



POWER CONTROLS

**Complete Solutions
to Meet Your Needs.**



WHO WE ARE

More than 75 years ago, our products started with a simple idea — identify an unmet need in the industry and provide a reliable solution. Since then our product offering has grown to more than 3,800 products.

Our ever-expanding product breadth includes sophisticated engine control and monitoring systems, electronic and mechanical controls, custom engineered control panels and systems, battery chargers, expandable I/O modules and a whole array of electronic displays. We offer full solutions for challenging projects.

We Are Innovators.

We led the way in helping to meet the latest engine environmental emissions regulations with instrumentation that eases the transition to electronic engines. We continue to explore new technologies and develop new products for emerging market needs. Murphy innovations don't just apply to products. We have integrated a standard operating system which utilizes lean manufacturing and Six Sigma for maximum productivity.

We Are Customer Driven.

We pride ourselves on customer satisfaction and service. We work closely with our customers to design and deliver innovative and reliable products for specific applications. Our goal is to not only meet, but to exceed customer expectations in order to become your preferred partner.

We Are Global.

We are where our customers are. North American operations are centrally located in Tulsa, Oklahoma, with additional offices in San Antonio and Rosenberg, Texas. Our international manufacturing operations are located in Europe and China, with sales offices in India, South Korea and Latin America. Customer support is achieved through our extensive distributor and dealer networks available throughout the world.



State-of-the-art manufacturing capabilities – including Surface Mount Technology (SMT), X-Ray inspection and LCD bonding



Multipoint functional testing delivers higher quality products for our customers



ISO 9001:2008 certified manufacturer of engine instrumentation and control solutions



MORE SOLUTIONS

We offer a wide range of advanced manufacturing and engineering capabilities – including mechanical and electronic hardware design, software design, product testing, in-house LCD bonding, panel and harness engineering and more. Let us provide a complete turnkey solution to meet your needs.

In-House Engineering

Whether it's software or hardware development, our dedicated engineering team has the expertise to complete your project. We offer engineering and design support to provide the right solution for your industrial application. Our engineers are skilled in electronic and mechanical hardware design, embedded software, wire harness design, engine calibration and emissions testing.

In-House Manufacturing

We take pride in our world-class manufacturing which allows us to perform specialized processes for more reliable products. Our facilities feature focused in-house cells dedicated to specific product production, such as SMT, Panel, Wire and Sheet Metal. As we expand our electronic product offerings, we have created future cells designated only for production of our electronic displays and operated by specially trained personnel. LCD bonding is performed in-house and allows for complete bonding of the LCD to the glass in order to provide long-term durability without yellowing, delamination or degradation.

Custom Panel Solutions

Our Industrial Panel Division provides quick delivery of standard or custom panels in a single one-stop solution for all industrial markets. The division offers a project-focused organization backed by vertically integrated manufacturing capabilities. Our application and panel design engineers work side-by-side with manufacturing to keep your project running smoothly. Our panel division offers customized instrumentation panels and packages, standard instrumentation panels and wire harnesses.

Quality and Technical Support

We are constantly looking for ways to improve communication between the integral parts of the manufacturing process to provide better teamwork and faster response to changes. That's why Enovation Controls implemented a Global Operating System focused around Lean Six Sigma to identify and remove variables in our manufacturing and business processes. By pinpointing areas for improvement, we are able to provide our customers with faster delivery time and higher quality products. To better serve our customers, we also offer 24-hour customer service support and an in-house technical service department to answer all your questions.

