

MurphyLink 2nd Generation Panels

Typical Application Shown,
Features Vary Per Engine
Application



MurphyLink™ Series M310 Panels

- Standard panel designed for modern electronic engines and equipment applications using SAE J1939 Controller Area Network (CAN)
- PowerView displays over 30 standard SAE J1939 parameters broadcast by major engine and transmission manufacturer's ECU's
- Display active faults and ECU-stored faults with text description on most common faults for diagnosing equipment malfunctions
- Standard harnesses available for most major engine manufacturers ECU's
- Enclosed design or flat panel option
- Deutsch connectors
- Optional Extension Harnesses

Description

Introducing the new M310 Series panels using the new PowerView System. It is available in an enclosure or stand-alone flat panel option that can be dropped into a dash. The PowerView is a powerful new display in a line of components manufactured as part of its J1939 MurphyLink™ Family. These products have been developed to meet the needs for instrumentation and control on electronically controlled engines communicating using the SAE J1939 Controller Area Network (CAN).

The M310 Series Panels include the PowerView and the Mlink™ PowerView Analog Gages. The PowerView is a multifunction tool that enables equipment operators to view many different engine or transmission parameters and service codes. The panels provide a window into modern electronic engines. The PowerView includes a graphical back-lighted LCD screen. It has excellent contrast and viewing from all angles. The display can show either a single parameter or a quadrant display for viewing four parameters simultaneously. Diagnostic capabilities include fault codes with text translation for the most common fault conditions.

The PowerView has four buttons using touch-sensitive technology, which eliminates the concern for push button wear and failure. In addition operators

can navigate the display with ease. Enhanced alarm indication uses ultra bright alarm and shutdown LED's (amber and red). The PowerView has a wide operating temperature range of -40 to +85° C (-40 to 185° F), display viewing -40 to +75° C (-40 to 167° F), and environmental sealing to +/- 5 PSI.

Other components in the panels are microprocessor-based M-Link™ PowerView Analog Gages for displaying critical engine data broadcast by an electronic engine: engine RPM, oil pressure, coolant temperature, system voltage, etc. and an optional audible alarm and relay unit for warning and shutdown annunciation.

This standard panel can be ordered with or without an enclosure, since all of the components are assembled to a stand-a-lone flat panel. Optional mounting kits are offered for the enclosure, which provide packagers and operators numerous mounting solutions to meet multiple applications. Panel designs are offered to meet the needs of specific engine models. In addition, FWMurphy offers standard harnesses for quick Plug and Go operation that interface with all the 2nd Generation MurphyLink™ PowerView panels.

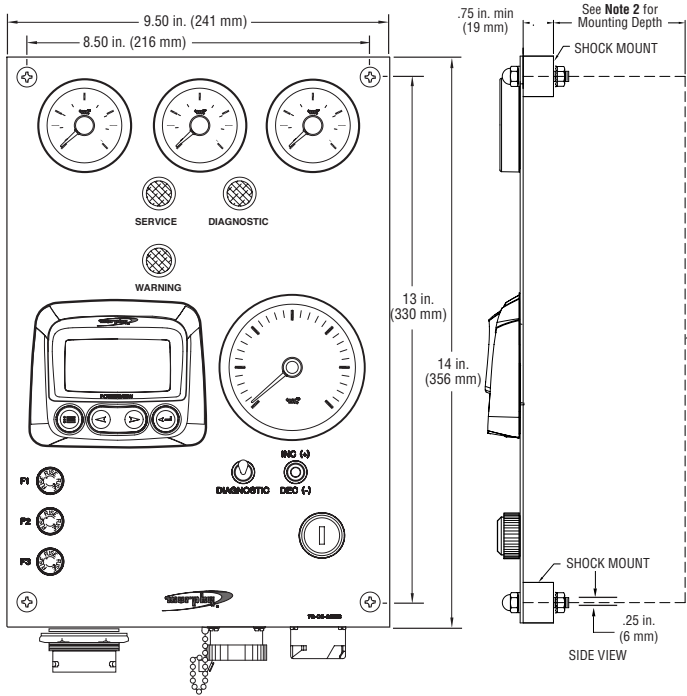
Optional Extension Harnesses are available to allow remote mounting of the panel. For available lengths see the How to Order information (page-3).

Display Parameters

The following are some of the engine and transmission parameters displayed by the PowerView in English or Metric units (when applicable), consult engine or transmission manufacturer for SAE J1939 supported parameters.

