

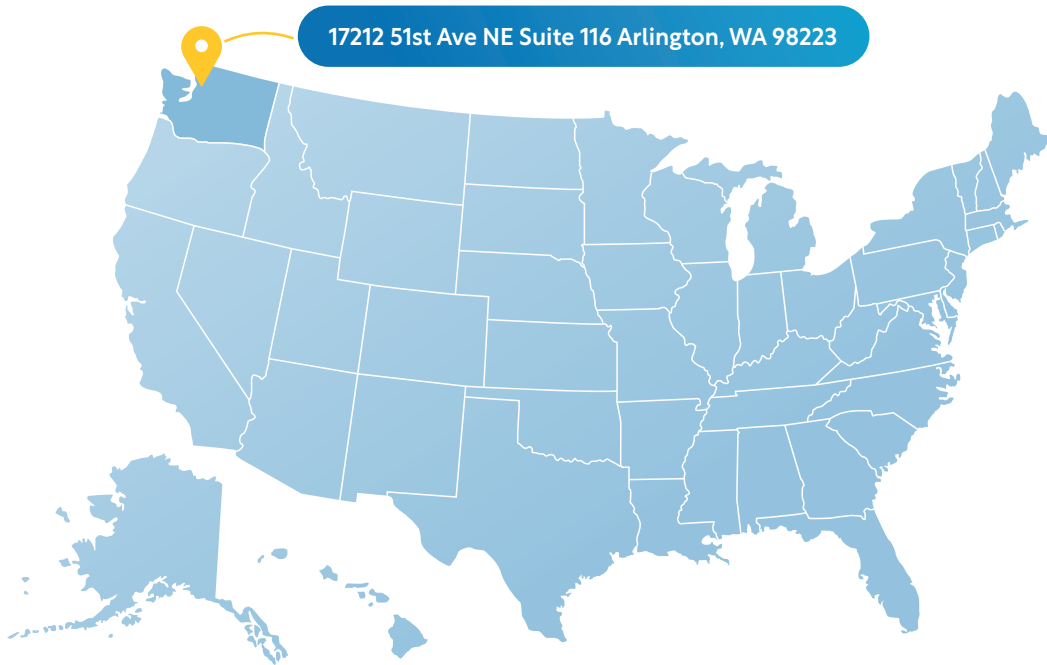
INDEX
SENSORS & CONTROLS

2023
PRODUCT CATALOG



Index Sensors manufacturing facility & headquarters are located in **Arlington, Washington**

45 miles north of Seattle on the I-5 corridor. Our building was designed to support Index's advanced engineering, quality labs, world-class manufacturing processes, and flexible layout.



We are a leading manufacturer of switches, sensors, and controls for the commercial truck, engine, agricultural, off-road, and industrial equipment markets. Our products monitor, control and protect some of the world's toughest equipment.

For over 45 years, Index has built a reputation for designing and producing products that stand up to the harshest, most severe environments.

Index Sensors is a supplier to the world's most demanding equipment manufacturers, including Cummins, Caterpillar, John Deere, all makes of Class 8 trucks, and a wide range of specialty original equipment manufacturers (OEMs).

We continue to expand our focus on helping industrial vehicle manufacturers, equipment OEMs, and end-users to add innovation and efficiency to their products.

Index's switches, sensors, and controls play an important role "behind the scenes" improving basic machine operation, as well as benefit equipment users with easier operation, diagnostics, and lower maintenance costs.



Index has been IATF 16949:2016 (TS16949) certified since 2016.

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CUSTOMER SUPPORT & ORDERING INFORMATION

Original Equipment Manufacturers

Index provides components and custom-engineered products to Original Equipment Manufacturers (OEMs) in a variety of fields: heavy-duty highway (truck & bus), automotive, construction, agriculture or lawn care, marine, defense, power generation, and assorted industrial applications.

If your company is an OEM or if you need particular performance characteristics or design features for your application, give us a call at **(800) 726-1737** or contact us via email at: oemsales@indexsensors.com



Aftermarket Independent Distributors

In addition to OEM distributors, our products are also carried by independent heavy-duty parts distributors all over the world. Some parts can be rushed for next-day delivery. Contact us to locate a distributor near you.



Aftermarket Heavy Vehicle Dealer

Index parts are carried by OEM dealers and distributors. Contact your local OEM truck dealer to purchase.



Index Sensors and Controls Headquarters and Manufacturing Facility

PART OF OUR COMPANY MISSION

is to provide best-in-class quality while creating a positive impact with each of our customers at every stage of the order process.

As a Tier 1 OEM supplier to over 50 engine and HD vehicle producers, we manufacture products that are used in the world's harshest environments on a daily basis.

We create solutions to suit *your* needs.

Index offers a large variety of configurations with our standard products, but sometimes that isn't enough.

After discussing your requirements, we have the ability to make changes ranging from a simple change of a current product to a complete custom designed system.

We are happy to work with you to create your custom solution, all while maintaining our industry-leading lead-time and 99% on-time delivery.

Our team is ready to assist you!

Customer & Technical Support

Customer support is available to assist you with your order, answer any questions about orders in process, the availability of new or existing products, as well as any technical questions you may have. Reach our customer support representatives via email at: customersupport@indexsensors.com.

Sales Support

At Index, we are always looking for ways we can help enhance your products and your business. Whether you are looking for rugged and reliable products, more intelligent components or custom-engineered controls, we're ready to help. If you are interested in learning more about Index products, email us at: sales@indexsensors.com.

Want to talk? Call us at: 1 (800) 726-1737.

Check out what we can do:

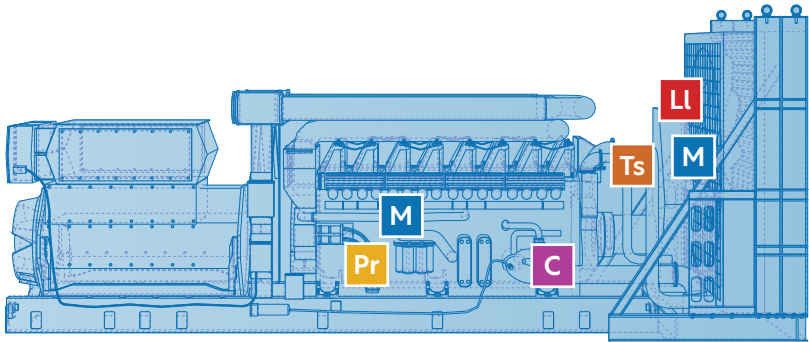
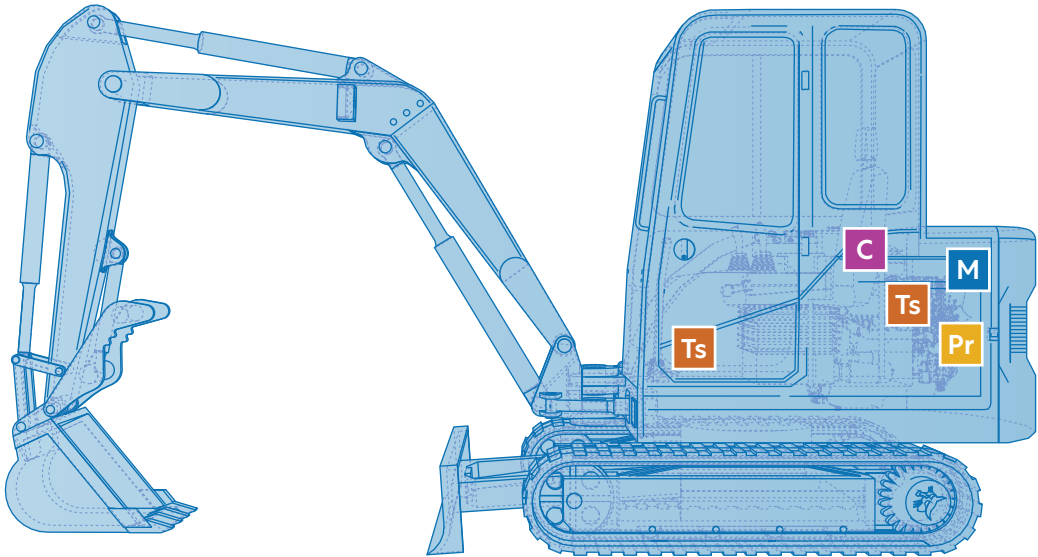
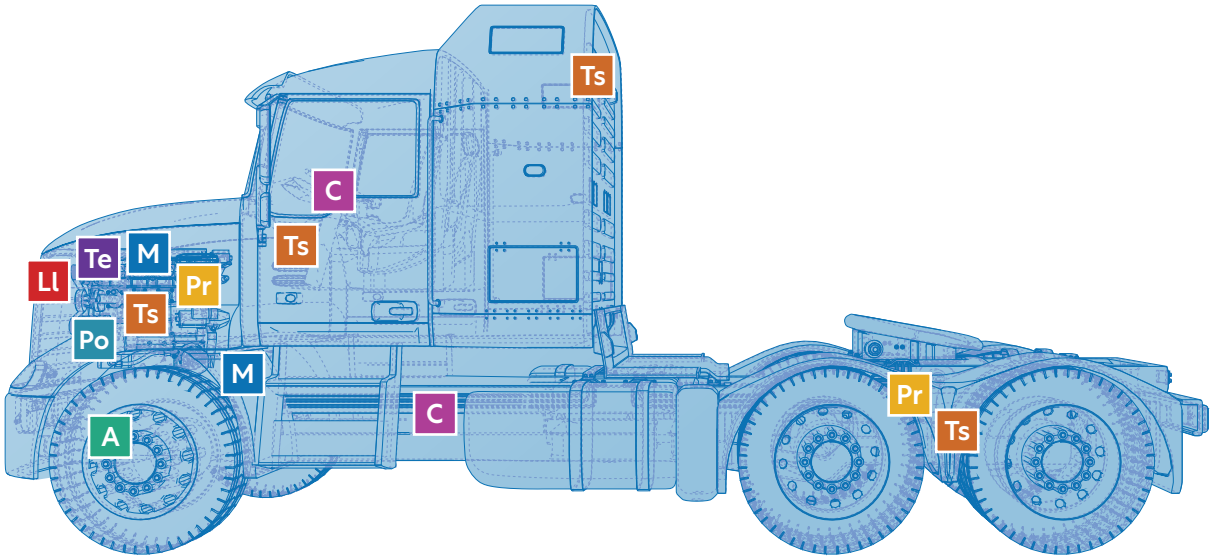
General Capabilities

- Multi-function control systems
- Electronic controls
- Mechanical & electrical temperature sensors & switches
- Mechanical & electrical pressure sensors & switches
- Liquid level probes
- Position & level sensors
- Continuous flow manufacturing process
- Automated testing equipment
- AIAG bar-coded packaging

Engineering Capabilities:

- Product design (custom & proprietary)
- Applications engineering
- System analysis & control algorithm design
- Hardware & mechanical design
- Software development & user interface design
- Design testing, reliability & test engineering
- CPK analysis
- PPAP (Production Part Approval Process)
- APQP (Advanced Product Quality Planning)

INDEX FAMILY OF PRODUCTS



Pr PRESSURE SENSORS

Index offers reliable pressure sensors for heavy-duty applications. There are three types of pressure sensors relating to how they measure pressure: Absolute Pressure, Gauge Pressure, and Sealed Gauge Pressure.

Ll LIQUID LEVEL

Liquid sensing products improve the reliability and operation of your vehicle: Coolant Level sensors increase the overall longevity of your vehicle engine. Water-In-Fuel and Low Coolant Level probes keep your engine running smoothly without costly repairs or downtime.

