LP113KM (P-Low) | 0-130KM/H (15360-30660ppk) | 24V | Black | Tach Generator/ Magnetic Sensor |
| 103720 | 30LP013KM (P-Low) | 0-130KM/H (7680-15300ppk) | 12V | Polished | Tach Generator/ Magnetic Sensor |
| 103721 | 30LP113KM (P-Low) | 0-130KM/H (15360-30660ppk) | 12V | Polished | Tach Generator/ Magnetic Sensor |
| 103655 | 30LP213KM (P-High) | 0-130KM/H (30720-61320ppk) | 24V | Black | Tach Generator/ Magnetic Sensor |
| 103722 | 30LP213KM (P-High) | 0-130KM/H (30720-61320ppk) | 12V | Polished | Tach Generator/ Magnetic Sensor |

Note: See section on Senders/Sensors for appropriate speed sensors and section on Specialty Products & Accessories for pulse generators and drive tangs.

Note: "E" refers to electronic speedometer; "P-Low" refers to programmable speedometer low; "P-High" refers to programmable speedometer high.

3-3/8" TACHOMETERS

| P/N | Model | Scale |  Volts |  Bezel | Signal Source |
|------------|--------------|--------------|--|--|--------------------------------|
| 103656 | 27A30 | 0-3000 RPM | 12 | Black | Alternator |
| 103657 | 27H30 | 0-3000 RPM | 12 | Black | Battery Ign./Direct Drive Alt. |
| 103658 | 27B30 | 0-3000 RPM | 12 | Black | Battery Ignition |
| 103659 | 27M30 | 0-3000 RPM | 12 | Black | Magnetic Sensor |
| 103660 | 27S30 | 0-3000 RPM | 12 | Black | Tach Generator 60-pole |
| 103661 | 27C30 | 0-3000 RPM | 12 | Black | Tach Generator 16-pole |
| 103727 | 27A30 | 0-3000 RPM | 12 | Polished | Alternator |
| 103728 | 27H30 | 0-3000 RPM | 12 | Polished | Battery Ign./Direct Drive Alt. |
| 103729 | 27B30 | 0-3000 RPM | 12 | Polished | Battery Ignition |
| 103730 | 27M30 | 0-3000 RPM | 12 | Polished | Magnetic Sensor |
| 103731 | 27S30 | 0-3000 RPM | 12 | Polished | Tach Generator 60-pole |

**103646****103720****103657**

HEAVY DUTY AUTOMOTIVE

MAXIMA TECHNOLOGIES



103732



103669





101828



103679





3-3/8" TACHOMETERS (CONT'D)

| P/N | Model | Scale |  Volts |  Bezel | Signal Source |
|--------|-------|-------------|---|--|--------------------------------|
| 103732 | 27C30 | 0-3000 RPM | 12 | Polished | Tach Generator 16-pole |
| 103663 | 27H40 | 0-4000 RPM | 12 | Black | Battery Ign./Direct Drive Alt. |
| 103664 | 27B40 | 0-4000 RPM | 12 | Black | Battery Ignition |
| 103665 | 27M40 | 0-4000 RPM | 12 | Black | Magnetic Sensor |
| 103666 | 27S40 | 0-4000 RPM | 12 | Black | Tach Generator 60-pole |
| 103667 | 27C40 | 0-4000 RPM | 12 | Black | Tach Generator 16-pole |
| 103733 | 27A40 | 0-4000 RPM | 12 | Polished | Alternator |
| 103734 | 27H40 | 0-4000 RPM | 12 | Polished | Battery Ign./Direct Drive Alt. |
| 103735 | 27B40 | 0-4000 RPM | 12 | Polished | Battery Ignition |
| 103736 | 27M40 | 0-4000 RPM | 12 | Polished | Magnetic Sensor |
| 103737 | 27S40 | 0-4000 RPM | 12 | Polished | Tach Generator 60-pole |
| 103738 | 27C40 | 0-4000 RPM | 12 | Polished | Tach Generator 16-pole |
| 103668 | 27A60 | 0-6000 RPM | 12 | Black | Alternator |
| 103669 | 27H60 | 0-6000 RPM | 12 | Black | Battery Ign./Direct Drive Alt. |
| 103670 | 27B60 | 0-6000 RPM | 12 | Black | Battery Ignition |
| 103672 | 27S60 | 0-6000 RPM | 12 | Black | Tach Generator 60-pole |
| 103739 | 27A60 | 0-6000 RPM | 12 | Polished | Alternator |
| 103740 | 27H60 | 0-6000 RPM | 12 | Polished | Battery Ign./Direct Drive Alt. |
| 103741 | 27B60 | 0-6000 RPM | 12 | Polished | Battery Ignition |
| 103674 | 27H80 | 0-8000 RPM | 12 | Black | Battery Ign./Direct Drive Alt. |
| 103675 | 27B80 | 0-8000 RPM | 12 | Black | Battery Ignition |
| 103746 | 27B80 | 0-8000 RPM | 12 | Polished | Battery Ignition |
| 103767 | 36BXO | 0-10000 RPM | 12 | Polished | Battery Ignition |



Note: See section on Senders/Sensors for appropriate speed sensors and section on Specialty Products & Accessories for pulse generators and drive tangs.

Note: P/N 103767 includes shift light.

3-3/8" TACHOMETERS WITH HOURMETERS

| P/N | Model | Scale |  Volts |  Bezel | Signal Source |
|--------|-------|------------|---|--|------------------------|
| 101828 | 24A30 | 0-3000 RPM | 12 | Polished (DD) | Alternator |
| 101829 | 24C30 | 0-3000 RPM | 12 | Polished (DD) | Tach Generator 16-pole |
| 101831 | 24M30 | 0-3000 RPM | 12 | Polished (DD) | Magnetic Sensor |
| 103678 | 24A30 | 0-3000 RPM | 12 | Black | Alternator |
| 103679 | 24B30 | 0-3000 RPM | 12 | Black | Battery Ignition |
| 103680 | 24M30 | 0-3000 RPM | 12 | Black | Magnetic Sensor |
| 103681 | 28M30 | 0-3000 RPM | 12 | Black | Magnetic Sensor |
| 103682 | 24S30 | 0-3000 RPM | 12 | Black | Tach Generator 60-pole |
| 103683 | 24C30 | 0-3000 RPM | 12 | Black | Tach Generator 16-pole |
| 103749 | 24A30 | 0-3000 RPM | 12 | Polished | Alternator |
| 103750 | 24B30 | 0-3000 RPM | 12 | Polished | Battery Ignition |
| 103751 | 24M30 | 0-3000 RPM | 12 | Polished | Magnetic Sensor |
| 103753 | 24S30 | 0-3000 RPM | 12 | Polished | Tach Generator 60-pole |
| 103754 | 24C30 | 0-3000 RPM | 12 | Polished | Tach Generator 16-pole |
| 108009 | 28A30 | 0-3000 RPM | 12 | Black | Alternator |
| 101285 | 24M40 | 0-4000 RPM | 12 | Black (DD) | Magnetic Sensor |

HEAVY DUTY AUTOMOTIVE**3-3/8" TACHOMETERS WITH HOURMETERS (CONT'D)**

| P/N | Model | Scale |  Volts |  Bezel | Signal Source |
|--------|-------|------------|---|---|------------------------|
| 103684 | 24A40 | 0-4000 RPM | 12 | Black | Alternator |
| 103685 | 24B40 | 0-4000 RPM | 12 | Black | Battery Ignition |
| 103686 | 24M40 | 0-4000 RPM | 12 | Black | Magnetic Sensor |
| 103687 | 24S40 | 0-4000 RPM | 12 | Black | Tach Generator 60-pole |
| 103688 | 24C40 | 0-4000 RPM | 12 | Black | Tach Generator 16-pole |
| 103755 | 24A40 | 0-4000 RPM | 12 | Polished | Alternator |
| 103756 | 24B40 | 0-4000 RPM | 12 | Polished | Battery Ignition |
| 103757 | 24M40 | 0-4000 RPM | 12 | Polished | Magnetic Sensor |
| 103758 | 24S40 | 0-4000 RPM | 12 | Polished | Tach Generator 60-pole |
| 103759 | 24C40 | 0-4000 RPM | 12 | Polished | Tach Generator 16-pole |
| 107648 | 28A40 | 0-4000 RPM | 12 | Polished | Alternator |
| 107682 | 24M40 | 0-4000 RPM | 12 | Black | Magnetic Sensor |
| 103689 | 24A60 | 0-6000 RPM | 12 | Black | Alternator |
| 103690 | 24B60 | 0-6000 RPM | 12 | Black | Battery Ignition |
| 103692 | 24M60 | 0-6000 RPM | 12 | Black | Magnetic Sensor |
| 103694 | 24S60 | 0-6000 RPM | 12 | Black | Tach Generator 60-pole |
| 103760 | 24A60 | 0-6000 RPM | 12 | Polished | Alternator |
| 103761 | 24B60 | 0-6000 RPM | 12 | Polished | Battery Ignition |



Note: P/Ns 103681, 107648 and 108009 include inhibited hourmeter feature.

Note: "DD" under "Bezel" indicates "deep draw" style bezel.

Note: See section on Senders/Sensors for appropriate speed sensors and section on Specialty Products & Accessories for pulse generators and drive tangs.

Note: Reference section for Heavy Duty Industrial instruments for complete list of 2" diameter tachometers.



3-3/8" TACHOMETERS-LCD DIGITAL

| P/N | Model |  Volts |  Bezel | Signal Source |
|--------|-------|---|---|--------------------------|
| 103676 | 26 | Self-powered/12 | Black | Mag Sensor or Pulse Gen. |
| 103747 | 26 | Self-powered/12 | Polished | Mag Sensor or Pulse Gen. |
| 104928 | 26 | Self-powered/24 | Polished | Mag Sensor or Pulse Gen. |

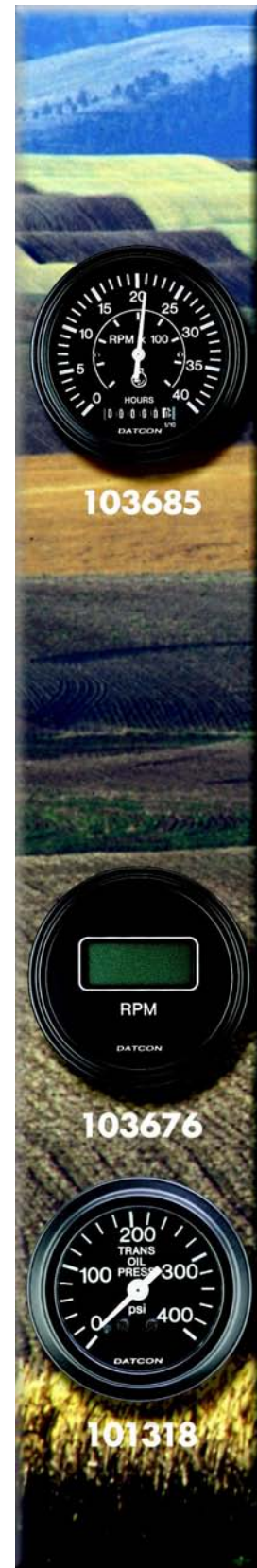
Note: "Self-powered" means that units are energized by either a magnetic sensor or signal generator. These units are recommended for stationary applications.

Note: Consult with factory representatives or your distributor concerning options for programmable speedometer and tachometers with LCD odometers and hourmeters.

TRANSMISSION OIL PRESSURE (MECHANICAL)

| P/N | Model | Scale | \varnothing mm |  Volts |  Bezel |
|--------|-------|-----------|------------------|---|---|
| 101317 | 387 | 0-300 psi | 52 | 12 | Black |
| 101867 | 387 | 0-300 psi | 52 | 12 | Polished |
| 101318 | 388 | 0-400 psi | 52 | 12 | Black |
| 101868 | 388 | 0-400 psi | 52 | 12 | Polished |

Note: Voltage listed pertains to light in gauge.



HEAVY DUTY AUTOMOTIVE

MAXIMA TECHNOLOGIES



102312



101870



101319



101358



101364



TRANSMISSION OIL TEMPERATURE

| P/N | Model | Scale | ∅ mm | Match | Volts | Bezel |
|--------|-------|-----------|---------|-------|-------|----------|
| 102312 | 828 | 140-320°F | 52 | DAH | 12 | Black |
| 102313 | 828 | 140-320°F | 52 | DAH | 12 | Polished |
| 104355 | 828 | 140-320°F | 52 | DAH | 24 | Black |

Note: Voltage listed pertains to light in gauge.

TRIM

| P/N | Model | Match | ∅ mm | Bezel |
|--------|-------|-------|---------|-------|
| 101369 | 840 | MERC | 52 | Black |
| 101370 | 890 | OMC | 52 | Black |

TURBO PRESSURE (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Volt | Bezel |
|--------|-------|---------------------|---------|------|----------|
| 101320 | 351 | 0-30 in Hg/0-15 psi | 52 | 12 | Black |
| 101870 | 351 | 0-30 in Hg/0-15 psi | 52 | 12 | Polished |

Note: Voltage listed pertains to light in gauge.

VACUUM (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Volts | Bezel |
|--------|-------|------------|---------|-------|----------|
| 101319 | 353 | 0-30 in Hg | 52 | 12 | Black |
| 101869 | 353 | 0-30 in Hg | 52 | 12 | Polished |

Note: Voltage listed pertains to light in gauge.

VOLTMETERS

| P/N | Model | Scale | Colored Dial | ∅ mm | Volts | Bezel |
|--------|-------|---------|-----------------|---------|----------|----------|
| 101358 | 830 | 8-18 V | No | 52 | 12 | Black |
| 101360 | 830 | 8-18 V | Yes | 52 | 12 | Black |
| 101908 | 830 | 8-18 V | No | 52 | 12 | Polished |
| 101910 | 830 | 8-18 V | Yes | 52 | 12 | Polished |
| 102663 | 830 | 8-18 V | No | 52 | 12 (Pos) | Black |
| 101359 | 831 | 16-36 V | No | 52 | 24 | Black |
| 101909 | 831 | 16-36 V | No | 52 | 24 | Polished |
| 101911 | 831 | 16-36 V | Yes | 52 | 24 | Polished |

WATER PRESSURE

| P/N | Model | Scale | ∅ mm | Volts | Bezel |
|--------|-------|----------|---------|-------|-------|
| 101364 | 352 | 0-15 psi | 52 | 12 | Black |
| 101365 | 350 | 0-30 psi | 52 | 12 | Black |

HEAVY DUTY AUTOMOTIVE**WATER TEMPERATURE**

| P/N | Model | Scale | ∅ mm | Match | Volts | Bezel |
|--------|-------|-----------|---------|-------|----------|----------|
| 101341 | 825 | 100-240°F | 52 | DAL | 12 | Black |
| 101891 | 825 | 100-240°F | 52 | DAL | 12 | Polished |
| 102657 | 825 | 100-240°F | 52 | DAL | 12 (Pos) | Black |
| 104345 | 825 | 100-240°F | 52 | DAL | 24 | Black |
| 104346 | 825 | 100-240°F | 52 | DAL | 24 | Polished |
| 105342 | 823 | 100-250°F | 52 | AC | 12 | Polished |
| 101342 | 826 | 100-280°F | 52 | DAH | 12 | Black |
| 101892 | 826 | 100-280°F | 52 | DAH | 12 | Polished |
| 102665 | 826 | 100-280°F | 52 | DAH | 12 (Pos) | Black |
| 101893 | 828 | 140-320°F | 52 | DAH | 12 | Polished |
| 101343 | 828 | 140-320°F | 52 | DAH | 12 | Black |

WATER TEMPERATURE (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Volts | Bezel | Tubing |
|--------|-------|-----------|---------|-------|----------|--------|
| 101321 | 326 | 100-280°F | 52 | 12 | Black | 72" |
| 101322 | 326 | 100-280°F | 52 | 12 | Black | 96" |
| 101323 | 326 | 100-280°F | 52 | 12 | Black | 120" |
| 101324 | 326 | 100-280°F | 52 | 12 | Black | 144" |
| 101871 | 326 | 100-280°F | 52 | 12 | Polished | 72" |
| 101872 | 326 | 100-280°F | 52 | 12 | Polished | 96" |
| 101873 | 326 | 100-280°F | 52 | 12 | Polished | 120" |
| 101874 | 326 | 100-280°F | 52 | 12 | Polished | 144" |
| 102055 | 326 | 100-280°F | 52 | 12 | Polished | 48" |
| 105777 | 326 | 100-280°F | 52 | 12 | Polished | 216" |

Note: Voltage listed pertains to light in gauge.

Note: See section on Heavy Duty Hourmeters to match appropriate hourmeter with Heavy Duty Automotive style instruments.

Note: Consult with factory representatives or your distributor for other products not listed.

Note: See section on Smart Instruments® for gauges with warning light options.

**101341****101342****101321****101871**

HEAVY DUTY INDUSTRIAL

HEAVY DUTY INDUSTRIAL INSTRUMENTS

Rugged products for demanding O.E.M. applications

DESCRIPTION:

Full line of heavy-duty gauges, tachometers & speedometers ideally suited for rugged O.E.M. off-highway, industrial & specialty vehicle applications • Rugged design assures desired performance in high shock & vibration environments • Superior Magna-Torque™ air-core movement minimizes hysteresis, improves pointer response & assures better accuracy • High-impact moisture-resistant polyester case & sealed bobbin assembly • Dual scale graphics • Immune to over-voltage or incorrect installation • Optional Smart Instrument® versions

SPECIFICATIONS:

| | |
|---------------------------|---|
| Sizes: | 2" diameter (nominal) gauges/tachometers, panel cut-out 2.098" +/- .02"; 3-3/8" diameter (nominal) tachometers/speedometers, panel cut-out 3.400" +/- .02" |
| Dials: | Metal, black |
| Graphics/symbols: | White-on-black English-metric (dual scale) with SAE symbols |
| Pointer: | Standard white; RTZ feature on select products |
| Bezel: | Black, anodized; SAE "step", "deep draw" or stainless steel, polished "step" |
| Lens: | Glass |
| Case: | High-impact moisture-resistant polyester (PBT) |
| Bobbin assembly: | Fully sealed, internally dampened |
| Movement: | High-torque Magna-Torque™ air-core movement: 90° sweep for gauges & 270° sweep for tachometers & speedometers |
| Lighting: | Perimeter lighting (flood-lit)/Optional incandescent 12- or 24-volt 5/8" or wedge-base light kits |
| Supply/operating voltage: | 12 VDC or 24 VDC/10-16 VDC (12-volt) or 20-32 VDC (24-volt) |
| Ohms/resistance: | Datcon electrical "match" (240-33.5Ω, typical) |
| Electrical connections: | #6-32 studs, male |
| Hardware: | "Kit" includes mounting bracket, lock washers & zinc-plated nuts |
| Sealing: | Front sealed, gasketed |
| General performance: | Gauges per SAE J1810; meters per SAE J1399 & J1226 |
| Accuracy: | Per SAE J1810: +/-1.5 angular degrees at primary calibration point & +/-3 angular degrees at secondary calibration point based on nominal input |
| Operating temperature: | -40°C to +85°C |
| Shock & vibration: | Per SAE J1810 |

APPLICATIONS:

Suitability of application is the responsibility of the user. Gauges and meters should be matched with appropriate Datcon brand senders and sensors to assure systems compatibility.



HEAVY DUTY INDUSTRIAL**AIR PRESSURE**

| P/N | Model | Scale | ∅ mm | Ω Ohms | ⊕ Volts | Bezel |
|------------|--------------|--------------|-----------------|-------------------|--------------------|--------------|
| 101213 | 889 | 0-150 psi | 52 | 240-33.5 | 12 | Black |
| 101214 | 889 | 0-150 psi | 52 | 240-33.5 | 12 | Polished |

AIR PRESSURE (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Bezel |
|------------|--------------|--------------|-----------------|--------------|
| 100190 | 389 | 0-150 psi | 52 | Black |
| 100191 | 389 | 0-150 psi | 52 | Polished |

AIR PRESSURE-DUAL (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Bezel |
|------------|--------------|--------------|-----------------|--------------|
| 100250 | N/A | 0-150 psi | 52 | Black |
| 100251 | N/A | 0-150 psi | 52 | Polished |

AMMETERS

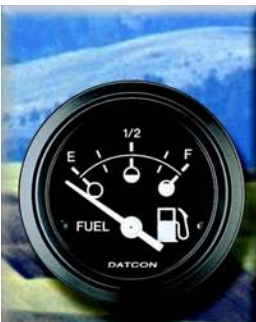
| P/N | Model | Scale | ∅ mm | Bezel | Shunt (P/N) |
|------------|--------------|--------------|-----------------|--------------|------------------------|
| 102480 | 861 | 10-0-10 A | 52 | Black | N/A |
| 102481 | 861 | 10-0-10 A | 52 | Polished | N/A |
| 101077 | 862 | 20-0-20 A | 52 | Black | N/A |
| 101078 | 862 | 20-0-20 A | 52 | Polished | N/A |
| 100158 | 863 | 30-0-30 A | 52 | Black | N/A |
| 100159 | 863 | 30-0-30 A | 52 | Polished | N/A |
| 101079 | 864 | 40-0-40 A | 52 | Black | N/A |
| 101080 | 864 | 40-0-40 A | 52 | Polished | N/A |
| 100160 | 866 | 60-0-60 A | 52 | Black | N/A |
| 100161 | 866 | 60-0-60 A | 52 | Polished | N/A |
| 101995 | 86X | 80-0-80A | 52 | Black | N/A |
| 100162 | 860 | 100-0-100 A | 52 | Black | 07598-00 |
| 100163 | 860 | 100-0-100 A | 52 | Polished | 07598-00 |
| 100164 | 867 | 150-0-150 A | 52 | Black | 07599-00 |
| 100165 | 867 | 150-0-150 A | 52 | Polished | 07599-00 |
| 106373 | 869 | 300-0-300 A | 52 | Black | 07618-00 |

Note: Shunts are external to ammeters.

Note: "Match" relates to type of Datcon brand temperature sender. See section on Senders/Sensors for references to either "DATCON LOW" (match) or "DATCON HIGH" (match) senders.

**101213****100190****100250****100158****MAXIMA TECHNOLOGIES**

HEAVY DUTY INDUSTRIAL



100176



100170



106674



100824



FUEL

| P/N | Model | Scale | ∅ mm | Ω Ohms | Volts | Bezel |
|--------|-------|---------|---------|-----------|-------|----------|
| 100176 | 810 | E-1/2-F | 52 | 240-33.5 | 12 | Black |
| 100177 | 810 | E-1/2-F | 52 | 240-33.5 | 12 | Polished |
| 100677 | 810 | E-1/2-F | 52 | 0-90 | 12 | Black |
| 100678 | 810 | E-1/2-F | 52 | 0-90 | 12 | Polished |
| 100726 | 810 | E-1/2-F | 52 | 10-180 | 12 | Black |
| 101584 | 810 | E-1/2-F | 52 | 240-33.5 | 24 | Black |
| 101585 | 810 | E-1/2-F | 52 | 240-33.5 | 24 | Polished |
| 102478 | 810 | E-1/2-F | 52 | 78-10 | 12 | Black |
| 102479 | 810 | E-1/2-F | 52 | 78-10 | 12 | Polished |

APPLICATIONS TIPS: For 240-33.5 ohm fuel gauges, use either regular duty universal (6-24" adjustable) fuel sender P/N 102535 or heavy-duty sender P/N 104734 for 1 & 3 position configuration, P/N 100438 or 104735 for 2 & 4 position configuration; for 10-180 ohms, use either P/N 100967 or 104738 (1 & 3 position), or 100083 or 104739 (2 & 4 position); for 0-90 ohms, use either P/N 100436 or 104742 (2 & 4 position only); for 78-10 ohms, use either P/N 100437 or 104743 (2 & 4 position only). All senders provide common ground. Senders include gasket and hardware.

FUEL PRESSURE (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Bezel |
|--------|-------|----------|---------|----------|
| 100168 | 352 | 0-15 psi | 52 | Black |
| 100169 | 352 | 0-15 psi | 52 | Polished |
| 100170 | 350 | 0-30 psi | 52 | Black |
| 100171 | 350 | 0-30 psi | 52 | Polished |
| 101190 | 381 | 0-80 psi | 52 | Black |
| 101191 | 381 | 0-80 psi | 52 | Polished |

HYDRAULIC OIL TEMPERATURE

| P/N | Model | Scale | ∅ mm | Match | Volts | Bezel |
|--------|-------|-----------|---------|-------|-------|-------|
| 106674 | 825 | 100-240°F | 52 | DAL | 12 | Black |

MANIFOLD PRESSURE (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Bezel |
|--------|-------|----------|---------|----------|
| 100824 | 350 | 0-30 psi | 52 | Black |
| 100826 | 350 | 0-30 psi | 52 | Polished |

OIL PRESSURE

| P/N | Model | Scale | ∅ mm | Ω Ohms | Volts | Bezel |
|--------|-------|----------|---------|-----------|-------|----------|
| 103340 | 884 | 0-60 psi | 52 | 240-33.5 | 12 | Polished |
| 100172 | 881 | 0-80 psi | 52 | 240-33.5 | 12 | Black |
| 100173 | 881 | 0-80 psi | 52 | 240-33.5 | 12 | Polished |
| 101574 | 881 | 0-80 psi | 52 | 240-33.5 | 24 | Black |

Note: "Match" relates to type of Datcon brand temperature sender. See section on Senders Sensors for references to either "DATCON LOW" (match) or "DATCON HIGH" (match) senders.

HEAVY DUTY INDUSTRIAL**OIL PRESSURE (CONT'D)**

| P/N | Model | Scale | ∅ mm | Ω Ohms | ⊕ Volts | Bezel |
|------------|--------------|--------------|-----------------|-------------------|--------------------|--------------|
| 101575 | 881 | 0-80 psi | 52 | 240-33.5 | 24 | Polished |
| 103098 | 881 | 0-80 psi | 52 | 0-90 | 12 | Black |
| 103099 | 881 | 0-80 psi | 52 | 0-90 | 12 | Polished |
| 100174 | 882 | 0-100 psi | 52 | 240-33.5 | 12 | Black |
| 100175 | 882 | 0-100 psi | 52 | 240-33.5 | 12 | Polished |
| 101576 | 882 | 0-100 psi | 52 | 240-33.5 | 24 | Black |
| 101577 | 882 | 0-100 psi | 52 | 240-33.5 | 24 | Polished |
| 107490 | 882 | 0-100 psi | 52 | 240-33.5 | 12 | Black |
| 101083 | 883 | 0-125 psi | 52 | 240-33.5 | 12 | Black |
| 101084 | 883 | 0-125 psi | 52 | 240-33.5 | 12 | Polished |
| 101087 | 889 | 0-150 psi | 52 | 240-33.5 | 12 | Black |
| 101088 | 889 | 0-150 psi | 52 | 240-33.5 | 12 | Polished |
| 100679 | 887 | 0-300 psi | 52 | 0-90 | 12 | Black |
| 100680 | 887 | 0-300 psi | 52 | 0-90 | 12 | Polished |
| 100728 | 802 | 0-5 bar | 52 | 10-180 | 12 | Black |
| 100729 | 802 | 0-5 bar | 52 | 10-180 | 12 | Polished |
| 100730 | 805 | 0-10 bar | 52 | 10-180 | 12 | Black |
| 100731 | 805 | 0-10 bar | 52 | 10-180 | 12 | Polished |
| 100732 | 806 | 0-25 bar | 52 | 10-180 | 12 | Black |
| 100733 | 806 | 0-25 bar | 52 | 10-180 | 12 | Polished |

OIL PRESSURE (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Bezel |
|------------|--------------|--------------|-----------------|--------------|
| 102252 | 384 | 0-60 psi | 52 | Polished |
| 100186 | 381 | 0-80 psi | 52 | Black |
| 100187 | 381 | 0-80 psi | 52 | Polished |
| 100188 | 382 | 0-100 psi | 52 | Black |
| 100189 | 382 | 0-100 psi | 52 | Polished |
| 107009 | 389 | 0-150 psi | 52 | Black |

OIL TEMPERATURE

| P/N | Model | Scale | ∅ mm | Match | ⊕ Volts | Bezel |
|------------|--------------|--------------|-----------------|--------------|--------------------|--------------|
| 100681 | 825 | 100-240°F | 52 | DAL | 12 | Black |
| 100682 | 825 | 100-240°F | 52 | DAL | 12 | Polished |
| 100180 | 826 | 100-280°F | 52 | DAH | 12 | Black |
| 100181 | 826 | 100-280°F | 52 | DAH | 12 | Polished |
| 101578 | 826 | 100-280°F | 52 | DAH | 24 | Black |
| 101579 | 826 | 100-280°F | 52 | DAH | 24 | Polished |
| 100178 | 828 | 140-320°F | 52 | DAH | 12 | Black |
| 100179 | 828 | 140-320°F | 52 | DAH | 12 | Polished |
| 101580 | 828 | 140-320°F | 52 | DAH | 24 | Black |
| 101581 | 828 | 140-320°F | 52 | DAH | 24 | Polished |
| 100736 | 817 | 150-300°F | 52 | VD3 | 12 | Black |

**100174****100730****100188****100681****101580****MAXIMA TECHNOLOGIES**

HEAVY DUTY INDUSTRIAL



100210



100252



103643



OIL TEMPERATURE (MECHANICAL)

| P/N | Model | Scale | Ø mm | Bezel | Tubing |
|--------|-------|-----------|---------|----------|--------|
| 100210 | 326 | 100-280°F | 52 | Black | 72" |
| 100211 | 326 | 100-280°F | 52 | Polished | 72" |
| 100212 | 326 | 100-280°F | 52 | Black | 96" |
| 100213 | 326 | 100-280°F | 52 | Polished | 96" |
| 100215 | 326 | 100-280°F | 52 | Polished | 120" |
| 100217 | 326 | 100-280°F | 52 | Polished | 144" |
| 105769 | 326 | 100-280°F | 52 | Black | 216" |
| 106839 | 326 | 100-280°F | 52 | Polished | 216" |
| 105764 | 328 | 140-320°F | 52 | Black | 72" |
| 105767 | 328 | 140-320°F | 52 | Black | 144" |
| 105768 | 328 | 140-320°F | 52 | Black | 216" |
| 108101 | 328 | 140-320°F | 52 | Polished | 60" |
| 108103 | 328 | 140-320°F | 52 | Polished | 96" |
| 108105 | 328 | 140-320°F | 52 | Polished | 144" |
| 108106 | 328 | 140-320°F | 52 | Polished | 216" |

PYROMETERS



| P/N | Model | Scale | Ø mm | Bezel | Lead Wire |
|--------|-------|------------------------------|---------|----------|---------------------------|
| 100252 | N/A | 300-1300°F (Single Scale) | 52 | Black | 84"-100510 168"-100511 |
| 100253 | N/A | 300-1300°F (Single Scale) | 52 | Polished | 84"-100510 168"-100511 |
| 102241 | N/A | 300-1300°F 150-700°C | 52 | Black | 84"-100510 168"-100511 |
| 102243 | N/A | 300-1300°F 150-700°C | 52 | Polished | 84"-100510 168"-100511 |

Note: Datcon brand pyrometers use thermocouple P/N 100348. See section on Specialty Products & Accessories for additional pyrometer accessories.