- Engine RPM
- Engine Hours
- Machine Hours
- System Voltage
- % Engine Load at the Current RPM
- Coolant Temperature
- Oil Pressure
- Fuel Economy
- Throttle Position
- Engine Manifold Air Temperature
- Current Fuel Consumption
- Transmission Gear Oil Pressure
- Transmission Gear Oil Temperature
- Transmission Gear Position
- Active Service Codes
- Stored Service Codes from the Engine
- Set Units for Display (English or Metric)
- View Engine Configuration Parameters

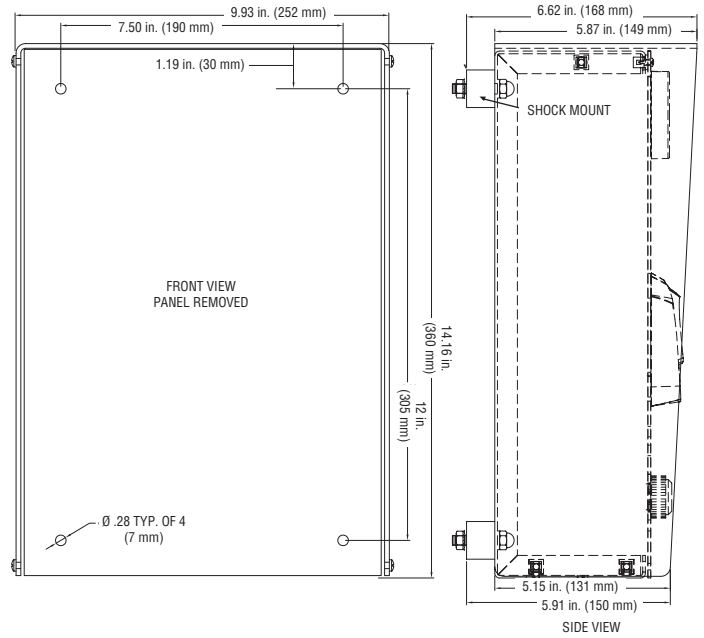
**Dimensions Flat Panel (only)
Includes Shock Mounts**



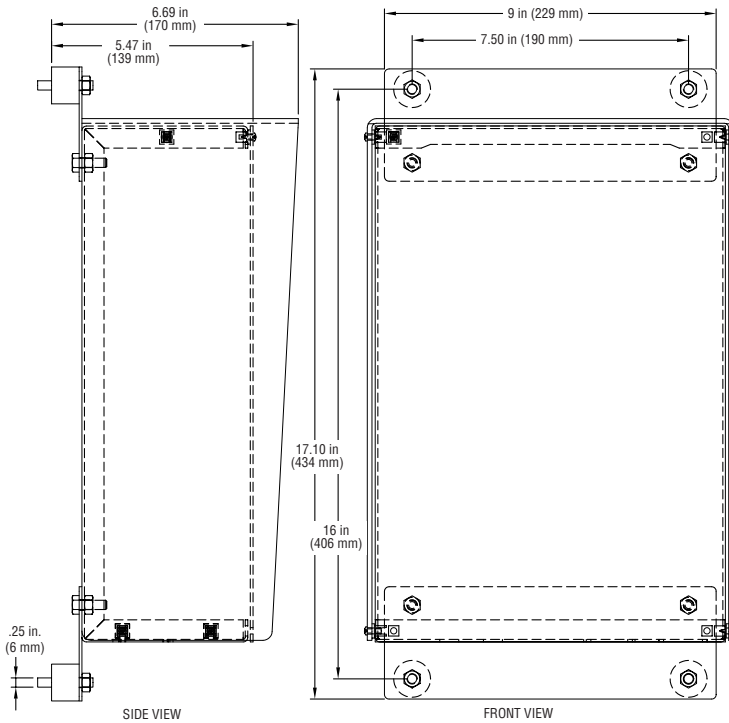
NOTE 1: Flat Panel has approximately 8 inch leads on connectors. Typical application shown, features vary per engine application.

NOTE 2: Allow 4.50 in. (114 mm) minimum mounting depth for versions with Morse throttle. For all other version allow 3.25 in. (83 mm) minimum depth.