Mobile Equipment Instrumentation



MORE INTEGRATION

CAN
I/O



PV780 Series PowerView®
Full-Color Display



PV450 Series PowerView®
Full-Color Display

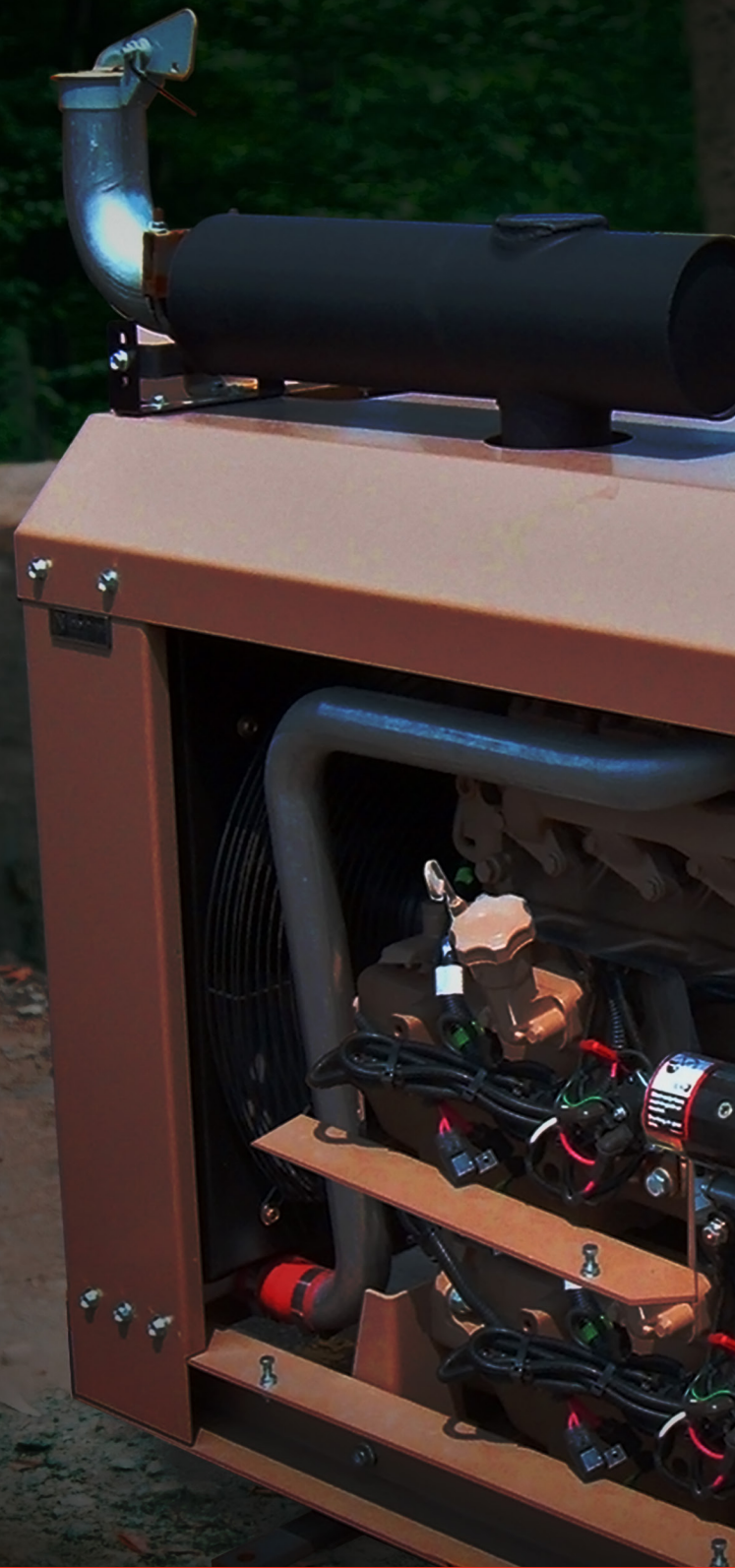


PV380 Series PowerView®
Monochrome Display



I/O Module

Engine Power Unit Instrumentation



MurphyLink™ Engine
Control Panel

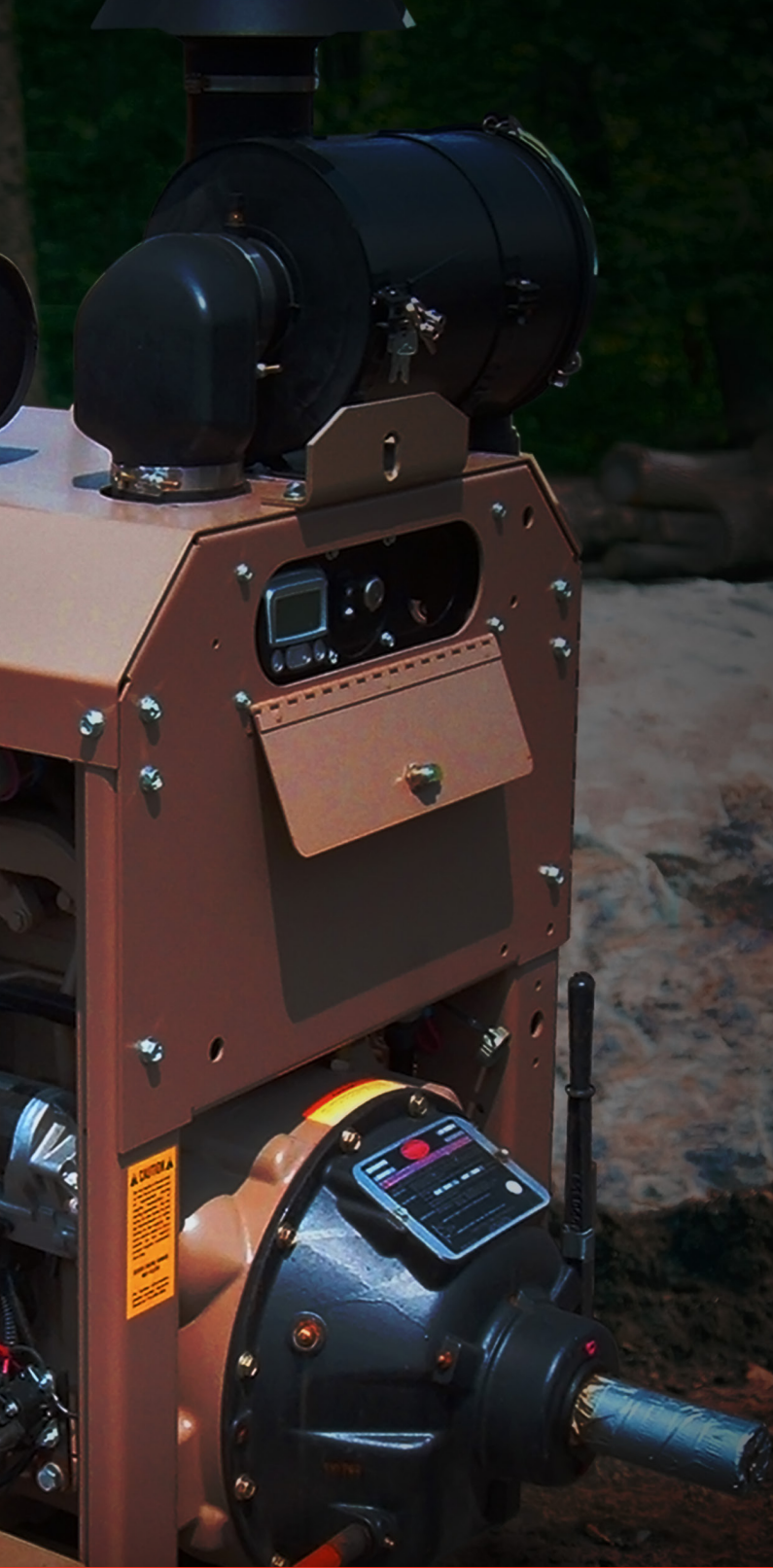


MurphyLink® Enclosed
Engine Control Panels



PowerCore® Family

MORE INTEGRATION



LM500 Auto-Lube
Level Maintainer



L129 Swichgage®
Fluid Level Switch



EL150 Swichgage®
Coolant Level Switch



Wire Harness

Engine/Gen Set Instrumentation



Custom Solutions

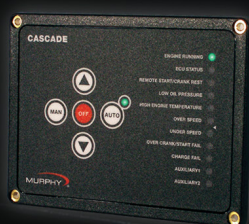


EMS Series Gen Set Controller