SPEEDOMETERS WITH ODOMETERS

| P/N | Model | Scale | Volts | Bezel | Signal Source |
|--------|----------------------|------------------------------|-------|---------------|------------------------------------|
| 103643 | 30L08MI (E) | 0-80 MPH (30000ppm) | 12V | Black | Tach Generator/ Magnetic Sensor |
| 103714 | 30L08MI (E) | 0-80 MPH (30000ppm) | 12V | Polished | Tach Generator/ Magnetic Sensor |
| 103646 | 30L08MI (E) | 0-80MPH (30000ppm) | 24V | Black | Tach Generator/ Magnetic Sensor |
| 103644 | 30LP108MI (P-Low) | 0-80 MPH (15360-30600ppm) | 12V | Black | Tach Generator/ Magnetic Sensor |
| 100246 | 30LP108MI (P-Low) | 0-80MPH (15360-30600ppm) | 12V | Black (DD) | Tach Generator/ Magnetic Sensor |
| 100247 | 30LP108MI (P-Low) | 0-80MPH (15360-30600ppm) | 12V | Polished (DD) | Tach Generator/ Magnetic Sensor |
| 103647 | 30LP108MI (P-Low) | 0-80MPH (15360-30600ppm) | 24V | Black | Tach Generator/ Magnetic Sensor |

HEAVY DUTY INDUSTRIAL**SPEEDOMETERS WITH ODOMETERS (CONT'D)**



| P/N | Model | Scale |  Volts |  Bezel | Signal Source |
|--------|-----------------------|-------------------------------|---|---|------------------------------------|
| 103721 | 30LP1113KM (P-Low) | 0-130KM/H (15360-30600ppk) | 12V | Polished | Tach Generator/ Magnetic Sensor |
| 103654 | 30LP1113KM (P-Low) | 0-130KM/H (15360-30600ppk) | 24V | Black | Tach Generator/ Magnetic Sensor |
| 103645 | 30LP208MI (P-High) | 0-80MPH (30720-61320ppm) | 12V | Black | Tach Generator/ Magnetic Sensor |
| 100248 | 30LP208MI (P-High) | 0-80-MPH (30720-61320ppm) | 12V | Black (DD) | Tach Generator/ Magnetic Sensor |
| 103716 | 30LP208MI (P-High) | 0-80MPH (30720-61320ppm) | 12V | Polished | Tach Generator/ Magnetic Sensor |
| 100249 | 30LP208MI (P-High) | 0-80MPH (30720-61320ppm) | 12V | Polished (DD) | Tach Generator/ Magnetic Sensor |
| 103648 | 30LP208MI (P-High) | 0-80MPH (30720-61320ppm) | 24V | Black | Tach Generator/ Magnetic Sensor |

Note: See section on Senders/Sensors for appropriate speed sensors and section on Specialty Products & Accessories for pulse generators and drive tangs.

Note: "DD" under "Bezel" indicates "deep draw" style bezel.

Note: "E" refers to electronic speedometer; "P-Low" refers to programmable speedometer low; "P-High" refers to programmable speedometer high.

2" TACHOMETERS

| ITEM | Model | Scale | Application |  Volts |  Bezel | Signal Source |
|--------|-------|------------|---------------|---|---|-------------------|
| 106471 | 12G30 | 0-3000 RPM | 0.5:1 | 12 | Black | Tach Gen 16-pole |
| 106472 | 12G30 | 0-3000 RPM | 1.0:1 | 12 | Black | Tach Gen 16-pole |
| 106473 | 12G30 | 0-3000 RPM | 2.0:1 | 12 | Black | Tach Gen 16-pole |
| 106474 | 12G30 | 0-3000 RPM | 811-1900 Hz | 12 | Black | Alternator |
| 106912 | 12M30 | 0-3000 RPM | 120-180 teeth | 12 | Black | Magnetic Sensor |
| 106460 | 12B40 | 0-4000 RPM | 4-cylinder | 12 | Black | Battery Ignition |
| 106461 | 12B40 | 0-4000 RPM | 6-cylinder | 12 | Black | Battery Ignition |
| 106462 | 12B40 | 0-4000 RPM | 8-cylinder | 12 | Black | Battery Ignition |
| 106475 | 12G40 | 0-4000 RPM | 1.0:1 | 12 | Black | Tach Gen 16-pole |
| 106476 | 12G40 | 0-4000 RPM | 2.0:1 | 12 | Black | Tach Gen 16-pole |
| 106477 | 12B40 | 0-4000 RPM | 4-cylinder | 12 | Polished | Battery Ignition |
| 106478 | 12B40 | 0-4000 RPM | 6-cylinder | 12 | Black | Battery Ignition |
| 106479 | 12B40 | 0-4000 RPM | 8-cylinder | 12 | Polished | Battery Ignition |
| 106492 | 12G40 | 0-4000 RPM | 1.0:1 | 12 | Polished | Tach Gen 16-pole |
| 106493 | 12G40 | 0-4000 RPM | 2.0:1 | 12 | Polished | Tach Gen 16-pole |
| 106913 | 12M40 | 0-4000 RPM | 90-135 teeth | 12 | Black | Magnetic Sensor |
| 106915 | 12M40 | 0-4000 RPM | 90-135 teeth | 12 | Polished | Magnetic Sensor |
| 106463 | 12B60 | 0-6000 RPM | 4-cylinder | 12 | Black | Battery Ignition |
| 106464 | 12B60 | 0-6000 RPM | 6-cylinder | 12 | Black | Battery Ignition |
| 106465 | 12B60 | 0-6000 RPM | 8-cylinder | 12 | Black | Battery Ignition |
| 106480 | 12B60 | 0-6000 RPM | 4-cylinder | 12 | Polished | Battery Ignition |
| 106481 | 12B60 | 0-6000 RPM | 6-cylinder | 12 | Polished | Battery Ignition |
| 106482 | 12B60 | 0-6000 RPM | 8-cylinder | 12 | Polished | Battery Ignition |
| 106486 | 12G60 | 0-6000 RPM | 12-pole | 12 | Polished | Direct Drive Alt. |

**100248****106460****106463**

HEAVY DUTY INDUSTRIAL



106466



100234



100239



103676



2" TACHOMETERS (CONT'D)

| ITEM | Model | Scale | Application | Volts | Bezel | Signal Source |
|--------|-------|------------|-------------|-------|-------|------------------|
| 106466 | 12B80 | 0-8000 RPM | 4-cylinder | 12 | Black | Battery Ignition |
| 106468 | 12B80 | 0-8000 RPM | 8-cylinder | 12 | Black | Battery Ignition |

Note: See section on Senders/Sensors for appropriate speed sensors and section for Specialty Products & Accessories for pulse generators and drive tangs.

3-3/8" TACHOMETERS

| P/N | Model | Scale | Volts | Bezel | Signal Source |
|--------|-------|------------|-------|---------------|------------------------|
| 100234 | 27C30 | 0-3000 RPM | 12/24 | Black (DD) | Tach Generator 16-pole |
| 100694 | 27S30 | 0-3000 RPM | 12/24 | Black (DD) | Tach Generator 60-pole |
| 100818 | 27A30 | 0-3000 RPM | 12/24 | Black (DD) | Alternator |
| 100820 | 27M30 | 0-3000 RPM | 12/24 | Black (DD) | Magnetic Sensor |
| 100230 | 27A40 | 0-4000 RPM | 12/24 | Black (DD) | Alternator |
| 100231 | 27A40 | 0-4000 RPM | 12/24 | Polished (DD) | Alternator |
| 100232 | 27M40 | 0-4000 RPM | 12/24 | Black (DD) | Magnetic Sensor |
| 100237 | 27B40 | 0-4000 RPM | 12/24 | Polished (DD) | Battery Ignition |
| 100226 | 27B60 | 0-6000 RPM | 12/24 | Black (DD) | Battery Ignition |
| 100228 | 27B80 | 0-8000 RPM | 12/24 | Black (DD) | Battery Ignition |
| 100229 | 27B80 | 0-8000 RPM | 12/24 | Polished (DD) | Battery Ignition |

Note: "DD" under "Bezel" indicates "deep draw" style bezel.

3-3/8" TACHOMETERS WITH HOURMETERS

| P/N | Model | Scale | Volts | Bezel | Signal Source |
|--------|-------|------------|-------|---------------|------------------------|
| 100696 | 24S30 | 0-3000 RPM | 12/24 | Black (DD) | Tach Generator 60-pole |
| 102471 | 24A30 | 0-3000 RPM | 12/24 | Black (DD) | Alternator |
| 102473 | 24M30 | 0-3000 RPM | 12/24 | Black (DD) | Magnetic Sensor |
| 100238 | 24A40 | 0-4000 RPM | 12/24 | Black (DD) | Alternator |
| 100239 | 24A40 | 0-4000 RPM | 12/24 | Polished (DD) | Alternator |
| 100240 | 24M40 | 0-4000 RPM | 12/24 | Black (DD) | Magnetic Sensor |
| 100242 | 24C40 | 0-4000 RPM | 12/24 | Black (DD) | Tach Generator 16-pole |

Note: "DD" under "Bezel" indicates "deep draw" style bezel.

3-3/8" TACHOMETERS-LCD DIGITAL

| P/N | Model | Volts | Bezel | Signal Source |
|--------|-------|-----------------|----------|--------------------------|
| 103676 | 26 | Self-powered/12 | Black | Mag Sensor or Pulse Gen. |
| 103747 | 26 | Self-powered/12 | Polished | Mag Sensor or Pulse Gen. |
| 104928 | 26 | Self-powered/24 | Polished | Mag Sensor or Pulse Gen. |

Note: "Self-powered" means that units are energized by either a magnetic sensor or signal generator. These units are recommended for stationary applications.

Note: Consult with factory representatives or your distributor concerning options for programmable speedometer and tachometers with LCD odometers and hourmeters.

HEAVY DUTY INDUSTRIAL**TRANSMISSION OIL PRESSURE**

| P/N | Model | Scale | ∅ mm | Match | Volts | Bezel |
|------------|--------------|--------------|-----------------|--------------|--------------|--------------|
| 105296 | 888 | 0-400 psi | 52 | 0-90 | 12 | Black |
| 105760 | 888 | 0-400 psi | 52 | 0-90 | 12 | Polished |
| 108838 | 888 | 0-400 psi | 52 | 240-33.5 | 12 | Polished |

TRANSMISSION OIL PRESSURE (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Bezel |
|------------|--------------|--------------|-----------------|--------------|
| 100196 | 387 | 0-300 psi | 52 | Black |
| 100197 | 387 | 0-300 psi | 52 | Polished |
| 100198 | 388 | 0-400 psi | 52 | Black |
| 100199 | 388 | 0-400 psi | 52 | Polished |

TRANSMISSION OIL TEMPERATURE

| P/N | Model | Scale | ∅ mm | Match | Volts | Bezel |
|------------|--------------|--------------|-----------------|--------------|--------------|--------------|
| 100685 | 826 | 100-280°F | 52 | DAH | 12 | Black |
| 100686 | 826 | 100-280°F | 52 | DAH | 12 | Polished |

TRIM

| P/N | Model | Match | Volts | Bezel |
|------------|--------------|--------------|--------------|--------------|
| 100742 | 840 | MERC | 12 | Black |
| 100745 | 890 | OMC | 12 | Polished |

TURBO BOOST (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Bezel |
|------------|--------------|--------------|-----------------|--------------|
| 101490 | 350 | 0-30 psi | 52 | Black |
| 101491 | 350 | 0-30 psi | 52 | Polished |

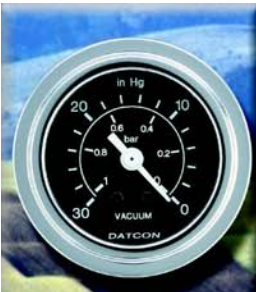
TURBO PRESSURE (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Bezel |
|------------|--------------|---------------------|-----------------|--------------|
| 100192 | 351 | 0-30 in Hg/0-15 psi | 52 | Black |
| 100193 | 351 | 0-30 in Hg/0-15 psi | 52 | Polished |
| 101085 | 354 | 0-30 in Hg/0-30 psi | 52 | Black |
| 101086 | 354 | 0-30 in Hg/0-30 psi | 52 | Polished |

**105296****100196****100685****101491****100192**

HEAVY DUTY INDUSTRIAL

MAXIMA TECHNOLOGIES



100195



100184



100262



100734



101081



VACUUM (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Bezel |
|--------|-------|------------|---------|----------|
| 100194 | 353 | 0-30 in Hg | 52 | Black |
| 100195 | 353 | 0-30 in Hg | 52 | Polished |

VOLTMETERS

| P/N | Model | Scale | Colored Dial | ∅ mm | Volts | Bezel |
|--------|-------|---------|-----------------|---------|-------|----------|
| 100166 | 830 | 8-18 V | Yes | 52 | 12 | Black |
| 100167 | 830 | 8-18 V | Yes | 52 | 12 | Polished |
| 100262 | 830 | 8-18 V | No | 52 | 12 | Black |
| 100263 | 830 | 8-18 V | No | 52 | 12 | Polished |
| 100184 | 831 | 16-36 V | Yes | 52 | 24 | Black |
| 100185 | 831 | 16-36 V | Yes | 52 | 24 | Polished |
| 100264 | 831 | 16-36 V | No | 52 | 24 | Black |
| 100265 | 831 | 16-36 V | No | 52 | 24 | Polished |

WATER TEMPERATURE

| P/N | Model | Scale | ∅ mm | Match | Volts | Bezel |
|--------|-------|-----------|---------|-------|-------|----------|
| 100683 | 825 | 100-240°F | 52 | DAL | 12 | Black |
| 100684 | 825 | 100-240°F | 52 | DAL | 12 | Polished |
| 101586 | 825 | 100-240°F | 52 | DAL | 24 | Black |
| 101587 | 825 | 100-240°F | 52 | DAL | 24 | Polished |
| 100734 | 815 | 100-250°F | 52 | VD3 | 12 | Black |
| 100735 | 815 | 100-250°F | 52 | VD3 | 12 | Polished |
| 100182 | 826 | 100-280°F | 52 | DAH | 12 | Black |
| 100183 | 826 | 100-280°F | 52 | DAH | 12 | Polished |
| 101582 | 826 | 100-280°F | 52 | DAH | 24 | Black |
| 101583 | 826 | 100-280°F | 52 | DAH | 24 | Polished |
| 101081 | 828 | 140-320°F | 52 | DAH | 12 | Black |
| 101082 | 828 | 140-320°F | 52 | DAH | 12 | Polished |

WATER TEMPERATURE (MECHANICAL)

| P/N | Model | Scale | ∅ mm | Bezel | Tubing |
|--------|-------|-----------|---------|----------|--------|
| 100256 | 326 | 100-280°F | 52 | Black | 36" |
| 100257 | 326 | 100-280°F | 52 | Polished | 36" |
| 100258 | 326 | 100-280°F | 52 | Black | 48" |
| 100259 | 326 | 100-280°F | 52 | Polished | 48" |
| 100260 | 326 | 100-280°F | 52 | Black | 60" |
| 100261 | 326 | 100-280°F | 52 | Polished | 60" |
| 100200 | 326 | 100-280°F | 52 | Black | 72" |
| 100201 | 326 | 100-280°F | 52 | Polished | 72" |
| 100202 | 326 | 100-280°F | 52 | Black | 96" |
| 100203 | 326 | 100-280°F | 52 | Polished | 96" |
| 100204 | 326 | 100-280°F | 52 | Black | 120" |
| 100205 | 326 | 100-280°F | 52 | Polished | 120" |
| 100206 | 326 | 100-280°F | 52 | Black | 144" |

HEAVY DUTY INDUSTRIAL

WATER TEMPERATURE (MECHANICAL)(CONT'D)

| P/N | Model | Scale | ∅ mm | Bezel | Tubing |
|--------|-------|-----------|---------|----------|--------|
| 100207 | 326 | 100-280°F | 52 | Polished | 144" |
| 100208 | 326 | 100-280°F | 52 | Black | 216" |
| 100209 | 326 | 100-280°F | 52 | Polished | 216" |

Note: See section on Heavy Duty Hourmeters to match appropriate hourmeter with Heavy Duty Industrial style instruments.

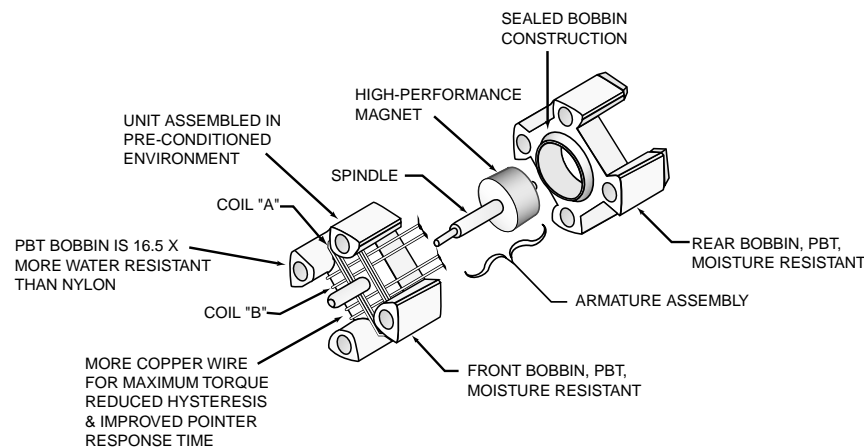
Note: Datcon brand tachometers and speedometers are interchangeable with either Heavy Duty Automotive or Heavy Duty Industrial gauges.

Note: Consult with factory representatives or your distributor for other products not listed.

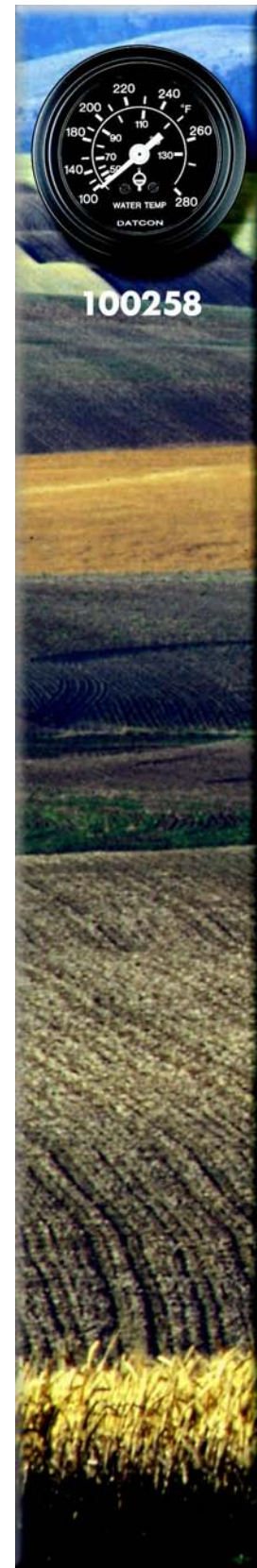
Note: See section on Smart Instruments® for gauges with warning light options.

What makes a Heavy Duty Industrial gauge *heavy duty*?

Superior air-core bobbin assembly - the "heart" of the gauge.



At the heart of every Heavy Duty Industrial gauge and meter (and other Datcon product lines as well) is the patented Magna-Torque™ air-core movement. Packaged in a PBT (polyester) bobbin assembly that is 16.5 times more water resistant than nylon (a typical material used due to its low cost), the system features sealed bobbin construction, thereby preventing dampening fluid from leaking out (a problem that is fairly common to marginally constructed gauges). Dampening fluid is injected into the assembly using an automated process to ensure that the correct amount is distributed, thus optimizing the system's intended relationship between desired pointer response time and negligible pointer "flutter" as would be caused from heavy shock or vibration. The design (in a Datcon match of 240-33.5 ohms) also accommodates more "turns" of copper wire around the coils, thus maximizing the system's torque output (compared to other systems). As a result, *hysteresis is minimized* (i.e. erratic pointer behavior or a floating pointer) while *desired pointer response time is maintained* (relative to real-time sender inputs). A high-performance magnet augments the system's aim of obtaining maximum torque and response time. Of particular note, the unit is assembled in a pre-conditioned environment—temperature and humidity-controlled—to ensure that no moisture is artificially induced into the assembly.



100258

MAXIMA TECHNOLOGIES

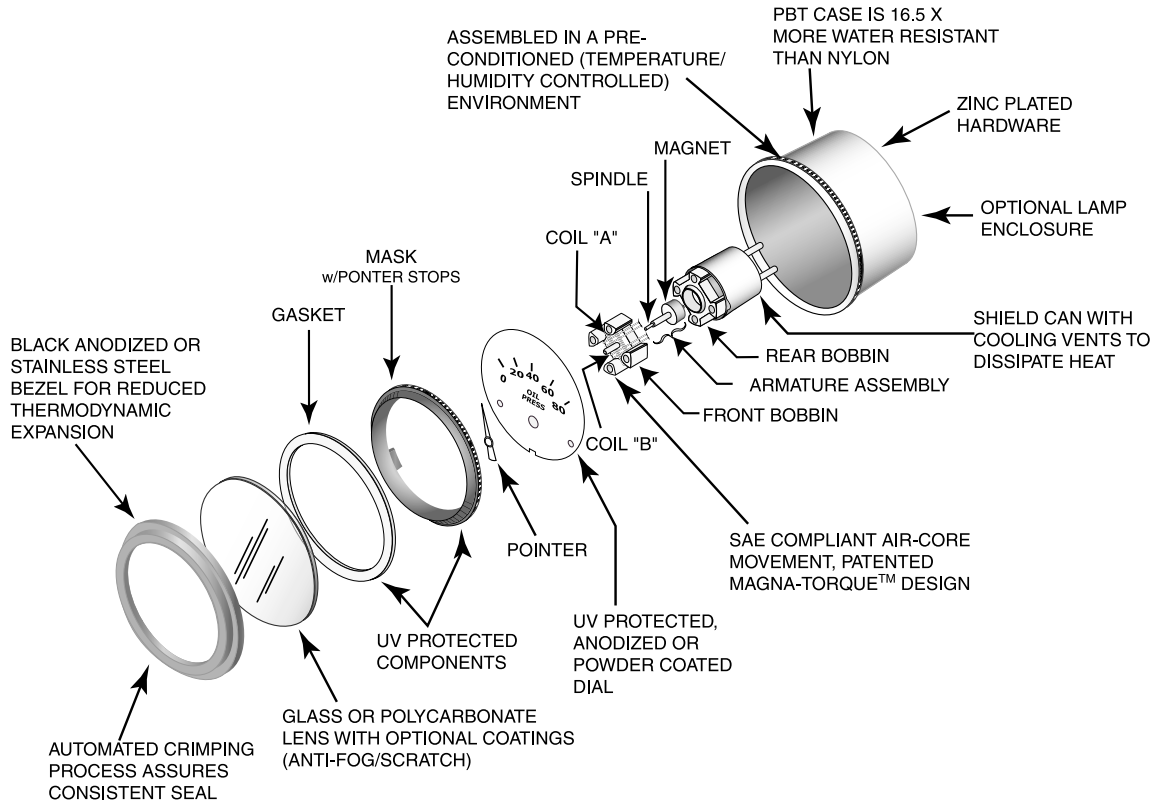


HEAVY DUTY INDUSTRIAL

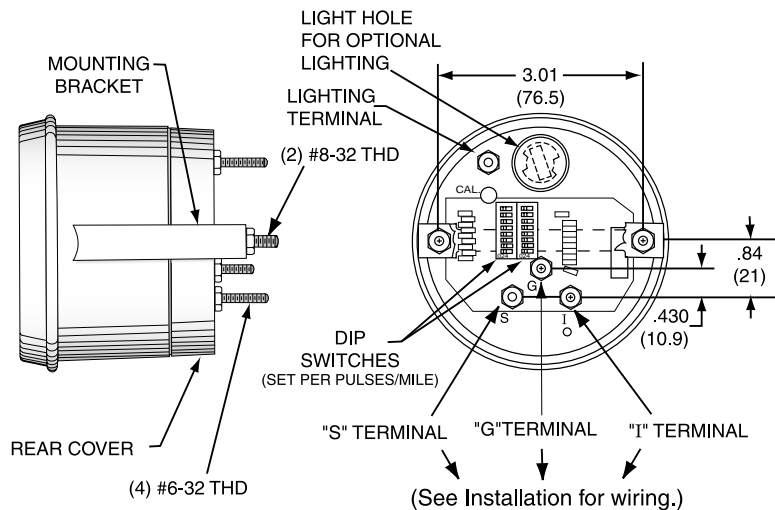
MAXIMA TECHNOLOGIES

What makes a Heavy Duty Industrial gauge heavy duty?

Superior systems integration and design.



Rear view of speedometer.



ILLUMASEAL® INSTRUMENTS*Fully sealed & anti-fog instruments for superior environmental performance***DESCRIPTION:**

Fully sealed, anti-fog instruments provide best-in-class sealing in high-moisture environments • Rugged O.E.M. design assures performance in high shock & vibration environments • Superior Magna-Torque™ air-core movement minimizes hysteresis, improves pointer response and assures better accuracy • High-impact moisture-resistant polyester case and sealed bobbin assembly • Bold white-on-black graphics • Immune to over-voltage or incorrect installation • Anti-scratch coated lenses • Optional Smart Instrument® versions

SPECIFICATIONS:

| | |
|---------------------------|---|
| Sizes: | 2" diameter (nominal) gauges, panel cut-out 2.098" +/- .02"; 3-3/8" diameter (nominal) tachometers/speedometers, panel cut-out 3.400" +/- .02" |
| Dials: | Polycarbonate, black |
| Graphics/symbols: | White-on-black English-scale/SAE symbols |
| Pointer: | White, pyramidal shaped for superior light reflection; RTZ feature on select products |
| Bezel: | Black, anodized; SAE "step" or stainless steel, polished "step" |
| Lens: | Polycarbonate, flat; anti-scratch coated |
| Case: | High-impact moisture-resistant polyester (PBT) |
| Bobbin assembly: | Fully sealed, internally dampened |
| movement: | High-torque Magna-Torque™ air-core movement: 90° sweep for gauges & 270° sweep for tachometers & speedometers |
| Lighting: | Translucent (backlit)/Incandescent 12- or 24-volt 5/8" light kit included |
| Supply/operating voltage: | 12 VDC or 24 VDC/10-16 VDC (12-volt) or 20-32 VDC (24-volt) |
| Ohms/resistance: | Datcon electrical "match" (240-33.5Ω, typical) |
| Electrical connections: | #6-32 studs, male |
| Hardware: | "Kit" includes mounting bracket, lock washers & zinc-plated nuts; optional non-ferrous mounting hardware for marine applications |
| Sealing: | Front & rear sealed, IP 67 compliant |
| General performance: | Gauges per SAE J1810; meters per SAE J1399 & J1226 |
| Accuracy: | Per SAE J1810: +/-1.5 angular degrees at primary calibration point & +/-3 angular degrees at secondary calibration point based on nominal input |
| Operating temperature: | -40°C to +85°C |
| Shock & vibration: | Per SAE J1810 |

APPLICATIONS:

Suitability of application is the responsibility of the user. Units are designed for most applications in high-moisture environments. Gauges and meters should be matched with appropriate Datcon brand senders and sensors to assure system compatibility.



ILLUMASEAL®

MAXIMA TECHNOLOGIES



105780



104246



104410



104411



104412



AMMETERS

| P/N | Model | Scale | ∅ mm | ⎓ Volts | ⊖ Bezel | Shunt (P/N) |
|--------|-------|-----------|---------|------------|------------|----------------|
| 104244 | 862 | 20-0-20 A | 52 | 12 | Black | N/A |
| 104245 | 864 | 40-0-40 A | 52 | 12 | Black | N/A |
| 105780 | 866 | 60-0-60 A | 52 | 12 | Black | N/A |
| 105781 | 860 | 100-0-100 | 52 | 12 | Black | 07598-00 |
| 105895 | 869 | 300-0-300 | 52 | 12 | Black | 105784 |

Note: Voltage listed pertains to light in gauge.