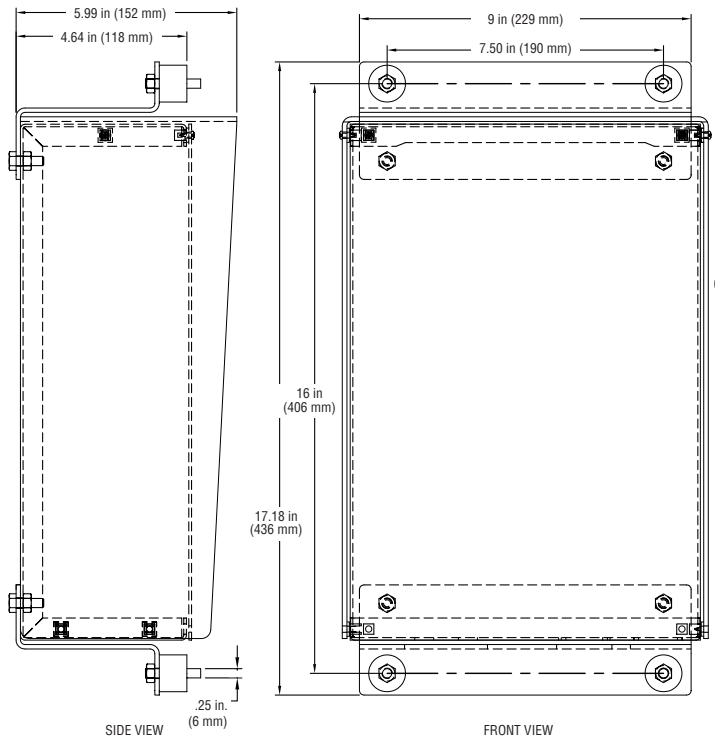
**Dimensions in Enclosure
Includes Shock Mounts**



**Surface Mount Dimension
(optional) Kit P/N 32-00-0033**



**Recessed Mount Dimension
(optional) Kit P/N 32-00-0035**



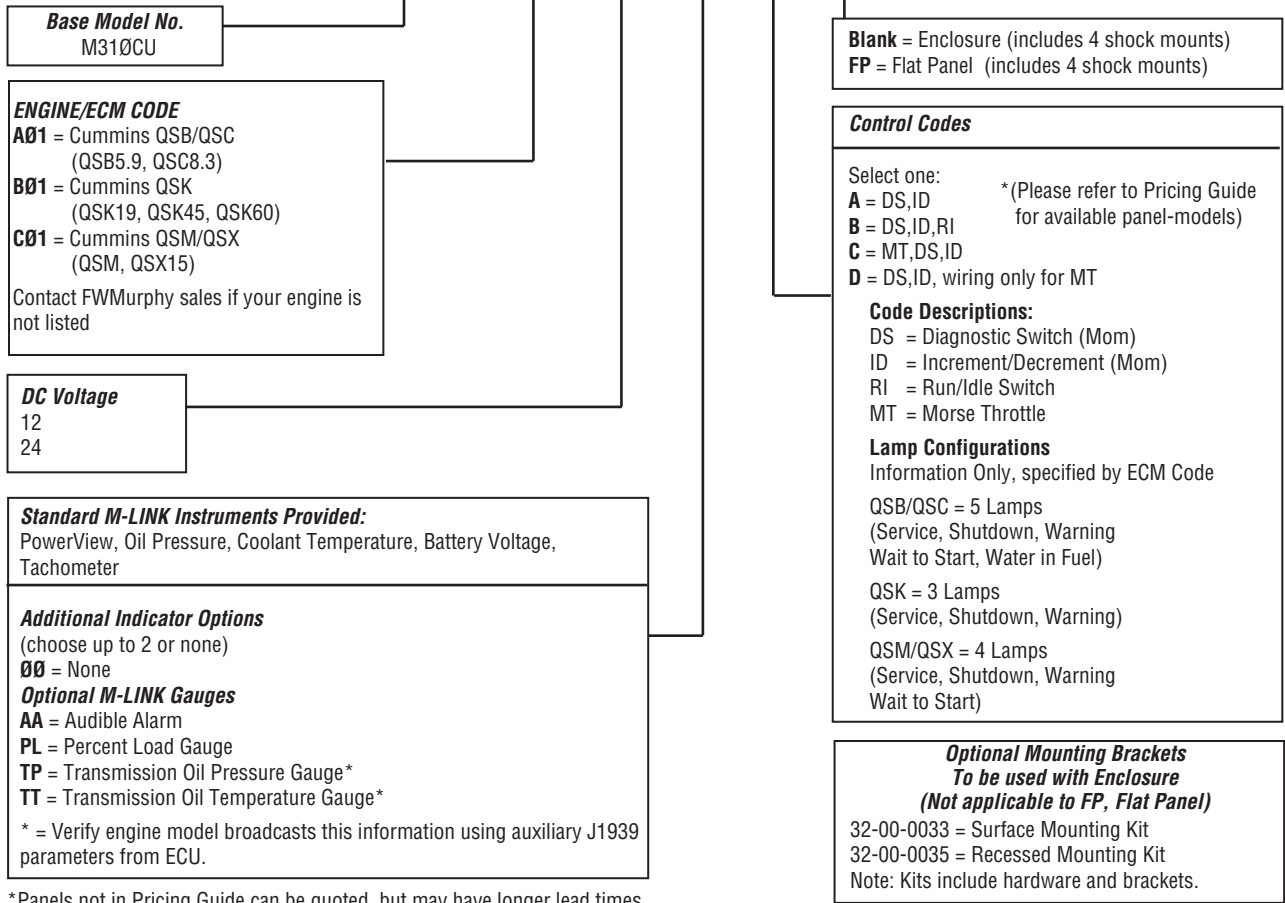
NOTE: It is the user's responsibility to verify that the electronic control module (ECM) has been programmed to support these control features, and that the appropriate external wire harness or other interconnecting wiring has been installed from the panel to the ECM.

