POWERCORE® SERIES OVERVIEW

Revised 12/2020

WHY **POWERCORE®?**

Designed for Electronic & Mechanical Engines

Ready to Use Out of the Box

Proven Reliability in Harsh Environments

Available in Controller & Panel Configurations

Customizable to Any Application

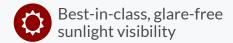Tier 4 Final Ready

THE FULL POWERCORE® CONTROLLER/PANEL **SERIES**

Multifunctional Controllers

MPC-10

MPC-20

TEC-10

Rugged Panel Systems

ML2000

ML1000-4X

MLC380

Ready-to-Run OEM Panel Systems

ISUZU

MTU

DOOSAN

Industry leading durability and environmental protection

Best-in-class, glare-free sunlight visibility

Ready-to-use software based on decades of engine expertise

Built-in support for most major electronic engine manufacturers

POWERCORE SERIES FEATURES

Compatible with Mechanical and Electronic Engines (SAE J1939 CAN)

User Configurable from the Controller

Auto & Manual Start with Various Throttling Options

Built-in Shutdowns for Low Oil Pressure, High Temperature & High Speed

Adjust RPM Set Point from Controller
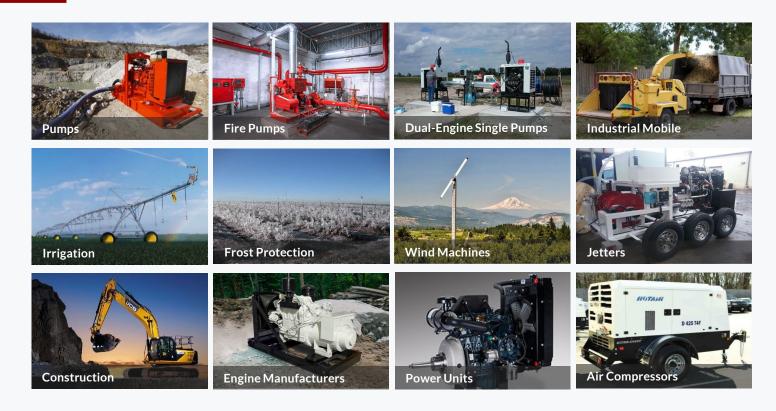
3 Configurable Levels of Passcode Protection

Flexible Analog Sensor Inputs

Wide Operating & Storage Temp. Range (-40°C To +85°C)

8-32 VDC Operating Electrical Range

3 Status LEDs

Real-Time Clock

DESIGNED FOR RUGGED MARKETS

Pumps

Fire Pumps

Dual-Engine Single Pumps

Industrial Mobile

Irrigation

Frost Protection

Wind Machines

Jetters

Construction

Engine Manufacturers

Power Units

Air Compressors

MURPHY INDUSTRIAL HARNESSES

Enovation Controls offers a variety of engine harnesses built to connect electronic engines from major OEMs to controllers and panels.

Complete list available on our website: click here

Multifunctional Controllers

POWERCORE MPC-20

Murphy's PowerCore MPC-20 is a powerful, all-purpose industrial controller designed to work in the harshest environments on most any engine-driven application.

- Easy-to-read 3.8-inch monochrome display

- Extensive inputs and outputs for mechanical engines and complex applications

- Auto Start / Stop Methods: (10)

- Throttling Methods: (8) Auto / (1) Manual

1800 RPM
TARGET : 1800
Oil Press **38** PSI | Eng Temp **198** F | Batt Volt **13.1** V
46 % DEF | 12 % Soot | 268.15 Hrs
Running Loaded | Manual | 00:00:00

PowerCore MPC-20

7.5 in
(207.7 mm)

8.2 in
(208.7 mm)

All Weather

Service Reminders

Sunlight Visible

Telematics Ready

Engine Monitoring

Glove-Friendly

Programmable

Auto Start/Stop

CE

CSA C US ®

IP 67

Tier 4 Final ready Stage V

ENOVATION CONTROLS

8

POWERCORE MPC-10

Murphy's PowerCore MPC-10 is a configurable, all-purpose controller perfect for rental and fleet applications.

- Easy-to-read 2.7-inch monochrome display

- Primarily for applications where a wide array of inputs and outputs are not required

- Auto Start / Stop Methods: (8)

- Throttling Methods: (6) Auto / (4) Manual

5.25 in
(133.29mm)

6.57 in
(167.09mm)

1800 RPM
TARGET: 1800
55 PSI   169 °F
Running Loaded
32 % Soot   7 % DEF   Manual

PowerCore MPC-10

All Weather
Sunlight Visible
Engine Monitoring
Programmable

Service Reminders
Telematics Ready
Glove-Friendly
Auto Start/Stop

CE
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POWERCORE CONTROLLERS COMPARED

	MPC-20	MPC-10
Display	3.8-inch (320 X 240)	2.7-inch (400x240)
Connectors	(1) Delphi 90 pin	(3) Deutsch 12 pin
Total Inputs	15	9
Total Outputs	13	7
Auto Start/Stop Methods	10	8
Throttling Methods	Auto (8) Manual (1)	Auto (6) Manual (4)

Rugged Panel Systems

ML2000 PANELS

Murphy's ML2000 control panel series incorporates all the power & functionality of the PowerCore® MPC-20 Controller in a panel solution for most engine-driven applications.