FUEL

| P/N | Model | Scale | ∅ mm | Ω Ohms | ⎓ Volts | ⊖ Bezel |
|--------|-------|---------|---------|-----------|------------|------------|
| 106955 | 810 | E-1/2-F | 52 | 10-180 | 12 | Black |
| 104246 | 810 | E-1/2-F | 52 | 240-33.5 | 12 | Black |

OIL PRESSURE

| P/N | Model | Scale | ∅ mm | Ω Ohms | ⎓ Volts | ⊖ Bezel |
|--------|-------|-----------|---------|-----------|------------|------------|
| 104236 | 881 | 0-80 psi | 52 | 240-33.5 | 12 | Black |
| 105788 | 881 | 0-80 psi | 52 | 0-90 | 12 | Black |
| 104237 | 882 | 0-100 psi | 52 | 240-33.5 | 12 | Black |
| 105789 | 882 | 0-100 psi | 52 | 0-90 | 12 | Black |
| 105814 | 889 | 0-150 psi | 52 | 10-180 | 12 | Black |

OIL TEMPERATURE

| P/N | Model | Scale | ∅ mm | Match | ⎓ Volts | ⊖ Bezel |
|--------|-------|-----------|---------|-------|------------|------------|
| 105815 | 823 | 100-250°F | 52 | VD3 | 12 | Black |
| 105790 | 826 | 100-280°F | 52 | DAH | 12 | Black |
| 104239 | 828 | 140-320°F | 52 | DAH | 12 | Black |



SPEEDOMETERS (MECHANICAL)

| P/N | Model | Scale | ⎓ Volts | ⊖ Bezel | Signal Source |
|--------|-------|------------|------------|------------|------------------|
| 104412 | 894 | 10-55 MPH | 12 | Black | Pitot Tube |
| 109860 | 896 | 10-60 MPH | 12 | White | Pitot Tube |
| 104410 | 896 | 10-65 MPH | 12 | Black | Pitot Tube |
| 104411 | 897 | 20-80 MPH | 12 | Black | Pitot Tube |
| 109854 | 897 | 20-80 MPH | 12 | White | Pitot Tube |
| 109857 | 899 | 20-100 MPH | 12 | White | Pitot Tube |



Note: Voltage listed pertains to light in gauge.

Note: See section on Senders/Sensors for appropriate speed sensors and section on Specialty Products & Accessories for pulse generators and drive tangs.

ILLUMASEAL®**3-3/8" TACHOMETERS**

| P/N | Model | Scale |  Volts |  Bezel | Signal Source |
|--------|-------|--------|---|---|--------------------------------|
| 104413 | 47H30 | 0-3000 | 12 | Black | Battery Ign./Direct Drive Alt. |
| 105716 | 47C30 | 0-3000 | 12 | Black | Tach Generator 16-pole |
| 104414 | 47H40 | 0-4000 | 12 | Black | Battery Ign./Direct Drive Alt. |
| 105720 | 44C40 | 0-4000 | 12 | Black | Tach Generator 16-pole |
| 104415 | 47H60 | 0-6000 | 12 | Black | Battery Ign./Direct Drive Alt. |
| 104416 | 47H80 | 0-8000 | 12 | Black | Battery Ign./Direct Drive Alt. |



3-3/8" TACHOMETERS WITH HOURMETERS

| P/N | Model | Scale |  Volts |  Bezel | Signal Source |
|--------|-------|--------|---|---|--------------------------------|
| 104417 | 44H30 | 0-3000 | 12 | Black | Battery Ign./Direct Drive Alt. |
| 105719 | 44C30 | 0-3000 | 12 | Black | Tach Generator 16-pole |
| 104418 | 44H40 | 0-4000 | 12 | Black | Battery Ign./Direct Drive Alt. |
| 107647 | 44A40 | 0-4000 | 12 | Black | Alternator |
| 104419 | 44H60 | 0-6000 | 12 | Black | Battery Ign./Direct Drive Alt. |



TRANSMISSION OIL TEMPERATURE

| P/N | Model | Scale | ∅ mm | Match |  Volts |  Bezel |
|--------|-------|-----------|------|-------|---|--|
| 104240 | 828 | 140-320°F | 52 | DAH | 12 | Black |



TRIM

| P/N | Model | Match | ∅ mm |  Voltz |  Bezel |
|--------|-------|-------|------|---|---|
| 104247 | 840 | MERC | 52 | 12 | Black |
| 104248 | 890 | OMC | 52 | 12 | Black |

VOLTMETERS

| P/N | Model | Scale | Colored Dial | ∅ mm |  Volts |  Bezel |
|--------|-------|---------|--------------|------|---|--|
| 104232 | 830 | 8-18 V | No | 52 | 12 | Black |
| 104233 | 831 | 16-36 V | No | 52 | 24 | Black |
| 104235 | 831 | 16-36 V | Yes | 52 | 24 | Black |

WATER TEMPERATURE

| P/N | Model | Scale | ∅ mm | Match |  Volts |  Bezel |
|--------|-------|-----------|------|-------|---|--|
| 104241 | 825 | 100-240°F | 52 | DAL | 12 | Black |
| 104242 | 826 | 100-280°F | 52 | DAH | 12 | Black |
| 106958 | 823 | 105-250°F | 52 | VD3 | 12 | Black |

Note: IllumaSeal® instruments are ideal for applications in open-air cabs, marine and high-moisture environments. These gauges literally operate under water!

**104417****104240****104247****104233****104242****MAXIMA TECHNOLOGIES**

MARINE

HEAVY-DUTY & DELUXE MARINE INSTRUMENTS

Specially designed marine products with optional best-in-class sealing & alert functions

DESCRIPTION:

Full line of gauges, hourmeters, tachometers & speedometers for marine applications • Multiple styles including monochromatic black or white instruments with either front or front/rear sealing & flat or domed lens • Applications-specific designs assure desired performance in high shock & vibration environments • Superior Magna-Torque™ air-core movement minimizes hysteresis, improves pointer response & assures better accuracy • High-impact moisture-resistant polyester case & sealed bobbin assembly • Bold white-on-black, black-on-white or blue/white swirl graphics • Immune to over-voltage or incorrect installation • MarinaSeal™ line includes best-in-class IllumaSeal® sealing & non-ferrous hardware • Wet exhaust temperature system for inboard motors

SPECIFICATIONS:



| | |
|---------------------------|---|
| Models: | Heavy-duty: white-on-black or black-on-white dials, black or white bezels (front-seal only); Deluxe: black-on-white dials, white bezels (fully sealed with anti-fog/scratch coatings), Bezel color indicates dial color |
| Sizes: | 2" diameter (nominal) gauges/tachometers, panel cut-out 2.098" +/- .02"; 3-3/8" diameter tachometers/speedometers, panel cut-out 3.400" +/- .02" |
| Dials: | See references in "Models" above |
| Graphics/symbols: | See "Models" above/SAE symbols |
| Pointer: | Rocket-red style pointers (all models) |
| Bezel: | Black anodized or powder-coated white, SAE "step" type |
| Lens: | Glass, flat or domed (front seal configuration) or polycarbonate, coated, domed (front/rear fully sealed configuration) |
| Case: | High-impact moisture-resistant polyester (PBT) |
| Bobbin assembly: | Fully sealed, internally dampened |
| Movement: | High-torque Magna-Torque™ air-core movement: 90° sweep for gauges & 270° sweep for tachometers & speedometers |
| Lighting: | Perimeter lighting(flood-lit)/Incandescent 12-volt 5/8" optional light kit, wedge-base lamps included on Deluxe products |
| Supply/operating voltage: | 12 VDC/10-16 VDC |
| Ohms/resistance: | Datcon electrical "match" (240-33.5Ω, typical) |
| Electrical connections: | #6-32 studs, male |
| Hardware: | Standard "kit" includes mounting bracket, lock washers & zinc-plated nuts; Front/rear fully sealed versions include non-ferrous mounting hardware |
| Sealing: | See references in "Models" above |
| General performance: | Gauges per SAE J1810; meters per SAE J1399 & J1226 |
| Accuracy: | Per SAE J1810: +/-1.5 angular degrees at primary calibration point & +/-3 angular degrees at secondary calibration point based on nominal input |
| Operating temperature: | -40°C to +85°C |
| Shock & vibration: | Per SAE J1810 |

APPLICATIONS:



Consult with factory representatives or your distributor for the best marine application.





MARINE**FUEL**

| P/N | Scale | ∅ mm | Ohms |  Volts |  Bezel | Sealing | Lens |
|--------|---------|---------|----------|---|---|------------|-------|
| 108663 | E-1/2-F | 52 | 240-33.5 | 12 | Black | Front | Flat |
| 108672 | E-1/2-F | 52 | 240-33.5 | 12 | White | Front | Flat |
| 108681 | E-1/2-F | 52 | 240-33.5 | 12 | White | Front/Rear | Domed |



HOURMETERS

| P/N | ∅ mm |  Volts |  Bezel | Sealing | Lens |
|--------|---------|---|---|------------|-------|
| 109834 | 52 | 10-32 VDC | Black | Front/Rear | Flat |
| 109835 | 52 | 10-32 VDC | White | Front/Rear | Flat |
| 109836 | 52 | 10-32 VDC | White | Front/Rear | Domed |


OIL PRESSURE

| P/N | Scale | ∅ mm | Ω Ohms |  Volts |  Bezel | Sealing | Lens |
|--------|-----------|---------|-----------|---|---|------------|-------|
| 108667 | 0-80 psi | 52 | 240-33.5 | 12 | Black | Front | Flat |
| 108676 | 0-80 psi | 52 | 240-33.5 | 12 | White | Front | Flat |
| 108685 | 0-80 psi | 52 | 240-33.5 | 12 | White | Front/Rear | Domed |
| 108668 | 0-100 psi | 52 | 240-33.5 | 12 | Black | Front | Flat |
| 108677 | 0-100 psi | 52 | 240-33.5 | 12 | White | Front | Flat |
| 108686 | 0-100 psi | 52 | 240-33.5 | 12 | White | Front/Rear | Domed |

OIL TEMPERATURE

| P/N | Scale | ∅ mm | Match |  Volts |  Bezel | Sealing | Lens |
|--------|-----------|---------|-------|---|---|------------|-------|
| 108666 | 100-280°F | 52 | DAH | 12 | Black | Front | Flat |
| 108675 | 100-280°F | 52 | DAH | 12 | White | Front | Flat |
| 108684 | 100-280°F | 52 | DAH | 12 | White | Front/Rear | Domed |

SPEEDOMETERS (MECHANICAL)

| P/N | Scale |  Bezel | Sealing | Lens | Signal Source |
|--------|------------|---|---------|-------|---------------|
| 109858 | 10-60 MPH | Black | Front | Flat | Pitot Tube |
| 109859 | 10-60 MPH | White | Front | Flat | Pitot Tube |
| 109860 | 10-60 MPH | White | Front | Domed | Pitot Tube |
| 109852 | 20-80 MPH | Black | Front | Flat | Pitot Tube |
| 109853 | 20-80 MPH | White | Front | Flat | Pitot Tube |
| 109854 | 20-80 MPH | White | Front | Domed | Pitot Tube |
| 109855 | 20-100 MPH | Black | Front | Flat | Pitot Tube |
| 109856 | 20-100 MPH | White | Front | Flat | Pitot Tube |
| 109857 | 20-100 MPH | White | Front | Domed | Pitot Tube |

Note: See page 29 and Specialty Products & Accessories for tubing kits.

**108672****109834****108667****108684****109858**

MARINE



108680



108669



108687





108664



108683





2" TACHOMETERS

| ITEM | Scale |  Volt |  Bezel | Sealing | Lens |
|--------|--------|--|---|------------|-------|
| 109846 | 0-6000 | 12 | Black | Front | Flat |
| 109847 | 0-6000 | 12 | White | Front | Flat |
| 109848 | 0-6000 | 12 | White | Front/Rear | Domed |
| 109849 | 0-8000 | 12 | Black | Front | Flat |
| 109850 | 0-8000 | 12 | White | Front | Flat |
| 109851 | 0-8000 | 12 | White | Front/Rear | Domed |



Note: See section on Senders/Sensors for appropriate speed sensors and section for Specialty Products & Accessories for appropriate pulse generators and drive tangs.

3-3/8" TACHOMETERS



| ITEM | Scale |  Volts |  Bezel | Sealing | Lens |
|--------|--------|---|---|------------|-------|
| 109837 | 0-6000 | 12 | Black | Front | Flat |
| 109838 | 0-6000 | 12 | White | Front | Flat |
| 109839 | 0-6000 | 12 | White | Front/Rear | Domed |
| 109840 | 0-8000 | 12 | Black | Front | Flat |
| 109841 | 0-8000 | 12 | White | Front | Flat |
| 109842 | 0-8000 | 12 | White | Front/Rear | Domed |

Note: See section on Senders/Sensors for appropriate speed sensors and section for Specialty Products & Accessories for appropriate pulse generators and drive tangs.



TRIM

| P/N | Match | \varnothing mm |  Volts |  Bezel | Sealing | Lens |
|--------|-------|------------------|---|---|------------|-------|
| 108670 | MERC | 52 | 12 | Black | Front | Flat |
| 108679 | MERC | 52 | 12 | White | Front | Flat |
| 108688 | MERC | 52 | 12 | White | Front/Rear | Domed |
| 108671 | OMC | 52 | 12 | Black | Front | Flat |
| 108680 | OMC | 52 | 12 | White | Front | Flat |
| 108689 | OMC | 52 | 12 | White | Front/Rear | Domed |

VOLTMETERS

| P/N | Scale | \varnothing mm |  Volts |  Bezel | Sealing | Lens |
|--------|--------|------------------|---|---|------------|-------|
| 108669 | 8-18 V | 52 | 12 | Black | Front | Flat |
| 108678 | 8-18 V | 52 | 12 | White | Front | Flat |
| 108687 | 8-18 V | 52 | 12 | White | Front/Rear | Domed |

WATER TEMPERATURE

| P/N | Scale | \varnothing mm | Match |  Volts |  Bezel | Sealing | Lens |
|--------|-----------|------------------|-------|---|---|------------|-------|
| 108664 | 100-240°F | 52 | DAL | 12 | Black | Front | Flat |
| 108673 | 100-240°F | 52 | DAL | 12 | White | Front | Flat |
| 108682 | 100-240°F | 52 | DAL | 12 | White | Front/Rear | Domed |
| 108665 | 100-280°F | 52 | DAH | 12 | Black | Front | Flat |
| 108674 | 100-280°F | 52 | DAH | 12 | White | Front | Flat |
| 108683 | 100-280°F | 52 | DAH | 12 | White | Front/Rear | Domed |

MARINE

MAXIMA TECHNOLOGIES

WET EXHAUST TEMPERATURE (SMART INSTRUMENT®)

| P/N | Scale | ∅ mm | Match | Volts | Bezel | Sealing | Lens | Trip Point |
|--------|-----------|------|-------|-------|-------|---------|------|---------------|
| 104120 | 100-240°F | 52 | DLW | 12 | Black | Front | Flat | Alert @ 200°F |

Note: Use temperature sender P/N 104121.

MECHANICAL TUBE KITS

| P/N | Description |
|----------|---|
| 07140-01 | Tube Kit, 25.5', with Barb Connector |
| 71264-00 | Pitot Tube Kit, 22.5', with Connectors and Pitot Assembly |

Note: "Barb" is a connection that fits inside the tube.

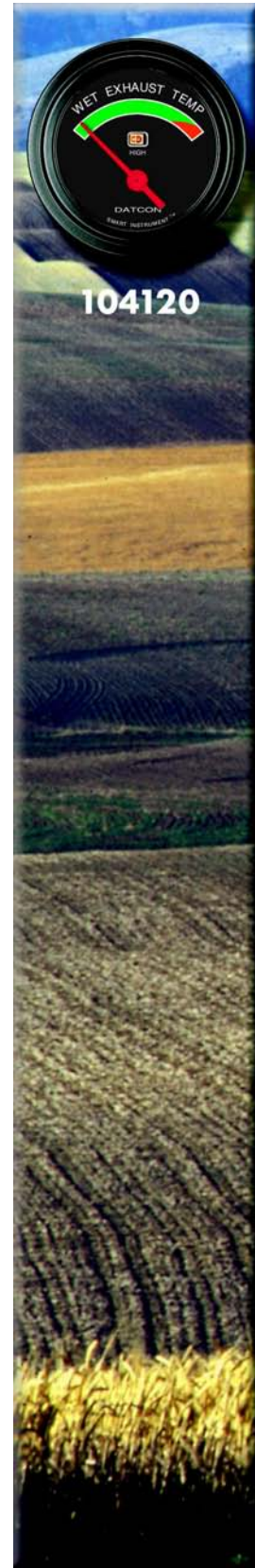
HEAVY-DUTY MARINE (BLACK): Black bezel, anodized, SAE step; black dial face; rocket-red pointer; oblique font, white numbers/indices; white Datcon logo; glass lens, flat; front sealed; optional 5/8" light kit; standard hardware.

HEAVY-DUTY MARINE (WHITE): White bezel, powder-coated, SAE step; white dial face; rocket-red pointer; oblique font, black numbers/indices; black Datcon logo; glass lens, flat; front sealed; optional 5/8" light kit; standard hardware.

DELUXE MARINE (WHITE): White bezel, powder-coated, SAE step; white dial face; rocket-red pointer; oblique font, black numbers/indices; blue & gold Datcon logo; polycarbonate lens, domed, anti-fog/scratch coated; front/rear sealed; standard wedge-base light kit; non-ferrous hardware.

Applications Tips: Heavy duty marine instruments work best when instruments are generally protected from the rear as would be the case in a panel. These instruments are ideal for general recreational boating and/or for use in partially enclosed cabs if used for purposes other than marine. Deluxe marine instruments are fully sealed using IllumaSeal® technology and, as such, they are ideal for harsh environmental conditions as would be typical of high-performance marine applications and/or in cases where instruments are fully exposed, whether outside or even in an engine compartment.

Datcon brand Deluxe Marine Gauges with IllumaSeal® technology literally work underwater (just in case your boat would sink).



104120



STREAMLINE™**STREAMLINE™ INSTRUMENTS**

Stylish retro & functional gauges with oversized meters for better visibility

DESCRIPTION:

All-new gauges, tachometers & speedometers feature retro styling, low-profile bezels, domed lenses, lighted pointers & night-time lighting that glows • Oversized 4-5/8" diameter meters are easy-to-read • Rugged design assures performance in high shock & vibration environments • Superior Magna-Torque™ air-core movement minimizes hysteresis, improves pointer response and assures better accuracy • High-impact moisture-resistant polyester case & sealed bobbin assembly • Immune to over-voltage or incorrect installation

SPECIFICATIONS:



| | |
|---------------------------|---|
| Sizes: | 2" diameter (nominal) gauges, panel cut-out 2.098" +/- .02"; 4-5/8" diameter (nominal) tachometers/speedometers, panel cut-out 4.61" +/- .02" |
| Dials: | Polycarbonate dial with white or black overlays |
| Graphics/symbols: | White-on-black or black-on-white graphics/English scale |
| Pointer: | Clear polycarbonate with orange background, black hub; RTZ feature on select products |
| Bezel: | Black, matte finish, low-profile, plastic |
| Lens: | Glass, domed (convex shape) |
| Case: | High-impact moisture-resistant polyester (PBT) |
| Bobbin assembly: | Fully sealed, internally dampened |
| Movement: | High-torque Magna-Torque™ air-core movement: 90° sweep for gauges & 270° sweep for tachometers & speedometers |
| Lighting: | Translucent (backlit)/Includes incandescent 12-volt wedge-base lamps |
| Supply/operating voltage: | 12 VDC/10-16 VDC |
| Ohms/resistance: | Datcon electrical "match" (240-33.5Ω, typical) |
| Electrical connections: | #6-32 studs, male |
| Hardware: | "Kit" includes mounting bracket, lock washers & zinc-plated nuts |
| Sealing: | Front sealed, gasketed |
| General performance: | Gauges per SAE J1810; meters per SAE J1399 & J1226 |
| Accuracy: | Per SAE J1810: +/-1.5 angular degrees at primary calibration point & +/-3 angular degrees at secondary calibration point based on nominal input |
| Operating temperature: | -40°C to +85°C |
| Shock & vibration: | Per SAE J1810 |

APPLICATIONS:

Suitability of application is the responsibility of the user. Gauges and meters should be matched with appropriate Datcon brand senders and sensors to assure system compatibility.





STREAMLINE™**AIR PRESSURE (MECHANICAL)**

| P/N | Scale | ∅ mm |  Volts |  Bezel | Dial | Sealing | Lens |
|--------|-----------|---------|--|--|-------|---------|-------|
| 109989 | 0-100 psi | 52 | 12 | Black | Black | Front | Domed |
| 109999 | 0-100 psi | 52 | 12 | Black | White | Front | Domed |



Note: Voltage listed pertains to light in gauge.

AMMETERS



| P/N | Scale | ∅ mm |  Volts |  Bezel | Dial | Sealing | Lens |
|--------|-----------|---------|--|--|-------|---------|-------|
| 109990 | 20-0-20 A | 52 | 12 | Black | Black | Front | Domed |
| 110000 | 20-0-20 A | 52 | 12 | Black | White | Front | Domed |

Note: Voltage listed pertains to light in gauge.

FUEL



| P/N | Scale | ∅ mm | Ω Ohms |  Volts |  Bezel | Dial | Sealing | Lens |
|--------|---------|---------|-----------|--|--|-------|---------|-------|
| 109991 | E-1/2-F | 52 | 240-33.5 | 12 | Black | Black | Front | Domed |
| 110001 | E-1/2-F | 52 | 240-33.5 | 12 | Black | White | Front | Domed |

MANIFOLD PRESSURE (MECHANICAL)



| P/N | Scale | ∅ mm |  Volts |  Bezel | Dial | Sealing | Lens |
|--------|----------|---------|--|--|-------|---------|-------|
| 109992 | 0-40 psi | 52 | 12 | Black | Black | Front | Domed |
| 110002 | 0-40 psi | 52 | 12 | Black | White | Front | Domed |

Note: Voltage listed pertains to light in gauge.



OIL PRESSURE

| P/N | Scale | ∅ mm | Ω Ohms |  Volts |  Bezel | Dial | Sealing | Lens |
|--------|----------|---------|-----------|--|--|-------|---------|-------|
| 109993 | 0-80 psi | 52 | 240-33.5 | 12 | Black | Black | Front | Domed |
| 110003 | 0-80 psi | 52 | 240-33.5 | 12 | Black | White | Front | Domed |

OIL TEMPERATURE

| P/N | Scale | ∅ mm | Match |  Volts |  Bezel | Dial | Sealing | Lens |
|--------|-----------|---------|-------|--|--|-------|---------|-------|
| 109994 | 140-320°F | 52 | DAH | 12 | Black | Black | Front | Domed |
| 110004 | 140-320°F | 52 | DAH | 12 | Black | White | Front | Domed |

4-5/8" SPEEDOMETERS WITH ODOMETERS

| P/N | Model | ∅ mm | Scale |  Volts |  Bezel | Dial | Lens | Sealing | Signal Source |
|--------|-------------------|---------|--------------------------------|--|--|-------|-------|---------|--------------------------|
| 110770 | 37LP1 (P-Low) | 116 | 0-80 MPH (15,360-30,600ppm) | 12 | Black | Black | Domed | | Tach Gen/ Mag. Sensor |
| 110771 | 37LP1 (P-Low) | 116 | 0-80 MPH (15,360-30,600ppm) | 12 | Black | White | Domed | | Tach Gen/ Mag. Sensor |
| 110772 | 37LP2 (P-High) | 116 | 0-80 MPH (30,720-61,320ppm) | 12 | Black | Black | Domed | | Tach Gen/ Mag. Sensor |
| 110773 | 37LP2 (P-High) | 116 | 0-80 MPH (30,720-61,320ppm) | 12 | Black | White | Domed | | Tach Gen/ Mag. Sensor |



109989

110000

109991

109993

110773



STREAMLINE™**MAXIMA TECHNOLOGIES****110767****109995****110006****109997****110008****4-5/8" SPEEDOMETERS (CONT'D)**

Note: See section on Senders/Sensors for appropriate speed sensors and section on Specialty Products & Accessories for pulse generators and drive tangs.

Note: "P-Low" refers to programmable speedometer low; "P-High" refers to programmable speedometer high.

4-5/8" TACHOMETERS

| P/N | Model | ∅ mm | Scale | Volts | Bezel | Dial | Lens | Signal Source |
|--------|-------|------|------------|-------|-------|-------|-------|---------------|
| 110766 | 32M | 116 | 0-3000 RPM | 12 | Black | Black | Domed | Mag. Sensor |
| 110767 | 32M | 116 | 0-3000 RPM | 12 | Black | White | Domed | Mag. Sensor |

4-5/8" TACHOMETERS WITH HOURMETERS

| P/N | Model | ∅ mm | Scale | Volts | Bezel | Dial | Lens | Signal Source |
|--------|-------|------|------------|-------|-------|-------|-------|---------------|
| 110768 | 29M | 116 | 0-3000 RPM | 12 | Black | Black | Domed | Mag. Sensor |
| 110769 | 29M | 116 | 0-3000 RPM | 12 | Black | White | Domed | Mag. Sensor |

Note: Hourmeter function is inhibited, meaning that hourmeters accumulate hours only when the engine is running and a signal is being applied to the unit.

TRANSMISSION OIL TEMPERATURE

| P/N | Scale | ∅ mm | Match | Volts | Bezel | Dial | Sealing | Lens |
|--------|-----------|------|-------|-------|-------|-------|---------|-------|
| 109995 | 140-320°F | 52 | DAH | 12 | Black | Black | Front | Domed |
| 110005 | 140-320°F | 52 | DAH | 12 | Black | White | Front | Domed |

VOLTMETERS

| P/N | Scale | ∅ mm | Volts | Bezel | Dial | Sealing | Lens |
|--------|--------|------|-------|-------|-------|---------|-------|
| 109996 | 8-18 V | 52 | 12 | Black | Black | Front | Domed |
| 110006 | 8-18 V | 52 | 12 | Black | White | Front | Domed |

WATER TEMPERATURE

| P/N | Scale | ∅ mm | Match | Volts | Bezel | Dial | Sealing | Lens |
|--------|-----------|------|-------|-------|-------|-------|---------|-------|
| 109997 | 100-240°F | 52 | DAL | 12 | Black | Black | Front | Domed |
| 110007 | 100-240°F | 52 | DAL | 12 | Black | White | Front | Domed |

WATER TEMPERATURE (MECHANICAL)

| P/N | Scale | ∅ mm | Volts | Bezel | Dial | Sealing | Tubing |
|--------|-----------|------|-------|-------|-------|---------|--------|
| 109998 | 100-280°F | 52 | 12 | Black | Black | Front | 144" |
| 110008 | 100-280°F | 52 | 12 | Black | White | Front | 144" |

Note: Voltage listed pertains to light in gauge.

Note: Use Sentinel™ hourmeters for the best match with Streamline™ instruments.

STREAMLINE™ DESCRIPTION: Black low-profile bezel, plastic; white or black dial face; lighted pointer, orange back; retro font, black or white numbers/indices; Datcon logo; glass lens, domed; front sealed; standard wedge-base light kit; standard hardware.

SMART INSTRUMENTS®**SMART INSTRUMENT® SERIES 2000™, 2001™ & 2002™***Integrated warning systems for Datcon brand instruments***GENERAL DESCRIPTION:**

Integrated warning lights, switch outputs & engine shut-down features for Datcon brand Automotive, Heavy Duty Industrial & IllumaSeal® instruments • Ideal for protecting valuable O.E.M. equipment especially in cases where operators might not otherwise be aware of potential problems • Functions monitored include oil pressure, water temperature, volts & fuel level • Systems allow customers to eliminate costly sender/switch combinations, detection modules, extra wiring & connectors for an “all-in-one” solution • Sensing electronics—sender, switches and LED warning lights—are incorporated inside gauge • Detection circuitry is matched to the instrument for improved accuracy, thus eliminating the gauge as a potential source of system variation (as caused by so-called tolerance “stack-ups”) • Three versions allow for natural “option-up” strategy depending on function required and budget considerations

SERIES 2000™:

Smart Instrument® system that monitors engine oil pressure and temperature, battery voltage & fuel levels • Integral ultra-bright red or amber LED located in center of gauge activated by the following conditions: high temperature, low or high battery voltage or fuel level • Wide range of set points, factory calibrated

SERIES 2001™:

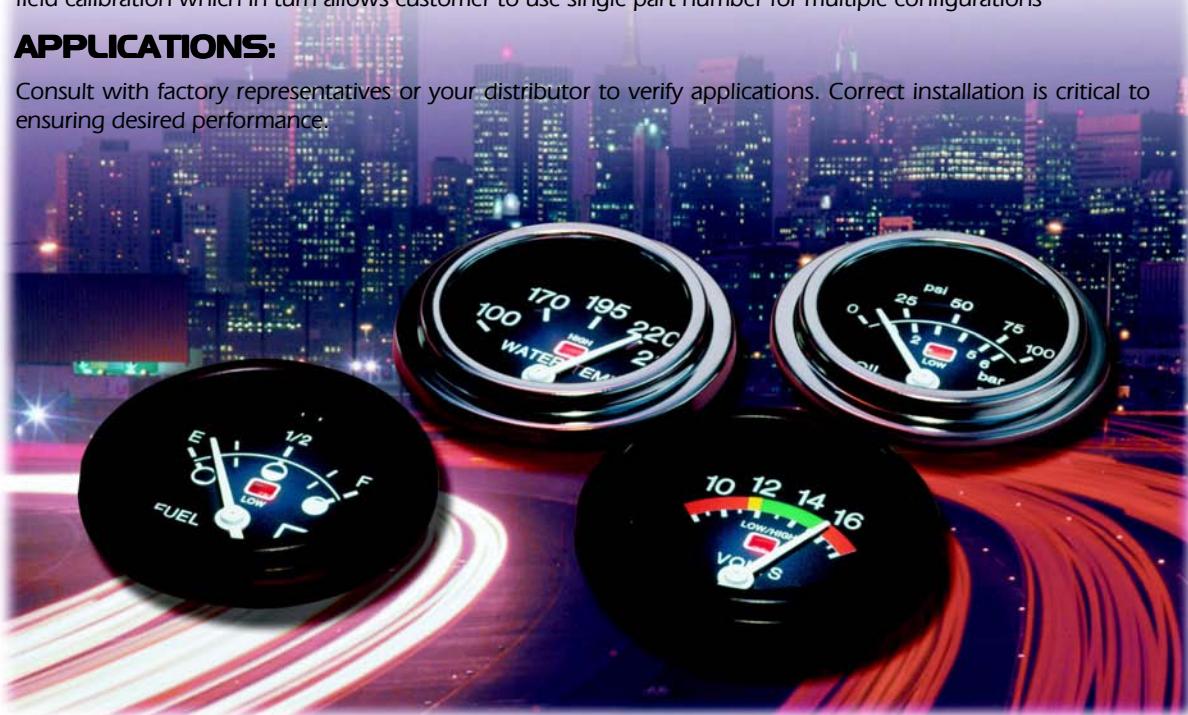
Same as Series 2000™ except that system includes a 2-amp switch output configured as normally open in a switch-to-ground configuration • Rugged MOSFET transistor powers switching over an operating temperature range of -40°C to +85°C • Monitor oil pressure and water temperature functions only • LEDs are located either left or right of center on the gauge dial • Factory-calibrated

SERIES 2002™:

Integrated LED warning lights—pre-alarm for low oil pressure or high water temperature (located left of center on the dial) and shut-down warning mode (located right of center) • Integral engine shut-down function with optional delay/timer (if customer’s engine does not include a built-in delay feature to compensate for low pressure on start-up) • 2-amp switch, MOSFET type transistor • Factory-calibrated with added feature of allowing for field calibration which in turn allows customer to use single part number for multiple configurations

APPLICATIONS:

Consult with factory representatives or your distributor to verify applications. Correct installation is critical to ensuring desired performance.