MGC Series
Gen Set Control Panel

MORE INTEGRATION



Cascade Gen Set Controller

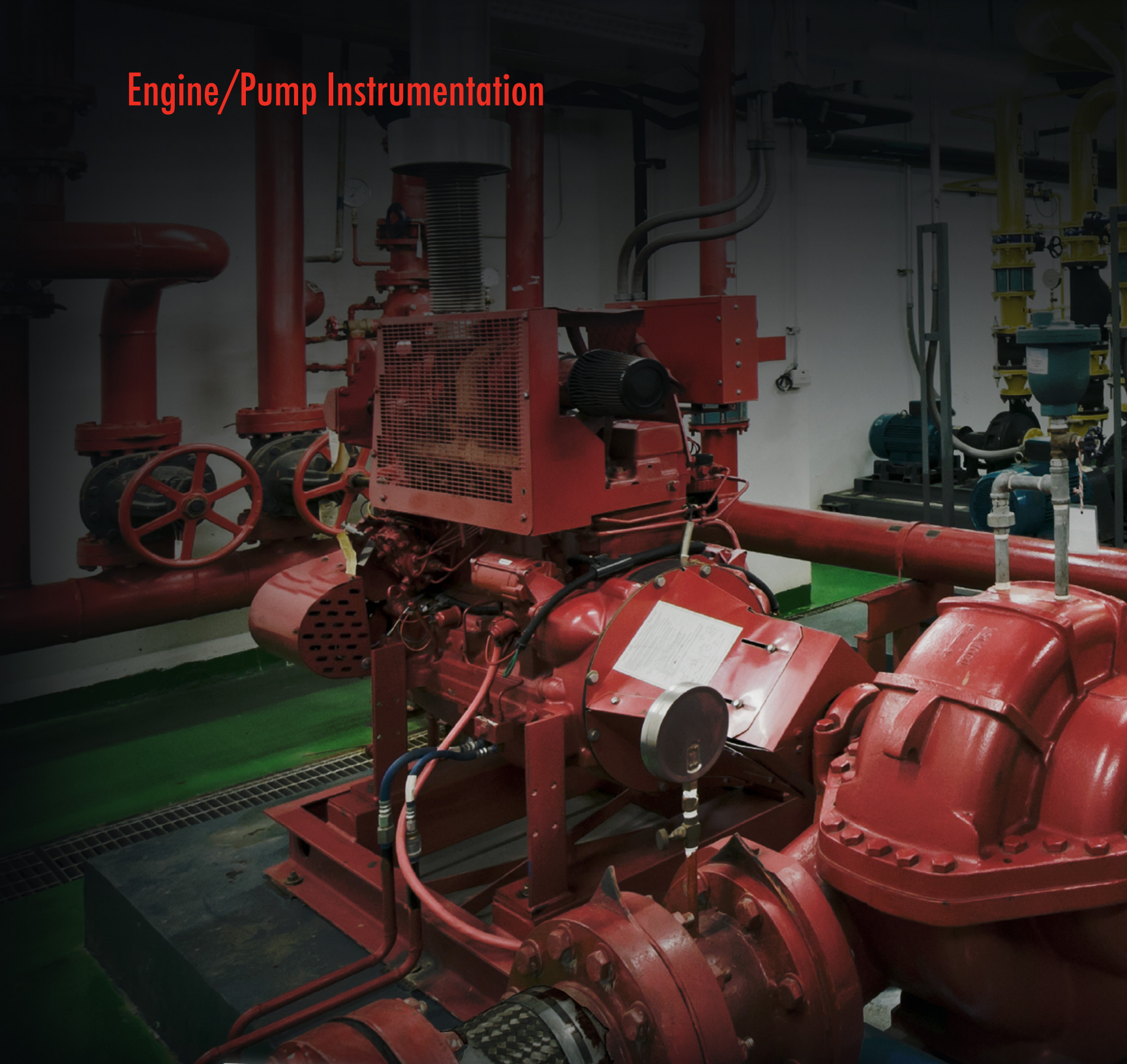


KeyStart Auto-Start
Gen Set Controls



Battery Chargers

Engine/Pump Instrumentation



**MurphyLink® Enclosed
Engine Control Panels**



PowerCore® Family

MORE INTEGRATION



LM500 Auto-Lube
Level Maintainer



L129 Swichgage®
Fluid Level Switch



EL150 Swichgage®
Coolant Level Switch



Wire Harness



PowerView 780 • PowerView 450

PowerView 25 • PowerView 380 • PowerView 101



MORE POSSIBILITIES

Modern Electronic Displays

PowerView® 780

A fully modular CAN display that integrates electronic engine, transmission and equipment information into a 7-inch, full WVGA flat screen. Customize the information for your application using our PowerVision Configuration Studio®.

PowerView 450

A smaller modular CAN display with a 4.3-inch screen. The PV450 has similar features and performance as our larger configurable displays but with a smaller footprint that uses less space.

PowerView 380

A configurable, multifunction display with a 3.8-inch screen designed for complete panel solutions. The PV380 monitors multiple engine parameters and is capable of displaying engine diagnostics as well as basic alarm/shutdown with integrated throttle control.

HelmView® Displays

HelmView displays are variations of the PowerView display line and come preloaded with standard marine software configurations.