Te ELECTRONIC TEMPERATURE SWITCHES

Custom-programmable flexibility and functionality including multiple outputs, timed switching, blink signals, PWM, and more. Highly accurate temperature monitoring, control, overtemp warning, and shutdown for engines and industrial equipment.

Po POSITION SENSORS

Position sensors play an important part in keeping your vehicle functioning properly and safely. Index carefully tests their sensors to make sure they are up to standard for various applications.

Ts TEMPERATURE SENSORS

Index's temperature sensors are intelligent and durable. With custom programmable outputs, they are reliable and flexible. Compatible with SAE J939 CAN Bus communication.

C EMBEDDED CONTROL MODULES

Flexible "distributed intelligence" modules applying custom-programmed control logic to a variety of potential inputs. Can include user interface panels or keypads. Our intelligent modules include A/C Protection modules, inclinometers, and more.

M MECHANICAL PRESSURE AND TEMPERATURE SWITCHES

Pressure switch applications include air conditioning, transmission, air pressure, hydraulic, brake fluid, and oil pressure. Temperature control and monitoring for engines, hydraulics, and similar applications in on- and off-road vehicles as well as stationary equipment.

A ABS SENSORS

Index's ABS Sensors (Anti-lock Breaking System) monitors wheel speed accurately. Working with your vehicle's ECM, it keeps your wheels from locking up when you brake. Index also offers multiple ABS extension cables.

AIR CONDITIONING PROTECTION

Index's ACX-10 helps you keep your cool!

Our air conditioning system protection modules go beyond monitoring conditions of low or high pressure and voltage. They stop damaging events, such as over-cycling, and coordinate functions within the system. Designed to thrive in harsh under-hood environments, Index Air Conditioning Protection Products help save money by extending the life of the A/C system and identifying problems before they become costly repairs.



Detection and Protection System

The ACX-10 detects rapid cycling before you even notice that your air conditioner isn't working properly. As your A/C system charge levels drop, clutch cycles increase. The ACX-10 limits A/C clutch cycles to four engagements per minute, reducing system wear and tear.

Voltage Protection

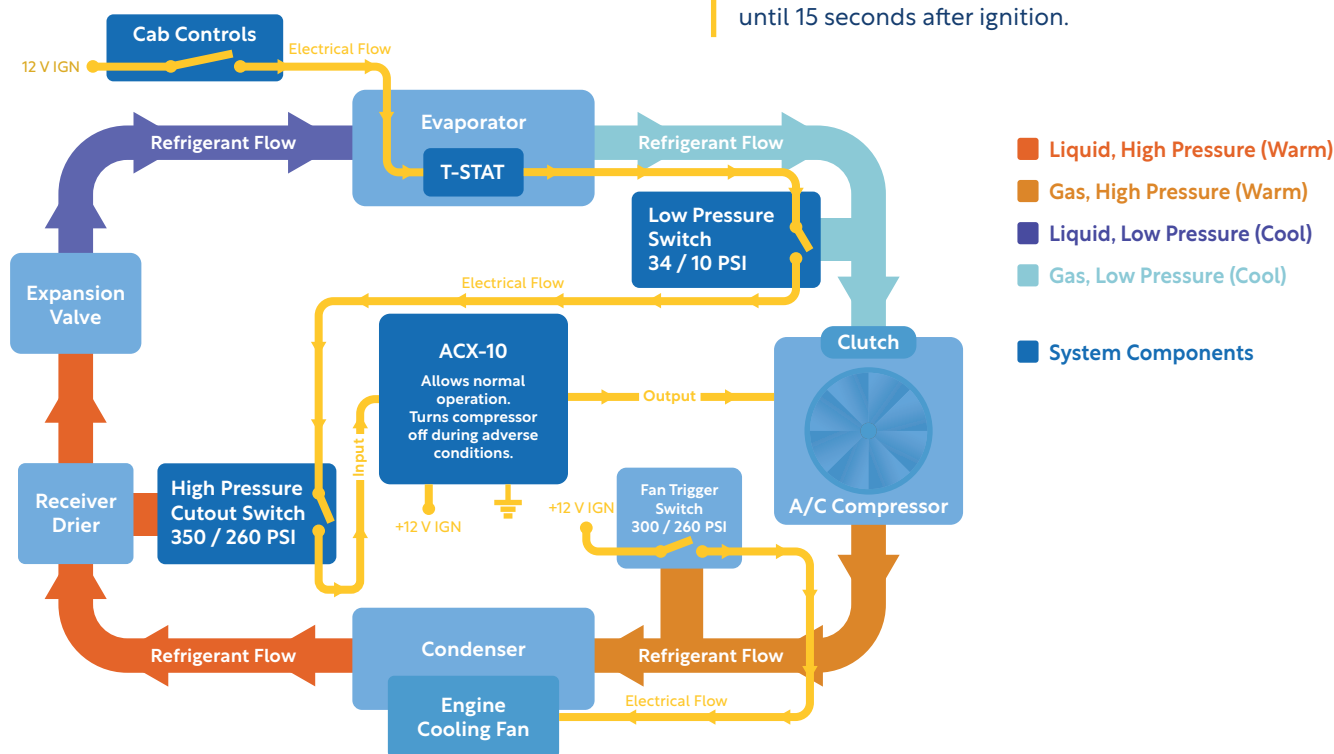
Over-voltage causes excessive current and heat in the clutch coil, which shortens its life. Worse yet, under-voltage can cause the clutch to slip and burn out. The ACX-10 detects poor voltage conditions and disengages the A/C clutch until the voltage returns to the normal, safe operating range.

Pressure Protection

Improper system pressure can lead to rapid cycling. Because the ACX-10 limits system cycles to four engagements per minute, it eliminates heat build-up.

Starter Motor Protection

If the A/C is on during the vehicle's ignition cycle, the starter motor has to crank the compressor as well as the engine. The ACX-10 unburdens the starter motor and extends its life by delaying the A/C clutch engagement until 15 seconds after ignition.



| Connector | Notes | INDEX P/N |
|------------------------|------------|-----------|
| Weather-Pack Connector | ACX-10 Kit | 8041188 |
| Weather-Pack Connector | 12V, ISC | 8042167 |
| Weather-Pack Connector | 12V, ISX | 8042168 |
| Weather-Pack Connector | 12V | 8042169 |
| Metri-Pack Connector | 12V | 8042171 |
| AMP Connector | 24V | 8042173 |
| Deutsch Connector | 12V | 8042178 |

With over 2,000 SKUs, many other parts are available - call or email for more information.

APAds™ Air Conditioning Protection and Diagnostics System

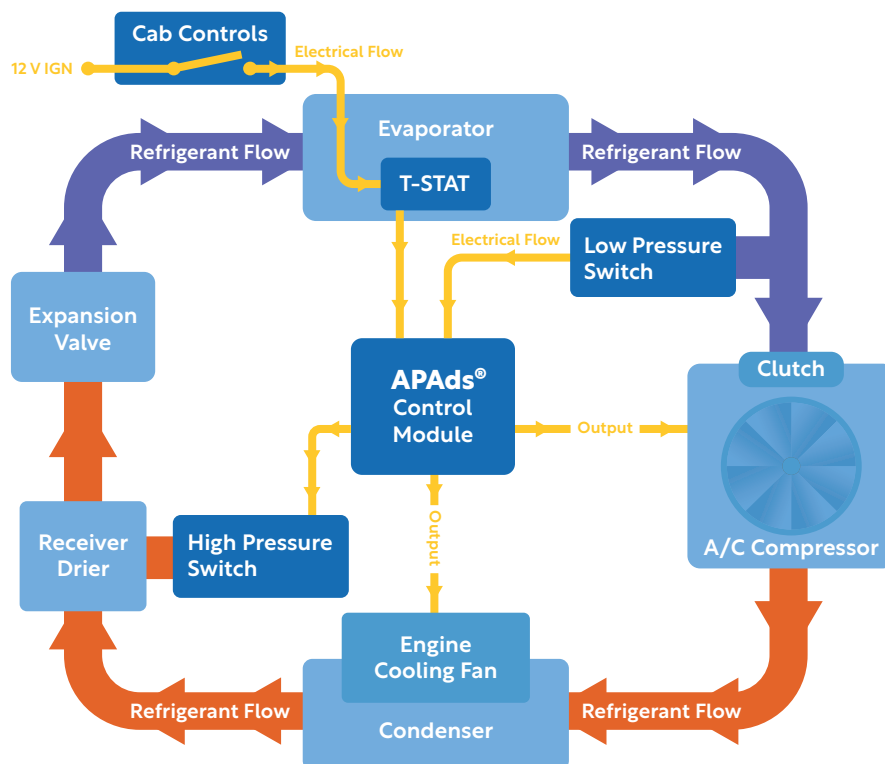
Available as an OEM option, the APAds system offers full air conditioning control, protection, and diagnostics. Its microprocessor-based intelligence offers all the protection of the ACX-10, plus year-round compressor lubrication and cooling fan coordination to prevent fan cycling at idle. APAds also aids in preventive maintenance and troubleshooting with its easy-to-read diagnostic fault codes. Specifying the APAds system on your new vehicle will save you hundreds or even thousands of dollars in A/C maintenance, repair, and downtime over your years of ownership.



APAds Multi-function Control

- Prevents clutch damage from rapid cycling.
- Prevents clutch slippage from low voltage or over voltage.
- Improves A/C efficiency at idle.
- Eases troubleshooting with easy-to-interpret codes.
- Enhances preventive maintenance.
- Reduces expensive unscheduled repairs.
- Detects A/C problems even when A/C is turned off.

APAds is a registered trademark of Index Sensors & Controls, Inc.
Patent number 5,761,918



Aftermarket

| Connector | Notes | INDEX P/N |
|-----------------------------|------------------------|-----------|
| Leaded Deutsch Connector | For Viscous Fan Drives | 8042124 |
| Leaded Deutsch Connector | | 8042105 |
| Leaded Metri-Pack Connector | | 8042152 |

■ Low Pressure (Cool)
 ■ High Pressure (Warm)
 System Components

Original Equipment Manufacturer

| OEM | New Truck Spec Option Code # | Notes | Modules P/N (Service Parts) | Low Pressure Switch P/N (Service Parts) | High Pressure Switch P/N (Service Parts) |
|---------------|------------------------------|----------------------------|-----------------------------|-----------------------------------------|------------------------------------------|
| Volvo/Mack | 25157068 | | 8042121 | 8040189 | 8040135 |
| Volvo/Mack | 25159381 | For Viscous Fan Drives | 8042124 | 8040189 | 8040172 |
| Kenworth | 81040125 | | 8042103 | 8040189 | 8040135 |
| Freightliner | 702-009 | | 8042103 | 8040189 | 8040135 |
| International | 016-WJC016-WJH | For On/Off Fan Drives | 8042103 | 8040189 | 8040135 |
| Peterbilt | | Call Index for Information | | | |

ELECTRONIC TEMPERATURE SWITCHES



Ideal for engines, transmissions, fuel, and fan control, **Index's Electronic Temperature Switches** are designed to give you precise temperature control, indication, warning, alarm, and monitoring for thousands of heavy-duty applications. They are built to withstand tough conditions and remain highly accurate in extreme environments.

Durable and Reliable

With a solid-state design and no moving parts, these switches ensure years of accurate switching with quick response time through whatever situation they face. Our switches have the ability to combine and coordinate two functions in one device and have one or two independently specifiable temperatures, as well as offer reverse polarity protection.