SMART INSTRUMENTS®

MAXIMA TECHNOLOGIES



103108



104256



104252



103177



104257



SMART 2000™

FUEL

| P/N | Model | Line | Scale | Ω Ohms | Volts | Bezel | Trip Point |
|--------|-------|------|---------|------------------|-------|----------|------------------|
| 102750 | 810 | IB | E-1/2-F | 240-33.5 | 12 | Black | Alert @ 1/8 Full |
| 103108 | 810 | AB | E-1/2-F | 240-33.5 | 12 | Black | Alert @ 1/8 Full |
| 103109 | 810 | AP | E-1/2-F | 240-33.5 | 12 | Polished | Alert @ 1/8 Full |
| 103110 | 810 | IP | E-1/2-F | 240-33.5 | 12 | Polished | Alert @ 1/8 Full |
| 104256 | 810 | LS | E-1/2-F | 240-33.5 | 12 | Black | Alert @ 1/8 Full |

OIL PRESSURE

| P/N | Model | Line | Scale | Ω Ohms | Volts | Bezel | Trip Point |
|--------|-------|------|-----------|------------------|-------|----------|----------------|
| 103111 | 881 | AB | 0-80 psi | 240-33.5 | 12 | Black | Alert @ 8 PSI |
| 103112 | 881 | AP | 0-80 psi | 240-33.5 | 12 | Polished | Alert @ 8 PSI |
| 103113 | 881 | IB | 0-80 psi | 240-33.5 | 12 | Black | Alert @ 8 PSI |
| 103114 | 881 | IP | 0-80 psi | 240-33.5 | 12 | Polished | Alert @ 8 PSI |
| 104251 | 881 | LS | 0-80 psi | 240-33.5 | 12 | Black | Alert @ 8 PSI |
| 102751 | 882 | IB | 0-100 psi | 240-33.5 | 12 | Black | Alert @ 10 PSI |
| 103115 | 882 | AB | 0-100 psi | 240-33.5 | 12 | Black | Alert @ 10 PSI |
| 103116 | 882 | AP | 0-100 psi | 240-33.5 | 12 | Polished | Alert @ 10 PSI |
| 103117 | 882 | IP | 0-100 psi | 240-33.5 | 12 | Polished | Alert @ 10 PSI |
| 104252 | 882 | LS | 0-100 psi | 240-33.5 | 12 | Black | Alert @ 10 PSI |
| 105565 | 882 | IB | 0-100 psi | 240-33.5 | 12 | Black | Alert @ 18 PSI |
| 107843 | 883 | IB | 0-125 psi | 240-33.5 | 12 | Black | Alert @ 8 PSI |

OIL TEMPERATURE

| P/N | Model | Line | Scale | Match | Volts | Bezel | Trip Point |
|--------|-------|------|-----------|-------|-------|----------|---------------|
| 103181 | 825 | AB | 100-240°F | DAL | 12 | Black | Alert @ 200°F |
| 103182 | 825 | AP | 100-240°F | DAL | 12 | Polished | Alert @ 200°F |
| 103183 | 825 | IP | 100-240°F | DAL | 12 | Polished | Alert @ 200°F |
| 108166 | 825 | LS | 100-240°F | DAL | 12 | Black | Alert @ 200°F |
| 103187 | 826 | IB | 100-280°F | DAH | 12 | Black | Alert @ 220°F |
| 103188 | 826 | IP | 100-280°F | DAH | 12 | Polished | Alert @ 220°F |
| 103190 | 828 | AP | 140-320°F | DAH | 12 | Polished | Alert @ 240°F |
| 103191 | 828 | IB | 140-320°F | DAH | 12 | Black | Alert @ 240°F |
| 104253 | 828 | LS | 140-320°F | DAH | 12 | Black | Alert @ 240°F |



TRANSMISSION OIL TEMPERATURE

| P/N | Model | Line | Scale | Match | Volts | Bezel | Trip Point |
|--------|-------|------|-----------|----------|-------|----------|---------------|
| 103180 | 828 | IP | 140-320°F | DAH | 12 | Polished | Alert @ 240°F |
| 104257 | 828 | LS | 140-320°F | DAH | 12 | Black | Alert @ 240°F |
| 107064 | 82X | LS | 180-350°F | ALWH (1) | 12 | Black | Alert @ 300°F |
| 107563 | 82X | IB | 180-350°F | ALWH (1) | 12 | Black | Alert @ 300°F |
| 107565 | 82X | IB | 180-350°F | ALWH (2) | 12 | Black | Alert @ 330°F |
| 106993 | 82X | LS | 180-350°F | ALWH (2) | 12 | Black | Alert @ 330°F |

Note: (1) with retarder; (2) without retarder.



Note: Below "Line" - "A" stands for Heavy Duty Automotive; "I" stands for Heavy Duty Industrial; "LS" stands for IllumaSeal®; "B" stands for black bezel; "P" stands for polished bezel.

SMART INSTRUMENTS®**TRANSMISSION OIL TEMPERATURE (CONT'D)**



| P/N | Model | Line | Scale | Match |  Volts |  Bezel | Trip Point |
|--------|-------|------|-----------|-------|---|---|---------------|
| 107202 | 828 | LS | 140-320°F | DAH | 12 | Polished | Alert @ 240°F |
| 103177 | 828 | AB | 140-320°F | DAH | 12 | Black | Alert @ 240°F |
| 103178 | 828 | AP | 140-320°F | DAH | 12 | Polished | Alert @ 240°F |
| 103179 | 828 | IB | 140-320°F | DAH | 12 | Black | Alert @ 240°F |

Note: "ALWH" refers to Allison World Transmission high match gauges or senders. See section on Senders/Sensors for matching senders. Kits: P/N 107019 (106993 sender + 106951 gauge); P/N 107030 (107064/106951); P/N 107518 (107563/106951); P/N 107519 (107565/106951).

VOLTMETERS

| P/N | Model | Line | Scale |  Volts |  Bezel | Trip Points |
|--------|-------|------|--------|---|---|---------------------------------------|
| 103129 | 830 | AB | 8-18 V | 12 | Black | Low Alert @ 10.5V High Alert @ 16V |
| 103130 | 830 | AP | 8-18 V | 12 | Polished | Low Alert @ 10.5V High Alert @ 16V |
| 103131 | 830 | IB | 8-18 V | 12 | Black | Low Alert @ 10.5V High Alert @ 16V |
| 103132 | 830 | IP | 8-18 V | 12 | Polished | Low Alert @ 10.5V High Alert @ 16V |
| 104250 | 830 | LS | 8-18 V | 12 | Black | Low Alert @ 10.5V High Alert @ 16V |

WATER TEMPERATURE

| P/N | Model | Line | Scale | Match |  Volts |  Bezel | Trip Point |
|--------|-------|------|-----------|-------|---|---|---------------|
| 103119 | 825 | AP | 100-240°F | DAL | 12 | Polished | Alert @ 200°F |
| 103120 | 825 | IB | 100-240°F | DAL | 12 | Black | Alert @ 200°F |
| 103121 | 825 | IP | 100-240°F | DAL | 12 | Polished | Alert @ 200°F |
| 104254 | 825 | LS | 100-240°F | DAL | 12 | Black | Alert @ 200°F |
| 107548 | 825 | AB | 100-240°F | DAL | 12 | Black | Alert @ 200°F |
| 107411 | 825 | IB | 100-240°F | DAL | 12 | Black | Alert @ 215°F |
| 105678 | 826 | AB | 100-280°F | DAH | 12 | Black | Alert @ 205°F |
| 107004 | 826 | IP | 100-280°F | DAH | 12 | Polished | Alert @ 210°F |
| 107236 | 826 | IB | 100-280°F | DAH | 12 | Black | Alert @ 210°F |
| 109127 | 826 | AB | 100-280°F | DAH | 12 | Black | Alert @ 210°F |
| 109128 | 826 | AP | 100-280°F | DAH | 12 | Polished | Alert @ 210°F |
| 105566 | 826 | IB | 100-280°F | DAH | 12 | Black | Alert @ 215°F |
| 109129 | 826 | AB | 100-280°F | DAH | 12 | Black | Alert @ 215°F |
| 109130 | 826 | AP | 100-280°F | DAH | 12 | Polished | Alert @ 215°F |
| 102752 | 826 | IB | 100-280°F | DAH | 12 | Black | Alert @ 220°F |
| 103122 | 826 | AB | 100-280°F | DAH | 12 | Black | Alert @ 220°F |
| 103123 | 826 | AP | 100-280°F | DAH | 12 | Polished | Alert @ 220°F |
| 103124 | 826 | IP | 100-280°F | DAH | 12 | Polished | Alert @ 220°F |
| 104255 | 826 | LS | 100-280°F | DAH | 12 | Black | Alert @ 220°F |
| 103125 | 828 | AB | 140-320°F | DAH | 12 | Black | Alert @ 240°F |
| 103126 | 828 | AP | 140-320°F | DAH | 12 | Polished | Alert @ 240°F |

**103129****103131****107548****105678**

SMART INSTRUMENTS®

MAXIMA TECHNOLOGIES



108232



108234



109011



107546



WATER TEMPERATURE

| P/N | Model | Line | Scale | Match | Volts | Bezel | Trip Point |
|--------|-------|------|-----------|-------|-------|----------|---------------|
| 103127 | 828 | IB | 140-320°F | DAH | 12 | Black | Alert @ 240°F |
| 103128 | 828 | IP | 140-320°F | DAH | 12 | Polished | Alert @ 240°F |

Note: All warning LEDs are red except for fuel gauge (yellow LED).

SMART 2001™

OIL PRESSURE

| P/N | Model | Line | Scale | Ohms | Volts | Bezel | Trip Point |
|--------|-------|------|-----------|----------|-------|----------|----------------|
| 108232 | 881 | IB | 0-80 psi | 240-33.5 | 12 | Black | Alert @ 8 psi |
| 110435 | 881 | IP | 0-80 psi | 240-33.5 | 12 | Polished | Alert @ 8 psi |
| 108174 | 882 | IB | 0-100 psi | 240-33.5 | 12 | Black | Alert @ 10 psi |
| 109111 | 882 | IB | 0-100 psi | 240-33.5 | 12 | Black | Alert @ 18 psi |

OIL TEMPERATURE

| P/N | Model | Line | Scale | Match | Volts | Bezel | Trip Point |
|--------|-------|------|-----------|-------|-------|-------|---------------|
| 108789 | 826 | IB | 100-280°F | DAH | 12 | Black | Alert @ 240°F |

WATER TEMPERATURE

| P/N | Model | Line | Scale | Match | Volts | Bezel | Trip Point |
|--------|-------|------|-----------|-------|-------|----------|---------------|
| 109112 | 825 | IB | 100-240°F | DAL | 12 | Black | Alert @ 205°F |
| 110434 | 826 | IP | 100-280°F | DAH | 12 | Polished | Alert @ 220°F |
| 108234 | 826 | IB | 100-280°F | DAH | 12 | Black | Alert @ 220°F |

SMART 2002™

FUEL

| P/N | Model | Line | Scale | Ohms | Volts | Bezel | Trip Points |
|--------|-------|------|---------|----------|-------|-------|---|
| 109011 | 810 | IB | E-1/2-F | 240-33.5 | 12 | Black | Alert @ 1/8 Full, Shutdown @ 1/16 Full |

OIL PRESSURE



| P/N | Model | Line | Scale | Ohms | Volts | Bezel | Trip Points |
|--------|-------|------|-----------|----------|-------|----------|--------------------------------------|
| 107546 | 881 | IB | 0-80 psi | 240-33.5 | 12 | Black | Alert @ 13 PSI, Shutdown @ 8 PSI |
| 108274 | 881 | IP | 0-80 psi | 240-33.5 | 12 | Polished | Alert @ 13 PSI, Shutdown @ 8 PSI |
| 107547 | 882 | IB | 0-100 psi | 240-33.5 | 12 | Black | Alert @ 15 PSI, Shutdown @ 10 PSI |
| 107845 | 882 | IP | 0-100 psi | 240-33.5 | 12 | Polished | Alert @ 15 PSI, Shutdown @ 10 PSI |

Note: See page 58 for Smart Instrument® point-of-purchase display (P/N 110742)!

SMART INSTRUMENTS®

MAXIMA TECHNOLOGIES



OIL TEMPERATURE

| P/N | Model | Line | Scale | Match |  Volts |  Bezel | Trip Points |
|--------|-------|------|-----------|-------|---|---|------------------------------------|
| 107847 | 826 | IP | 100-280°F | DAH | 12 | Polished | Alert @ 220°F, Shutdown @ 240°F |
| 109186 | 826 | IB | 100-280°F | DAH | 12 | Black | Alert @ 220°F, Shutdown @ 240°F |


TRANSMISSION OIL TEMPERATURE

| P/N | Model | Line | Scale | Match |  Volts |  Bezel | Trip Points |
|--------|-------|------|-----------|-------|---|---|------------------------------------|
| 109009 | 828 | IB | 140-320°F | DAH | 12 | Black | Alert @ 250°F, Shutdown @ 275°F |

WATER TEMPERATURE

| P/N | Model | Line | Scale | Match |  Volts |  Bezel | Trip Points |
|--------|-------|------|-----------|-------|---|---|------------------------------------|
| 108347 | 825 | IP | 100-240°F | DAL | 12 | Polished | Alert @ 200°F, Shutdown @ 220°F |
| 107549 | 826 | IB | 100-280°F | DAH | 12 | Black | Alert @ 220°F, Shutdown @ 240°F |
| 107846 | 826 | IP | 100-280°F | DAH | 12 | Polished | Alert @ 220°F, Shutdown @ 240°F |

DELAY-TIMER RELAY FOR SMART 2002™

| P/N |  Volts | Contact Rating | Delay | Connection |
|--------|---|----------------|----------------------------------|----------------------|
| 107767 | 12 | N.O.-40A | Input #1 (alert)-15 sec (2A) | 12" wire lead-each |
| | | N.C.-30A | Input #2 (shutdown)-15 sec (30A) | connection (#16-AWG) |

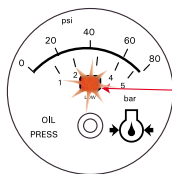
Note: Use delay-timer relay when a delay is required during engine start-up to account for initially low engine pressure so that Series 2002™ gauge does not activate premature engine shutdown. Unit has a delay tolerance of +/- 10%. Mechanical life is 10 million cycles.

Applications Tips-Series 2001/2002™: Always disconnect the battery when installing these instruments. Do not connect the switch terminal to a voltage source, this will cause a short circuit! Make sure that the system is grounded to the chassis and that the gauge and sender share the same ground.

Applications Tips-Series 2002™: Do not short circuit alert and shutdown terminals to ignition! Ignition, sender and ground terminals must be connected as required.

Applications Tips: Series 2000™ and 2001™ gauge trip points are factory calibrated. Series 2002™ instruments may be field-calibrated using a 1/14" jewelers screwdriver (e.g. Digi-Key P/N CT2155-ND--phone # 800-344-4539).

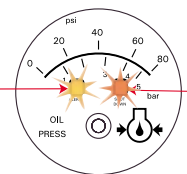
SERIES 2000



SERIES 2001



SERIES 2002



Warning Light LED

Pre-Alarm Warning LED

Shut-down mode LED



107767



COMPATTINO™ CLUSTERS

COMPATTINO™ CLUSTER (3TA & 3SA)

Compact clusters provide economical solution for improved packaging & styling

DESCRIPTION:

Rugged, compact designs are ideal for O.E.M. off-highway, industrial & specialty vehicle applications • Elliptical shape fits contemporary styling themes and automotive "look" • Unit consolidates multiple functions for vehicle & engine monitoring into one package • Ideal for customers who are budget conscious • Front sealed & dust-proof • 24-pin connector & side mounting tabs allow for easy installation • Immune to voltage variations & external transients, reverse polarity protected • Provisions for up to 19 LED warning lights

SPECIFICATIONS:

| | |
|---------------------------|---|
| Models: | 3TA: fuel & water temperature gauges & tachometer/hourmeter 3,000 rpm/6-digits; 3SA: fuel & water temperature gauges & speedometer/odometer, 0-80 mph |
| Overall dimensions: | ~ 9.1" (230 mm) wide x 4.7" (120 mm) high x 2.5" (63 mm) deep |
| Panel opening: | ~ 8.7" (222 mm) wide x 4.4" (111 mm) high x 2.5" (63 mm) deep |
| Installation: | Mounting tabs, metal (4), with rubber gasket |
| Housing: | ABS, white, opaque |
| Front facing: | Overlay, |
| Graphics: | White-on-black, SAE symbols; hourmeter tenths in yellow |
| Pointers: | Orange, pyramidal shaped; black hubs; RTZ feature for meters |
| Lighting: | Translucent (backlit)/Incandescent lamps & LEDs |
| Movements: | Air-core, 90° sweep |
| Gauge/meter accuracy: | Gauges per SAE J1810/meters per SAE J1399 & J1226 |
| Hourmeter/accuracy: | Quartz movement, 6-digits; accurate to +/- .1% |
| Supply/operating voltage: | 12 VDC/10-16 VDC |
| Ohms/resistance: | Datcon electrical "match" (240-33.5Ω) |
| Input protection: | Reverse polarity, load dump & field decay per ISO 7632 |
| Connector: | 24-pin, 5-amp (AMP) |
| Sealing: | Front seal, IP 65; rear seal, IP 54 |
| Operating temperature: | -25°C to +65°C |
| Shock & vibration: | Per SAE J1810 |

APPLICATIONS:

Suitability of application is the responsibility of the user. Consult with factory representatives or your distributor for the best approach for applications that are exposed to excessive moisture or water. Datcon brand senders are recommended to assure system compatibility.

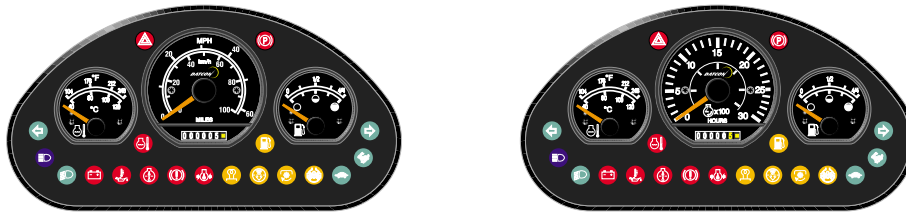


COMPATTINO™/UNIVERSAL CLUSTERS

COMPATTINO™ CLUSTERS

| Model | Screen | Dimensions (mm) | Functions | Alarm | Connection |
|-------|--------|----------------------|---|----------|-------------|
| 3TA | Black | 230 W x 120 H x 63 D | Tach-Hm: 3000 RPM; Fuel; Water Temp; 19 - LEDs | Optional | AMP 24 Pins |
| 3SA | Black | 230 W x 120 H x 63 D | Speedometer: 0-85 MPH/ 0-120 KM/H; Fuel; Water Temp; 19 - LEDs | Optional | AMP 24 Pins |

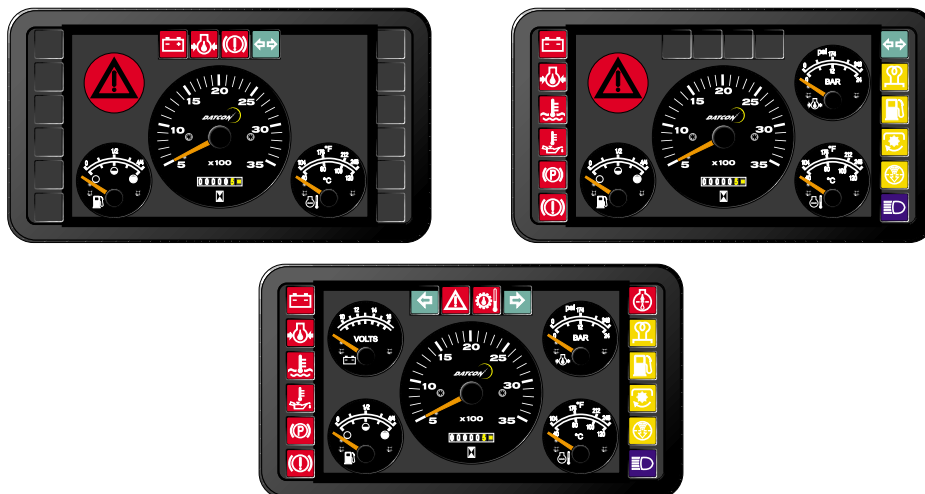
Note: Units available as custom products only based on volume required. Pictures below represent typical configurations. Consult with factory salesperson or distributor for more details.



UNIVERSAL CLUSTERS

| Model | Dimensions (mm) | Functions | Alarm | Connection |
|-------|----------------------|---|----------|--------------------|
| UC-3A | 246 W x 136 H x 58 D | Tach-Hm: 3,000 RPM; Fuel; Water Temp; 4-Lights | Optional | ITT Cannon 24 Pins |
| UC-4A | 246 W x 136 H x 58 D | Tach-Hm: 3,000 RPM; Fuel; Water Temp; Oil Pressure; 12-Lights | Optional | ITT Cannon 24 Pins |
| UC-5A | 246 W x 136 H x 58 D | Tach-Hm: 3,000 RPM; Fuel; Water Temp; Oil Pressure; Voltmeter; 16-Lights | Optional | ITT Cannon 24 Pins |

Note: Units available as custom products only based on volume required. Pictures below represent typical configurations. Consult with factory salesperson or distributor for more details.



UNIVERSAL CLUSTERS

UNIVERSAL CLUSTERS (UC-3A, UC-4A & UC-5A)

Rugged compact design offers flexibility with minimal investment required

DESCRIPTION:

Rugged, heavy-duty designs are ideal for O.E.M. off-highway, industrial and specialty vehicle applications • Compact, rectangular, "off-the-shelf" configurations fit most instrument panels • Consolidates multiple functions into one package • Ideal for customers who wish to minimize tooling investment & long lead times • Front sealed & dust-proof • 24-pin connector & side tabs allow for easy installation • Immune to voltage variations & external transients, reverse polarity protected • Options include custom graphics, electrical "matches" & overlays

SPECIFICATIONS:

| | |
|---------------------------|---|
| Models: | <i>UC-3A</i> : fuel & water temperature gauges & tachometer/hourmeter, 0-3,500 rpm/6-digits & four warning lights; <i>UC-4A</i> : fuel, water temperature & oil pressure gauges & tachometer/hourmeter, 0-3,500 rpm/6-digits & 12 warning lights; <i>UC-5A</i> : fuel, water temperature, oil pressure gauges, voltmeter & tachometer/hourmeter, 0-3,500 rpm/6-digits |
| Overall dimensions: | ~ 9.7" (247 mm) wide x 5.4" (137 mm) high x 2.3" (58 mm) deep |
| Panel opening: | ~ 9.3" (236 mm) wide x 5.0" (127 mm) high x 2.3" (58 mm) deep |
| Installation: | Mounting tabs, metal (2), with rubber gasket |
| Housing: | ABS, white, opaque |
| Lens: | Glass, 12.0mm thick |
| Bezel: | Black, matte finish, plastic |
| Graphics: | White-on-black, English scale, SAE symbols |
| Pointers: | Orange, lighted; black hubs; return-to-zero feature for meters |
| Lighting: | Translucent (backlit)/Incandescent lamps & LEDs |
| Gauge/meter accuracy: | Gauges per SAE J1810/meters per SAE J1399 & J1226 |
| Hourmeter/accuracy: | Quartz movement, 6-digits; accurate to +/- .1% |
| Supply/operating voltage: | 12 VDC/10-16 VDC |
| Ohms/resistance: | Datcon electrical "match" (240-33.5Ω) |
| Input protection: | Reverse polarity, load dump & field decay per ISO 7632 |
| Connector: | 24-pin, 5A (ITT) |
| Sealing: | Front seal, IP 65; rear seal, IP 54 |
| Operating temperature: | -25°C to +65°C |
| Shock & vibration: | Per SAE J1810 |

APPLICATIONS:

Suitability of application is the responsibility of the user. Consult with factory representatives or your distributor for the best approach for applications in high moisture environments. Datcon brand senders are recommended to assure system compatibility.



HEAVY DUTY HOURMETERS

HEAVY DUTY HOURMETERS

Rugged hourmeters for O.E.M. applications

DESCRIPTION:

Heavy-duty units are ideal for industrial, specialty vehicle & aircraft applications • Accurate, reliable DC electronic solid-state, DC mini-hourmeter & quartz versions • Numerous ranges: 10-32, 10-50, 10-80 & 30-90 • Fully sealed & dust-proof • Optional inhibited feature • Bold white-on-black graphics • Numerous mounting configurations: U-bracket, 3-hole flange, 4-hole aircraft, 2-hole & clip mounting • Record to either 9999.9 (electronic version) or 99999.9 hours (quartz & mini versions) • Counter wheels • U.L./C.E. approvals on select models

SPECIFICATIONS:



| | |
|-------------------------|--|
| Models: | <i>Model 876:</i> 10-32, 10-50 & 30-90 VDC with U-bracket mounting & inhibited option; <i>Model 871:</i> 10-32, 10-50 & 30-90 VDC with 3-hole flange & inhibited option; <i>Model 873:</i> 10-32 & 30-90 VDC with 3-hole flange or 4-hole aircraft mounting & inhibited option; <i>mini-hourmeters:</i> 10-80 VDC with 2-hole or clip mounting; <i>quartz model:</i> 10-50 VDC |
| Dimensions: | Standard round units—U-bracket mounting: ~ 58 mm diameter, mounting depth 53 mm; round units—3-hole flange: ~ 73 mm diameter (with flange); round units—aircraft mounting: ~ 63 mm diameter (with flange); mini-hourmeters: ~ 54 mm long x 36 mm wide x 71 mm deep |
| Digits: | Standard round units: 9,999.9 or 99,999 hours; quartz type & mini-hourmeters: 99,999.9 hours (rolls over to 0 at 100,000 hours) |
| Bezels: | <i>Model 876:</i> SAE "step", black, anodized; <i>Model 871:</i> elongated "step", black, reinforced PBT; <i>Model 873:</i> aircraft style integrated round "step" with mounting tabs, black, reinforced PBT; <i>mini-hourmeters:</i> integrated into front face, black; <i>quartz model:</i> low-profile, matte black |
| Accuracy (real-time): | +/- 1% @ 72°F; +/- .02% for mini-hourmeters & quartz models |
| Electrical connections: | 6.35 x 0.8 mm blade terminals; brass/tin-plated; with #8-32 terminal screws (Note: screws for round hourmeters only) |
| Installation hardware: | <i>Model 876:</i> U-bracket, steel/zinc-plated, with #10-24 nut and washer for mounting (Note: Models 871 & 873 do not include brackets; hardware "kit" includes screws and washers); mini-hour meters: bracket for clip version (Note: no hardware for 2-hole version); quartz model: bracket with spin-on fastener, brass/zinc-plated |
| Input protection: | Reverse polarity, load dump & field decay per SAE J1810/1378 |
| Sealing: | <i>Models 876, 871 & 873:</i> fully sealed; <i>mini-hourmeter & quartz model:</i> front sealed |
| Operating temperature: | -40°C to +85°C |

APPLICATIONS:

Suitability of application is responsibility of user. Consult with factory representatives or your distributor for more information about the appropriate hourmeter to select for a particular application.





HEAVY DUTY HOURMETERS / SENTINEL™ HOURMETERS**MAXIMA TECHNOLOGIES****100222****100689****100690****102033****102035****HOURMETERS (ELECTRONIC)**

| P/N | Model |  Volts |  Bezel | Range (Hours) | Mounting | Inhibited Feature |
|--------|-------|---|---|---------------|-----------------|-------------------|
| 100222 | 876 | 10-32 VDC | Black | 9999.9 | U-bracket | No |
| 100223 | 876 | 10-32 VDC | Polished | 9999.9 | U-bracket | No |
| 100224 | 876 | 10-32 VDC | Black | 9999.9 | U-bracket | Yes |
| 100225 | 876 | 10-32 VDC | Polished | 9999.9 | U-bracket | Yes |
| 100689 | 871 | 10-32 VDC | Black | 9999.9 | 3-hole flange | No |
| 100690 | 873 | 10-32 VDC | Black | 9999.9 | 4-hole aircraft | No |
| 100843 | 871 | 10-32 VDC | Black | 9999.9 | 3-hole flange | Yes |
| 100844 | 873 | 10-32 VDC | Black | 9999.9 | 4-hole aircraft | Yes |
| 102162 | 876 | 10-32 VDC | Black | 99,999 | U-bracket | No |
| 102163 | 876 | 10-32 VDC | Polished | 99,999 | U-bracket | No |
| 102033 | Mini | 10-80 VDC | Black | 99,999.9 | 2-hole | No |
| 102035 | Mini | 10-80 VDC | Black | 99,999.9 | Clip | No |
| 102164 | 871 | 30-90 VDC | Black | 9999.9 | 3-hole flange | No |
| 102167 | 876 | 30-90 VDC | Polished | 9999.9 | U-bracket | No |
| 109229 | 876 | 30-90 VDC | Black | 99,999 | U-bracket | No |
| 102169 | 871 | 10-32 VDC | Black | 99,999 | 3-hole flange | No |

Note: "Inhibited" hourmeters accumulate hours only when the engine is running and a signal is being applied to the unit.