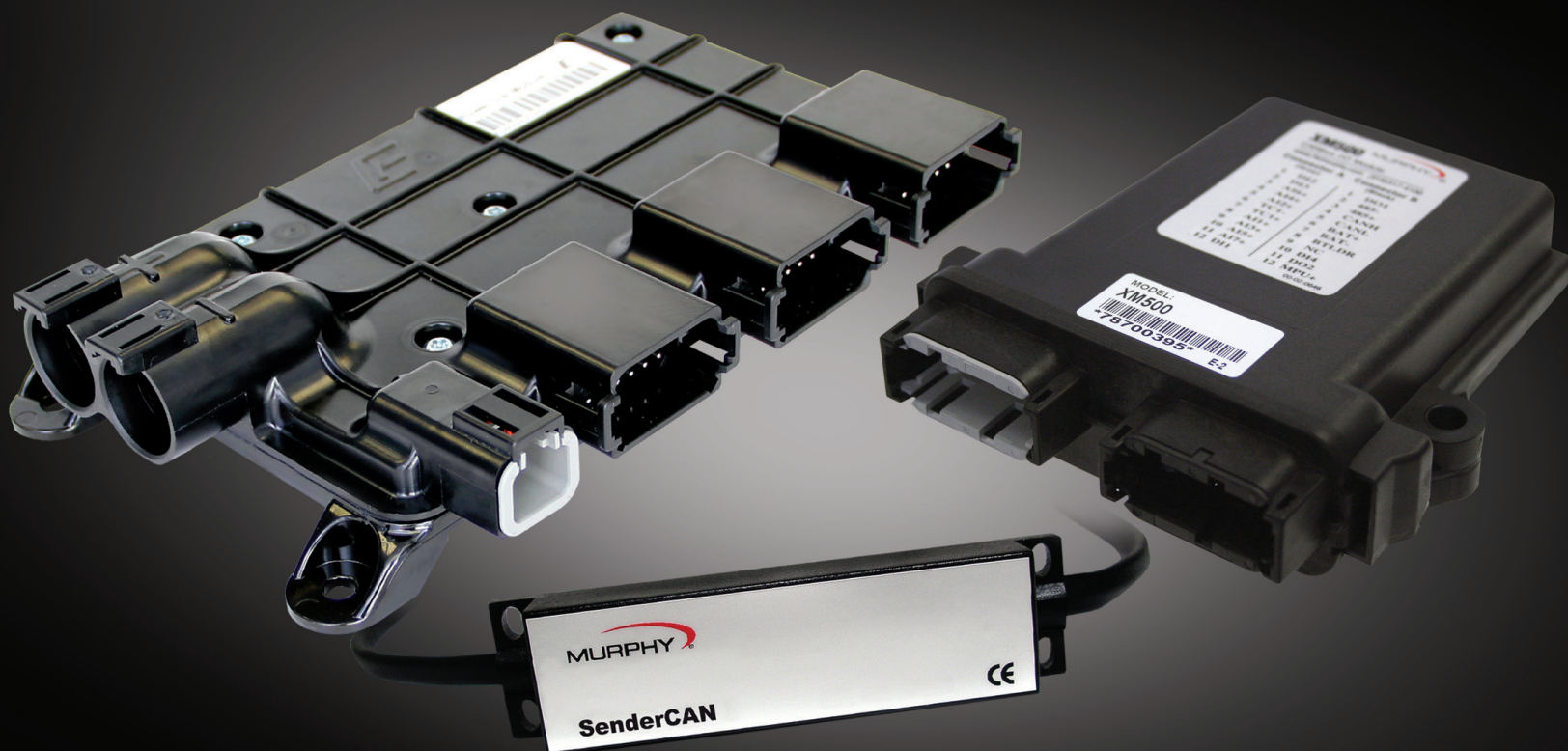
PowerView 101

A multifunction J1939 display that monitors multiple parameters and service codes on a single compact screen. The PV101 display has become an industry standard for electronic engines.

PowerView 25

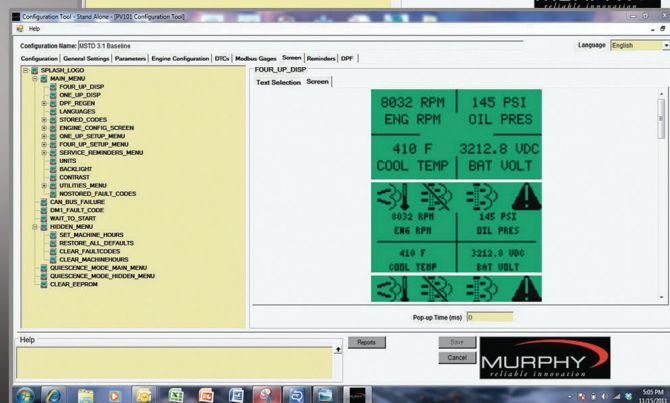