Single- or Dual-function Designs

Two outputs from one location assures coordination of functions through one device. Dual-function maximizes the use of limited installation ports.

- Single-function: shutter control, fan control, overtemp warning/engine shutdown, low transmission temperature
 - (-10° to 32° F / -23° to 0° C), and fuel temperature.
- Dual-function provides two functions with a single port: overtemp warning/engine shutdown, fan control/shutter control.

Versatile Performance

- Accurate to $\pm 1.5^\circ\text{F}$.
- Functions from -20° to 230° F (-29° to 110° C).
- Fully custom set and reset points.
- Operates in a variety of fluids.
- Numerous fittings and connectors available.

Air-sensing Fan Drivers with Special Fast-response Tip

1/2" NPT Housing

| Set | Mode | Output Type | Connector | Description | Notes | INDEX P/N |
|-----|------|-------------|----------------------------------|--------------------------------------------|---------------------------------------------|-----------|
| 150 | NC | Sinking | Leaded Deutsch Plug | TE Air Snk 150 NC H1 C9 Intake Air Temp Sw | | 8036154 |
| 150 | NC | Sourcing | Leaded Weather-Pack Receptacle | TE Air Src 150 NC H1 C7 Intake Air Temp Sw | | 8036186 |
| 190 | NO | Sourcing | Leaded Deutsch Plug & Receptacle | TE Air Src 190 NO H1 C8 Intake Air Temp Sw | Fan timer w/ external pressure switch input | 8036098 |

With over 2,000 SKUs, many other parts are available - call or email for more information.

Single- and Dual-Function Temperature Switches

1/2" NPT Housing

| Function 1 Set Point | Mode | Function 2 Set Point | Mode | Output Type | Connector | Description | OEM | INDEX P/N |
|-------------------------|------|-------------------------|------|-------------|--------------------------------|-----------------------------------------|---------------------|-----------|
| 060 | NC | | | Sourcing | Leaded Metri-Pack Plug | TE 1fn Src 060 NC H1 C4 | | 8036128 |
| 080 | NC | | | Sourcing | Leaded Metri-Pack Receptacle | TE 1fn Src 080 NC H1 C3 | | 8036043 |
| 150 | NC | | | Sourcing | Leaded Weather-Pack Receptacle | TE 1fn Src 150 NC H1 C6 Nav 1621011C91 | Navistar 1621011C91 | 8036157 |
| 150 | NO | | | Sourcing | Leaded Weather-Pack Receptacle | TE 1fn Src 150 NO H1 C7 | | 8036152 |
| 160 | NO | 200 | NO | Sinking | Leaded Metri-Pack Plug | TE 2fn Snk 160 NO 200 NO H1 C4 | | 8036201 |
| 172 | NC | 187 | NC | Sinking | Leaded Metri-Pack Plug | TE 2fn Snk 172 NC 187 NC H1 C4 | | 8036217 |
| 172 | NC | 187 | NO | Sinking | Leaded Metri-Pack Plug | TE 2fn Snk 172 NC 187 NO H1 C4 | | 8036216 |
| 185 | NC | | | Sourcing | Leaded Metri-Pack Receptacle | TE 1fn Src 185 NC H1 C3 | | 8036200 |
| 185 | NC | | | Sourcing | Leaded Weather-Pack Receptacle | TE 1fn Src 185 NC H1 C7 Nav 1621007C92 | Navistar 1621007C92 | 8036052 |
| 185 | NC | 195 | NC | Sourcing | Leaded Weather-Pack Receptacle | TE 2fn Src 185 NC 195 NC Nav 1621005C91 | Navistar 1621005C91 | 8036143 |
| 185 | NC | 195 | NC | Sourcing | Flying Leads w/ Ring Terminals | TE 2fn Src 185 NC 195 NC Nav 1985130C91 | Navistar 1985130C91 | 8036142 |
| 195 | NC | 210 | NC | Sinking | Leaded Metri-Pack Plug | TE 2fn Snk 195 NC 210 NC H1 C4 | | 8036158 |
| 200 | NO | 215 | NO | Sinking | Leaded Weather-Pack Receptacle | TE 2fn Snk 200 NO 215 NO H1 C7 | | 8036198 |
| 200 | NC | | | Sinking | Leaded Weather-Pack Receptacle | TE 1fn Snk 200 NC H1 C3 Nav 1516893C91 | Navistar 1516893C91 | 8036023 |
| 200 | NO | | | Sinking | Leaded Weather-Pack Plug | TE 1fn Snk 200 NO H1 C6 | | 8036205 |
| 200 | NO | | | Sinking | Leaded Weather-Pack Receptacle | TE 1fn Snk 200 NO H1 C7 | | 8036206 |
| 200 | CO | | | Sourcing | Screw Terminals | TE 1fn Src 200 CO H0 Cx | | 8036178 |
| 200 | NC | | | Sourcing | Leaded Weather-Pack Receptacle | TE 1fn Src 200 NC H1 C7 | | 8036061 |
| 205 | NC | | | Sourcing | Leaded Metri-Pack Receptacle | TE 1fn Src 205 NC H1 C3 Volvo 3942759 | Volvo 3942759 | 8036167 |
| 205 | NC | | | Sourcing | Leaded Weather-Pack Receptacle | TE 1fn Src 205 NC H1 C7 | | 8036056 |
| 205 | NO | | | Sourcing | Leaded Weather-Pack Receptacle | TE 1fn Src 205 NO H1 C7 Nav 2016585C91 | Navistar 2016585C91 | 8036058 |
| 215 | NO | 220 | NC | Sinking | None – bare wire | TE 2fn Snk 215 NO 220 NC H1 Cw | | 8036213 |

Cooling Fan Timer Temperature Control Switches

Controls engine fan when needed to cool the engine or reduce air conditioning system pressure. Contains a fan control temperature switch plus a time circuit that takes input from an Index A/C fan trigger switch. When needed by the A/C system, the fan stays on for 3 minutes to greatly reduce system pressure and prevent rapid fan cycling.

1/2" NPT Housing

| Set Point | Mode | Output Type | Connector | Description | OEM | INDEX P/N |
|-----------|------|-------------|----------------------------------|------------------------------------------|---------------------|-----------|
| 180 | NC | Sourcing | Leaded Weather-Pack Receptacle | TE fan timer 180 NC H1 C7 Nav 1688070C91 | Navistar 1688070C91 | 8036076 |
| 195 | NC | Sourcing | Leaded Deutsch Receptacle | TE fan timer 195 NC H1 C9 Volvo 3940177 | Volvo 3940177 | 8036165 |
| 195 | NO | Sourcing | Leaded Deutsch Plug & Receptacle | TE fan timer 195 NO H1 C8 | | 8036100 |
| 200 | NC | Sourcing | Leaded Deutsch Receptacle | TE fan timer 200 NC Ford F3HT-10B843-SA | Ford F3HT-10B843-SA | 8036083 |
| 200 | NC | Sourcing | Leaded Weather-Pack Receptacle | TE fan timer 200 NC H1 C7 | | 8036078 |
| 200 | NC | Sourcing | Leaded Weather-Pack Receptacle | TE fan timer 200 NC H1 C7 Nav 2011857C91 | Navistar 2011857C91 | 8036077 |
| 200 | NO | Sourcing | Leaded Weather-Pack Plug | TE fan timer 200 NO H1 C6 | | 8036070 |
| 200 | NO | Sourcing | Leaded Weather-Pack Plug | TE fan timer 200 NO H1 C6 Nav 2027243C1 | Navistar 2027243C1 | 8036071 |
| 200 | NO | Sourcing | Leaded Deutsch Plug & Receptacle | TE fan timer 200 NO H1 C8 | | 8036101 |
| 205 | NC | Sourcing | Leaded Weather-Pack Receptacle | TE fan timer 205 NC H1 C7 | | 8036080 |
| 205 | NC | Sourcing | Leaded Weather-Pack Receptacle | TE fan timer 205 NC H1 C7 Mack 1MR6546M | Mack 1MR6546M | 8036081 |
| 205 | NC | Sourcing | Leaded Weather-Pack Receptacle | TE fan timer 205 NC H1 C7 Nav 1622647C91 | Navistar 1622647C91 | 8036079 |
| 205 | NC | Sourcing | Leaded Deutsch Receptacle | TE fan timer 205 NC H1 C9 | | 8036087 |
| 205 | NC | Sourcing | Leaded Deutsch Receptacle | TE fan timer 205 NC H1 C9 Volvo 3942809 | Volvo 3942809 | 8036169 |
| 205 | NC | Sourcing | Leaded Deutsch Receptacle | TE fan timer 205 NC H1 C9 Volvo 3942917 | Volvo 3942917 | 8036168 |
| 205 | NO | Sourcing | Leaded Weather-Pack Plug | TE fan timer 205 NO H1 C6 | | 8036073 |
| 205 | NO | Sourcing | Leaded Deutsch Plug & Receptacle | TE fan timer 205 NO H1 C8 | | 8036103 |
| 205 | NO | Sourcing | Leaded Deutsch Plug | TE fan timer 205 NO H1 C8 air sw trigger | | 8036094 |
| 209 | NO | Sourcing | Leaded Deutsch Plug & Receptacle | TE fan timer 208.5 NO H1 C8 | | 8036105 |

All temperatures in degrees Fahrenheit.
See definitions and connector key on page 23.

HEAVY-DUTY TEMPERATURE SWITCHES



The basic function of a mechanical temperature switch is to turn something on or off at a given temperature. Our temperature switches were designed for years of service under tough, high duty-cycle conditions.

With **Index Temperature Switches**, you get more than just the basics. We build switches to deliver improved performance and cost control for your engine, vehicle, or equipment.

Versatile with Multiple Options

Our switches offer versatile performance for multiple heavy-duty applications. Along with temperature, we also offer a variety of customizable options to choose from such as thread sizes, integrated or leaded connectors, and switching modes.

Efficiency from Precise Temperature Control

Chances are there are particular set and reset temperatures that are optimal for your application, where energy and operating cost efficiencies are maximized. With Index switches' tight tolerances, fast response, and specifiable reset points, your equipment runs precisely and evenly, at just the right temperature.

Long Life and Vibration Resistance

We designed our Temperature Switches for years of service under tough, high duty-cycle conditions. Because vibration sensitivity can significantly shorten the life of both a temp switch and your equipment, Index Temperature Control Switches put up a double line of defense against vibration with two snap-action elements. Crisp-response dual-temperature discs trigger a heavy-duty contact, assuring clean, no-chatter electrical switching. Both elements can deliver up to a million cycles or more

Temperature Control, Indication, Warning, Alarm, and Monitoring for:

- | | | |
|-----------------------|---------------------|-----------------------------------------------|
| - Engine cooling fans | - Water reservoirs | - Heat exchange valve actuation |
| - Transmissions | - Radiator shutters | - Accessory implement monitoring & interlocks |
| - Heating elements | - Hydraulic fluid | - Dashboard overtemp indicators |

Contact us for more information on customizable options.