SENTINEL™

| P/N | Range (Hours) |  mm |  Volts | Mounting |
|--------|---------------|---|---|----------|
| 110190 | 0-99,999.9 | 52 | 10-50 V | Ring |
| 110191 | 0-99,999.9 | 52 | 30-100 V | Ring |
| 110192 | 0-99,999.9 | 52 | 80-170 V | Ring |
| 110193 | 0-99,999.9 | 52 | 160-240 V | Ring |

Note: Kit includes hourmeter, mounting ring and blade/terminal connections.

Note: Units are CE approved!

SENTINEL™ ACCESSORIES

| P/N | Description |
|--------|---|
| 109474 | Mounting Ring (Thick)-Replacement |
| 110077 | Deluxe Mounting Hardware Kit (Support Ring, Damping Ring-Rubber, Clamping Ring, Thrust Collar and Mounting Ring-Thin) |

Note: Consult with factory representatives, your distributor or current Datcon brand price lists for more details and availability regarding alternating current (110 or 220 AC) or mechanical type hourmeters. Maxima recommends that electronic hourmeters be used in lieu of AC or mechanical type whenever possible.

Sentinel™ Hourmeter
(P/N 110190)



SENTINEL™ HOURMETERS**SENTINEL™ HOURMETERS**

Ruggedly built elapsed time counters with reliable quartz, stepper motor movement

DESCRIPTION:

Rugged, heavy-duty units are ideal for O.E.M. applications • Accurate, reliable quartz, stepper motor movement assures desired performance • Four ranges: 10-50 VDC, 30-100 VDC, 80-170 VDC & 160-240 VDC • Spin-on fastener assures easy installation • Front sealed & dust-proof • Bold graphics & European styling with low-profile bezel • Indicator wheel to verify performance (turns every second) • Corrosion-proof construction • Options include custom mounting accessories & custom graphics • CE approved

SPECIFICATIONS:

| | |
|------------------------|---|
| Dimensions: | 58 mm diameter (overall), 52 mm (case); 57 mm (depth) |
| Panel opening: | 53.29 mm +/- .51 mm |
| Weight: | 80g |
| Installation: | Spin-on fastener, plastic |
| Housing: | Acetal plastic, high-impact, black |
| Lens: | Glass |
| Bezel: | Black, matte finish, plastic, low profile |
| Dial graphics: | White-on-black, ISO symbols |
| Wheels: | Hourmeter: white-on-black; 1/10 marking: yellow-on-black |
| Movement/accuracy: | Quartz stepper motor, 6-digits (including tenths); 99,999.9 hours; accurate to +/- .02% (at room temperature) & +/- 10 seconds per every 24 hours at 20°C |
| Indicator: | Indexes every one (1) second |
| Voltage ranges: | 10-50 VDC (3.3-3.19 mA), 30-100 VDC (2.0-7.3 mA), 80-170 VDC (2.0-4.3 mA) & 160-240VDC (2.0-3.1 mA) |
| Input protection: | Reverse polarity protected; load dump & field decay per SAE J1810 & VDE 0633 |
| Connections: | Integral 6.3 x 0.8 blade terminals, brass/tin-plated, with screws |
| Sealing: | Front seal, IP 65; rear seal, IP 54 |
| Operating temperature: | -20°C to +70°C |

APPLICATIONS:

Suitability of application is the responsibility of the user. However, please consult with factory sales representatives or your distributor for the best approach for applications that are exposed to excessive moisture or water.



SENTINEL™ HOURMETERS WITH ACCESSORIES

INTELLISENSOR®**INTELLISENSOR® LIQUID MEASURING SYSTEMS***Fully electronic sensors with no moving parts***DESCRIPTION:**

Electronic tank-level sensors for tank depths ranging from 11" to 50" • Units fit in standard SAE 5-hole flange opening • Ideal for most hydrocarbon-based liquid-sensing applications • Rugged, heavy-duty function designed especially for O.E.M. off-highway, industrial and specialty vehicle applications • Sealed SMT electronics • Self-powered, draws power from the fuel gauge • Immune to voltage variations, reverse polarity protected • Robust extruded aluminum housing with baffles eliminates potential for disruptive fuel slosh • Options include variable switch set points (for low fuel warning), lengths, flange types, integrated tubing & output signals

SPECIFICATIONS:

| | |
|--------------------------|---|
| Standard lengths: | ~ 10" to 50" (Consult with factory for other lengths) |
| Housing: | Extruded aluminum, reinforced, internally baffled |
| Flange/opening/mounting: | High-impact, chemical-resistant acetal, molded; standard SAE 5-hole flange (~42 mm) diameter; 5-#10 sealing screws for mounting; heavy duty nitrile gasket |
| Internal configuration: | Patented technology using a pulse-width-modulation output |
| Connections: | Two wires standard (flying leads), 18-gauge, color-coded: pink lead for sender ground, black lead for ground; optional blue lead for low fuel warning light |
| Operating voltage: | Not voltage dependant (typically works with 12 or 24 volt gauge systems) |
| Switch set point/rating: | Fixed @ 1/8 tank level; 0.5A DC switch current |
| Accuracy: | SAE J1810 |
| Operating temperature: | -40°C to +85°C |
| Operating media: | Diesel fuels, hydraulic fluids, heating fuels, pure gasoline, petro |
| Shock & vibration: | Per SAE J1810 |
| Salt spray: | Per SAE J1810 |
| Water leakage: | Per SAE J1810 |

APPLICATIONS:

Suitability of application is the responsibility of the user. Use in "contaminated" fuels and in applications where the percentage of water-to-fuel exceeds approximately 5% may impede normal operating performance and will void warranty. Follow factory guidelines for installation to assure correct mounting of flange. Cup supports or similar devices are recommended for non-vertical mounting in tank for most units or where units exceed 24". Unit should be installed approximately .75" from bottom of tank. Set point for empty is 1/8 tank level.



INTELLISENSOR®**SENSORS**

| P/N | Tank Depth | Tank Shape | Low Fuel Level Switch |
|------------|-------------------|-------------------|------------------------------|
| 109364 | 11.0" | NR | Yes |
| 107672 | 13.5" | NR | Yes |
| 107581 | 14.0" | NR | Yes |
| 108656 | 15.3" | NR | No |
| 108412 | 16.0" | NR | Yes |
| 106595 | 16.5" | NR | No |
| 106598 | 16.5" | NR | Yes |
| 106596 | 18.5" | NR | No |
| 106599 | 18.5" | NR | Yes |
| 107870 | 19.8" | R | Yes |
| 105696 | 20.0" | R | No |
| 106590 | 20.0" | R | Yes |
| 106597 | 20.5" | NR | No |
| 106600 | 20.5" | NR | Yes |
| 105697 | 22.0" | R | No |
| 106591 | 22.0" | R | Yes |
| 108061 | 22.0" | NR | Yes |
| 105698 | 23.0" | R | No |
| 106592 | 23.0" | R | Yes |
| 105699 | 24.0" | R | No |
| 106593 | 24.0" | R | Yes |
| 105600 | 24.0" | NR | Yes |
| 105700 | 25.0" | R | No |
| 106594 | 25.0" | R | Yes |
| 105670 | 25.3" | NR | Yes |
| 105701 | 26.0" | R | No |
| 106800 | 26.0" | R | Yes |
| 107820 | 30.5" | NR | No |
| 107392 | 30.5" | NR | Yes |
| 107802 | 33.0" | NR | No |
| 108917 | 37.2" | NR | Yes |
| 107753 | 44.0" | NR | Yes |
| 108475 | 50.0" | NR | No |

Note: Gasket included (P/N 02343-04), screws excluded (specify with order or purchase separately). All units provide isolated ground configuration, 240-33.5 ohms resistance. For sensors with low fuel level switch the trip point is at approximately 1/8 tank level. Tank shape is either round (R) or non-round (NR). Tank depths of greater than 24" may require supports.

Note: P/Ns 107672 & 108061 contain fill and return tubes.

MOUNTING KITS (5-SCREWS)

| P/N | Screw Type |
|------------|----------------------|
| 105598 | #10 x 1" Lg (Type B) |
| 105665 | #10-32 x 1" Lg |
| 02342-05 | #10-24 x 1" Lg |

Note: Screws are sealing screws.

**MAXIMA TECHNOLOGIES**

HEAVY DUTY SENDERS/SENSORS

HEAVY DUTY SENDERS: FUEL, TEMPERATURE, PRESSURE & SPEED

Rugged sender products that interface with Datcon brand instruments

FUEL SENDERS:

Full line of heavy-duty fuel senders for O.E.M. applications • Fixed or adjustable (6"-24"), • Electrical "match" (resistance) is 240-33.5 • Available in common flange ground with #10-32 sender terminal stud or isolated ground version with #10-32 ground & sender terminal stud • Sender "kits" include sender, gasket & hardware • SAE 5-hole flange configuration for tank openings of 1.65" (+/- .02") • Regular-duty ("slim-line") senders fit tank openings as small as 1.35" (+/- .02") • Two fuel sender mounting configurations are available, each with two mounting positions for flange orientation • Custom lengths; flanges; integral fuel pick-up, return & venting tubes; calibrations; electrical "matches"; & floats

See also IntelliSensor® section for full line of electronic liquid (hydrocarbon-based) measuring systems (e.g. fuel sensors).

TEMPERATURE SENDERS:

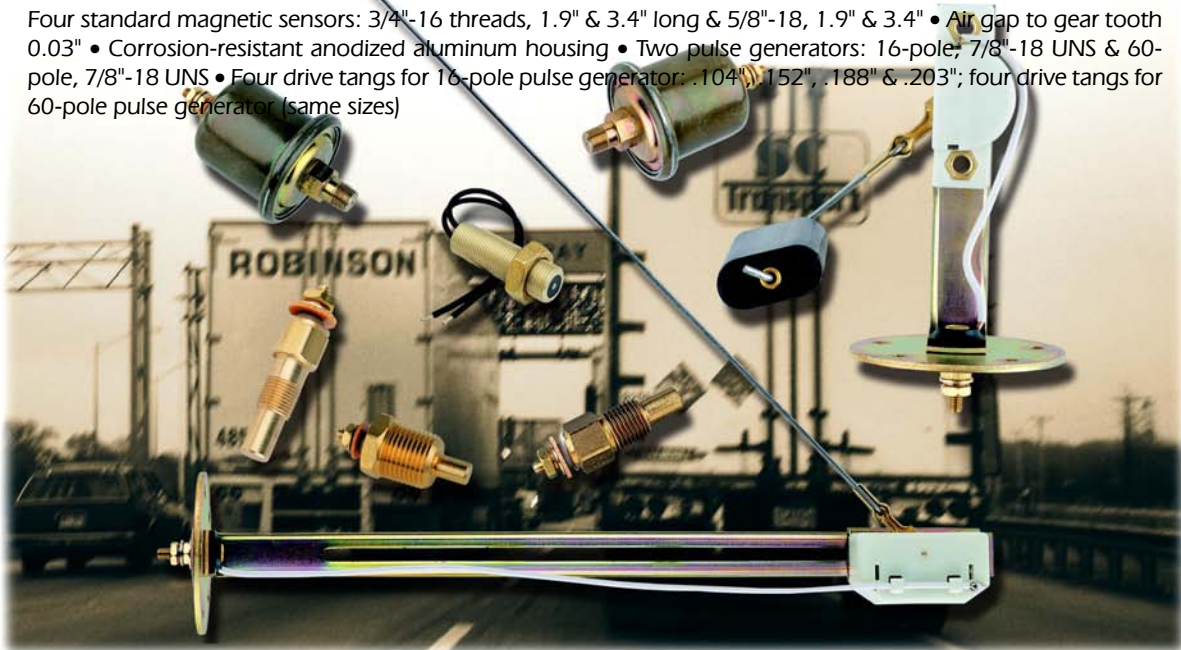
Full line of economically priced temperature senders available in Datcon "high" & "low" range matches • Temperature ranges up to 240°F & 320°F • Thread sizes: 1/8"-27 NPTF, 1/4"-18 NPTF, 3/8"-18 NPTF, 1/2"-14 NPTF, 5/8"-18 NPTF, M14 x 1.5, M16 x 1.5, & M18 x 1.5 • "Universal" sender kit includes 1/4"-27 NPTF sender & 1/4", 3/8" & 1/2" adapters • #10-32 terminals • Thermally isolated senders available with 1/2"-14 NPTF & 9/16"-18 NPTF thread mountings • Dual-station units available in Datcon high or low range (to drive two separate gauges) • Consult with factory for isolated ground options & other electrical "matches"

OIL PRESSURE SENDERS:

Full line of regular-, heavy- & severe-duty oil pressure senders for O.E.M. applications • Standard pressure ranges from 40 to 400 psi • Electrical "match" (resistance) is 240-33.5Ω • Fully sealed & dust-proof heavy- & severe-duty units • Thread sizes: 1/8"-27 NPTF, 1/4"-18 NPTF & M10 x 1.0 • #10-32 terminals • Common ground through mounting thread • Severe duty senders (80, 100, 125 & 150 psi) assure desired performance in high shock & vibration environments • Dual-station units available (to drive two separate gauges) • Consult with factory representatives or your distributor for isolated ground options & other electrical "matches"

SPEED SENSORS:

Four standard magnetic sensors: 3/4"-16 threads, 1.9" & 3.4" long & 5/8"-18, 1.9" & 3.4" • Air gap to gear tooth 0.03" • Corrosion-resistant anodized aluminum housing • Two pulse generators: 16-pole, 7/8"-18 UNS & 60-pole, 7/8"-18 UNS • Four drive tangs for 16-pole pulse generator: .104", .152", .188" & .203"; four drive tangs for 60-pole pulse generator (same sizes)



HEAVY DUTY SENDERS/SENSORS

FUEL SENDERS

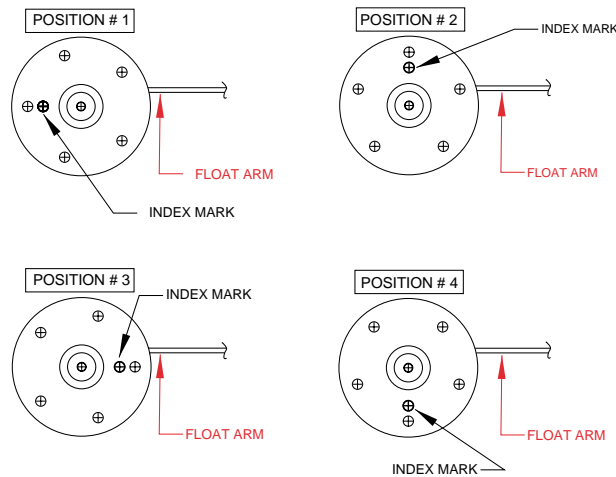
HEAVY DUTY ADJUSTABLE

| P/N | Ω Ohms | Ground | Position | Terminal | Tank Depth |
|--------|------------------|--------|----------|------------|------------|
| 100436 | 0-90 | Common | 2 & 4 | 10-32 STUD | 6-24" |
| 100083 | 10-180 | Common | 2 & 4 | 10-32 STUD | 6-24" |
| 100967 | 10-180 | Common | 1 & 3 | 10-32 STUD | 6-24" |
| 100437 | 76-10 | Common | 2 & 4 | 10-32 STUD | 6-24" |
| 100438 | 240-33.5 | Common | 2 & 4 | 10-32 STUD | 6-24" |
| 102535 | 240-33.5 | Common | 1 & 3 | 10-32 STUD | 6-24" |
| 104742 | 0-90 | Common | 2 & 4 | 10-32 STUD | 6-24" |
| 104738 | 10-180 | Common | 1 & 3 | 10-32 STUD | 6-24" |
| 104739 | 10-180 | Common | 2 & 4 | 10-32 STUD | 6-24" |
| 104743 | 76-10 | Common | 2 & 4 | 10-32 STUD | 6-24" |
| 104734 | 240-33.5 | Common | 1 & 3 | 10-32 STUD | 6-24" |
| 104735 | 240-33.5 | Common | 2 & 4 | 10-32 STUD | 6-24" |

ISOLATED GROUND ADJUSTABLE

| P/N | Ω Ohms | Ground | Position | Terminal | Tank Depth |
|--------|------------------|----------|----------|------------|------------|
| 100970 | 10-180 | Isolated | 1 & 3 | 10-32 STUD | 6-24" |
| 100969 | 240-33.5 | Isolated | 2 & 4 | 10-32 STUD | 6-24" |
| 100968 | 240-33.5 | Isolated | 1 & 3 | 10-32 STUD | 6-24" |
| 104740 | 10-180 | Isolated | 1 & 3 | 10-32 STUD | 6-24" |
| 104736 | 240-33.5 | Isolated | 1 & 3 | 10-32 STUD | 6-24" |
| 104737 | 240-33.5 | Isolated | 2 & 4 | 10-32 STUD | 6-24" |

TOP VIEW: FUEL SENDER FLANGE



MAXIMA TECHNOLOGIES



HEAVY DUTY SENDERS/SENSORS

MAXIMA TECHNOLOGIES



02300-01

FIXED

| P/N | Ω Ohms | Ground | Position | Terminal | Tank Depth |
|----------|------------------|--------|----------|------------|------------|
| 02300-01 | 240-33.5 | Common | 2 | 10-32 STUD | 6.0" |
| 02301-03 | 240-33.5 | Common | 4 | 10-32 STUD | 7.0" |
| 02300-04 | 240-33.5 | Common | 2 | 10-32 STUD | 7.5" |
| 02301-04 | 240-33.5 | Common | 4 | 10-32 STUD | 7.5" |
| 02300-07 | 240-33.5 | Common | 2 | 10-32 STUD | 9.0" |
| 02300-08 | 240-33.5 | Common | 2 | 10-32 STUD | 9.5" |
| 02300-09 | 240-33.5 | Common | 2 | 10-32 STUD | 10.0" |
| 02301-11 | 240-33.5 | Common | 4 | 10-32 STUD | 11.0" |
| 02300-12 | 240-33.5 | Common | 2 | 10-32 STUD | 11.5" |
| 02300-13 | 240-33.5 | Common | 2 | 10-32 STUD | 12.0" |
| 02300-14 | 240-33.5 | Common | 2 | 10-32 STUD | 12.5" |
| 02300-16 | 240-33.5 | Common | 2 | 10-32 STUD | 13.5" |
| 02300-17 | 240-33.5 | Common | 2 | 10-32 STUD | 14.0" |
| 02301-17 | 240-33.5 | Common | 4 | 10-32 STUD | 14.0" |
| 02301-18 | 240-33.5 | Common | 4 | 10-32 STUD | 14.5" |
| 02300-19 | 240-33.5 | Common | 2 | 10-32 STUD | 15.0" |
| 02301-19 | 240-33.5 | Common | 4 | 10-32 STUD | 15.0" |
| 02300-20 | 240-33.5 | Common | 2 | 10-32 STUD | 15.5" |
| 02300-21 | 240-33.5 | Common | 2 | 10-32 STUD | 16.0" |
| 02300-23 | 240-33.5 | Common | 2 | 10-32 STUD | 17.0" |
| 02300-24 | 240-33.5 | Common | 2 | 10-32 STUD | 17.5" |
| 02300-26 | 240-33.5 | Common | 2 | 10-32 STUD | 18.5" |
| 02300-27 | 240-33.5 | Common | 2 | 10-32 STUD | 19.0" |
| 02300-28 | 240-33.5 | Common | 2 | 10-32 STUD | 19.5" |
| 02300-29 | 240-33.5 | Common | 2 | 10-32 STUD | 20.0" |
| 02300-31 | 240-33.5 | Common | 2 | 10-32 STUD | 21.0" |
| 02300-33 | 240-33.5 | Common | 2 | 10-32 STUD | 22.0" |
| 02301-33 | 240-33.5 | Common | 4 | 10-32 STUD | 22.0" |
| 02300-34 | 240-33.5 | Common | 2 | 10-32 STUD | 22.5" |
| 02300-35 | 240-33.5 | Common | 2 | 10-32 STUD | 23.0" |
| 02300-36 | 240-33.5 | Common | 2 | 10-32 STUD | 23.5" |
| 02300-37 | 240-33.5 | Common | 2 | 10-32 STUD | 24.0" |
| 02301-37 | 240-33.5 | Common | 4 | 10-32 STUD | 24.0" |
| 02300-39 | 240-33.5 | Common | 2 | 10-32 STUD | 25.0" |
| 02300-44 | 240-33.5 | Common | 2 | 10-32 STUD | 30.0" |
| 02300-47 | 240-33.5 | Common | 2 | 10-32 STUD | 33.0" |
| 02301-47 | 240-33.5 | Common | 4 | 10-32 STUD | 33.0" |
| 02300-48 | 240-33.5 | Common | 2 | 10-32 STUD | 34.0" |
| 02300-50 | 240-33.5 | Common | 2 | 10-32 STUD | 36.0" |
| 02301-50 | 240-33.5 | Common | 4 | 10-32 STUD | 36.0" |

See page 47 for explanations of fuel sender positions.

HEAVY DUTY SENDERS/SENSORS**TEMPERATURE SENDERS****LOW RANGE**

| P/N | Range | Match(V) | Thread | Ground | Terminal |
|------------|--------------|-----------------|----------------------------|---------------|-----------------|
| 02017-00 | 100-240°F | DAL | 1/8"-27 NPTF | Common | 10-32 STUD |
| 02029-00 | 100-240°F | DAL (Dual) | 1/8"-27 NPTF | Common | 10-32 STUD |
| 104121 | 100-240°F | DLW | 1/8"-27 NPTF | Common | 10-32 STUD |
| 02055-00 | 100-280°F | SW2 (334) | 1/8"-27 NPTF | Common | 10-32 STUD |
| 02018-00 | 100-240°F | DAL | 1/4"-18 NPTF | Common | 10-32 STUD |
| 02030-00 | 100-240°F | DAL (Dual) | 1/4"-18 NPTF | Common | 10-32 STUD |
| 02019-00 | 100-240°F | DAL | 3/8"-18 NPTF | Common | 10-32 STUD |
| 02031-00 | 100-240°F | DAL (Dual) | 3/8"-18 NPTF | Common | 10-32 STUD |
| 02079-02 | 100-240°F | SW2 (334) | 3/8"-18 NPTF | Common | 10-32 STUD |
| 102700 | 100-240°F | DAL | 3/8"-18 NPTF | Common | 10-32 STUD |
| 02055-02 | 100-280°F | SW 334 | 3/8"-18 NPTF | Common | 10-32 STUD |
| 02092-22 | 100-280°F | AC1 (24) | 1/2"-14 NPTF | Common | 10-32 STUD |
| 02020-00 | 100-240°F | DAL | 1/2"-14 NPTF | Common | 10-32 STUD |
| 02032-00 | 100-240°F | DAL (Dual) | 1/2"-14 NPTF | Common | 10-32 STUD |
| 107281 | 100-240°F | DAL | 1/2"-14 NPTF w/sealant | Common | 10-32 STUD |
| 109370 | 100-240°F | DAL | 1/2"-14 NPTF | Common | 10-32 STUD |
| 102070 | 100-240°F | DAL | 9/16"-18 NPTF w/sealant | Common | 10-32 STUD |
| 107097 | 100-240°F | DAL | 3/4"-16 UNF | Common | 10-32 STUD |
| 02037-00 | 100-240°F | DAL | 5/8"-18 UNF | Common | 10-32 STUD |
| 02088-00 | 100-240°F | DAL | M14 x 1.5 | Common | 10-32 STUD |
| 02094-00 | 100-240°F | DAL | M16 x 1.5 | Common | 10-32 STUD |
| 02062-00 | 100-240°F | DAL | M18 x 1.5 | Common | 10-32 STUD |

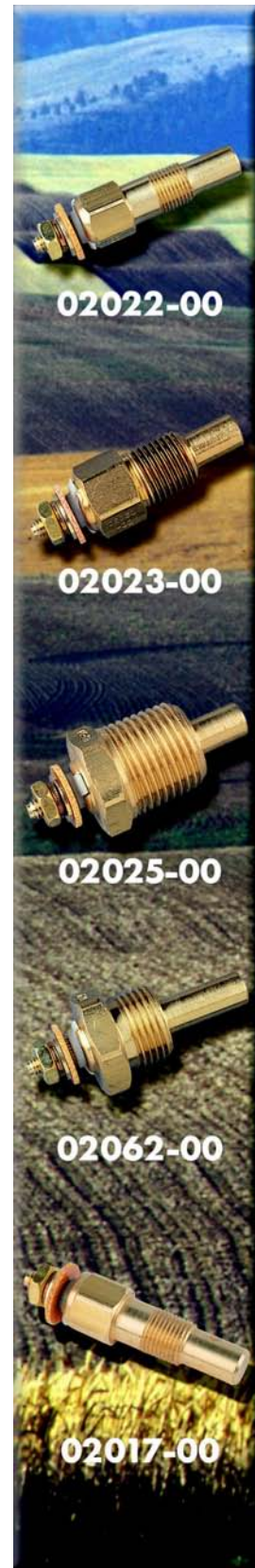
Note: P/N 104121 is for the Marine Wet Exhaust Temperature System.

Note: P/N 109370 is thermally-isolated for reduced impact from local ambient temperature.

HIGH RANGE

| P/N | Range | Match(V) | Thread | Ground | Terminal |
|------------|----------------------|-----------------|---------------------------|---------------|-----------------|
| 02022-00 | 100-280° & 140-320°F | DAH | 1/8"-27 NPTF | Common | 10-32 STUD |
| 105576 | 100-280° & 140-320°F | DAH | 1/8"-27 NPTF w/Sealant | Common | 10-32 STUD |
| 02023-00 | 100-280° & 140-320°F | DAH | 1/4"-18 NPTF | Common | 10-32 STUD |
| 02092-24 | 100-280° & 140-320°F | AC2 (12) | 1/4"-18 NPTF | Common | 10-32 STUD |
| 02024-00 | 100-280° & 140-320°F | DAH | 3/8"-18 NPTF | Common | 10-32 STUD |
| 02049-00 | 100-280° & 140-320°F | AC | 3/8"-18 NPTF | Common | 10-32 STUD |
| 02075-02 | 100-280° & 140-320°F | AC2 (12) | 3/8"-18 NPTF | Common | 10-32 STUD |
| 02081-02 | 100-280° & 140-320°F | AC2 (24) | 3/8"-18 NPTF | Common | 10-32 STUD |
| 02092-12 | 100-280° & 140-320°F | AC2 (12) | 3/8"-18 NPTF | Common | 10-32 STUD |
| 107283 | 100-280° & 140-320°F | DAH | 3/8"-18 NPTF w/Sealant | Common | 10-32 STUD |
| 02090-13 | 100-280° & 100-280°F | DAH | 1/2"-14 NPTF | Common | 10-32 STUD |
| 02025-00 | 100-280° & 140-320°F | DAH | 1/2"-14 NPTF | Common | 10-32 STUD |
| 02050-00 | 100-280° & 140-320°F | AC | 1/2"-14 NPTF | Common | 10-32 STUD |
| 02092-13 | 100-280° & 140-320°F | AC2 (24) | 1/2"-14 NPTF | Common | 10-32 STUD |

Note: All straight threads require sealing washer.

**MAXIMA TECHNOLOGIES**

HEAVY DUTY SENDERS/SENSORS



02069-00

102222

108496



HIGH RANGE (CONT'D)

| P/N | Range | Match(V) | Thread | Ground | Terminal |
|----------|----------------------|----------|---------------------------|--------|------------|
| 02092-16 | 100-280° & 140-320°F | AC2 (12) | 1/2"-14 NPTF | Common | 10-32 STUD |
| 02092-28 | 100-280° & 140-320°F | DAH | 1/2"-14 NPTF w/Sealant | Common | 10-32 STUD |
| 105575 | 100-280° & 140-320°F | DAH | 1/2"-14 NPTF w/Sealant | Common | 10-32 STUD |
| 109371 | 100-280° & 140-320°F | DAH | 1/2"-14 NPTF | Common | 10-32 STUD |
| 02092-17 | 100-280° & 140-320°F | AC2 (24) | 9/16"-18 NPTF | Common | 10-32 STUD |
| 102769 | 100-280° & 140-320°F | DAH | 9/16"-18 NPTF | Common | 10-32 STUD |
| 107602 | 100-280° & 140-320°F | AC2 (24) | 9/16"-18 UNF | Common | 10-32 STUD |
| 02092-10 | 100-280° & 140-320°F | AC2 (12) | 3/4"-16 UNF | Common | 10-32 STUD |
| 02092-21 | 100-280° & 140-320°F | AC2 (12) | 5/8"-18 UNF | Common | 10-32 STUD |
| 02092-23 | 100-280° & 140-320°F | AC | 5/8"-18 UNF | Common | 10-32 STUD |
| 02089-00 | 100-280° & 140-320°F | DAH | M14 x 1.5 | Common | 10-32 STUD |
| 02092-20 | 100-280° & 140-320°F | AC2 (12) | M14 x 1.25 | Common | 10-32 STUD |
| 102438 | 100-280° & 140-320°F | DAH | M14 x 1.25 | Common | 10-32 STUD |
| 108697 | 100-280° & 140-320°F | DAH | M14 x 1.5 | Common | 10-32 STUD |
| 02067-00 | 100-280° & 140-320°F | DAH | M16 x 1.5 | Common | 10-32 STUD |
| 02092-08 | 100-280° & 140-320°F | AC2 | M16 x 1.5 | Common | 10-32 STUD |
| 106394 | 100-280° & 140-320°F | AC2 (24) | M16 x 1.5 | Common | 10-32 STUD |
| 02069-00 | 100-280° & 140-320°F | DAH | M18 x 1.5 | Common | 10-32 STUD |
| 02092-09 | 100-280° & 140-320°F | AC2 (12) | M18 x 1.5 | Common | 10-32 STUD |
| 109352 | 100-280° & 140-320°F | DAH | M22 x 1.5 | Common | 10-32 STUD |

Note: P/Ns 107602 and 109371 provide thermal isolation from local ambient temperature!