How to Order

To order, use the model number designation diagram below.

M-LINK M310 Panel Model Number Configurator for CUMMINS Engines

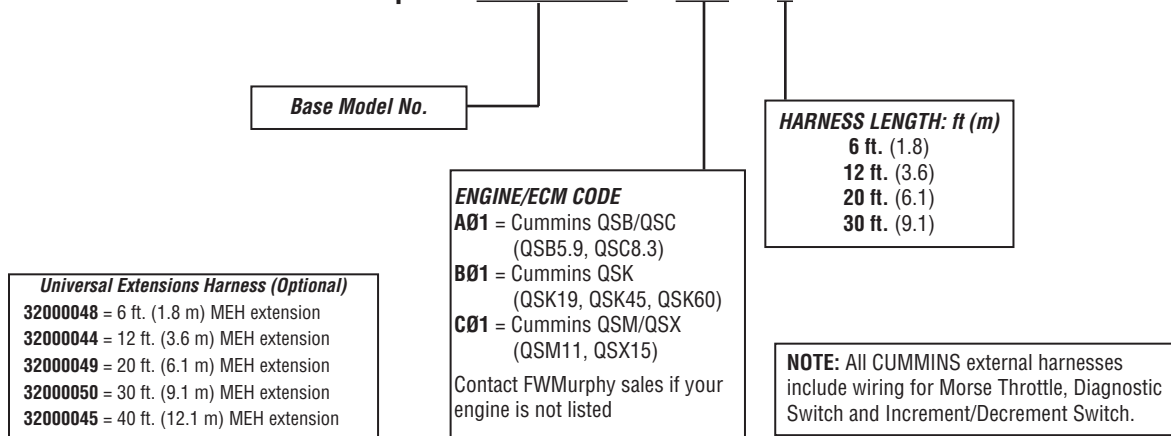
Example: **M310CU - A01 - 24 - 00 - B - FP**



*Panels not in Pricing Guide can be quoted, but may have longer lead times.