Heavy-Duty Temperature Switches for Cummins® Applications

Three Terminals – 1/2" NPT Housing

| Temp | Mode | Connector | Cummins Equivalents | INDEX P/N |
|------|------|-----------------------|---------------------|-----------|
| 90 | CO | Integrated Metri-Pack | 3408645 | 8037317 |
| 150 | CO | Integrated Metri-Pack | 3408634 | 8037372 |
| 160 | CO | Integrated Metri-Pack | 3408643 | 8037316 |
| 185 | NO | Integrated Metri-Pack | 3408624 | 8037318 |
| 185 | CO | Integrated Metri-Pack | 3408639 | 8037322 |
| 200 | CO | Integrated Metri-Pack | 3408632 | 8037375 |
| 200 | CO | Integrated Metri-Pack | 3408636 | 8037380 |
| 210 | CO | Integrated Metri-Pack | 3408625 | 8037445 |
| 215 | CO | Integrated Metri-Pack | 3408626 | 8037319 |
| 215 | CO | Integrated Metri-Pack | 3408629 | 8037374 |
| 205 | CO | Integrated Metri-Pack | 3408631 | 8037321 |
| 223 | CO | Integrated Metri-Pack | 4954948 | 8037429 |
| 223 | CO | Integrated Metri-Pack | 3408627 | 8037320 |
| 223 | NO | Integrated Metri-Pack | 3408635 | 8037377 |

Heavy-Duty Temperature Switches

Three Terminals – 3/8" NPT Housing

| Temp | Mode | Connector | Direct Replacement Medallion P/N | Can also replace these Medallion P/Ns* | INDEX P/N |
|------|------|-----------------------|----------------------------------|----------------------------------------|-----------|
| 140 | NC | Integrated 8-32 Screw | 1002-04880-20 | | 8037142 |
| 160 | CO | Integrated 8-32 Screw | 1002-04880-24 | | 8037090 |
| 180 | CO | Integrated 8-32 Screw | 1002-04880-28 | | 8037175 |
| 185 | CO | Integrated 8-32 Screw | 1002-04880-29 | | 8037176 |
| 190 | CO | Integrated 8-32 Screw | 1002-04880-30 | 102-07955-30 | 8037177 |
| 195 | CO | Integrated 8-32 Screw | 1002-04880-31 | 102-07955-31 | 8037093 |
| 200 | CO | Integrated 8-32 Screw | 1002-04880-32 | 102-07955-32 | 8037178 |
| 205 | CO | Integrated 8-32 Screw | 1002-04880-33 | 102-07955-33 | 8037179 |
| 210 | CO | Integrated 8-32 Screw | 1002-04880-34 | 102-07955-34 | 8037180 |
| 215 | CO | Integrated 8-32 Screw | 1002-04880-35 | 102-07955-35 | 8037098 |
| 220 | CO | Integrated 8-32 Screw | 1002-04880-36 | 102-07955-36 | 8037099 |
| 225 | CO | Integrated 8-32 Screw | 1002-04880-37 | 102-07955-37 | 8037126 |
| 240 | CO | Integrated 8-32 Screw | 1002-04880-40 | 102-07955-40 | 8037127 |
| 250 | CO | Integrated 8-32 Screw | 1002-04880-42 | 102-07955-42 | 8037224 |
| 255 | CO | Integrated 8-32 Screw | 1002-04880-43 | | 8037181 |

Two Terminals – 3/8" NPT Housing

| Temp | Mode | Connector | Direct Replacement Medallion P/N | Direct Replacement Horton P/Ns | Can also replace these Medallion P/Ns* | INDEX P/N |
|------|------|--------------------------------|----------------------------------|--------------------------------|----------------------------------------|-----------|
| 180 | NO | Integrated 8-32 Screw | 1002-05825-28 | | | 8037183 |
| 195 | NO | Integrated 8-32 Screw | | P-1602 / 983624 / 993610 | | 8037082 |
| 220 | NO | Leaded Weather-Pack Receptacle | | | | 8037163 |
| 250 | NO | Leaded Weather-Pack Receptacle | | | | 8037169 |
| 150 | NC | Integrated 8-32 Screw | 1002-07393-22 | | 1002-07479-22 | 8037121 |

*Replace Metri-Pack connector on harness with ring terminals.

All temperatures in degrees Fahrenheit. See definitions and connector key on page 23.

Heavy-Duty Temperature Switches

Two Terminals – 1/2" NPT Housing

| Temp | Mode | Connector | Direct Replacement Medallion P/N | Old Kysor P/N | Direct Replacement Horton P/Ns | Can also replace these Medallion P/Ns* | INDEX P/N |
|------|------|------------------------------|-------------------------------------|---------------|-----------------------------------|-------------------------------------------|-----------|
| 105 | NO | Integrated 8-32 Screw | | | 15949 | | 8037106 |
| 120 | NO | Integrated 8-32 Screw | 1002-05850-16 | | | | 8037134 |
| 150 | NO | Integrated 8-32 Screw | 1002-05554-22 | 1002-05850-22 | 993662, 15953 | | 8037013 |
| 160 | NO | Integrated 8-32 Screw | | | 993656, 16452 | | 8037240 |
| 165 | NO | Integrated 8-32 Screw | 1002-05554-25 | 1002-05850-25 | | | 8037108 |
| 180 | NO | Integrated 8-32 Screw | 1002-05554-28 | 1002-05850-28 | 993615, 15944 | | 8037014 |
| 185 | NO | Integrated 8-32 Screw | 1002-05554-29 | 1002-05850-29 | 993616, 15942 | 1002-07988-29 | 8037018 |
| 190 | NO | Integrated 8-32 Screw | 1002-05554-30 | 1002-05850-30 | 993617, 15943 | 1002-07988-30 | 8037022 |
| 195 | NO | Integrated 8-32 Screw | 1002-05554-31 | 1002-05850-31 | 993653, 15957 | 1002-07988-31 | 8037026 |
| 200 | NO | Integrated 8-32 Screw | 1002-05554-32 | 1002-05850-32 | 993654, 15954 | 1002-07988-32 | 8037030 |
| 200 | NO | Leaded Metri-Pack Receptacle | | | | | 8037225 |
| 205 | NO | Integrated 8-32 Screw | 1002-05554-33 | 1002-05850-33 | 993655, 15940, 15954 | 1002-07988-33 | 8037034 |
| 210 | NO | Integrated 8-32 Screw | 1002-05554-34 | 1002-05850-34 | 993624, 15947 | 1002-07988-34 | 8037037 |
| 215 | NO | Integrated 8-32 Screw | 1002-05554-35 | 1002-05850-35 | 993625, 15945 | 1002-07988-35 | 8037184 |
| 220 | NO | Integrated 8-32 Screw | 1002-05554-36 | 1002-05850-36 | 993626, 15948 | 1002-07988-36 | 8037041 |
| 250 | NO | Integrated 8-32 Screw | 1002-05554-42 | 1002-05850-42 | | | 8037111 |
| 300 | NO | Integrated 8-32 Screw | 1002-05554-52 | 1002-05850-52 | 15946 | | 8037112 |
| 165 | NC | Integrated 8-32 Screw | 1002-07393-25 | | | | 8037107 |
| 185 | NC | Integrated 8-32 Screw | 1002-07393-29 | | 993619, 15952 | 1002-07479-29 | 8037016 |
| 190 | NC | Integrated 8-32 Screw | 1002-07393-30 | | 993603, 15939 | 1002-07479-30 | 8037020 |
| 195 | NC | Integrated 8-32 Screw | 1002-07393-31 | | 993605, 15949 | 1002-07479-31 | 8037024 |
| 200 | NC | Leaded Metri-Pack Receptacle | | | | | 8037188 |
| 200 | NC | Integrated 8-32 Screw | 1002-07393-32 | | 993606, 15941 | 1002-07479-32 | 8037028 |
| 205 | NC | Integrated 8-32 Screw | 1002-07393-33 | | 993607, 15940 | 1002-07479-33 | 8037032 |
| 210 | NC | Integrated 8-32 Screw | 1002-07393-34 | | | 1002-07479-34 | 8037036 |
| 215 | NC | Integrated 8-32 Screw | 1002-07393-35 | | 993665 | 1002-07479-35 | 8037039 |
| 220 | NC | Integrated 8-32 Screw | 1002-07393-36 | | | 1002-07479-36 | 8037040 |

Three Terminals – 1/2" NPT Housing

| Temp | Mode | Connector | Other Equivalents | INDEX P/N |
|------|------|--------------------------------|-------------------|-----------|
| 180 | CO | Integrated 8-32 Screw | | 8037044 |
| 185 | CO | Integrated 8-32 Screw | Nav 1685131C92 | 8037045 |
| 190 | CO | Integrated 8-32 Screw | | 8037048 |
| 195 | CO | Integrated 8-32 Screw | Nav 1685132C92 | 8037050 |
| 200 | CO | Integrated 8-32 Screw | | 8037053 |
| 205 | CO | Integrated 8-32 Screw | Nav 1685171C92 | 8037055 |
| 210 | CO | Leaded Weather-Pack Receptacle | | 8037228 |
| 220 | CO | Integrated 8-32 Screw | | 8037061 |

With over 2,000 SKUs, many other parts are available – call or email for more information.

Overtemp Warning Switches

One Terminal – 1/2" NPT Housing

| Temp | Mode | Connector | Direct Replacement Medallion P/N | Can also replace these Medallion P/Ns* | Other Equivalents | INDEX P/N |
|------|------|-----------------------|----------------------------------|----------------------------------------|-------------------|-----------|
| 160 | NO | Integrated 8-32 Screw | | | | 8039076 |
| 180 | NO | Integrated 8-32 Screw | 1002-05511-28 | 1002-07690-28, 1002-07324-28 | | 8039057 |
| 190 | NO | Integrated 8-32 Screw | 1002-05511-30 | 1002-07690-30, 1002-07324-30 | | 8039058 |
| 195 | NO | Integrated 8-32 Screw | 1002-05511-31 | 1002-07690-31, 1002-07324-31 | | 8039064 |
| 200 | NO | Integrated 8-32 Screw | 1002-05511-32 | 1002-07690-32, 1002-07324-32 | | 8039065 |
| 205 | NO | Integrated 8-32 Screw | 1002-05511-33 | 1002-07690-33, 1002-07324-33 | | 8039054 |
| 210 | NO | Integrated 8-32 Screw | 1002-05511-34 | 1002-07690-34, 1002-07324-34 | | 8039014 |
| 215 | NO | Integrated 8-32 Screw | 1002-05511-35 | 1002-07690-35, 1002-07324-35 | | 8039019 |
| 220 | NO | Integrated 8-32 Screw | 1002-05511-36 | 1002-07690-36, 1002-07324-36 | | 8039023 |
| 225 | NO | Integrated 8-32 Screw | 1002-05511-37 | 1002-07690-37, 1002-07324-37 | | 8039025 |
| 230 | NO | Integrated 8-32 Screw | 1002-05511-38 | 1002-07690-38, 1002-07324-38 | | 8039026 |
| 250 | NO | Integrated 8-32 Screw | 1002-05511-42 | 1002-07690-42, 1002-07324-42 | | 8039066 |
| 260 | NO | Integrated 1/4" Spade | | | | 8039078 |
| 300 | NO | Integrated 8-32 Screw | 1002-05511-52 | 1002-07690-52, 1002-07324-52 | | 8039029 |
| 185 | NC | Integrated 8-32 Screw | | | Thomas 61230658 | 8039050 |
| 190 | NC | Integrated 8-32 Screw | 1002-05768-30 | 1002-07474-30, 1002-07449-30 | | 8039010 |
| 195 | NC | Integrated 8-32 Screw | 1002-05768-31 | 1002-07474-31, 1002-07449-31 | | 8039056 |
| 200 | NC | Integrated 8-32 Screw | 1002-05768-32 | 1002-07474-32, 1002-07449-32 | | 8039067 |
| 205 | NC | Integrated 8-32 Screw | 1002-05768-33 | 1002-07474-33, 1002-07449-33 | | 8039068 |
| 210 | NC | Integrated 8-32 Screw | 1002-05768-34 | 1002-07474-34, 1002-07449-34 | | 8039012 |
| 215 | NC | Integrated 8-32 Screw | 1002-05768-35 | 1002-07474-35, 1002-07449-35 | | 8039017 |
| 220 | NC | Integrated 8-32 Screw | 1002-05768-36 | 1002-07474-36, 1002-07449-36 | | 8039021 |