EXTRA HIGH RANGE

| P/N | Range | Match(V) | Thread | Ground | Terminal |
|----------|-----------|----------|--------------|--------|------------|
| 02092-51 | 130-330°F | DAEH | 1/2"-14 NPTF | Common | 10-32 STUD |
| 100064 | 130-330°F | DAEH | 9/16"-18 UNF | Common | 10-32 STUD |
| 106951 | 150-350°F | ALWH | 1/8"-27 NPTF | Common | 10-32 STUD |
| 106952 | 150-350°F | ALWH | 1/4"-18 NPTF | Common | 10-32 STUD |
| 106953 | 150-350°F | ALWH | 3/8"-18 NPTF | Common | 10-32 STUD |
| 106954 | 150-350°F | ALWH | 1/2"-14NPTF | Common | 10-32 STUD |

OIL PRESSURE SENDERS

STANDARD DUTY

| P/N | Range | Ω | | Thread | Ground | Terminal |
|----------|-------------------|----------|--|---------|--------|------------|
| | | Ohms | | | | |
| 02502-00 | 0-40 psi | 240-33.5 | | 1/8"-27 | Common | 10-32 STUD |
| 02502-02 | 0-40 psi | 0-90 | | 1/8"-27 | Common | 10-32 STUD |
| 02503-00 | 0-60 psi | 240-33.5 | | 1/8"-27 | Common | 10-32 STUD |
| 02503-02 | 0-60 psi | 0-90 | | 1/8"-27 | Common | 10-32 STUD |
| 02504-00 | 0-80 psi/0-5 bar | 240-33.5 | | 1/8"-27 | Common | 10-32 STUD |
| 02504-02 | 0-80 psi/0-5 bar | 0-90 | | 1/8"-27 | Common | 10-32 STUD |
| 02505-00 | 0-100 psi/0-7 bar | 240-33.5 | | 1/8"-27 | Common | 10-32 STUD |
| 02505-02 | 0-100 psi/0-7 bar | 0-90 | | 1/8"-27 | Common | 10-32 STUD |
| 02505-04 | 0-100 psi/0-7 bar | 76-10 | | 1/8"-27 | Common | 10-32 STUD |
| 02506-00 | 0-125 psi | 240-33.5 | | 1/8"-27 | Common | 10-32 STUD |
| 02506-02 | 0-125 psi | 0-90 | | 1/8"-27 | Common | 10-32 STUD |

HEAVY DUTY SENDERS/SENSORS**STANDARD DUTY (CONT'D)**

| P/N | Range | Ω | | Ground | Terminal |
|----------|--------------------|----------|----------------------|--------|------------|
| | | Ohms | Thread | | |
| 02582-21 | 0-125 psi | 240-33.5 | 1/8"-27 w/Sealant | Common | 10-32 STUD |
| 02507-00 | 0-150 psi/0-10 bar | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |
| 02509-02 | 0-300 psi | 0-90 | 1/8"-27 | Common | 10-32 STUD |
| 02510-02 | 0-400 psi | 0-90 | 1/8"-27 | Common | 10-32 STUD |

STANDARD DUTY-DUAL

| P/N | Range | Ω | | Ground | Terminal |
|----------|-------------------|----------|---------|--------|------------|
| | | Ohms | Thread | | |
| 02503-01 | 0-60 psi | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |
| 02504-01 | 0-80 psi/0-5 bar | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |
| 02505-01 | 0-100 psi/0-7 bar | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |
| 02506-01 | 0-125 psi | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |

HEAVY DUTY

| P/N | Range | Ω | | Ground | Terminal |
|--------|--------------------|----------|---------|--------|------------|
| | | Ohms | Thread | | |
| 102222 | 0-40 psi | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |
| 102223 | 0-60 psi | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |
| 102224 | 0-80 psi/0-5 bar | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |
| 103575 | 0-80 psi/0-5 bar | 0-90 | 1/8"-27 | Common | 10-32 STUD |
| 103579 | 0-100 psi/0-7 bar | 76-10 | 1/8"-27 | Common | 10-32 STUD |
| 102225 | 0-100 psi/0-7 bar | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |
| 102226 | 0-125 psi | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |
| 103581 | 0-125 psi | 0-90 | 1/8"-27 | Common | 10-32 STUD |
| 102227 | 0-150 psi/0-10 bar | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |

HEAVY DUTY-DUAL

| P/N | Range | Ω | | Ground | Terminal |
|--------|-------------------|----------|---------|--------|------------|
| | | Ohms | Thread | | |
| 103574 | 0-80 psi/0-5 bar | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |
| 103577 | 0-100 psi/0-7 bar | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |
| 103580 | 0-125 psi | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |

SEVERE DUTY

| P/N | Range | Ω | | Ground | Terminal |
|--------|--------------------|----------|----------------------|--------|------------|
| | | Ohms | Thread | | |
| 108496 | 0-80 psi/0-5 bar | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |
| 108878 | 0-80 psi/0-5 bar | 240-33.5 | 1/8"-27 w/Sealant | Common | 10-32 STUD |
| 108497 | 0-100 psi/0-7 bar | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |
| 108882 | 0-125 psi | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |
| 109491 | 0-150 psi/0-10 bar | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |

SEVERE DUTY-DUAL

| P/N | Range | Ω | | Ground | Terminal |
|--------|-------------------|----------|---------|--------|------------|
| | | Ohms | Thread | | |
| 109013 | 0-100 psi/0-7 bar | 240-33.5 | 1/8"-27 | Common | 10-32 STUD |



02505-00

Custom

MAXIMA TECHNOLOGIES



HEAVY DUTY SENDERS/SENSORS

MAXIMA TECHNOLOGIES



71255-00

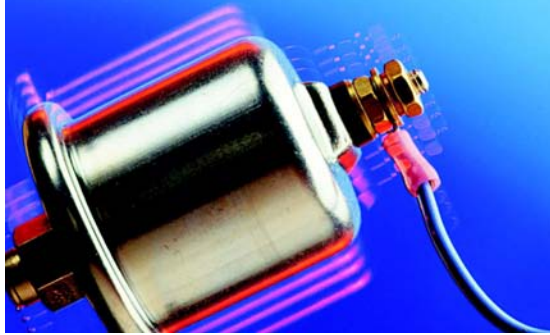
71544-00

71266-00

71268-00

71274-00

Datcon brand "severe duty" pressure senders are ideal for rugged off-highway applications. Units have been designed to withstand severe random vibration (exceeding over 14 GRMS) and continuous shock & vibration over a frequency range of 24-24,000 Hz, thus ensuring gauge performance and reliability of information.



SPEED SENSORS

MAGNETIC SENSORS

| P/N | Connection | Thread | Length | Wire |
|----------|---------------|---------------|--------|------|
| 71544-00 | Lead Wires | 5/8" x 18 UNF | 1.9" | 6.5" |
| 72000-00 | Amp Terminals | 5/8" x 18 UNF | 1.9" | 6.5" |
| 110799 | Packard | 5/8" x 18 UNF | 1.9" | 7.2" |
| 101493 | Lead Wires | 5/8" x 18 UNF | 3.4" | 24" |
| 106258 | Lead Wires | 5/8" x 18 UNF | 3.4" | 5" |
| 71545-00 | Lead Wires | 5/8" x 18 UNF | 3.4" | 5" |
| 110800 | Packard | 5/8" x 18 UNF | 3.4" | 7.2" |
| 105792 | Packard | 3/4" x 16 UNF | 1.9" | 5.5" |
| 71255-00 | Lead Wires | 3/4" x 16 UNF | 1.9" | 6.5" |
| 110797 | Packard | 3/4" x 16 UNF | 1.9" | 7.2" |
| 109204 | Packard/Dual | 3/4" x 16 UNF | 3" | 30" |
| 71256-00 | Lead Wires | 3/4" x 16 UNF | 3.4" | 5" |
| 110798 | Packard | 3/4" x 16 UNF | 3.4" | 7.2" |

Note: P/N 106258 has stainless steel thread.

Note: Units with Packard connectors assure easy installation!

PULSE GENERATORS/DRIVE TANGS

| P/N | Description/ Configuration | Thread/Size |
|----------|-------------------------------|---------------|
| 71266-00 | Pulse Generator, 60-pole | 7/8" x 18 UNS |
| 71274-00 | Drive Tang (for P/N 71266-00) | .152" x 1.06" |
| 71275-00 | Drive Tang (for P/N 71266-00) | .187" x 1.06" |
| 71276-00 | Drive Tang (for P/N 71266-00) | .203" x 1.06" |
| 71550-01 | Drive Tang (for P/N 71266-00) | .104" x 1.06" |
| 71267-00 | Pulse Generator, 16-pole | 7/8" x 18 UNS |
| 71268-00 | Drive Tang (for P/N 71267-00) | .152" x 2.30" |
| 71269-00 | Drive Tang (for P/N 71267-00) | .187" x 2.30" |
| 71270-00 | Drive Tang (for P/N 71267-00) | .203" x 2.30" |
| 71889-01 | Drive Tang (for P/N 71267-00) | .104" x 2.30" |



SPECIALTY PRODUCTS & ACCESSORIES

SPECIALTY PRODUCTS & ACCESSORIES

GAUGE PANELS:

Ultra mini-gauge panel measuring 4-1/8" x 2" includes voltmeter, water temperature & oil pressure gauges, 1/8" temperature sender, 1/8" pressure sender • Mini gauge panels measuring 8-3/8" x 2-3/8" include fuel level, oil pressure, water temperature & various warning lights or warning light modules • Standard gauge panel measuring 8.25" x 5.5" includes fuel level, oil pressure & water temperature gauges, voltmeter & hourmeter

HARDWARE/GASKET KITS:

Wide range of kits for gauges, tachometers/speedometers ammeters, hourmeters, light clusters & fuel senders

HOURLMETER ACCESSORIES:

Mounting rings & hardware for Sentinel™ product line • Vibration dampeners • Lead wires

LIGHTING PRODUCTS:

Light kit options include 5/8" incandescent 12 or 24 VDC lamps and lamp holders (plug-in style), isolated 12 or 24 VDC incandescent lamp assemblies, 12 or 24 VDC "wedge-base" twist-in incandescent lamp assemblies, 12 or 24 VDC pyrometer lamp assemblies, & light filters (amber, green or red) • Wide range of 4-in-one warning light clusters, round, 52 mm diameter (nominal) • Mini warning light modules with panel enclosure • Emergency lamp assembly

MECHANICAL TUBE KITS:

Mechanical gauge tube kits with connectors: 6' & 16' • Pitot tube kits with connectors & pitot assembly

METER PROGRAMMING KIT:

FPK-2 programming kit for select meter products, PC-based • Kit includes cable and Windows-based software

MOUNTING KITS:

Mounting kit for 3-3/8" diameter tachometers & speedometers: plastic cup, hardware & molded socket

MOUNTING PANELS:

1-, 2- & 3-hole mounting panels, black or polished chrome • Bezel underlay & mounting panel overlay kits for 2" diameter gauges in black • Mounting panels (overlays) for 2" diameter gauges in black

POINT-OF-PURCHASE DISPLAYS:

Display panels containing Datcon brand gauges & meters • Smart Instrument® version with active display

PYROMETER ACCESSORIES:

Pyrometer light kits, 12 & 24 VDC • Thermocouples • Lead wires: 84", 120" & 168"

SHUNTS:

Four models: 100A, 150A, 200A & 300A (100 mV applications only) • Work with Datcon brand ammeters • Two mounting screws & electrical connections

SWITCHES:

Economically priced 835 Series pressure switches, 8-amp: N/O, N/C & dual circuit • Range includes 4, 15, 60 & 100 psi • Standard pressure switches, 5-amp: Dual circuit • Range includes 4, 15, 60 & 100 psi

TERMINAL/VOLTAGE ADAPTORS/CONNECTORS:

Blade terminal adapter kits—European configuration • Voltage adapters for Datcon-match gauges, 24 to 12 VDC & 32 to 12 VDC, with mounting tabs • Adapters for Smart Instrument® products, 24 to 12 VDC • Corrosion-resistant anodized aluminum housing • Molded sockets • ECM harness for warning light cluster interface • Integral 3- & 4-wire connector harnesses

THREAD ADAPTORS:

1/4", 1/2" & 3/8" for mechanical gauges & same sizes for temperature senders



SPECIALTY PRODUCTS & ACCESSORIES



110734



110708



110710



110716



GAUGE/CLUSTER PANELS

ULTRA MINI-GAUGE PANEL

| P/N | Function | Volts | Dimensions |
|--------|---|-------|------------------|
| 110734 | Voltmeter, Oil Pressure w/Sender, 1/8" (with 1/4" adaptor); Water Temp w/Sender, 1/8" (with 3/8" & 1/2" adaptor nuts) | 12 | 4-1/8" x 2" x 2" |

Note: Kit also includes 10 mm male-female adapters, 2-3/4" extension for oil pressure sender and wiring harness.

MINI-GAUGE PANELS

GAUGE MODULES

| P/N | Function | Scale | Ohms/Match | Volts | Dimensions |
|--------|---------------|-----------|------------|-------|------------|
| 110708 | Fuel | E-F | 240-33.5 | 12 | 1" x 1" |
| 110724 | Fuel | E-F | 240-33.5 | 24 | 1" x 1" |
| 110709 | Hyd. Oil Temp | 140-320°F | DAH | 12 | 1" x 1" |
| 110725 | Hyd. Oil Temp | 140-320°F | DAH | 24 | 1" x 1" |
| 110710 | Oil Pressure | 0-100 psi | 240-33.5 | 12 | 1" x 1" |
| 110711 | Oil Pressure | 0-100 psi | 240-33.5 | 24 | 1" x 1" |
| 110713 | Voltmeter | 8-18 V | N/A | 12 | 1" x 1" |
| 110714 | Voltmeter | 16-36 V | N/A | 24 | 1" x 1" |
| 110712 | Water Temp | 100-280°F | DAH | 12 | 1" x 1" |
| 110726 | Water Temp | 100-280°F | DAH | 24 | 1" x 1" |

Note: Other functions can be provided as required for a custom product. Consult with factory representatives or your distributor for more details. Units are intended for use in ENCLOSED CABS or INDOOR applications only.

WARNING LIGHTS

| P/N | Configuration | Function | Volts |
|--------|------------------|------------------|-------|
| 110890 | Individual Round | Electrical Power | 12 |
| 110717 | Individual Round | Electrical Power | 24 |
| 110722 | Individual Round | High Beam | 12 |
| 110723 | Individual Round | High Beam | 24 |
| 110891 | Individual Round | Oil Pressure | 12 |
| 110716 | Individual Round | Oil Pressure | 24 |
| 110720 | Individual Round | Turn Signals | 12 |
| 110721 | Individual Round | Turn Signals | 24 |
| 110718 | Individual Round | Volts (Battery) | 12 |
| 110719 | Individual Round | Volts (Battery) | 24 |
| 110715 | 4-in-1 (1" x 1") | Various | 12 |
| 110892 | 4-in-1 (1" x 1") | Various | 24 |

Note: Other warning/function symbols can be provided as required for custom applications.



Mini-Gauge Panel, assembled

SPECIALTY PRODUCTS & ACCESSORIES

PANELS (ONLY)

| P/N | Configuration | Dimensions |
|----------|-----------------------------------|----------------------|
| 07086-01 | 3-Gauge/3-Round Individual Lights | 8-3/8" x 2-3/8" x 1" |
| 07325-01 | 5-Gauge | 8-3/8" x 2-3/8" x 1" |

Applications Tips: Mix and match gauge modules and warning lights in panels to build your own custom panel. These panels are ideal for industrial and specialty vehicles where panel space is an issue.

STANDARD PANEL

| P/N | Functions | Volts | Dimension |
|--------|--|-------|--------------|
| 110354 | Fuel; Water Temperature (100-240°F); Oil Pressure (0-80 psi); Voltmeter (8-18 V); Hourmeter (Electronic); Provisions for Warning Lights (2) | 12 | 8.25" x 5.5" |

Note: Standard installation requires external wiring. Consult with factory representatives or your distributor if a common connector is desired.

HARDWARE/GASKET KITS

| P/N | Description |
|----------|---|
| 02342-00 | Fuel Sender Hardware Mounting Kit with 5-screws (Sealing #10-32 x 15/32") |
| 02342-05 | Fuel Sender Hardware Mounting Kit with 5-screws (Self-tapping)(Sealing #10-24 x 1") |
| 02343-02 | Fuel Sender Gasket (Material: CK-NPRN with Staple) |
| 02343-03 | Fuel Sender Gasket (Material: CK-NPRN) |
| 02343-04 | Fuel Sender Gasket (Material: BUNA-N) |
| 06282-08 | Ammeter & Gauge Hardware (Wedge-base Lamp Configuration Excluded) |
| 105309 | Mini-Hourmeter Hardware, 2-hole |
| 105665 | Fuel Sender Hardware Mounting Kit with 5-screws (Sealing #10-32 x 1") |
| 56433-00 | Hourmeter & Light Cluster Hardware |
| 71208-00 | Tachometer/Speedometer Gasket (Material: NPRN) |
| 71281-00 | Speedometer & Tachometer Hardware, Wedge-base Lamp Configuration |
| 71281-01 | Speedometer & Tachometer with Blades Hardware |
| 71461-00 | Tachometer/Speedometer Pedestal Mounting Kit |
| 71924-01 | Speedometer Hardware, Wedge-base Lamp Configuration |



Ultra Mini Gauge with cord



Standard 5-gauge panel

(Photos not to scale)



MAXIMA TECHNOLOGIES



SPECIALTY PRODUCTS & ACCESSORIES

MAXIMA TECHNOLOGIES



109474



110077



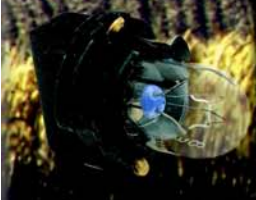
105359



06215-00



100330



03123-00



HOURMETER ACCESSORIES (PROGRAMMABLE)

| P/N | Description |
|----------|--|
| 109474 | Sentinel Mounting Ring, Thick |
| 110076 | Sentinel Mounting Hardware Kit, Standard |
| 110077 | Sentinel Deluxe Mounting Hardware Kit |
| 41787-00 | Hourmeter Vibration Dampener, 3-hole Flange |
| 49730-00 | Hourmeter Lead, 20" with 1/4" Female Terminal (2-required) |

LIGHTING PRODUCTS


KITS/ACCESSORIES

| P/N | Description | Voltage | Candlepower |
|----------|---|---------|-------------|
| 01072-00 | Miniature Bayonet Lamp | 14 | 1.0 |
| 07030-00 | Miniature Bayonet Lamp | 14 | 2.0 |
| 06295-00 | Miniature Bayonet Lamp | 28 | 1.0 |
| 71718-02 | Wedge Base Lamp | 14 | 0.31 |
| 71718-00 | Wedge Base Lamp | 28 | 1.6 |
| 102125 | Lamp Filter, Green | N/A | N/A |
| 105359 | Lamp Filter, Amber | N/A | N/A |
| 105360 | Lamp Filter, Red | N/A | N/A |
| 105492 | Lamp Filter, Blue | N/A | N/A |
| 108757 | Lamp Filter, Lunar White | N/A | N/A |
| 06280-00 | 1/2" Lamp Socket | N/A | N/A |
| 56307-00 | 5/8" Lamp Socket | N/A | N/A |
| 06281-00 | 1/2" Light Kit | 12 | 1.0 |
| 06281-01 | 1/2" Light Kit | 24 | 1.0 |
| 06215-00 | 5/8" Light Kit | 12 | 1.0 |
| 06298-00 | 5/8" Light Kit, w/Ring Terminal, 3.5" Lg | 12 | 1.0 |
| 06871-01 | 5/8" Light Kit, w/Ring Terminal, 5" Lg | 12 | 1.0 |
| 06871-03 | 5/8" Light Kit, w/Ring Terminal, 10.5" Lg | 12 | 1.0 |
| 105857 | 5/8" Light Kit, w/Terminal | 12 | 1.0 |
| 100330 | 5/8" Light Kit, 2-Wire | 12 | 1.0 |
| 104809 | 5/8" Light Kit, 2-Wire | 12 | 1.4 |
| 105715 | 5/8" Light Kit, 2-Wire | 12 | 2.0 |
| 06215-01 | 5/8" Light Kit | 12 | 2.0 |
| 06294-00 | 5/8" Light Kit | 24 | 1.0 |
| 06294-01 | 5/8" Light Kit | 24 | 1.6 |
| 102078 | 5/8" Light Kit, w/Terminal | 24 | 1.6 |
| 106546 | 5/8" Light Kit, 2-Wire | 24 | 1.6 |
| 71224-03 | Wedge Base Light Kit | 12 | 0.3 |
| 03123-00 | Wedge Base Light Kit | 12 | 1.0 |
| 71224-00 | Wedge Base Light Kit | 12 | 2.0 |
| 71224-04 | Wedge Base Light Kit | 24 | 0.3 |
| 71224-01 | Wedge Base Light Kit | 24 | 1.6 |
| 106683 | .410" Light Kit, 2-Wire, 2.38" Lg | 24 | 0.65 |
| 108698 | .410" Light Kit, 2-Wire, 7.75" Lg | 24 | 0.65 |

Applications Tips: Use P/N 06215-00 (5/8" light kit) for 12-volt 2" gauges and IllumaSeal® gauges and P/N 06294-00 (5/8" light kit) for 24-volt 2" gauges and IllumaSeal® gauges. Use P/N 104809 (5/8" light kit, 2-lead) for 2" tachometers. Note that lamp filters, while changing dial color, will REDUCE brightness. Wedge-base lamp assemblies are recommended for optimal sealing performance.

SPECIALTY PRODUCTS & ACCESSORIES


LIGHT CLUSTERS

| P/N | Functions |  Volts |
|----------|--|--|
| 06800-80 | Oil Pressure, Water Temperature, Fuel, Electrical Power | 12 |
| 104747 | Oil Pressure, Water Temperature, Fuel, Oil Temperature | 12 |
| 104782 | Oil Pressure, Water Temperature, Battery, Glow-Plug | 12 |
| 107042 | Oil Pressure, Water Temperature, Hydraulic Oil Temp, Battery | 12 |
| 107100 | High Beam, Turn Signal, Battery, Hazard | 12 |


Note: Consult with factory representatives or your distributor for OTHER light cluster options. Light clusters are configured in a 4-in-one combination contained inside a 2" diameter gauge. Symbols can be either SAE or ISO for either on- or off-highway use.

Note: Use ECM harness P/N 06876-01 to interface warning light cluster with external harness.

MINI-WARNING LIGHT MODULES/PANELS

| P/N | Description |  Volts |
|--------|--------------------------------------|---|
| 110735 | Battery Warning Light Module | 12 |
| 110736 | Hazard Light Module | 12 |
| 110737 | Oil Pressure Warning Light Module | 12 |
| 110738 | Oil Temperature Warning Light Module | 12 |
| 110739 | Turn Signal Warning Light Module | 12 |
| 110740 | Mini-warning Light Panel-Plastic | N/A |

EMERGENCY LAMP ASSEMBLY

| P/N | Description |  Volts | Candlepower |
|--------|---|---|-------------|
| 110741 | Magnetic trouble light with 18-foot power cord; ON-OFF switch; two lights-compartment and trouble light | 12 | 9.9 |

MECHANICAL TUBE KITS

| P/N | Description |
|----------|---|
| 07079-00 | Mechanical Gauge Tube Kit, 6', with Connectors |
| 07080-00 | Mechanical Gauge Tube Kit, 16', with Connectors |
| 07140-01 | Tube Kit, 25.5', with Barb Connector |
| 71264-00 | Pitot Tube Kit, 22.5', with Connectors and Pitot Assembly |

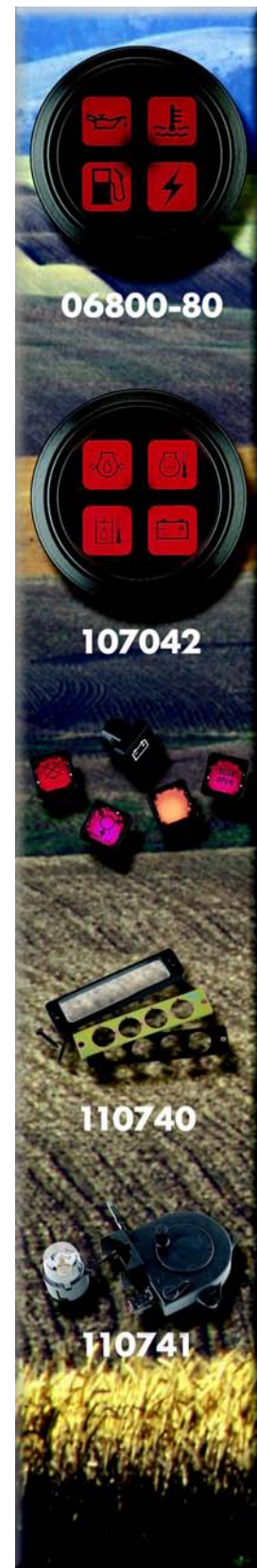
METER PROGRAMMING KIT

| P/N | Model | Description |
|--------|-------|--|
| 106351 | FPK-2 | Field Programming Kit, with Cable & Software |

Note: FPK-2 is designed to work with programmable speedometers only.



FPK-2 Meter Programming Kit



MAXIMA TECHNOLOGIES



SPECIALTY PRODUCTS & ACCESSORIES

MAXIMA TECHNOLOGIES



MOUNTING PANELS/KITS

| P/N | Description |
|----------|-------------------------|
| 03356-00 | 1-hole, Black |
| 03357-00 | 2-hole, Black |
| 03358-00 | 3-hole, Black |
| 03359-00 | 1-hole, Polished Chrome |
| 03360-00 | 2-hole, Polished Chrome |
| 03361-00 | 3-hole, Polished Chrome |
| 06372-02 | Bezel Overlay Kit |

Note: Mounting panels accommodate 2" diameter gauges and tachometers.

MOUNTING CUP

| P/N | Description |
|----------|--|
| 71461-00 | Mounting Cup for 3-3/8" tachometers/speedometers (includes mounting cup, hardware and molded socket) |

POINT-OF-PURCHASE DISPLAYS

| P/N | Description |
|--------|--|
| 110793 | 6-hole Configuration (For five 2" dia. gauges and one 3-3/8" dia. meter) |
| 110794 | 6-hole Configuration (For six 2" dia. gauges) |
| 110742 | 5-hole Configuration, (For five 2" dia. Smart Instrument® gauges & one control knob) |

Note: Panels do not include instruments.

PYROMETER ACCESSORIES

| P/N | Description |
|--------|---------------------------------|
| 100330 | Light Kit, 5/8", 12 VDC, 2-Wire |
| 100331 | Light Kit, 5/8", 24 VDC, 2-Wire |
| 100348 | Thermocouple |
| 100510 | Pyrometer Lead Wire, 84" |
| 100511 | Pyrometer Lead Wire, 168" |
| 109093 | Pyrometer Lead Wire, 120" |

SHUNTS (FOR AMMETERS)

| P/N | Amps |
|----------|------|
| 07598-00 | 100 |
| 07599-00 | 150 |
| 07600-00 | 200 |
| 07618-00 | 300 |

SWITCHES

| P/N | Model | Setting (psi) | Amps | Circuitry |
|--------|-------|---------------|------|------------------|
| 100450 | N/A | 4 | 5 | N.O./N.C. (Dual) |
| 100451 | N/A | 15 | 5 | N.O./N.C. (Dual) |
| 100452 | N/A | 60 | 5 | N.O./N.C. (Dual) |
| 100453 | N/A | 100 | 5 | N.O./N.C. (Dual) |
| 109746 | 835 | 4 | 8 | N.O. |
| 109747 | 835 | 4 | 8 | N.C. |
| 109754 | 835 | 4 | 8 | N.O./N.C. (Dual) |
| 109748 | 835 | 15 | 8 | N.O. |

SPECIALTY PRODUCTS & ACCESSORIES

SWITCHES

| P/N | Model | Setting (psi) | Amps | Circuitry |
|--------|-------|---------------|------|------------------|
| 109749 | 835 | 15 | 8 | N.C. |
| 109755 | 835 | 15 | 8 | N.O./N.C. (Dual) |
| 109750 | 835 | 60 | 8 | N.O. |
| 109751 | 835 | 60 | 8 | N.C. |
| 109756 | 835 | 60 | 8 | N.O./N.C. (Dual) |
| 109752 | 835 | 100 | 8 | N.O. |
| 109753 | 835 | 100 | 8 | N.C. |
| 109757 | 835 | 100 | 8 | N.O./N.C. (Dual) |

Applications Tips: 835 model pressure switches should not be used in applications exposed to extreme heat (200°F+). Units are not recommended for use with water or freon. Compatibility of steel base and actuating media should be verified by user.

TERMINAL/VOLTAGE ADAPTORS/CONNECTORS

| P/N | Description | Function |
|-----------|---|-------------------------|
| 06273-00 | Blade Terminal Kit | 4-blade Mounting |
| 06290-00 | Voltage Adaptor Kit-Datcon Match Gauges | 24 VDC to 12 VDC |
| 06290-04* | Voltage Adaptor Kit-Datcon Match Gauges | 32 VDC to 12 VDC |
| 103794 | Terminal Adaptor Kit-European Blade Pattern | M4 to 1/4" |
| 104220 | Terminal Adaptor Kit-European Blade Pattern | #6 Stud to 1/4" |
| 06370-06 | Molded Socket | Tachometer Interface |
| 06370-07 | Molded Socket | Speedometer Interface |
| 06876-01 | Harness, Warning Light Cluster | Warning Light Interface |
| 110743 | Integral Connector Harness (3-wire) | Gauge Interface |
| 110744 | Integral Connector Harness (4-wire) | Gauge Interface |

Note: Adaptors not compatible with Smart® Instruments.