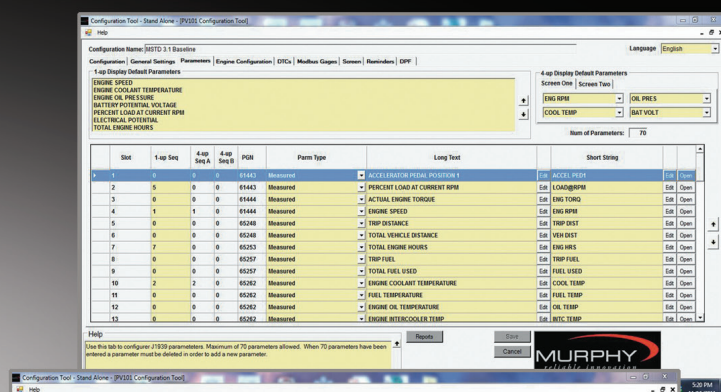
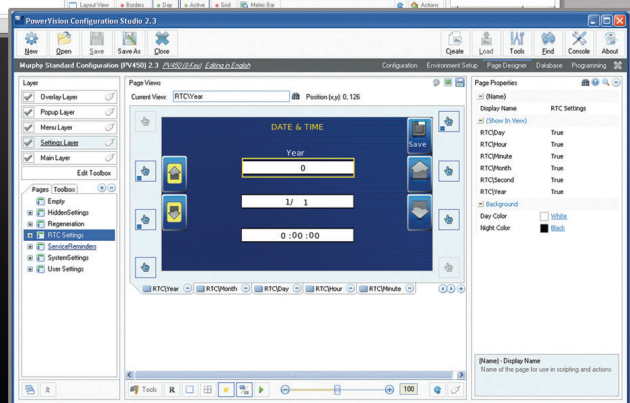
Basic J1939 electronic device that monitors and displays up to 20 primary engine parameters. The PV25 is an economical diagnostic display with Tier 4 emissions capability for lower horsepower electronic engines.