One Terminal – 3/8" NPT Housing

| Temp | Mode | Connector | Direct Replacement Medallion P/N | Can also replace these Medallion P/Ns* | Other Equivalents | INDEX P/N |
|------|------|-----------------------|----------------------------------|----------------------------------------|-------------------|-----------|
| 165 | NO | Integrated 8-32 Screw | 1002-05811-25 | | | 8039059 |
| 190 | NO | Integrated 8-32 Screw | 1002-05811-30 | 1002-07700-30, 1002-07450-30 | | 8039071 |
| 200 | NO | Integrated 8-32 Screw | 1002-05811-32 | 1002-07700-32, 1002-07450-32 | | 8039032 |
| 205 | NO | Integrated 8-32 Screw | 1002-05811-33 | 1002-07700-33, 1002-07450-33 | | 8039051 |
| 210 | NO | Integrated 8-32 Screw | 1002-05811-34 | 1002-07700-34, 1002-07450-34 | | 8039034 |
| 215 | NO | Integrated 8-32 Screw | 1002-05811-35 | 1002-07700-35, 1002-07450-35 | | 8039052 |
| 220 | NO | Integrated 8-32 Screw | 1002-05811-36 | 1002-07700-36, 1002-07450-36 | | 8039039 |
| 225 | NO | Integrated 8-32 Screw | 1002-05811-37 | 1002-07700-37, 1002-07450-37 | | 8039041 |
| 230 | NO | Integrated 8-32 Screw | 1002-05811-38 | 1002-07700-38, 1002-07450-38 | | 8039042 |
| 250 | NO | Integrated 8-32 Screw | 1002-05811-42 | 1002-07700-42, 1002-07450-42 | | 8039045 |
| 300 | NO | Integrated 8-32 Screw | 1002-05811-52 | 1002-07700-52, 1002-07450-52 | | 8039072 |
| 200 | NC | Integrated 8-32 Screw | | | Thomas 61230646 | 8039031 |
| 205 | NC | Integrated 8-32 Screw | 1002-05769-33 | 1002-07338-33, 1002-07476-33 | | 8039069 |
| 210 | NC | Integrated 8-32 Screw | 1002-05769-34 | 1002-07338-34, 1002-07476-34 | | 8039070 |
| 220 | NC | Integrated 8-32 Screw | 1002-05769-36 | 1002-07338-36, 1002-07476-36 | | 8039053 |

*Replace Metri-Pack connector on harness with ring terminals.

All temperatures in degrees Fahrenheit. See definitions and connector key on page 23.

HEAVY-DUTY PRESSURE SWITCHES



Index's Heavy-Duty Pressure Switches are ideal for a wide range of heavy vehicle and equipment applications where durability and reliability are crucial. Index switches are proven to withstand the shock and vibration of harsh underhood and off-road conditions.

Built-in Vibration Resistance

Index Pressure Switches put up a double line of defense against vibration with two snap-action elements. Under load, a crisp-response pressure disc triggers a heavy-duty contact set, assuring clean electrical switching. Both elements are real workhorses in high duty-cycle applications, lasting up to 1 million cycles or more (depending on load/voltage conditions).

Custom Specifications

By working closely with a variety of OEMs, we determine exactly how a pressure switch functions in the vehicle or machine. What are the optimum set and reset pressures? What receives the switch signal output, and what is done with that information? Then we can dial in the optimum specs to help the entire system work at its best. Our switches have numerous fittings and connectors available.

Intelligent & Reliable

Our switches have tight tolerance where high precision is needed. Intelligent switches with stable, drift-free calibration, pressure indication, interlock and control for engines, transmissions, hydraulics, fluid tanks, and similar industrial applications. In addition, they have a broad media compatibility: air, oil, water, coolant, hydraulic fluid, transmission fluid, and more.

Time-Delay & Diagnostics

You have more options than just on/off switching, too. Index Time-Delay Pressure Switches allow your equipment to "ignore" a normal, momentary high pressure spike or low pressure dip. With Index Diagnostic Switches, your control computer can distinguish a wire short or break from a normally-operating open or closed switch circuit.

Heavy-Duty Pressure Switches for Cummins® Applications

1/4" NPT Housing

| Set | Reset | Mode | Connector | Description | Cummins Equivalent | INDEX P/N |
|-----|-------|------|-----------------------|-----------------------|--------------------|-----------|
| 35 | 25 | CO | Integrated Metri-Pack | Psw 035R psi CO H9 Cc | 3408609 | 8040410 |
| 53 | 23 | CO | Integrated Metri-Pack | Psw 053R psi CO H9 Cc | 3408606 | 8040409 |

1/8" NPT Housing

| Set | Reset | Mode | Connector | Description | Cummins Equivalent | INDEX P/N |
|-----|-------|------|-----------------------|------------------------------------|--------------------|-----------|
| 14 | 6 | CO | Integrated Metri-Pack | Psw 006F psi CO H4 Cc Air Oil Fuel | 3408612 / 2897694 | 8040400 |
| 16 | 12 | CO | Integrated Metri-Pack | Psw 016R psi CO H4 Cc | 3408607 / 2897691 | 8040351 |
| 18 | 10 | CO | Integrated Metri-Pack | Psw 010F psi CO H4 Cc Air Oil Fuel | 3408613 / 2897695 | 8040424 |
| 21 | 18 | CO | Integrated Metri-Pack | Psw 021R psi CO H4 Cb | 3408608 / 2897692 | 8040399 |
| 30 | 20 | CO | Integrated Metri-Pack | Psw 020F psi CO H4 Cc Air Oil Fuel | 3408614 / 4307059 | 8040426 |
| 35 | 25 | CO | Integrated Metri-Pack | Psw 035R psi CO H4 Cc | 3408619 / 2897696 | 8040406 |

With over 2,000 SKUs, many other parts are available - call or email for more information.

Air Conditioning Pressure Switches: R134a Refrigerant Systems

High Pressure Cutout Switches - M10 Female Schrader Fitting

| Set | Reset | Mode | Connector | Description | Notes | OEM | INDEX P/N |
|-----|-------|------|--------------------------|----------------------------------------|-----------------------------|--------------------|-----------|
| 300 | 260 | NC | Leaded Metri-Pack Plug | Psw 300R psi NC D H1 C2 A/C high APAdS | for use with APAdS system | Volvo 3939317 | 8040135 |
| 300 | 300 | NC | Leaded Metri-Pack Plug | Psw 300R psi NC D H1 C2 A/C high APAdS | for use with APAdS system | Navistar 2501256C1 | 8040177 |
| 325 | 275 | NC | Leaded Weather-Pack Plug | Psw 350R psi NC D H1 C6 A/C high APAdS | for use with APAdS system | | 8040172 |
| 325 | 275 | NC | Leaded Weather-Pack Plug | Psw 325R psi NC H1 C6 A/C high | General Purpose | | 8040312 |
| 325 | 275 | NC | Leaded Metri-Pack Plug | Psw 325R psi NC H1 C2 A/C high | General Purpose - 30" wires | Volvo 3948747 | 8040277 |
| 325 | 275 | NC | Leaded Metri-Pack Plug | Psw 325R psi NC H1 C2 A/C high | General Purpose - 6" wires | Volvo 3948744 | 8040239 |
| | | | | | | Mack 1MR3562 | |
| 335 | 245 | NC | Leaded Metri-Pack Plug | Psw 335R psi NC D H1 C2 A/C high APAdS | for use with APAdS system | Mack 1MR3594M | 8040317 |

Fan Trigger Switches - M10 Female Schrader Fitting

| Set | Reset | Mode | Connector | Description | Notes | OEM | INDEX P/N |
|-----|-------|------|---------------------------|-------------------------------|-----------------------------|---------------|-----------|
| 275 | 235 | NO | Leaded Weather-Pack Plug | Psw 275R psi NO H1 C6 A/C fan | General Purpose | | 8040315 |
| 275 | 235 | NC | Leaded Deutsch Receptacle | Psw 275R psi NC H1 C9 A/C fan | use w/ Index Fan Temp Timer | Volvo 3948748 | 8040235 |
| | | | | | | Volvo 3949500 | |
| 275 | 235 | NC | Leaded Weather-Pack Plug | Psw 275R psi NC H1 C6 A/C fan | General Purpose | | 8040314 |
| 300 | 260 | NC | Leaded Weather-Pack Plug | Psw 300R psi NC H1 C6 A/C fan | General Purpose | | 8040164 |

Low Pressure Cutout Switches - M12 Female Schrader Fitting

| Set | Reset | Mode | Connector | Description | Notes | OEM | INDEX P/N |
|-----|-------|------|--------------------------------|---------------------------------------|-----------------------------|--------------------|-----------|
| 34 | 10 | NO | Leaded Weather-Pack Receptacle | Psw 034R psi NO H6 C7 A/C low | General Purpose & w/ACX-10 | | 8040321 |
| 34 | 10 | NO | Leaded Metri-Pack Receptacle | Psw 034R psi NO H2 C3 A/C low | General Purpose | Volvo 8025565 | 8040281 |
| | | | | | | Mack 1MR3561 | |
| 34 | 8 | NC | Leaded Metri-Pack Receptacle | Psw 034R psi NC D H2 C3 A/C low APAdS | for use with APAdS system | Volvo 3966805 | 8040189 |
| 34 | 34 | NC | Leaded Metri-Pack Receptacle | Psw 034R psi NC D H2 C3 A/C low APAdS | for use with APAdS system | Volvo 20437760 | 8040136 |
| | | | | | | Navistar 1699310C1 | |
| | | | | | | Cat 232-8506 | |
| 34 | 34 | NC | Leaded Metri-Pack Receptacle | Psw 034R psi NC D H2 C3 A/C low APAdS | for use with APAdS system | Navistar 2501257C1 | 8040178 |
| | | | | | | Volvo 3966805 | |
| 40 | 32 | NO | Leaded Metri-Pack Plug | Psw 040R psi NO H1 C2 A/C low | Note M10 F Schrader fitting | Volvo 3948749 | 8040282 |
| 47 | 25 | NO | Leaded Weather-Pack Receptacle | Psw 047R psi NO H2 C7 A/C low CCOT | for use with CCOT systems | | 8040318 |
| 47 | 25 | NC | Leaded Weather-Pack Receptacle | PSW 047R psi NC D H2 C7 A/C low APAdS | for APAdS on CCOT systems | | 8040194 |

Air Conditioning Pressure Switches: R12 Refrigerant Systems

High Pressure Cutout Switches - 1/4" Flare Fitting

| Set | Reset | Mode | Connector | Description | Notes | OEM | INDEX P/N |
|-----|-------|------|--------------------------------|----------------------------------------|---------------------------|--------------|-----------|
| 310 | 220 | NC | Leaded Weather-Pack Receptacle | Psw 310R psi NC H0 C7 A/C high R12 | General Purpose | | 8040225 |
| 335 | 245 | NC | Leaded Metri-Pack Plug | Psw 335R psi NC H0 C2 A/C high R12 | General Purpose | Mack 1MR2463 | 8040316 |
| | | | | | | Mack 1MR2451 | |
| 350 | 300 | NC | Leaded Weather-Pack Plug | Psw 350R psi NC D H0 C6 A/C high APAdS | for use with APAdS system | | 8040171 |