Note: P/N 06290-04 has a minimum quantity required for purchase. Check with factory representative or distributor for more information.

THREAD ADAPTORS

| P/N | Description |
|----------|--|
| 07451-01 | Mechanical Gauge: 1/4", 3/8" & 1/2" Adaptors |
| 102086 | Temperature Sender: 1/4", 3/8" & 1/2" Adaptors |



109755

06273-00

06290-04

06370-06



CUSTOM PRODUCTS

CUSTOM PRODUCTS & SUPPORT FOR O.E.M. CUSTOMERS

Applications-specific, "ruggedized" products for original equipment

ELECTRONIC CONTROLS:

Electronic control units (ECUs) for operating vehicle systems or accessories, ergonomically designed for easy operation • Digital-to-analog (D/A) instrument controllers in SAE J1708/1587, J1939 or CAN-bus protocols that interface with vehicle ECMs • Integrated control systems, microprocessor-driven (e.g. inter-lock features and switch outputs for alarms) packaged inside monitoring systems • Battery monitoring systems that interact with vehicle charging systems and operating functions • Custom Smart Instrument® products that monitor & control critical engine and vehicle operating parameters

INSTRUMENT CLUSTERS/DISPLAYS:

Full range of custom-designed, applications-specific instrument clusters and displays including "hybrid" products (i.e. analog & digital formats) • Wide variety of shapes for easy drop-in installation, integration with the vehicle's instrument panel, and/or use as the actual instrument panel in lieu of a separate panel (where space is an issue) • "Ruggedized" products for severe environments (e.g. high moisture, shock & vibration, and temperature variation) • Designs integrated with vehicle senders/sensors for a "tuned" system

INSTRUMENTS & SENDERS:

Wide range of custom instruments & senders • Compatible with various electrical "matches" (ohms/resistance) • Custom designs for special-purpose machine functions • Engineered solutions for total systems compatibility • Custom styling & artwork for specific market application & customer preference • Specially designed mounting flanges, thread sizes & harness interfaces

STEERING COLUMN MODULES:

Numerous sizes, shapes & designs for O.E.M. applications • 16 different standard models with either AST or Datcon brand instruments or no instruments which serve as "platforms" for custom applications • Consolidate many discrete components into a single module for a major reduction in complexity & handling

PRODUCT SUPPORT:

Full-service support including new product design, development, testing & validation in accordance with PPAP, as well as program management support • Technology Center in Lancaster, Pennsylvania, U.S.A. • Engineering design in CAD & Pro-E at each manufacturing location • Product teams using QS-9000 compliant *Integrated Product & Quality Planning* (IPQP) process for new products • Troubleshooting & field support • Ongoing technical training for customers/distributors • 8-D problem solving process & use of process variability reduction (PVR) as continuous improvement method



CUSTOM PRODUCTS



MAXIMA TECHNOLOGIES



APPLICATIONS GUIDELINES

ELECTRICAL GAUGES:

☞ Datcon brand electrical gauges monitor oil pressure, oil temperature, water temperature, fuel level, fuel pressure, charging & voltage. Units have been “ruggedized” for the purpose of heavy-duty and industrial use.

☞ ADVANTAGES OF ELECTRICAL GAUGES?

- More durable internal components (materials & construction)
- Longer life due to robustness of internal materials, less susceptible to friction-induced wear
- Less susceptible to disruptive pressure pulsations (which in turn causes pointer flutter)
- Easier and safer to make input signal connections (no tubes exposed to potential damage)
- Not damaged by over-charging or over-pressurizing
- Capable of being fully sealed with no chance of pressurized media leaking into gauge
- Compatible with newer engines
- Easier to calibrate on-line via PC-based process, thus ensuring better accuracy
- Easier to integrate features such as warning lights & switch outputs
- Improved lighting especially at night

Memo: Maxima also supplies mechanical gauges that are ideal for certain applications. Consult with factory representatives or your distributor for more details.

☞ WHERE ARE THESE GAUGES BEING USED?

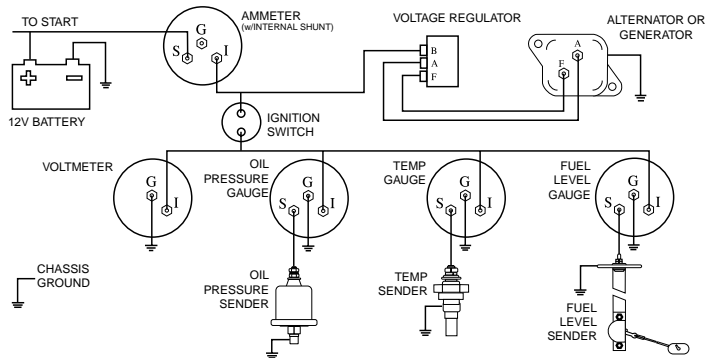
- Off-highway equipment
 - √ Agricultural equipment (tractors, combines, seeders, sprayers, research equipment, etc.)
 - √ Construction equipment (articulated dump trucks, asphalt finishers/pavers, backhoe loaders, compaction equipment, crawlers—dozers, excavators & loaders, graders, lift trucks—masted & telescoping, mini-excavators, rigid dump trucks, scrapers, skid-steer loaders, trenchers, wheeled excavators, wheeled loaders)
 - √ Forestry equipment
 - √ Mining equipment
- Specialty vehicles (aircraft—hourmeters only, chassis/body builders, ground support & airlines equipment, closed community/leisure vehicles, locomotives, mobile labs, mobile welding vehicles, military vehicles, power turf equipment—commercial & consumer, race cars, railroad maintenance-away equipment, refrigeration equipment, sweepsters, tankers, utility vehicles—outdoor)/Motorcycles
- On-highway equipment (trucks, buses, taxis, limousines, shuttles & passenger cars)
- Industrial (compressors, forklift trucks & material handling equipment, in-plant utility vehicles)
- Engine-powered equipment (compressors—mobile & stationary, generators—mobile & stationary, engine-builders, power plant-related equipment)
- Marine (recreational boats, high-performance boats, work boats, engine-builders, transportation)
- Emergency vehicles (body/chassis builders, crash trucks, fire trucks, ladder trucks, rescue equipment/ambulances, pump manufacturers)
- Recreational vehicles (Conventional RVs & high-end luxury cruisers)

☞ WHAT INFORMATION DO I NEED TO “SPEC OUT” A GAUGE?

- Determine the vehicle or machine’s monitoring functions and identify installation requirements. Reference block diagram on the next page for a typical installation.
- Determine sender inputs (ohms/resistance, i.e. the electrical “match”, such as a Datcon/SW range of 240-33.5Ω, for fuel level, European range of 10-180Ω, AC range of 0-90Ω, Chrysler Introl range of 10-73Ω, AST range of 327-8Ω (fuel gauge), or some other custom configuration)
- Identify operating voltage: 12 or 24 VDC
- Determine full-scale dial range
- Identify installation (blades or stud terminal mounting)
- Determine style/type of gauge (product line?)



APPLICATIONS GUIDELINES



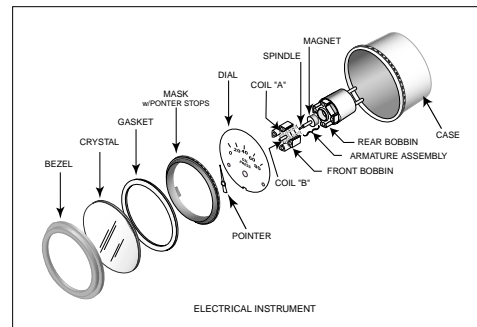
BLOCK DIAGRAM: TYPICAL GAUGE INSTALLATION

🔧 TROUBLESHOOTING TIPS?

Reference Datcon brand technical manual.

🔧 HOW DOES AN ELECTRICAL GAUGE WORK?

Electrical gauges consist of two coils, coil "A" & coil "B", comprised of copper wire that is wound around a magnetized armature consisting of a spindle and magnet, contained inside a front and rear bobbin assembly that is installed in a metal isolation can. This assembly is mounted inside a housing (case) and it serves as the platform for attaching the dial "face" (typically made of metal or polycarbonate), the pointer, mask, gasket, lens (crystal) and bezel. The armature is free to rotate inside the coils and it aligns naturally with the varying magnetic field produced by the amount of current flowing through the coils. Current variance is triggered by signals provided by the sender. The armature is surrounded by dampening fluid that minimizes pointer fluctuations caused by shock and vibration. Units are calibrated by setting specific dial readings via a computerized process. Calibration accuracy is impacted by sender tolerance and gauge movement tolerance, so care should be exercised understand the system's tolerance "stack-up".



SPEEDOMETERS & SPEEDOMETERS WITH ODOMETERS

🔧 Datcon brand speedometers and speedometers with odometers indicate the speed of the vehicle and total distance traveled by the vehicle. Standard electronic speedometers may be factory-calibrated or adjusted through a potentiometer. Programmable speedometers can be adjusted to custom applications using an 8-position DIP-switch located on the back of the instrument. In addition, certain models may be programmed through a PC interface using a field programming kit (FPK-2). Units obtain signals from pulse generators and magnetic (pulse) sensors. Odometers use electronic circuitry configured to respond to the variable frequency input signal.

🔧 BENEFITS FROM USING A SPEEDOMETER OR SPEEDOMETER WITH ODOMETER?

- Monitor vehicle speed (a legal requirement)
- Assure safe control of vehicle
- Keep track of distance traveled (whether for the life of the vehicle—also a legal requirement for passenger cars—or for short distances, e.g. using a trip odometer) and/or use miles/kilometers driven as a service reminder or fleet tracking tool

APPLICATIONS GUIDELINES

☛ WHERE CAN I USE A SPEEDOMETER OR A SPEEDOMETER WITH ODOMETER?

- Off-highway equipment
- Specialty vehicles/motorcycles
- On-highway equipment
- Industrial
- Marine
- Emergency vehicles
- Recreational vehicles

☛ WHAT INFORMATION DO I NEED TO "SPEC OUT" A SPEEDOMETER?

- Signal input: Pulses per mile/kilometer
- Pulse source: Magnetic sensor or pulse generator, 8 or 30 pulses per revolution
- Operating voltage: 12 or 24 VDC
- Full-scale dial range
- Installation (blades or stud terminal mounting)
- Tools required for installation: Electronic pulse counter or FPK-2 kit for programmable speedometers, 1/4" & 3/16" nut drivers for tightening terminals and mounting nuts (Note: Standard electronic speedometers are factory calibrated although they can be adjusted through a potentiometer)
- Style/type of gauge (product line?)

☛ TROUBLESHOOTING TIPS?

- Speedometer does not function: Speedometer wiring-to-power source interrupted
- Speedometer does not adequately read correct vehicle speed: Sender-to-speedometer signal problem, change in tire size, gear ratio or pulse source
- Pointer is not resting at 0: Apply power, pointer should return to 0; otherwise, specify unit with a return-to-zero feature (RTZ)

TACHOMETERS & TACHOMETERS WITH HOURMETERS

☛ Datcon brand tachometers and tachometers with hourmeters are ideal for measuring engine revolutions per minute or second, gallons per minute or hour, feet or meters per minute, and elapsed engine running time (with the hourmeter). The typical diesel engine range is 600-5,000 RPM. The typical automotive gasoline engine range is 500-7,000 RPM. Certain marine and motorcycle engines range as high as 10,000 RPM. Note that ALL Datcon brand tachometers are electric instruments although Maxima does sell other mechanical tachometers (AST & SW brands).

☛ BENEFITS FROM USING A TACHOMETER OR TACHOMETER WITH ODOMETER?

- Monitor the ratio of vehicle speed to engine speed as an indicator of overall vehicle performance
- Control engine performance through normal load & nominal speed
- Assess current engine performance
- Assess engine hours for the purpose of maintenance

☛ WHERE CAN I USE A TACHOMETER?

- Off-highway equipment
- Specialty vehicles/motorcycles
- On-highway equipment
- Industrial
- Engine-powered equipment
- Marine
- Emergency vehicles
- Recreational vehicles



APPLICATIONS GUIDELINES

🔧 WHAT INFORMATION DO I NEED TO “SPEC OUT” A TACHOMETER?

- Input source: Ignition coil, crankshaft, inductive pick-up, alternator
- Pulse source: 8/10/12/14/16-pole alternator, 16-pole pulse generator, 90-180 tooth flywheel, or digital signal source
- Operating voltage: 12 or 24 VDC
- Full-scale dial range
- Installation (blades or stud terminal mounting)
- Requirement for inhibited feature for hourmeter (i.e. to record engine hours only when the engine is running as opposed to when the ignition switch is on)
- Tools required for installation: 5/64" or 2.0 mm hex wrench for calibration, 1/4" & 3/16" nut drivers for tightening terminals and mounting nuts
- Style/type of gauge (product line?)

🔧 TROUBLESHOOTING TIPS?

- Tachometer reading does not match engine speed: Incorrect switch position on back of tachometer or incorrect sender-to-tachometer match
- Tachometer runs intermittently: Break in wiring or loose wiring
- Tachometer will not function: Blown fuse, tachometer wiring-to-power source interrupted, conductive obstruction, or magnetic pick-up positioned too far away from flywheel
- Tachometer read-out does not match engine speed: Incorrect gate time setting on back of instrument, calibration error, incorrect sender-to-tachometer match
- Pointer is not resting at 0: Apply power, pointer should return to 0; otherwise, specify unit with a return-to-zero feature (RTZ)

🔧 HOW DO SENDERS WORK?

Senders that drive typical electrical gauges use variable resistance technology. Temperature senders, regardless of whether they are used for oil or water, rely on an integral thermistor that responds to varying temperatures with a varying resistance output that drives the pointer on the gauge. Pressure senders use the same principal, wherein as pressure increases, a pivoting arm and contact spring inside the sender generate a resistance change to the unit's variable internal resistor, thus producing a signal for the gauge. Typical “mechanical” style fuel senders, of course, use a float and arm assembly to register changes in a resistance coil. The resistance output of the sender changes with fuel level changes as communicated by the position of the moving float. Each sender possesses a different rate of resistance change, or electrical “match”, as designed for a specific instrument's electrical footprint. Temperature senders are described as having a “low match” for temperatures up to 240°F, a “high match” for up to 320°F, or “extra high match” for temperatures above 320°F. Pressure senders are described as being “standard” duty (i.e. for gasoline-engine applications in low shock & vibration operating environments), “heavy-duty” (i.e. for diesel engines & medium-to-high shock & vibration environments) or “severe duty” for ultra rugged, harsh operating environments.

🔧 WHEN WOULD I USE AN INSTRUMENT CLUSTER INSTEAD OF REGULAR GAUGES OR METERS?

- Instrument clusters are ideal for vehicles or machines where it makes sense to combine multiple gauge and meter functions into a single package (as would be desired with a higher volume program).
- Clusters provide easy installation using a single multi-pin connector that interfaces with the vehicle or machine's harness and simple mounting tabs or screws that fasten to an instrument panel.
- Clusters share a common circuit board (the “mother” board) and gauge movements are attached to this board. A “mask” can give the appearance that round instruments are still being used.
- In some cases, clusters can be serviced although by the factory only.
- Clusters provide styling and packaging flexibility and where appropriate, they can be interfaced to the vehicle's electronic engine. In addition, they can include LCD or dot-matrix displays.
- “Standard” clusters are available in Datcon brand, wherein Maxima has tooled most “hard parts” (e.g. the housing), and these units can be modified somewhat for basic changes. “Custom” clusters involve tooling that is paid for by the customer, thus making them proprietary.



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MAXIMA TECHNOLOGIES

| Instrument Type | HEAVY DUTY AUTOMOTIVE | | | | HEAVY DUTY INDUSTRIAL | | | |
|---|-----------------------|---------------|---------------|----|-----------------------|---------------|---------------|----|
| | Scale | 52mm Mech. | 52mm Elec. | Pg | Scale | 52mm Mech. | 52mm Elec. | Pg |
| Air Brake Pressure | 0-150 psi | 101314 | | 4 | | | | |
| | 0-150 psi | 101864 | | 4 | | | | |
| Air Pressure | 0-150 psi | 101310 | | 4 | 0-150 psi | 100190 | 101213 | 13 |
| | 0-150 psi | 101860 | | 4 | 0-150 psi | 100191 | 101214 | 13 |
| | 0-200 psi | 101311 | | 4 | | | | |
| | 0-200 psi | 101861 | | 4 | | | | |
| Air Pressure - Dual | | | | | 0-150 psi | 100250 | | 13 |
| | | | | | 0-150 psi | 100251 | | 13 |
| Ammeters | 10-0-10 A | | 101350 | 4 | 10-0-10 A | | 102480 | 13 |
| | 10-0-10 A | | 101900 | 4 | 10-0-10 A | | 102481 | 13 |
| | 20-0-20 A | | 101351 | 4 | 20-0-20 A | | 101077 | 13 |
| | 20-0-20 A | | 101901 | 4 | 20-0-20 A | | 101078 | 13 |
| | 30-0-30 A | | 101352 | 4 | 30-0-30 A | | 100158 | 13 |
| | 30-0-30 A | | 101902 | 4 | 30-0-30 A | | 100159 | 13 |
| | 40-0-40 A | | 101353 | 4 | 40-0-40 A | | 101079 | 13 |
| | 40-0-40 A | | 101903 | 4 | 40-0-40 A | | 101080 | 13 |
| | 60-0-60 A | | 101354 | 4 | 60-0-60 A | | 100160 | 13 |
| | 60-0-60 A | | 101904 | 4 | 60-0-60 A | | 100161 | 13 |
| | 100-0-100 A | | 101355 | 4 | 80-0-80 A | | 101995 | 13 |
| | 100-0-100 A | | 101905 | 4 | 100-0-100 A | | 100162 | 13 |
| | 150-0-150 A | | 101356 | 4 | 100-0-100 A | | 100163 | 13 |
| | 150-0-150 A | | 101906 | 4 | 150-0-150 A | | 100164 | 13 |
| | 200-0-200 A | | 101357 | 4 | 150-0-150 A | | 100165 | 13 |
| | 200-0-200 A | | 101907 | 4 | 300-0-300 A | | 106373 | 13 |
| | 300-0-300 A | | 102381 | 4 | | | | |
| | 300-0-300 A | | 106374 | 4 | | | | |
| Fuel (see also Index page 76 for Smart Instruments®) | E-1/2-F | | 101347 | 5 | E-1/2-F | | 100176 | 14 |
| | E-1/2-F | | 101348 | 5 | E-1/2-F | | 100177 | 14 |
| | E-1/2-F | | 101349 | 5 | E-1/2-F | | 100677 | 14 |
| | E-1/2-F | | 101897 | 5 | E-1/2-F | | 100678 | 14 |
| | E-1/2-F | | 101899 | 5 | E-1/2-F | | 100726 | 14 |
| | E-1/2-F | | 102650 | 5 | E-1/2-F | | 101584 | 14 |
| | E-1/2-F | | 102651 | 5 | E-1/2-F | | 101585 | 14 |
| | E-1/2-F | | 104353 | 5 | E-1/2-F | | 102478 | 14 |
| | E-1/2-F | | 104354 | 5 | E-1/2-F | | 102479 | 14 |
| Fuel Pressure | 0-15 psi | 101312 | | 5 | 0-15 psi | 100168 | | 14 |
| | 0-15 psi | 101862 | | 5 | 0-15 psi | 100169 | | 14 |
| | 0-30 psi | 101313 | | 5 | 0-30 psi | 100170 | | 14 |
| | 0-30 psi | 101863 | | 5 | 0-30 psi | 100171 | | 14 |
| | | | | | 0-80 psi | 101190 | | 14 |
| | | | | | 0-80 psi | 101191 | | 14 |
| Hourmeter (see also Index page 76 for Smart Instruments®) | | | | | | | | |
| Hydraulic Oil Temperature | | | | | 100-240°F | | 106674 | 14 |
| Manifold Pressure | 0-40 psi | 102366 | | 5 | 0-30 psi | 100824 | | 14 |
| | 0-40 psi | 102367 | | 5 | 0-30 psi | 100826 | | 14 |
| Oil Pressure (see also Index page 76 for Smart Instruments®) | 0-40 psi | | 101329 | 5 | 0-5 bar | | 100728 | 15 |
| | 0-40 psi | | 101879 | 5 | 0-5 bar | | 100729 | 15 |
| | 0-60 psi | | 101331 | 5 | 0-10 bar | | 100730 | 15 |
| | 0-60 psi | | 101881 | 5 | 0-10 bar | | 100731 | 15 |
| | 0-60 psi | | 101882 | 5 | 0-25 bar | | 100732 | 15 |
| | 0-80 psi | | 101333 | 5 | 0-25 bar | | 100733 | 15 |
| | 0-80 psi | | 101334 | 5 | 0-60 psi | | 103340 | 14 |
| | 0-80 psi | | 101883 | 5 | 0-60 psi | 102252 | | 15 |
| | 0-80 psi | | 101884 | 5 | 0-80 psi | | 100172 | 14 |
| | 0-80 psi | | 102653 | 5 | 0-80 psi | | 100173 | 14 |
| | 0-80 psi | | 104342 | 5 | 0-80 psi | | 101574 | 14 |
| | 0-80 psi | 101316 | | 6 | 0-80 psi | 100187 | 101575 | 15 |
| | 0-80 psi | 101866 | | 6 | 0-80 psi | 100186 | 103098 | 15 |
| | 0-100 psi | | 101336 | 5 | 0-80 psi | | 103099 | 15 |
| | 0-100 psi | | 101886 | 5 | 0-100 psi | | 100174 | 15 |



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MAXIMA TECHNOLOGIES

| Instrument Type | HEAVY DUTY AUTOMOTIVE | | | | HEAVY DUTY INDUSTRIAL | | | |
|------------------------------------|-----------------------|---------------|---------------|----|-----------------------|---------------|---------------|----|
| | Scale | 52mm Mech. | 52mm Elec. | Pg | Scale | 52mm Mech. | 52mm Elec. | Pg |
| Tachometers (Cont'd) | | | 3-3/8" | | | | | |
| | 0-3000 RPM | | 103727 | 7 | 0-4000 RPM | | 106461 | 17 |
| | 0-3000 RPM | | 103728 | 7 | 0-4000 RPM | | 106462 | 17 |
| | 0-3000 RPM | | 103729 | 7 | 0-4000 RPM | | 106475 | 17 |
| | 0-3000 RPM | | 103730 | 7 | 0-4000 RPM | | 106476 | 17 |
| | 0-3000 RPM | | 103731 | 7 | 0-4000 RPM | | 106477 | 17 |
| | 0-3000 RPM | | 103732 | 8 | 0-4000 RPM | | 106478 | 17 |
| | 0-4000 RPM | | 103663 | 8 | 0-4000 RPM | | 106479 | 17 |
| | 0-4000 RPM | | 103664 | 8 | 0-4000 RPM | | 106492 | 17 |
| | 0-4000 RPM | | 103665 | 8 | 0-4000 RPM | | 106493 | 17 |
| | 0-4000 RPM | | 103666 | 8 | 0-4000 RPM | | 106913 | 17 |
| | 0-4000 RPM | | 103667 | 8 | 0-4000 RPM | | 106915 | 17 |
| | 0-4000 RPM | | 103733 | 8 | 0-6000 RPM | | 106463 | 17 |
| | 0-4000 RPM | | 103734 | 8 | 0-6000 RPM | | 106464 | 17 |
| | 0-4000 RPM | | 103735 | 8 | 0-6000 RPM | | 106465 | 17 |
| | 0-4000 RPM | | 103736 | 8 | 0-6000 RPM | | 106480 | 17 |
| | 0-4000 RPM | | 103737 | 8 | 0-6000 RPM | | 106481 | 17 |
| | 0-4000 RPM | | 103738 | 8 | 0-6000 RPM | | 106482 | 17 |
| | 0-6000 RPM | | 103668 | 8 | 0-6000 RPM | | 106486 | 17 |
| | 0-6000 RPM | | 103669 | 8 | 0-8000 RPM | | 106466 | 18 |
| | 0-6000 RPM | | 103670 | 8 | 0-8000 RPM | | 106468 | 18 |
| | 0-6000 RPM | | 103672 | 8 | | | 3-3/8" | |
| | 0-6000 RPM | | 103739 | 8 | 0-3000 RPM | | 100234 | 18 |
| | 0-6000 RPM | | 103740 | 8 | 0-3000 RPM | | 100694 | 18 |
| | 0-6000 RPM | | 103741 | 8 | 0-3000 RPM | | 100818 | 18 |
| | 0-8000 RPM | | 103674 | 8 | 0-3000 RPM | | 100820 | 18 |
| | 0-8000 RPM | | 103675 | 8 | 0-4000 RPM | | 100230 | 18 |
| | 0-8000 RPM | | 103746 | 8 | 0-4000 RPM | | 100231 | 18 |
| | 0-10000 RPM | | 103767 | 8 | 0-4000 RPM | | 100232 | 18 |
| | | | | | 0-4000 RPM | | 100237 | 18 |
| | | | | | 0-6000 RPM | | 100226 | 18 |
| | | | | | 0-8000 RPM | | 100228 | 18 |
| | | | | | 0-8000 RPM | | 100229 | 18 |
| Tachometers with Hourmeters | | | 3-3/8" | | | | 3-3/8" | |
| | 0-3000 RPM | | 101828 | 8 | 0-3000 RPM | | 100696 | 18 |
| | 0-3000 RPM | | 101829 | 8 | 0-3000 RPM | | 102471 | 18 |
| | 0-3000 RPM | | 101831 | 8 | 0-3000 RPM | | 102473 | 18 |
| | 0-3000 RPM | | 103678 | 8 | 0-4000 RPM | | 100238 | 18 |
| | 0-3000 RPM | | 103679 | 8 | 0-4000 RPM | | 100239 | 18 |
| | 0-3000 RPM | | 103680 | 8 | 0-4000 RPM | | 100240 | 18 |
| | 0-3000 RPM | | 103681 | 8 | 0-4000 RPM | | 100242 | 18 |
| | 0-3000 RPM | | 103682 | 8 | | | | |
| | 0-3000 RPM | | 103683 | 8 | | | | |
| | 0-3000 RPM | | 103749 | 8 | | | | |
| | 0-3000 RPM | | 103750 | 8 | | | | |
| | 0-3000 RPM | | 103751 | 8 | | | | |
| | 0-3000 RPM | | 103753 | 8 | | | | |
| | 0-3000 RPM | | 103754 | 8 | | | | |
| | 0-3000 RPM | | 108009 | 8 | | | | |
| | 0-4000 RPM | | 101285 | 8 | | | | |
| | 0-4000 RPM | | 103684 | 9 | | | | |
| | 0-4000 RPM | | 103685 | 9 | | | | |
| | 0-4000 RPM | | 103686 | 9 | | | | |
| | 0-4000 RPM | | 103687 | 9 | | | | |
| | 0-4000 RPM | | 103688 | 9 | | | | |
| | 0-4000 RPM | | 103755 | 9 | | | | |
| | 0-4000 RPM | | 103756 | 9 | | | | |
| | 0-4000 RPM | | 103757 | 9 | | | | |
| | 0-4000 RPM | | 103758 | 9 | | | | |
| | 0-4000 RPM | | 103759 | 9 | | | | |
| | 0-4000 RPM | | 107648 | 9 | | | | |
| | 0-4000 RPM | | 107682 | 9 | | | | |
| | 0-6000 RPM | | 103689 | 9 | | | | |
| | 0-6000 RPM | | 103690 | 9 | | | | |
| | 0-6000 RPM | | 103692 | 9 | | | | |
| | 0-6000 RPM | | 103694 | 9 | | | | |
| | 0-6000 RPM | | 103760 | 9 | | | | |
| | 0-6000 RPM | | 103761 | 9 | | | | |
| Tachometers - LCD Digital | | | 3-3/8" | | | | 3-3/8" | |
| | N/A | | 103676 | 9 | N/A | | 103676 | 18 |
| | N/A | | 103747 | 9 | N/A | | 103747 | 18 |
| | N/A | | 104928 | 9 | N/A | | 104928 | 18 |
| Transmission Oil Pressure | | | | | | | | |
| | 0-300 psi | 101317 | | 9 | 0-300 psi | 100196 | | 19 |