- Available in powder-coated cold-rolled steel enclosure, stand-alone flat panel, or a NEMA-4X sealed enclosure with door

- Compatible with Murphy Industrial Harnesses designed for major engine OEMs

- Can be mounted directly to the engine or application cover

Controller Only

CE CSA® C US IP 67 Tier4 Final ready Stage V

ENOVATION CONTROLS

All Weather

Sunlight Visible

Engine Monitoring

Programmable

Service Reminders

Telematics Ready

Glove-Friendly

Auto Start/Stop

POWERCORE TEC-10 CONTROLLER & PANEL

Murphy's PowerCore® TEC-10 controller & panel provides full control with easy setup and installation. This versatile turnkey control panel provides familiarity across many applications.

- Easy-to-read 2.7-inch monochrome display

- Plug-and-play panel solution designed for use with electronic engines and simple mechanical engines

- Auto Start / Stop Methods: (8)

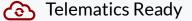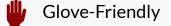- Throttling Methods: (6) Auto / (4) Manual

7.34 in (186.5mm)

9.59 in (243.48mm)

CE   IP 67   Tier4 Final ready Stage V

- All Weather
- Sunlight Visible
- Engine Monitoring
- Programmable
- Service Reminders
- Telematics Ready
- Glove-Friendly
- Auto Start/Stop

ENOVATION CONTROLS

ML1000-4X PANELS

Murphy's ML1000-4X incorporates all the power and functionality of the PowerCore MPC-10 Controller in a panel solution for most any engine-driven application.

- NEMA-4X enclosure for protection against harsh environments

- Compatible with Murphy Industrial Harnesses designed for major engine OEMs

- Can be mounted directly to the engine or application cover

Controller Only

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Tier4 Final ready Stage V

ENOVATION CONTROLS

All Weather   Service Reminders

Sunlight Visible   Telematics Ready

Engine Monitoring   Glove-Friendly

Programmable   Auto Start/Stop

MLC380 PANELS

The MurphyLink Series MLC380 Panel, engineered and built by Enovation Controls' Industrial Panel Division, is a superior panel offering that includes the powerful, yet simple-to-configure PV380 display.

- PV380 monitors multiple J1939 parameters and provides basic engine alarm/shut-down information

- Available in 12-volt and 24-volt models for electrical and mechanical engines

- Optional mounting bracket available

Controller Only

CE   IP 67   Tier4 Final ready Stage V

ENOVATION CONTROLS

All Weather

Sunlight Visible

Engine Monitoring

PC Configurable

Service Reminders

Glove-Friendly

Auto Start/Stop

RUGGED PANEL SYSTEMS COMPARED

	ML2000	ML1000-4X	TEC-10	MLC380
Controller/ Display	MPC-20	MPC-10	TEC-10	PV380
Connectors	21 Pin Deutsch & 31 Pin Deutsch			21 Pin Deutsch (Electronic) 15 Pin Deutsch (Mechanical)
Total Inputs	13	9	9	8
Total Outputs	15	8	7	2
Communications	CAN / J1939 RS-485 Modbus	CAN / J1939 RS-485 Modbus USB 2.0B for Programming	CAN / 1939 RS-485 Modbus RTU	CAN / J1939 RS-485 Modbus
Operating Voltage	8-32 VDC			6-36 VDC

Ready-to-Run OEM Panels

POWERCORE READY-TO-RUN ISUZU ENGINE PANEL

Get running in minutes with Murphy's Ready To Run Panels for ISUZU Engines. Ready To Run Panels provide complete engine control in a single solution.

- Custom panel and harness built specifically for ISUZU engines

- Designed for 4LE2 and 4JJ1T Final Tier 4 engines

- PV380 remote panel option available

Controller Only

CE IP 67 Tier4 Final ready Stage V

ENOVATION CONTROLS

All Weather
Sunlight Visible
Engine Monitoring

Service Reminders
Glove-Friendly
Auto Start/Stop

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POWERCORE READY-TO-RUN DOOSAN ENGINE PANELS

Get running in minutes with Murphy's Ready To Run Panels for Doosan Engines. Ready To Run Panels provide complete engine control in a single solution.

- Custom panel and harness built specifically for Doosan engines

- Designed for D10 – 4500, D10 – 4800, D18, D24, D34 and D34 SCR Final Tier 4 engines

- Optional I/O harnesses and mounting brackets available for a truly turnkey solution

All Weather

Service Reminders

Sunlight Visible

Glove-Friendly

Engine Monitoring

Auto Start/Stop

Controller Only

CE
IP 67
Tier4 Final ready Stage V

ENOVATION CONTROLS

POWERCORE READY-TO-RUN MTU ENGINE PANEL

Get running in minutes with Murphy's Ready To Run Panel for MTU Engines. Ready To Run Panels provide complete engine control in a single solution.

- Custom panel featuring an MPC-20 controller and complete MTU engine-specific harnessing

- Designed for Final Tier 4 LPR Series 1000, 1100, 1300 and 1500 engines

- Panel designed with suitable housing for CPC4 module

All Weather

Sunlight Visible

Engine Monitoring

Service Reminders

Glove-Friendly

Auto Start/Stop

Controller Only

CE

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Tier 4 Final ready Stage V

ENOVATION CONTROLS

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THANK YOU

APPENDIX: ELECTRONIC ENGINE COMPATIBILITY

- Caterpillar (M-T4F)
- Cummins (M-T4F)
- John Deere (M-T4F)
- Deutz (M-T4F)
- Kohler KDI 1903
- Kubota (M, T4i, Gaseous)
- JCB (T4F)
- Volvo (T3-T4F)
- FPT (T4F)
- Isuzu (M)
- PSI (E-Controls ECU)
- Scania (T3-T4F)
- FORD (E-Controls ECU)
- Perkins (M-T4F)
- HATZ (M-T4F)
- GM (MEFI ECU)
- Yanmar (T4F)