Fan Trigger Switches - 1/4" Flare Fitting

| Set | Reset | Mode | Connector | Description | Notes | OEM | INDEX P/N |
|-----|-------|------|--------------------------------|-----------------------------------|-------------------------------|---------------------|-----------|
| 39 | 39 | NO | Flying Leads | Psw 039R psi NO H0 Cw A/C low R12 | | Kysor 2299010 | 8040201 |
| | | | | | | Red Dot 71R6040 | |
| 250 | 250 | NC | Leaded Weather-Pack Plug | Psw 250R psi NC H0 C6 A/C fan R12 | | Red Dot 71R6402 | 8040230 |
| 275 | 235 | NC | Leaded Deutsch Receptacle | Psw 275R psi NC H0 C9 A/C fan R12 | use with Index Fan Temp Timer | | 8040082 |
| 275 | 235 | NC | Leaded Weather-Pack Receptacle | Psw 275R psi NC H0 C7 A/C fan R12 | General Purpose | Mack 1MR2456 | 8040243 |
| 275 | 235 | NC | Leaded Weather-Pack Plug | Psw 275R psi NC H0 C6 A/C fan R12 | General Purpose | Navistar 1622648C91 | 8040231 |
| 300 | 260 | NC | Leaded Weather-Pack Plug | Psw 300R psi NC H0 C6 A/C fan R12 | General Purpose | | 8040307 |
| 300 | 260 | NO | Leaded Weather-Pack Plug | Psw 300R psi NO H1 C6 A/C fan R12 | General Purpose | | 8040313 |
| 300 | 300 | NC | Leaded Deutsch Receptacle | Psw 300R psi NC H1 C9 A/C fan R12 | High Pressure A/C Switch | Red Dot RD5-10008 | 8040088 |

All pressures in PSI. See definitions and connector key on page 23.

Multi-purpose Pressure Switches: Specified by Rising Set Point

1/4" NPT Housing

| Set | Reset | Mode | Connector | Description | INDEX P/N |
|-----|-------|------|--------------------------------|------------------------------------|-----------|
| 9 | 7 | CO | Leaded Weather-Pack Receptacle | Psw 009R psi CO H3 C7 Air Oil Fuel | 8040262 |
| 14 | 8 | CO | Leaded Weather-Pack Receptacle | Psw 014R psi CO H3 C7 Air Oil Fuel | 8040280 |
| 35 | 255 | CO | Leaded Weather-Pack Receptacle | Psw 035R psi CO H3 C7 Air Oil Fuel | 8040254 |

1/8" NPT Housing

| Set | Reset | Mode | Connector | Description | INDEX P/N |
|-----|-------|------|--------------------------------|------------------------------------|-----------|
| 4 | 2 | NO | Integrated Metri-Pack 280 | Psw 004R psi NO H4 C3 Air Oil Fuel | 8040490 |
| 5 | 2 | NC | Integrated Metri-Pack 280 | Psw 005R psi NC H4 C3 Air Oil Fuel | 8040470 |
| 5 | 2 | NO | Integrated Metri-Pack 280 | Psw 005R psi NO H4 C3 Air Oil Fuel | 8040471 |
| 7 | 4 | NO | Integrated Metri-Pack 280 | Psw 007R psi NO H4 Cx Air Oil Fuel | 8040491 |
| 8 | 4 | NO | Ring Terminals | Psw 008R psi NO H4 Cx Air Oil Fuel | 8040311 |
| 10 | 5 | NC | Integrated Metri-Pack 280 | Psw 010R psi NC H4 C3 Air Oil Fuel | 8040472 |
| 10 | 5 | NO | Integrated Metri-Pack 280 | Psw 010R psi NO H4 C3 Air Oil Fuel | 8040473 |
| 14 | 8 | CO | Leaded Weather-Pack Receptacle | Psw 014R psi CO H4 C7 Air Oil Fuel | 8040257 |
| 20 | 10 | NC | Integrated Metri-Pack 280 | Psw 020R psi NC H4 C3 Air Oil Fuel | 8040474 |
| 20 | 10 | NO | Integrated Metri-Pack 280 | Psw 020R psi NO H4 C3 Air Oil Fuel | 8040475 |
| 35 | 25 | NC | Integrated Metri-Pack 280 | Psw 035R psi NC H4 C3 Air Oil Fuel | 8040476 |
| 35 | 25 | NO | Integrated Metri-Pack 280 | Psw 035R psi NO H4 C3 Air Oil Fuel | 8040477 |
| 60 | 50 | NO | Leaded Metri-Pack Plug | Psw 060R psi NO H4 C2 Air Oil Fuel | 8040215 |
| 60 | 50 | NO | Leaded Weather-Pack Receptacle | Psw 060R psi NO H4 C7 Air Oil Fuel | 8040216 |
| 60 | 50 | NC | Integrated Metri-Pack 280 | Psw 060R psi NC H4 C3 Air Oil Fuel | 8040478 |
| 60 | 50 | NO | Integrated Metri-Pack 280 | Psw 060R psi NO H4 C3 Air Oil Fuel | 8040479 |
| 85 | 75 | NC | Integrated Metri-Pack 280 | Psw 085R psi NC H4 C3 Air Oil Fuel | 8040480 |
| 85 | 75 | NO | Integrated Metri-Pack 280 | Psw 085R psi NO H4 C3 Air Oil Fuel | 8040481 |
| 100 | 85 | CO | Leaded Weather-Pack Receptacle | Psw 100R psi CO H4 C7 Air Oil Fuel | 8040256 |
| 115 | 90 | NC | Integrated Metri-Pack 280 | Psw 115R psi NC H4 C3 Air Oil Fuel | 8040482 |
| 115 | 90 | NO | Integrated Metri-Pack 280 | Psw 115R psi NO H4 C3 Air Oil Fuel | 8040483 |
| 135 | 105 | NC | Integrated Metri-Pack 280 | Psw 135R psi NC H4 C3 Air Oil Fuel | 8040484 |
| 135 | 105 | NO | Integrated Metri-Pack 280 | Psw 135R psi NO H4 C3 Air Oil Fuel | 8040485 |

Multi-purpose Pressure Switches: Specified by Falling Reset Point

1/4" NPT Housing

| Set | Reset | Mode | Connector | Description | INDEX P/N |
|-----|-------|------|--------------------------------|------------------------------------|-----------|
| 14 | 6 | NC | Leaded Metri-Pack Plug | Psw 014F psi NC H3 C2 Air Oil Fuel | 8040224 |
| 14 | 6 | CO | Leaded Weather-Pack Receptacle | Psw 006F psi CO H3 C6 Air Oil Fuel | 8040258 |
| 18 | 10 | CO | Leaded Weather-Pack Receptacle | Psw 010F psi CO H3 C7 Air Oil Fuel | 8040260 |
| 18 | 10 | NC | Leaded Weather-Pack Receptacle | Psw 010F psi NC H3 C7 Air Oil Fuel | 8040223 |
| 75 | 65 | NC | Leaded Metri-Pack Plug | Psw 065F psi NC H3 C2 Air Oil Fuel | 8040237 |
| 85 | 75 | NC | Leaded Metri-Pack Plug | Psw 075F psi NC H3 C2 Air Oil Fuel | 8040238 |

1/8" NPT Housing

| Set | Reset | Mode | Connector | Description | INDEX P/N |
|-----|-------|------|--------------------------------|------------------------------------|-----------|
| 12 | 6 | NC | Leaded Weather-Pack Receptacle | Psw 006F psi NC H4 C7 Air Oil Fuel | 8040310 |
| 15 | 6 | CO | Flying Lead | Psw 006F psi CO H3 Cw Air Oil Fuel | 8040265 |
| 15 | 6 | CO | Flying Lead | Psw 006F psi CO H4 Cw Air Oil Fuel | 8040250 |
| 15 | 7 | NO | Tab Connector | Psw 007F psi NO H4 Cx Air Oil Fuel | 8040218 |
| 16 | 8 | CO | Leaded Weather-Pack Plug | Psw 008F psi CO H4 C6 Air Oil Fuel | 8040263 |
| 16 | 10 | NC | Leaded Weather-Pack Receptacle | Psw 010F psi NC H4 C7 Air Oil Fuel | 8040272 |
| 18 | 10 | NC | Leaded Weather-Pack Plug | Psw 010F psi NC H4 C6 Air Oil Fuel | 8040212 |
| 25 | 15 | CO | Flying Lead | PSW 015F psi CO H4 Cw Air Oil Fuel | 8040251 |
| 25 | 15 | CO | Tab Connector | Psw 015F psi CO H4 Cx Air Oil Fuel | 8040268 |
| 25 | 15 | NC | Leaded Weather-Pack Plug | Psw 015F psi NC H4 C6 Air Oil Fuel | 8040221 |
| 55 | 40 | NC | Flying Lead | Psw 040F psi NC H4 Cw Air Oil Fuel | 8040246 |
| 75 | 60 | CO | Flying Lead | Psw 060F psi CO H4 Cw Air Oil Fuel | 8040266 |
| 75 | 60 | CO | Flying Lead | Psw 060F psi CO H4 Cw Air Oil Fuel | 8040252 |
| 90 | 65 | CO | Leaded Weather-Pack Receptacle | Psw 070F psi CO H4 C7 Air Oil Fuel | 8040255 |
| 150 | 120 | NC | Flying Lead | Psw 120F psi NC H4 Cw Air Oil Fuel | 8040245 |

With over 2,000 SKUs, many other parts are available - call or email for more information.

LIQUID LEVEL



Index's Liquid Level Sensors & Probes improve the reliability and operation of your vehicle. An engine leak can lead to costly repairs, rebuilds, or replacements. Index heavy-duty coolant sensors sense when the coolant level drops below the measuring point and provides input to a dashboard or ECM warning system.

Coolant Level Sensors

These sensors are available in 4-pin configurations and are also available with a 3-pin Deutsch adapter harness.

1/4" NPT Housing

| Connector | Output High | Output Low | INDEX P/N |
|-----------------------|------------------|------------|-----------|
| Integrated Metri-Pack | 4.75 - 11.75 VDC | 0.25 VDC | 8034111 |
| Integrated Metri-Pack | 4.75 - 11.75 VDC | 0.25 VDC | 8034112 |
| Integrated Metri-Pack | 4.0 VDC | 0.25 VDC | 8034113 |
| Integrated Metri-Pack | 5.0 VDC | 0.25 VDC | 8034114 |
| Leaded Deutsch | 4.75 - 11.75 VDC | 0.25 VDC | 8041206 |
| Leaded Deutsch | 4.75 - 11.75 VDC | 0.25 VDC | 8041207 |

1/2" NPT Housing

| Connector | Output High | Output Low | INDEX P/N |
|-----------------------|------------------|------------|-----------|
| Integrated Metri-Pack | 4.75 - 11.75 VDC | 0.25 VDC | 8034116 |
| Leaded Deutsch | 4.75 - 11.75 VDC | 0.25 VDC | 8041204 |

Input voltage range is 5-24 VDC

Note: Voltages are stated at nominal, actual output voltages depend on actual input voltage.

Low Coolant Level Probes

These probes are available in one-pin (case ground) and two-pin configuration.