Power Distribution Module • SenderCAN • XM500

PowerVision Configuration Studio • PowerView 101 Configuration Tool



MORE POSSIBILITIES

We continue to provide traditional products such as gages, switches, controllers and panels for mechanical engines. Our latest products have been designed for the future of engine technology, including fully configurable electronic displays which offer a clear and concise look into modern electronic engines while allowing for ease of integration into any application.

Expandable I/O Modules

IX3212-24

Expand CAN bus control networks by replacing existing relay and fuse boxes with the Intelligent XPansion's more reliable solid-state switches that directly drive work lights, wiper motors, cooling fans, directional DC motors and other high-current loads. This power distribution module offers dependability while reducing the cost of wire harnesses for construction, heavy trucking and specialty vehicles.

XM500

The XM500 I/O module picks up additional digital or analog parameters not supported by the existing Engine Control Unit (ECU) and brings them into the display via J1939. When coupled with PowerView displays, the XM500 provides manufacturers with more advanced alarm and shut-down options for equipment.

SenderCAN®

The SenderCAN I/O module integrates analog and digital measurement, control and indicating devices into modern ECU-based engines and systems. The SenderCAN module has up to four inputs and two outputs which can be configured to meet OEM or application-specific measurement needs.

Software Configuration Tools

PowerVision Configuration Studio®

A powerful software development tool that provides OEMs with complete customization. Personalize the look and feel of equipment screens, customize parameters, edit troubleshooting data and upload company branding on the PowerView 780, PowerView 450, PowerView 300 and HelmView marine displays.

PowerView 101 Software Configuration Tool

Configure custom parameters, create proprietary DTC warnings and shutdowns, designate screen layout and more on the PowerView 101 display.

XM500 Software Configuration Tool

Configure the software for the setup of incoming and outgoing parameters between the XM500 and the SAE J1939 CAN bus.

Cascade Software Configuration Tool

Customize parameters for the Cascade auto-start controller.

Sentinel Software Configuration Tool

Configure your battery charger quickly and easily for your specific application and battery type.

PowerCore Configuration Tool

Ability to change settings and parameters without the need of a PC.





PowerView Analog Gages • Electric Gages • PowerView CAN Gages

Battery Chargers

Oil Level Switches • Coolant & Diesel Fuel Level • Lube Level Maintainers

Tachometers • Timers • Overspeed Sensors



MORE POSSIBILITIES

We have a long history with engine instrumentation, so it's no surprise that we offer the broadest range of durable and dependable products for industrial applications. From modern gages for electronic engines to traditional devices for mechanical engines, Murphy products offer the right solution for your application.

Gages - Analog, Electric and CAN

PowerView® Analog Gages

Our PVA gages communicate directly with PowerView displays to provide additional engine information, such as oil pressure/temperature, coolant temperature, transmission oil pressure/temperature and more. The gages also feature smooth stepper motor operation as well as a variety of lens and bezel options.