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MAXIMA TECHNOLOGIES

| Instrument Type | HEAVY DUTY AUTOMOTIVE | | | | HEAVY DUTY INDUSTRIAL | | | |
|---|-----------------------|---------------|---------------|----|-----------------------|---------------|---------------|----|
| | Scale | 52mm Mech. | 52mm Elec. | Pg | Scale | 52mm Mech. | 52mm Elec. | Pg |
| Transmission Oil Pressure (Cont'd) | | | | | | | | |
| | 0-300 psi | 101867 | | 9 | 0-300 psi | 100197 | | 19 |
| | 0-400 psi | 101318 | | 9 | 0-400 psi | 100198 | 105296 | 19 |
| | 0-400 psi | 101868 | | 9 | 0-400 psi | 100199 | 105760 | 19 |
| | | | | | 0-400 psi | | 108838 | 19 |
| Transmission Oil Temperature (see also index page 76 for Smart Instruments®) | | | | | | | | |
| | 140-320°F | | 102312 | 10 | 100-280°F | | 100685 | 19 |
| | 140-320°F | | 102313 | 10 | 100-280°F | | 100686 | 19 |
| | 140-320°F | | 104355 | 10 | | | | |
| Trim | | | | | | | | |
| | N/A | | 101369 | 10 | N/A | | 100742 | 19 |
| | N/A | | 101370 | 10 | N/A | | 100745 | 19 |
| | | | | | | | | |
| | | | | | | | | |
| Turbo Boost | | | | | | | | |
| | | | | | 0-30 psi | 101490 | | 19 |
| | | | | | 0-30 psi | 101491 | | 19 |
| Turbo Pressure | | | | | | | | |
| | 0-30 in Hg/0-15 psi | 101320 | | 10 | 0-30 in Hg/0-15 psi | 100192 | | 19 |
| | 0-30 in Hg/0-15 psi | 101870 | | 10 | 0-30 in Hg/0-15 psi | 100193 | | 19 |
| | | | | | 0-30 in Hg/0-30 psi | 101085 | | 19 |
| | | | | | 0-30 in Hg/0-30 psi | 101086 | | 19 |
| Vacuum | | | | | | | | |
| | 0-30 in Hg | 101319 | | 10 | 0-30 in Hg | 100194 | | 20 |
| | 0-30 in Hg | 101869 | | 10 | 0-30 in Hg | 100195 | | 20 |
| Voltmeters (see also index page 76 for Smart Instruments®) | | | | | | | | |
| | 8-18 V | | 101358 | 10 | 8-18 V | | 100166 | 20 |
| | 8-18 V | | 101360 | 10 | 8-18 V | | 100167 | 20 |
| | 8-18 V | | 101908 | 10 | 8-18 V | | 100262 | 20 |
| | 8-18 V | | 101910 | 10 | 8-18 V | | 100263 | 20 |
| | 8-18 V | | 102663 | 10 | 16-36 V | | 100184 | 20 |
| | 16-36 V | | 101359 | 10 | 16-36 V | | 100185 | 20 |
| | 16-36 V | | 101909 | 10 | 16-36 V | | 100264 | 20 |
| | 16-36 V | | 101911 | 10 | 16-36 V | | 100265 | 20 |
| Water Pressure | | | | | | | | |
| | 0-15 psi | 101364 | | 10 | | | | |
| | 0-30 psi | 101365 | | 10 | | | | |
| Water Temperature (see also index page 77 for Smart Instruments®) | | | | | | | | |
| | 100-240°F | | 101341 | 11 | 100-240°F | | 100683 | 20 |
| | 100-240°F | | 101891 | 11 | 100-240°F | | 100684 | 20 |
| | 100-240°F | | 102657 | 11 | 100-240°F | | 101586 | 20 |
| | 100-240°F | | 104345 | 11 | 100-240°F | | 101587 | 20 |
| | 100-240°F | | 104346 | 11 | 100-250°F | | 100734 | 20 |
| | 100-250°F | | 105342 | 11 | 100-250°F | | 100735 | 20 |
| | 100-280°F | 101321 | 101342 | 11 | 100-280°F | | 100182 | 20 |
| | 100-280°F | 101322 | 101892 | 11 | 100-280°F | | 100183 | 20 |
| | 100-280°F | 101323 | 102665 | 11 | 100-280°F | | 101582 | 20 |
| | 100-280°F | 101324 | | 11 | 100-280°F | | 101583 | 20 |
| | 100-280°F | 101871 | | 11 | 100-280°F | 100256 | | 20 |
| | 100-280°F | 101872 | | 11 | 100-280°F | 100257 | | 20 |
| | 100-280°F | 101873 | | 11 | 100-280°F | 100258 | | 20 |
| | 100-280°F | 101874 | | 11 | 100-280°F | 100259 | | 20 |
| | 100-280°F | 102055 | | 11 | 100-280°F | 100260 | | 20 |
| | 100-280°F | 105777 | | 11 | 100-280°F | 100261 | | 20 |
| | 140-320°F | | 101343 | 11 | 100-280°F | 100200 | | 20 |
| | 140-320°F | | 101893 | 11 | 100-280°F | 100201 | | 20 |
| | | | | | 100-280°F | 100202 | | 20 |
| | | | | | 100-280°F | 100203 | | 20 |
| | | | | | 100-280°F | 100204 | | 20 |
| | | | | | 100-280°F | 100205 | | 20 |
| | | | | | 100-280°F | 100206 | | 20 |
| | | | | | 100-280°F | 100207 | | 21 |
| | | | | | 100-280°F | 100208 | | 21 |
| | | | | | 100-280°F | 100209 | | 21 |
| | | | | | 140-320°F | | 101081 | 20 |
| | | | | | 140-320°F | | 101082 | 20 |
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|-------------------------------------|-------------|------------|----|-------------|------------|----|-------------|------------|----|---------------------|------------|----|
| | Scale | 52mm Elec. | Pg | Scale | 52mm Elec. | Pg | Scale | 52mm Elec. | Pg | Scale | 52mm Elec. | Pg |
| Delay-Timer Relay | | | | | | | N/A | 107767 | 37 | | | |
| Fuel | | | | | | | | | | | | |
| | E-1/2-F | 102750 | 34 | | | | E-1/2-F | 109011 | 36 | | | |
| | E-1/2-F | 103108 | 34 | | | | | | | | | |
| | E-1/2-F | 103109 | 34 | | | | | | | | | |
| | E-1/2-F | 103110 | 34 | | | | | | | | | |
| | E-1/2-F | 104256 | 34 | | | | | | | | | |
| Hourmeters | | | | | | | | | | | | |
| | | | | | | | | | | 9999.9 | 100222 | 42 |
| | | | | | | | | | | 9999.9 | 100223 | 42 |
| | | | | | | | | | | 9999.9 | 100224 | 42 |
| | | | | | | | | | | 9999.9 | 100225 | 42 |
| | | | | | | | | | | 9999.9 | 100689 | 42 |
| | | | | | | | | | | 9999.9 | 100690 | 42 |
| | | | | | | | | | | 9999.9 | 100843 | 42 |
| | | | | | | | | | | 9999.9 | 100844 | 42 |
| | | | | | | | | | | 9999.9 | 102164 | 42 |
| | | | | | | | | | | 9999.9 | 102167 | 42 |
| | | | | | | | | | | 99,999 | 102162 | 42 |
| | | | | | | | | | | 99,999 | 102163 | 42 |
| | | | | | | | | | | 99,999 | 102169 | 42 |
| | | | | | | | | | | 99,999 | 109229 | 42 |
| | | | | | | | | | | 99,999.9 | 102033 | 42 |
| | | | | | | | | | | 99,999.9 | 102035 | 42 |
| Oil Pressure | | | | | | | | | | | | |
| | 0-80 psi | 103111 | 34 | 0-80 psi | 108232 | 36 | 0-80 psi | 107546 | 36 | | | |
| | 0-80 psi | 103112 | 34 | 0-80 psi | 110435 | 36 | 0-80 psi | 108274 | 36 | | | |
| | 0-80 psi | 103113 | 34 | 0-100 psi | 108174 | 36 | 0-100 psi | 107547 | 36 | | | |
| | 0-80 psi | 103114 | 34 | 0-100 psi | 109111 | 36 | 0-100 psi | 107845 | 36 | | | |
| | 0-80 psi | 104251 | 34 | | | | | | | | | |
| | 0-100 psi | 102751 | 34 | | | | | | | | | |
| | 0-100 psi | 103115 | 34 | | | | | | | | | |
| | 0-100 psi | 103116 | 34 | | | | | | | | | |
| | 0-100 psi | 103117 | 34 | | | | | | | | | |
| | 0-100 psi | 104252 | 34 | | | | | | | | | |
| | 0-100 psi | 105565 | 34 | | | | | | | | | |
| | 0-125 psi | 107843 | 34 | | | | | | | | | |
| Oil Temperature | | | | | | | | | | | | |
| | 100-240°F | 103181 | 34 | 100-280°F | 108789 | 36 | 100-280°F | 107847 | 37 | | | |
| | 100-240°F | 103182 | 34 | | | | 100-280°F | 109186 | 37 | | | |
| | 100-240°F | 103183 | 34 | | | | | | | | | |
| | 100-240°F | 108166 | 34 | | | | | | | | | |
| | 100-280°F | 103187 | 34 | | | | | | | | | |
| | 100-280°F | 103188 | 34 | | | | | | | | | |
| | 140-320°F | 103190 | 34 | | | | | | | | | |
| | 140-320°F | 103191 | 34 | | | | | | | | | |
| | 140-320°F | 104253 | 34 | | | | | | | | | |
| Sentinel Hourmeters | | | | | | | | | | | | |
| | | | | | | | | | | 0-99,999.9 | 110190 | 42 |
| | | | | | | | | | | 0-99,999.9 | 110191 | 42 |
| | | | | | | | | | | 0-99,999.9 | 110192 | 42 |
| | | | | | | | | | | 0-99,999.9 | 110193 | 42 |
| Transmission Oil Temperature | | | | | | | | | | | | |
| | 140-320°F | 103177 | 35 | | | | 140-320°F | 109009 | 37 | | | |
| | 140-320°F | 103178 | 35 | | | | | | | | | |
| | 140-320°F | 103179 | 35 | | | | | | | | | |
| | 140-320°F | 103180 | 34 | | | | | | | | | |
| | 140-320°F | 104257 | 34 | | | | | | | | | |
| | 140-320°F | 107202 | 35 | | | | | | | | | |
| | 180-350°F | 106993 | 34 | | | | | | | | | |
| | 180-350°F | 107064 | 34 | | | | | | | | | |
| | 180-350°F | 107563 | 34 | | | | | | | | | |
| | 180-350°F | 107565 | 34 | | | | | | | | | |
| Voltmeters | | | | | | | | | | | | |
| | 8-18 V | 103129 | 35 | | | | | | | | | |
| | 8-18 V | 103130 | 35 | | | | | | | | | |
| | 8-18 V | 103131 | 35 | | | | | | | | | |
| | 8-18 V | 103132 | 35 | | | | | | | | | |
| | 8-18 V | 104250 | 35 | | | | | | | | | |



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| Instrument Type | SMART 2000™ | | | SMART 2001™ | | | SMART 2002™ | | | HOURMETERS/SENTINEL | | |
|-------------------|-------------|------------|----|-------------|------------|----|-------------|------------|----|---------------------|------------|----|
| | Scale | 52mm Elec. | Pg | Scale | 52mm Elec. | Pg | Scale | 52mm Elec. | Pg | Scale | 52mm Elec. | Pg |
| Water Temperature | 100-240°F | 103119 | 35 | 100-240°F | 109112 | 36 | 100-240°F | 108347 | 37 | | | |
| | 100-240°F | 103120 | 35 | 100-280°F | 110434 | 36 | 100-280°F | 107549 | 37 | | | |
| | 100-240°F | 103121 | 35 | 100-280°F | 108234 | 36 | 100-280°F | 107846 | 37 | | | |
| | 100-240°F | 104254 | 35 | | | | | | | | | |
| | 100-240°F | 107411 | 35 | | | | | | | | | |
| | 100-240°F | 107548 | 35 | | | | | | | | | |
| | 100-280°F | 102752 | 35 | | | | | | | | | |
| | 100-280°F | 103122 | 35 | | | | | | | | | |
| | 100-280°F | 103123 | 35 | | | | | | | | | |
| | 100-280°F | 103124 | 35 | | | | | | | | | |
| | 100-280°F | 104255 | 35 | | | | | | | | | |
| | 100-280°F | 105566 | 35 | | | | | | | | | |
| | 100-280°F | 105678 | 35 | | | | | | | | | |
| | 100-280°F | 107004 | 35 | | | | | | | | | |
| | 100-280°F | 107236 | 35 | | | | | | | | | |
| | 100-280°F | 109127 | 35 | | | | | | | | | |
| | 100-280°F | 109128 | 35 | | | | | | | | | |
| | 100-280°F | 109129 | 35 | | | | | | | | | |
| | 100-280°F | 109130 | 35 | | | | | | | | | |
| | 140-320°F | 103125 | 35 | | | | | | | | | |
| | 140-320°F | 103126 | 35 | | | | | | | | | |
| | 140-320°F | 103127 | 36 | | | | | | | | | |
| | 140-320°F | 103128 | 36 | | | | | | | | | |

| Sensor Type | IntelliSensor® | | |
|--------------|----------------|--------|----|
| | Tank Depth | P/N | Pg |
| Sensors-Fuel | 11.0 | 109364 | 45 |
| | 13.5 | 107672 | 45 |
| | 14.0 | 107581 | 45 |
| | 15.3 | 108656 | 45 |
| | 16.0 | 108412 | 45 |
| | 16.5 | 106595 | 45 |
| | 16.5 | 106598 | 45 |
| | 18.5 | 106596 | 45 |
| | 18.5 | 106599 | 45 |
| | 19.8 | 107870 | 45 |
| | 20.0 | 105696 | 45 |
| | 20.0 | 106590 | 45 |
| | 20.5 | 106597 | 45 |
| | 20.5 | 106600 | 45 |
| | 22.0 | 105697 | 45 |
| | 22.0 | 106591 | 45 |
| | 22.0 | 108061 | 45 |
| | 23.0 | 105698 | 45 |
| | 23.0 | 106592 | 45 |
| | 24.0 | 105699 | 45 |
| | 24.0 | 106593 | 45 |
| | 24.0 | 105600 | 45 |
| | 25.0 | 105700 | 45 |
| | 25.0 | 106594 | 45 |
| | 25.3 | 105670 | 45 |
| | 26.0 | 105701 | 45 |
| | 26.0 | 106800 | 45 |
| | 30.5 | 107820 | 45 |
| | 30.5 | 107392 | 45 |
| | 33.0 | 107802 | 45 |
| | 37.2 | 108917 | 45 |
| | 44.0 | 107753 | 45 |
| | 50.0 | 108475 | 45 |



Note: Custom European style IntelliSensor® shown. This is not a standard product!

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|--|-------------------|---------------|----------|----|
| Sender Type | | | P/N | Pg |
| Fuel Senders - Heavy Duty Adjustable | Tank Depth | | | |
| | 6-24" | | 100083 | 47 |
| | 6-24" | | 100436 | 47 |
| | 6-24" | | 100437 | 47 |
| | 6-24" | | 100438 | 47 |
| | 6-24" | | 100967 | 47 |
| | 6-24" | | 102535 | 47 |
| | 6-24" | | 104734 | 47 |
| | 6-24" | | 104735 | 47 |
| | 6-24" | | 104738 | 47 |
| | 6-24" | | 104739 | 47 |
| | 6-24" | | 104742 | 47 |
| | 6-24" | | 104743 | 47 |
| Fuel Senders - Isolated Ground Adjustable | Tank Depth | | | |
| | 6-24" | | 100968M | 47 |
| | 6-24" | | 100969M | 47 |
| | 6-24" | | 100970M | 47 |
| | 6-24" | | 104736M | 47 |
| | 6-24" | | 104737M | 47 |
| | 6-24" | | 104740M | 47 |
| Fuel Senders - Fixed | Tank Depth | | | |
| | 6.0" | | 02300-01 | 48 |
| | 7.0" | | 02301-03 | 48 |
| | 7.5" | | 02300-04 | 48 |
| | 7.5" | | 02301-04 | 48 |
| | 9.0" | | 02300-07 | 48 |
| | 9.5" | | 02300-08 | 48 |
| | 10.0" | | 02300-09 | 48 |
| | 11.0" | | 02301-11 | 48 |
| | 11.5" | | 02300-12 | 48 |
| | 12.0" | | 02300-13 | 48 |
| | 12.5" | | 02300-14 | 48 |
| | 13.5" | | 02300-16 | 48 |
| | 14.0" | | 02300-17 | 48 |
| | 14.0" | | 02301-17 | 48 |
| | 14.5" | | 02301-18 | 48 |
| | 15.0" | | 02300-19 | 48 |
| | 15.0" | | 02301-19 | 48 |
| | 15.5" | | 02300-20 | 48 |
| | 16.0" | | 02300-21 | 48 |
| | 17.0" | | 02300-23 | 48 |
| | 17.5" | | 02300-24 | 48 |
| | 18.5" | | 02300-26 | 48 |
| | 19.0" | | 02300-27 | 48 |
| | 19.5" | | 02300-28 | 48 |
| | 20.0" | | 02300-29 | 48 |
| | 21.0" | | 02300-31 | 48 |
| | 22.0" | | 02300-33 | 48 |
| | 22.0" | | 02301-33 | 48 |
| | 22.5" | | 02300-34 | 48 |
| | 23.0" | | 02300-35 | 48 |
| | 23.5" | | 02300-36 | 48 |
| | 24.0" | | 02300-37 | 48 |
| | 24.0" | | 02301-37 | 48 |
| | 25.0" | | 02300-39 | 48 |
| | 30.0" | | 02300-44 | 48 |
| | 33.0" | | 02300-47 | 48 |
| | 33.0" | | 02301-47 | 48 |
| | 34.0" | | 02300-48 | 48 |
| | 36.0" | | 02300-50 | 48 |
| | 36.0" | | 02301-50 | 48 |
| Oil Pressure Senders - Standard Duty | Range | Thread | | |
| | 0-40 psi | 1/8"-27 | 02502-00 | 50 |
| | 0-40 psi | 1/8"-27 | 02502-02 | 50 |
| | 0-60 psi | 1/8"-27 | 02503-00 | 50 |
| | 0-60 psi | 1/8"-27 | 02503-02 | 50 |
| | 0-80 psi/0-5 bar | 1/8"-27 | 02504-00 | 50 |
| | 0-80 psi/0-5 bar | 1/8"-27 | 02504-02 | 50 |
| | 0-100 psi/0-7 bar | 1/8"-27 | 02505-00 | 50 |



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| Sender Type | | | P/N | Pg |
| Oil Pressure Senders - Standard Duty (Cont'd) | | Range | Thread | |
| | 0-100 psi/0-7 bar | 1/8"-27 | 02502-02 | 50 |
| | 0-100 psi/0-7 bar | 1/8"-27 | 02505-04 | 50 |
| | 0-125 psi | 1/8"-27 | 02506-00 | 50 |
| | 0-125 psi | 1/8"-27 | 02506-02 | 50 |
| | 0-125 psi | 1/8"-27 | 02582-21 | 51 |
| | 0-150 psi/0-10 bar | 1/8"-27 | 02507-00 | 51 |
| | 0-300 psi | 1/8"-27 | 02509-02 | 51 |
| | 0-400 psi | 1/8"-27 | 02510-02 | 51 |
| Oil Pressure Senders - Standard Duty - Dual | | Range | Thread | |
| | 0-60 psi | 1/8"-27 | 02503-01 | 51 |
| | 0-80 psi/0-5 bar | 1/8"-27 | 02504-01 | 51 |
| | 0-100 psi/0-7 bar | 1/8"-27 | 02505-01 | 51 |
| | 0-125 psi | 1/8"-27 | 02506-01 | 51 |
| Oil Pressure Senders - Heavy Duty | | Range | Thread | |
| | 0-40 psi | 1/8"-27 | 102222 | 51 |
| | 0-60 psi | 1/8"-27 | 102223 | 51 |
| | 0-80 psi/0-5 bar | 1/8"-27 | 102224 | 51 |
| | 0-80 psi/0-5 bar | 1/8"-27 | 103575 | 51 |
| | 0-100 psi/0-7 bar | 1/8"-27 | 102225 | 51 |
| | 0-100 psi/0-7 bar | 1/8"-27 | 103579 | 51 |
| | 0-125 psi | 1/8"-27 | 102226 | 51 |
| | 0-125 psi | 1/8"-27 | 103581 | 51 |
| | 0-150 psi/0-10 bar | 1/8"-27 | 102227 | 51 |
| Oil Pressure Senders - Heavy Duty - Dual | | Range | Thread | |
| | 0-80 psi/0-5 bar | 1/8"-27 | 103574 | 51 |
| | 0-100 psi/0-7 bar | 1/8"-27 | 103577 | 51 |
| | 0-125 psi | 1/8"-27 | 103580 | 51 |
| Oil Pressure Senders - Severe Duty | | Range | Thread | |
| | 0-80 psi/0-5 bar | 1/8"-27 | 108496 | 51 |
| | 0-80 psi/0-5 bar | 1/8"-27 | 108878 | 51 |
| | 0-100 psi/0-7 bar | 1/8"-27 | 108497 | 51 |
| | 0-125 psi | 1/8"-27 | 108882 | 51 |
| | 0-150 psi/0-10 bar | 1/8"-27 | 109491 | 51 |
| Oil Pressure Senders - Severe Duty - Dual | | Range | Thread | |
| | 0-100 psi/0-7 bar | 1/8"-27 | 109013 | 51 |
| Speed Sensors - Magnetic Sensors | | Thread | Length | |
| | 5/8" x 18 UNF | 1.9" | 71544-00 | 52 |
| | 5/8" x 18 UNF | 1.9" | 72000-00 | 52 |
| | 5/8" x 18 UNF | 3.4" | 101493 | 52 |
| | 5/8" x 18 UNF | 3.4" | 106258 | 52 |
| | 5/8" x 18 UNF | 3.4" | 71545-00 | 52 |
| | 5/8" x 18 UNF | 1.9" | 110799 | 52 |
| | 5/8" x 18 UNF | 3.4" | 110800 | 52 |
| | 3/4" x 16 UNF | 1.9" | 105792 | 52 |
| | 3/4" x 16 UNF | 1.9" | 71255-00 | 52 |
| | 3/4" x 16 UNF | 3" | 109204 | 52 |
| | 3/4" x 16 UNF | 3.4" | 71256-00 | 52 |
| | 3/4" x 16 UNF | 1.9" | 110797 | 52 |
| | 3/4" x 16 UNF | 3.4" | 110798 | 52 |
| Speed Sensors - Pulse Generators | | Thread | Type | |
| | 7/8" x 18 UNS | 60-pole | 71266-00 | 52 |
| | 7/8" x 18 UNS | 16-pole | 71267-00 | 52 |
| Speed Sensors - Drive Tangs | | Size | | |
| | .104" x 1.06" | | 71550-01 | 52 |
| | .152" x 1.06" | | 71274-00 | 52 |
| | .187" x 1.06" | | 71275-00 | 52 |
| | .203" x 1.06" | | 71276-00 | 52 |
| | .104" x 2.30" | | 71889-01 | 52 |
| | .152" x 2.30" | | 71268-00 | 52 |
| | .187" x 2.30" | | 71269-00 | 52 |
| | .203" x 2.30" | | 71270-00 | 52 |
| Temperature Senders - Low Range | | Range | Thread | |
| | 100-240°F | 1/8"-27 NPTF | 02017-00 | 49 |
| | 100-240°F | 1/8"-27 NPTF | 02029-00 | 49 |
| | 100-240°F | 1/8"-27 NPTF | 104121 | 49 |
| | 100-240°F | 1/4"-18 NPTF | 02018-00 | 49 |
| | 100-240°F | 1/4"-18 NPTF | 02030-00 | 49 |
| | 100-240°F | 3/8"-18 NPTF | 02019-00 | 49 |
| | 100-240°F | 3/8"-18 NPTF | 02031-00 | 49 |
| | 100-240°F | 3/8"-18 NPTF | 02079-02 | 49 |
| | 100-240°F | 3/8"-18 NPTF | 102700 | 49 |
| | 100-240°F | 1/2"-14 NPTF | 02020-00 | 49 |
| | 100-240°F | 1/2"-14 NPTF | 02032-00 | 49 |
| | 100-240°F | 1/2"-14 NPTF | 107281 | 49 |



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| Heavy Duty Senders & Sensors | | | | |
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| Sender Type | | | P/N | Pg |
| Temperature Senders - Low Range (Cont'd) | Range | Thread | | |
| | 100-240°F | 1/2"-14 NPTF | 109370 | 49 |
| | 100-240°F | 9/16"-18 NPTF | 102070 | 49 |
| | 100-240°F | 5/8"-18 UNF | 02037-00 | 49 |
| | 100-240°F | 3/4"-16 UNF | 107097 | 49 |
| | 100-240°F | M14 x 1.5 | 02088-00 | 49 |
| | 100-240°F | M14 x 1.5 | 109379 | 49 |
| | 100-240°F | M16 x 1.5 | 02094-00 | 49 |
| | 100-240°F | M18 x 1.5 | 02062-00 | 49 |
| | 100-280°F | 1/8"-27 NPTF | 02055-00 | 49 |
| | 100-280°F | 1/2"-14 NPTF | 02092-22 | 49 |
| | 100-280°F | 3/8"-18 NPTF | 02055-02 | 49 |
| Temperature Senders - High Range | Range | Thread | | |
| | 100-280°F & 140-320°F | 1/8"-27 NPTF | 02022-00 | 49 |
| | 100-280°F & 140-320°F | 1/8"-27 NPTF | 105576 | 49 |
| | 100-280°F & 140-320°F | 1/4"-18 NPTF | 02023-00 | 49 |
| | 100-280°F & 140-320°F | 1/4"-18 NPTF | 02092-24 | 49 |
| | 100-280°F & 140-320°F | 3/8"-18 NPTF | 02024-00 | 49 |
| | 100-280°F & 140-320°F | 3/8"-18 NPTF | 02049-00 | 49 |
| | 100-280°F & 140-320°F | 3/8"-18 NPTF | 02075-02 | 49 |
| | 100-280°F & 140-320°F | 3/8"-18 NPTF | 02081-02 | 49 |
| | 100-280°F & 140-320°F | 3/8"-18 NPTF | 02092-12 | 49 |
| | 100-280°F & 140-320°F | 3/8"-18 NPTF | 107283 | 49 |
| | 100-280°F & 140-320°F | 1/2"-14 NPTF | 02090-13 | 49 |
| | 100-280°F & 140-320°F | 1/2"-14 NPTF | 105575 | 50 |
| | 100-280°F & 140-320°F | 1/2"-14 NPTF | 02025-00 | 49 |
| | 100-280°F & 140-320°F | 1/2"-14 NPTF | 02050-00 | 49 |
| | 100-280°F & 140-320°F | 1/2"-14 NPTF | 02092-13 | 49 |
| | 100-280°F & 140-320°F | 1/2"-14 NPTF | 02092-16 | 50 |
| | 100-280°F & 140-320°F | 1/2"-14 NPTF | 02092-28 | 50 |
| | 100-280°F & 140-320°F | 1/2"-14 NPTF | 109371 | 50 |
| | 100-280°F & 140-320°F | 9/16"-18 NPTF | 02092-17 | 50 |
| | 100-280°F & 140-320°F | 9/16"-18 NPTF | 102769 | 50 |
| | 100-280°F & 140-320°F | 9/16"-18 UNF | 107602 | 50 |
| | 100-280°F & 140-320°F | 5/8"-18 UNF | 02092-21 | 50 |
| | 100-280°F & 140-320°F | 5/8"-18 UNF | 02092-23 | 50 |
| | 100-280°F & 140-320°F | 3/4"-16 UNF | 02092-10 | 50 |
| | 100-280°F & 140-320°F | M14 x 1.25 | 02092-20 | 50 |
| | 100-280°F & 140-320°F | M14 x 1.25 | 102438 | 50 |
| | 100-280°F & 140-320°F | M14 x 1.5 | 02089-00 | 50 |
| | 100-280°F & 140-320°F | M14 x 1.5 | 108697 | 50 |
| | 100-280°F & 140-320°F | M16 x 1.5 | 02067-00 | 50 |
| | 100-280°F & 140-320°F | M16 x 1.5 | 02092-08 | 50 |
| | 100-280°F & 140-320°F | M16 x 1.5 | 106394 | 50 |
| | 100-280°F & 140-320°F | M18 x 1.5 | 02069-00 | 50 |
| | 100-280°F & 140-320°F | M18 x 1.5 | 02092-09 | 50 |
| | 100-280°F & 140-320°F | M22 x 1.5 | 109352 | 50 |
| Temperature Senders - Extra High Range | Range | Thread | | |
| | 130-330°F | 1/2"-14 NPTF | 02092-51 | 50 |
| | 130-330°F | 9/16"-18 UNF | 100064 | 50 |
| | 150-350°F | 1/8"-27 NPTF | 106951 | 50 |
| | 150-350°F | 1/4"-18 NPTF | 106952 | 50 |
| | 150-350°F | 3/8"-18 NPTF | 106953 | 50 |
| | 150-350°F | 1/2"-14 NPTF | 106954 | 50 |



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DISTRIBUTOR WARRANTY POLICY

Maxima Technologies shall warrant its products against defects in workmanship and materials for a period of twenty-four (24) months from the date of purchase provided that these products are installed and operated according to the purpose for which they were intended, designed and specified. This warranty excludes items that are incorrectly installed, misused or abused by the customer as would be uncovered upon examination. If a suspect product is returned to Maxima for inspection, upon which it is determined that the product is in fact defective, Maxima will replace the product free-of-charge or issue a credit for the customer. Customers are advised to consult with a Maxima sales representative in regard to this matter.

Maxima will not assume responsibility for labor costs associated with the removal of suspect product or the cost of equipment downtime, or any other costs associated with the concern that are not specifically related to workmanship or materials.

In order to qualify for warranty coverage, customers must use Maxima's *Returned Goods Authorization (RGA) process* and provide *proof of purchase (as verification of the start date of the warranty coverage period)*. Products which are returned to Maxima that are determined to be OK shall not qualify for warranty coverage.

RETURNED GOODS POLICY

ANY PRODUCT TO BE RETURNED TO MAXIMA FOR ANY REASON MUST INCLUDE A RETURNED GOODS AUTHORIZATION (RGA). The RGA must be obtained in advance from a Maxima quality representative who will determine whether to process the request. Maxima's quality personnel will assign an RGA number and the customer must identify this information on the package(s) to be returned to Maxima. All returns must be shipped pre-paid with traceability to Maxima. Upon receipt of suspect material, Maxima's quality personnel will provide appropriate disposition, in which case our warranty policy may or may not apply.





DATCON IS THE PRECISE MEASURE OF PERFORMANCE.



LANCASTER OPERATION
1811 Rohrerstown Road
Lancaster, PA 17601
U.S.A.
Phone 717.581.1000
Fax 717-569-6372

BARCELONA OPERATION
C/ Progres, 32
08191 RUBI (Barcelona)
SPAIN
Phone 3493.5862073
Fax 3493.586.2266