Operating temperature range: -40° F to 257° F (-40° C to 125° C)

3/8" - NPT Housing

| Connector | Reference Number | INDEX P/N |
|----------------|-------------------------|---------------------|
| Screw Terminal | Medallion 5022-33990-01 | Kysor 5022-01187-01 |
| | | 8034100 |

1/4" - NPT Housing

| Connector | Reference Number | INDEX P/N |
|--------------------|-------------------------|---------------------|
| Screw Terminal | Medallion 5022-33670-03 | Kysor 5022-01185-01 |
| | | 8034101 |
| Integrated Deutsch | | 8034109 |

Water-in-Fuel

Index Water-in-Fuel probes ensure the engine will not falter due to improper liquids entering the engine. The driver is notified when water has collected in the fuel filter housing and can remove the water before it causes problems. These probes keep your engine running smoothly without costly repairs or downtime.

1/4" - NPT Housing

| Connector | INDEX P/N |
|--------------------|-----------|
| Integrated Deutsch | 8034107 |

- Designed for low voltage applications
- Single pin or dual pin (internal resistor available on two-pin)
- Brass housing & stainless steel probe
- Designed for A/C or low duty cycle plum D/C current

ORIGINAL EQUIPMENT SENSORS



How are sensors different from switches?

Sensors provide a wide variety of electrical signals to indicate (sense) many conditions and produce analog or digital information for an ECU; while switches actuate a unit based on a predetermined temperature or pressure.

Index Sensors offer a wide range of configurations. From custom voltage ranges, to multiple output options.

Pressure Sensors

Index Pressure Sensors are custom designed for OE manufacturers for a variety of automotive and heavy duty applications. Each sensor is fully tested to ensure the output meets certain specifications. Index's IATF 16949:2016 Certification guarantees that every product meets strict quality requirements.

There are three possible types of pressure sensors related to how they measure the pressure:

Absolute Pressure

This type of sensor measures the difference between a built-in vacuum reference and the pressure at the sensor port. The zero reading for an Absolute Pressure Sensor is in a complete vacuum. This type of sensor is typically used for intake manifold pressure or fuel pressure.

Gauge Pressure

This type of sensor measures the difference between ambient pressure and the sensor port. The zero reading for this type of sensor is always current (atmospheric) ambient pressure. This type is less expensive than absolute pressure and commonly used for engine oil pressure.

Sealed Gauge Pressure

This type of sensor measures the difference between a built in atmospheric pressure reference and the sensor port. This is very similar to a Absolute pressure sensor but has a zero at Atmospheric pressure instead of a vacuum.



Coolant Level Sensors

Used to detect the coolant level in a plastic or metal coolant tank. This is typically a water and antifreeze mixture used to cool an internal combustion engine.

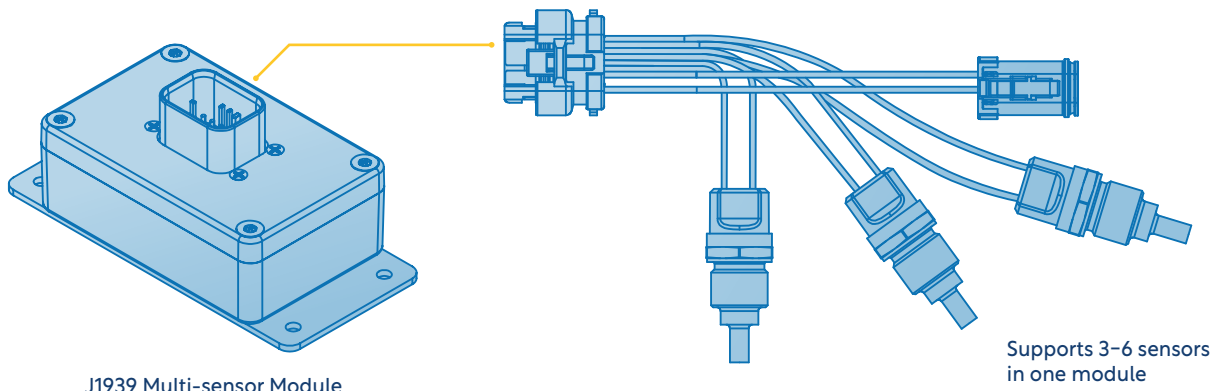


The signal from the sensor is primarily connected to the electronic engine controller (ECM). Low coolant will cause an alarm and for some vehicles will result in an engine shutdown.

Temperature Sensors

Temperature sensors have custom programmable outputs. They offer accurate, fast response with electromagnetic noise resistance sensing. Configurations can have either single or dual outputs (sourcing or sinking); Analog or PWM output with multiple functions in 1 device or SAE J1939 CAN Bus communications.

Applications include: Engine intake air sensing, Cooling fan & warning light, High- and Low- temp interlocks, Time-delay switching, HVAC control, Hydraulic fluid limits, Engine oil temp, Transmission fluid temp, Differential fluid protection.



SAE J1939 Inclinometer

The Inclinometer is an electronic device that measures the incline of a vehicle. It is designed to communicate and share information with the onboard vehicle computer. Designed for installation on the external chassis frame environment, it is packaged in a rugged housing designed to withstand severe environmental conditions.



The Inclinometer measures the acceleration forces on the vehicle in 3 axes (x,y,z) as well as the rate of change of the angular position of the vehicle in 3 axes using a built in MEMS sensor. An embedded processor computes the current pitch and roll angles based on these raw inputs. The resulting information is filtered to reduce the effects of the chassis vibration bounce to provide a best fit estimate of the current road slope in the direction of travel (pitch) and perpendicular to the direction of travel (roll).

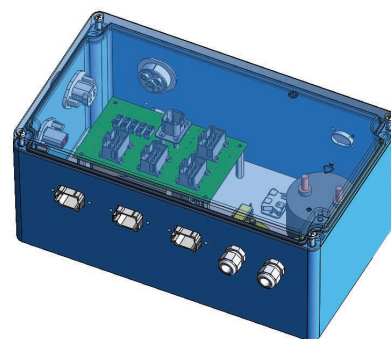
Composed of an electronic control module using a 6 state MEMS sensor that will determine the current road grade (angle in degrees). The information is compiled and sent to the vehicle's ECU over a J1939 CAN connection.

Custom Original Equipment

Index is able to produce custom sensors, controls, and harnessing for OE customers. We offer turn-key systems for thermal management including multiplexed sensors, control modules, power distribution and wiring harnesses with J1939 interfaces and diagnostics for off-road and electric vehicle applications.

Our custom harnessing capabilities include but are not limited to: wire sleeving, conduits, integrated fuses, strain relief, cable ties, as well as having multiple connector options all in small to medium quantities.

Contact us for more information about custom Original Equipment products.



Thermal Management System for Electric Vehicles

AFTERMARKET DIRECT REPLACEMENT SENSORS

Temperature Sensors (Direct Replacement)



| OEM | OEM P/N | INDEX P/N |
|----------------|----------|----------------|
| Caterpillar | 1022240 | 8062005 |
| Cummins | 3085185 | 8062006 |
| Cummins | 3408346 | 8062053 |
| Cummins | 3865312 | 8062024 |
| Cummins | 3865346 | 8062054 |
| Cummins | 4921473 | 8062009 |
| Cummins | 4921475 | 8062003 |
| Detroit Diesel | 23514708 | 8062075 |
| Detroit Diesel | 23515250 | 8062030 |
| Detroit Diesel | 23515251 | 8062031 |
| Detroit Diesel | 23518092 | 8062035 |
| Peterbilt | 144455 | 8062004 |

| OEM | OEM P/N | INDEX P/N |
|--------------|-------------|----------------|
| Freightliner | 147584 | 8062072 |
| Freightliner | 2254800000 | 8062007 |
| Freightliner | VCC83000036 | 8062077 |
| Kenworth | K379-12 | 8062073 |
| Kenworth | Q21-1002 | 8062076 |
| Navistar | 1675751C1 | 8062040 |

ABS / Position Sensors (Direct Replacement)



| OEM | OEM P/N | INDEX P/N |
|----------------|----------|----------------|
| Bendix | 801541 | 8065000 |
| Bendix | 801542 | 8065085 |
| Bendix | 801545 | 8065070 |
| Bendix | 801546 | 8065077 |
| Bendix | 801547 | 8065071 |
| Bendix | 801548 | 8065076 |
| Bendix | 801549 | 8065079 |
| Bendix | 801550 | 8065083 |
| Bendix | 801551 | 8065074 |
| Bendix | 801552 | 8065084 |
| Bendix | 801553 | 8065075 |
| Caterpillar | 2016615 | 8065009 |
| Caterpillar | 2454630 | 8065010 |
| Cummins | 2872277 | 8065025 |
| Cummins | 4921599 | 8065007 |
| Cummins | 4984223 | 8065003 |
| Detroit Diesel | 8929387 | 8065005 |
| Detroit Diesel | 8929388 | 8065008 |
| Haldex | 919801 | 8065066 |
| Haldex | 919802 | 8065067 |
| Haldex | 919803 | 8065068 |
| Haldex | 919804 | 8065069 |
| Mack | 20706327 | 8065011 |
| Mack | 25166488 | 8065012 |
| Meritor | R955329 | 8065013 |
| Meritor | R955335 | 8065001 |
| Meritor | R955336 | 8065073 |

| OEM | OEM P/N | INDEX P/N |
|----------|-------------|----------------|
| Meritor | R955338 | 8065082 |
| Meritor | R955341 | 8065081 |
| Meritor | R955342 | 8065002 |
| Meritor | R955608 | 8065087 |
| Meritor | S4410321840 | 8065059 |
| Meritor | S4410323810 | 8065052 |
| Meritor | S4497130300 | 8065063 |
| Meritor | S4497130500 | 8065065 |
| Navistar | 1835985C92 | 8065024 |
| Navistar | 1876735C91 | 8065029 |
| Navistar | 1876736C91 | 8065030 |
| Navistar | 1885812C91 | 8065006 |
| Volvo | 21508269 | 8060003 |

Pressure Sensors (Direct Replacement)



| OEM | OEM P/N | INDEX P/N |
|----------------|----------|-----------|
| Caterpillar | 1946724 | 8061003 |
| Caterpillar | 1946725 | 8061004 |
| Caterpillar | 2244536 | 8061006 |
| Caterpillar | 2482169 | 8061007 |
| Caterpillar | 2746718 | 8061008 |
| Caterpillar | 2746719 | 8061009 |
| Caterpillar | 2842728 | 8061010 |
| Cummins | 2871960 | 8061022 |
| Cummins | 2897331 | 8061057 |
| Cummins | 3084521 | 8061019 |
| Cummins | 3330141 | 8061029 |
| Cummins | 4076493 | 8061015 |
| Cummins | 4902720 | 8061060 |
| Cummins | 4921487 | 8061026 |
| Cummins | 4921493 | 8061040 |
| Cummins | 4921495 | 8061024 |
| Cummins | 4921499 | 8061073 |
| Cummins | 4921501 | 8061020 |
| Cummins | 4921511 | 8061087 |
| Cummins | 4921517 | 8061011 |
| Cummins | 4928593 | 8061077 |
| Cummins | 4928594 | 8061023 |
| Detroit Diesel | 23528418 | 8061088 |
| Detroit Diesel | 23532797 | 8061047 |
| Freightliner | 2482165 | 8061018 |

| OEM | OEM P/N | INDEX P/N |
|--------------|-------------|-----------|
| Freightliner | 23527829 | 8061021 |
| Navistar | 1807369C2 | 8061027 |
| Navistar | 1830669C92 | 8061025 |
| Navistar | 1839415C91 | 8061028 |
| Navistar | 1840078C1 | 8061012 |
| Navistar | 1846481C92 | 8061013 |
| Navistar | 1850351C1 | 8061014 |
| Navistar | 3C3Z9F838EA | 8061076 |
| Navistar | 5C3Z9J460B | 8061016 |
| Volvo | 1077574 | 8061030 |

Level Sensors (Direct Replacement)



| OEM | OEM P/N | INDEX P/N |
|----------------|-------------------------|-----------|
| Cummins | 4928568/2872768/2872769 | 8034111 |
| Cummins | 4903489/3612521 | 8034112 |
| Cummins | 4383932 | 8034113 |
| Caterpillar | 430-9454 | 8041206 |
| Caterpillar | 430-9449 | 8041207 |
| Detroit Diesel | 23520380 | 8060004 |
| Navistar | 1673785C92 | 8034114 |
| Freightliner | RSC85927C1 | 8034114 |
| Freightliner | 06-62384-002 | 8060005 |
| Mack | 25174715 | 8060007 |

With over 2,000 SKUs, many other parts are available - call or email for more information.