PowerView CAN Gages

Our PVCAN gages are intelligent gages designed to display information broadcast over SAE J1939 communications. The gages communicate directly to the J1939 CAN bus without the need of another device to drive them. The gages also feature smooth stepper motor operation as well as a variety of lens and bezel options.

Electric Gages

The Electric Gage and Switchgage® instruments provide proven technology, quality and reliability. Our EG gages combine the ease of electric gage installation and the reliable switching of Murphy's famous Switchgage instruments. The Electric Switchgage offers visual indication for monitoring and provides shutdown for many engine functions, including pressure, temperature and fuel level.

Tachometers, Level Indication and Battery Chargers

Tachometers, Time & Overspeed

Our tachometers and overspeed devices indicate engine RPM and running time, as well as provide alarm and shutdown on overspeed and starter cranking disconnect. Time switches automatically start or stop an engine after a fixed amount of time for time-critical applications.

Battery Chargers

The Sentinel Series battery chargers provide economical, advanced multistage charging and control functions to ensure optimum performance. The Sentinel 150 and 300P are available for both 12- and 24-volt systems and can be configured using a PC-configuration tool. The 300P is NFPA 100 compliant.

Level Devices

Level devices help protect your industrial engine applications with visual indication and monitoring of low/high levels of oil, coolant and diesel fuel. By providing an easy visual indication, operators can check engine fluid levels without shutting down the engine.



PowerCore Family: MPC-10 & MPC-20

Key Start • Cascade

ML1000 • ML2000



MORE POSSIBILITIES

Every application is unique, which is why we provide an array of controller options suitable for a broad range of industrial applications. Pumps, grinders, power units and generators are just a few of the applications that utilize Murphy controllers. Find the right controller with the right mix of features for your particular application below.

Controllers

PowerCore® MPC-10

Designed with rental applications in mind, the MPC-10 is a general, all-purpose manual/auto start and manual/auto throttling engine controller. This small, powerful controller supports J1939 CAN protocols for electronically governed engines as well as I/O for mechanical engines for fault and safety shutdowns.

PowerCore® MPC-20

Developed to meet the needs of manual or automatic control, the MPC-20 can be used on mechanically or electronically governed engines supporting SAE J1939 CAN communications.

Cascade

The Cascade auto-start engine controller can fit any engine driven application requiring a simple and robust automatic start and stop sequence. The Cascade can be used on both mechanical and electronic engines.

Key Start

Our family of compact keyswitch modules provide manual or automatic start/stop control and fault indication/shutdown.

Panels

ML2000

This superior panel offering features the MPC-20 Controller. The ML2000 Series panels are available in two rugged enclosures or a stand-alone flat panel option that can be dropped into an existing panel. The panel provides packagers and operators numerous mounting solutions to meet multiple applications.

ML1000-4x

The entry-level ML1004-4X offers the flexibility of the MPC-10 Controller in a panel. It can be mounted directly to the engine or engine/application cover.



OUR COMMITMENT TO YOU

Our company is more than just a supplier of products. We work closely with our customers to design and deliver innovative and reliable products for specific applications. Our goal is not just to meet, but exceed customer expectations in order to become the preferred partner.

IN-HOUSE MANUFACTURING

We take pride in our world-class manufacturing, which allows us to perform specialized manufacturing processes and provide customers with more reliable products. We have integrated a standard operating system, which utilizes intelligent approaches like lean manufacturing and Six Sigma, for maximum productivity.

CUSTOMER-FOCUSED SUPPORT

We understand the importance of creating sustainable partnerships with our customers. To accomplish that, we provide support before, during and after the initial sale. From engineering support to troubleshooting assistance, we are with you every step of the way.

GLOBAL SERVICE AND SUPPORT:

- 24-Hour Technical Support
- Global Field Service
- Skilled Engineering Team
- Startup/Commissioning, Training and Troubleshooting Assistance



MURPHY®

by **ENOVATION** CONTROLS



by **ENOVATION** CONTROLS

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