READING INDEX PART DESCRIPTIONS

Index product descriptions use codes to shorten the descriptions. Housings and connectors are simplified to two-digit identification codes. Other words are abbreviated to allow thorough descriptions in a small space.

Connector & Housing Key

Connectors

| | | |
|-----------|----------------|------------------------------------------|
| T0 | 1/4" spade | Spade |
| T1 | 8-32 screw | Threaded |
| C2 | Metri-Pack 280 | Plug w/socket |
| C3 | Metri-Pack 280 | Receptacle w/pin |
| C4 | Metri-Pack 150 | Plug w/socket |
| C5 | Metri-Pack 150 | Receptacle w/pin |
| C6 | Weather-Pack | Plug w/socket |
| C7 | Weather-Pack | Receptacle w/pin |
| C8 | Deutsch | Plug w/socket |
| C9 | Deutsch | Receptacle w/pin |
| Cb | Metri-Pack 150 | "Barn" Type mates w/ Packard 12047909 |
| Cc | Metri-Pack 150 | "Chevron" Type mates w/ Packard 12162280 |
| Cw | None | Bare wire |
| Cx | Other | Other |

Housings – Temperature

| | |
|-----------|-----------------|
| H0 | 3/8" NPTF |
| H1 | 1/2" NPTF |
| H2 | 3/4-16 UNF |
| H3 | 3/4-16 UNF Long |
| H4 | 1/2" NPT Long |
| H5 | 3/8" BSPT |
| Hx | Other |

Housings – Pressure

| | |
|-----------|--------------------|
| H0 | 1/4" F Schrader |
| H1 | M10 F Schrader |
| H2 | M12 F Schrader |
| H3 | 1/4" NPTF External |
| H4 | 1/8" NPTF External |
| H5 | 1/8" NPTF Long |
| H6 | M12 x 1.5 |
| H7 | M14 x 1.5 |
| H8 | 9/16" -18 UNF |
| H9 | 1/4" NPTF Internal |
| Hx | Other |

Ambient Condition Settings

| | | | | | |
|-----------|---------------|-----------|-----------------|-----------|------------------|
| NO | Normally Open | NC | Normally Closed | CO | Common (NO & NC) |
|-----------|---------------|-----------|-----------------|-----------|------------------|

Product Feature Abbreviations

Pressure Switches

| | |
|---------------------|--------------------------------------------------------------------------------------------|
| Psw | Pressure switch |
| R | Nominal refers to rising set point |
| F | Nominal refers to falling set point |
| D | Diagnostic resistor (e.g. APAdS switches) |
| T | Time Delay |
| R12 | For R12 A/C System |
| R134a | For R134a A/C System |
| APAdS | APAdS switches |
| Air Oil Fuel | Multi-purpose – suitable for air, oil, fuel, water, transmission, hydraulic or brake fluid |

Temperature Switches

| | |
|------------------|----------------------------------------------------------------------|
| Temp Ctrl | Temperature control – heavy duty, wide current range |
| Temp Sw | Temperature switch – medium duty, current to 1 amp |
| TW | Electronic temperature switch |
| 1fn | Single function electronic temperature switch |
| 2fn | Dual function electronic temperature switch |
| Src | Sourcing – switch wired between power and load |
| Snk | Sinking – switch wired between load and ground |
| Fan timer | Fan timing temperature switch (takes input from A/C pressure switch) |
| PWM | Pulse width modulation |

Standard Leaded Connector Options



Metri-Pack™ Plug and Receptacle



Weather-Pack™ Plug and Receptacle



Deutsch™ Plug and Receptacle



Cannon™ Plug and Receptacle



AMPSEAL™ Plug and Receptacle



Molex™ Plug and Receptacle

Index offers more connectors not listed above, including different connector types and variations. For non-standard and custom connectors, please contact us for more information.

SWITCH MODE

The setting of the switch contacts at ambient pressure or temperature. Index switches offer three modes: Normally Open, Normally Closed, and Common (both NO and NC).

NO (Normally Open)

A switch that does not conduct electricity at ambient conditions (contacts open) until it reaches its set point, at which point the contacts close and electrical current flows.

NC (Normally Closed)

A switch that conducts electricity at ambient conditions (contacts closed) until it reaches its set point, at which point the contacts open and the electrical current stops.

CO (Common)

A switch with both Normally Closed and Normally Open outputs having the same set and reset points. In the case of mechanical switches, these are 3-terminal devices, also described as **single-pole, double-throw (SPDT)**.

ELECTRICAL ENVIRONMENT

Index switches are designed for 12 to 24 volts nominal DC systems and have been designed to meet all applicable SAE standards.

DIFFERENTIAL

The pressure or temperature difference between the contact actuation set point and the contact de-actuation reset point. Also sometimes referred to as **hysteresis**.

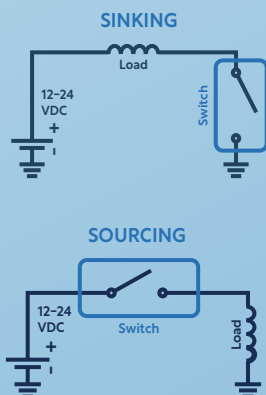
SINKING VS SOURCING CIRCUIT

Refers to the position of the switch in an electrical circuit with respect to power, load and ground.

Sinking: switches are wired between the load and ground.

Sourcing: switches are wired between power and the load.

Mechanical switches can generally be wired in both Sinking or Sourcing positions. Electronic switches and controls are designed as either Sinking (only) or Sourcing (only) devices.

**HIGH PRESSURE CUTOOUT SWITCH**

Prevents A/C system damage due to excessive pressure by disabling the A/C compressor when pressure exceeds the set point. Allows the compressor to resume when the pressure drops below the reset point. Mounted on or near the receiver dryer.

LOW PRESSURE CUTOOUT SWITCH

Prevents system damage due to low pressure or low refrigerant charge by disabling the A/C compressor when pressure drops below the reset point. Allows the compressor to resume when the pressure rises above the set point. Mounted on the low-pressure side of the compressor.

NOMINAL PRESSURE (REFERRING TO RISING SET VERSUS FALLING RESET POINT)

Nominal operating pressure is designated based on what is the most important for the switch's function. For switches responding to decreasing pressure conditions, the falling reset point should be designated as nominal. For switches responding to increasing pressure conditions, the rising set point should be designated as nominal.

SET POINT

The pressure or temperature at which the switch changes electrical contact state (closed to open, or open to closed) when the pressure or temperature is rising.

RESET POINT

The pressure or temperature at which the switch changes electrical contact state (closed to open, or open to closed) when the pressure or temperature is falling.

TEMPERATURE EXPOSURE RANGE

The range of temperatures which switches can operate normally. Index's standard exposure range is -40° F and 257° F (-40° C to 125° C).

INDUCTIVE LOAD

An electrical load from coil-type devices such as solenoids, relays, and electromagnetic clutches. When an inductive circuit is switched open, the energy stored in the coil rushes backwards through the circuit. This sometimes causes arcing at the electric contacts.

RESISTIVE LOAD

An electrical load from devices such as heaters or lights. Resistive loads draw electrical current in one direction through the circuit.

PROOF PRESSURE

The maximum pressure that can be applied to a pressure switch without harming its operating characteristics. A switch's proof pressure should exceed the system's maximum pressure under expected normal operating conditions (including pressure spikes). Standard proof pressure for Index pressure switches is 650 psi.

BURST PRESSURE

The maximum pressure that can be applied to a pressure device without risking catastrophic damage. A switch's burst pressure should exceed the maximum potential pressure in the system, including under abnormal conditions. Index burst pressures are validated within the switch temperature range (-40° to 257° F). Standard burst pressure for Index pressure switches is 975 psi.

LIMITED PRODUCT WARRANTY

Index warrants all of its products to be free from defects in material and workmanship under normal use and service. Any part which proves to be defective in material or workmanship within the Warranty period covering the specific product to which the Warranty applies as specified below, will be repaired or replaced, at Index's option, with a new or functionally operative part.

General Conditions

INDEX's liability under this Limited Warranty shall be limited to repairing or replacing at its own factory or through an authorized service distributor or dealer, material which is determined by INDEX to have been defective in manufacture and upon which a claim has been made by the original purchaser or user to Index (or an authorized distributor or dealer) within the Warranty period. Claims under this Limited Warranty will be honored only if the product is returned within 90 days of the date that the part was determined to be defective. INDEX specifically assumes no responsibility for labor charges unless prior authorization has been granted before the labor has been performed. Approved return of parts or products will be on a prepaid transportation charge basis only and non-defective products will be returned collect. Claims under this Limited Warranty will be honored only upon return of product and INDEX's determination that the claim is covered by this Limited Warranty, and Index shall incur no obligation under this Limited Warranty prior to such determination. This Limited Warranty does not apply to any device or component which has been (i) altered or repaired, except by INDEX or its authorized representatives ; (ii) subject to misuses, negligence, or accident, including, without limitation, use and operation of such machinery or equipment while any parts are loose, broken, out of order, or damaged by the elements, or (iii) used for a purpose for which it was not designed or used in conjunction with other products not approved for use by INDEX, or (iv) rendered inoperative due to miswiring or due to broken wires, or related connectors. Parts replaced under this Limited Warranty are warranted only through the remainder of the original Limited Warranty. Any and all claims for Warranty service must include such information as Index designates, and shall include specifically the part number and date code of each unit (if appropriate).

Recovery Payment Terms (Parts, Labor, Freight)

Parts: Parts returned and verified as failed, by Index, are reimbursed at sales price

Labor: Labor is reimbursed by applying a standard shop rate of \$125/hour x ½ hour/unit

Freight: Index reimburses actual freight costs on parts returned and verified as failed

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INDEX SHALL NOT BE LIABLE UNDER ANY CIRCUMSTANCES FOR ANY INCIDENTAL OF CONSEQUENTIAL DAMAGES, AS THOSE TERMS ARE DEFINED IN THE UNIFORM COMMERCIAL CODE. THE FOREGOING SHALL CONSTITUTE THE SOLE AND EXCLUSIVE LIABILITY OF INDEX IN CONNECTION WITH ITS PRODUCTS.

Warranty Periods

Unless otherwise documented, INDEX products are warranted for a period of **two (2) years** from the date of installation. If the date of installation or resale cannot be documented, the date of installation will be assumed to be ninety days after the manufacturing date coded on the product.



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