M-LINK External Harnesses for CUMMINS Engines

Example: **MEH-M010 - A01 - 6**

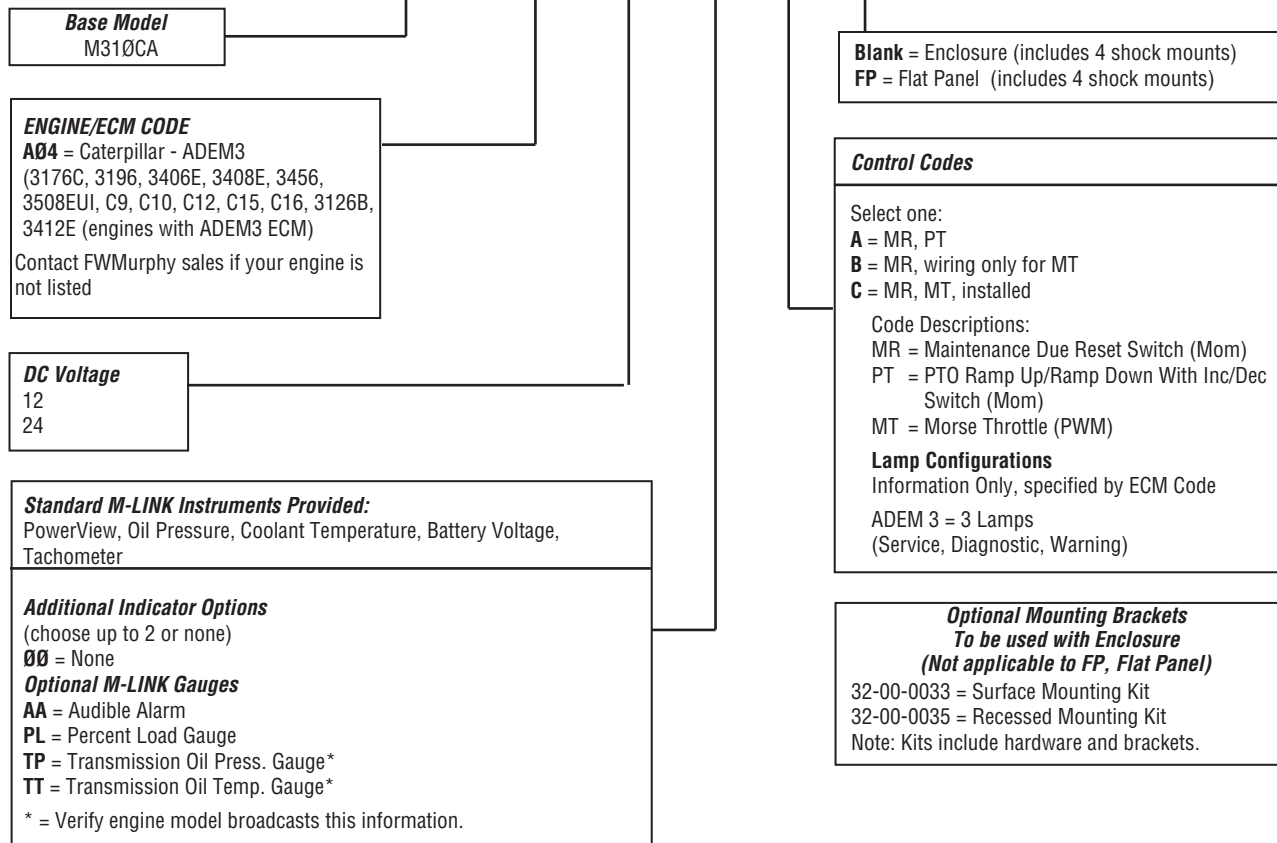


How to Order, continued

To order, use the model number designation diagram below.

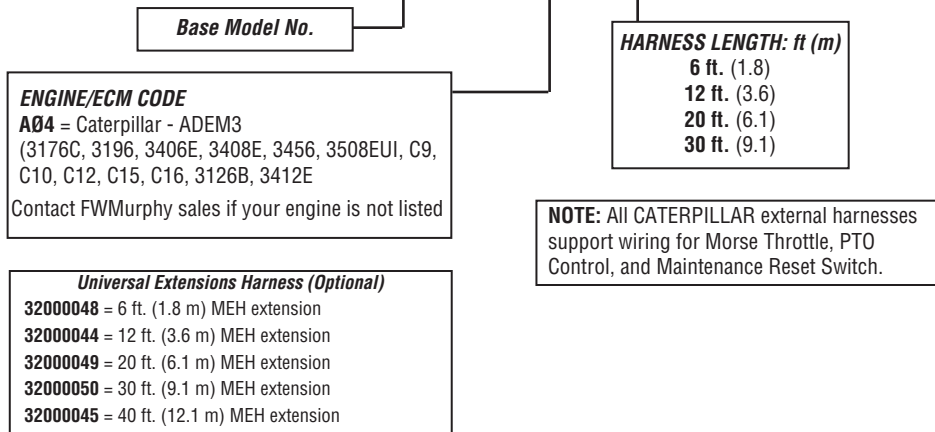
M-LINK M310 Panel Model Number Configurator for CATERPILLAR Engines-ADEM3 ECM

Example: **M310CA - A04 - 24 - 00 - C - FP**



M-LINK External Harnesses for CATERPILLAR ADEM3 Engines

Example: **MEH-M010 - A04 - 6**



How to Order, continued

To order, use the model number designation diagram below.

M-LINK M310 Panel Model Number Configurator for PERKINS Engines-1100 Series or CATERPILLAR-3000 Series (ADEM4 ECM)

Example: **M310PK - B03 - 24 - 00 - C - FP**

Base Model
M310PK

Engine/ECM Code
B03 = Perkins-1100 Series (1104, 1106)
Caterpillar-3000 Series (3054E, 3056E)
Contact FWMurphy sales if your engine is not listed

DC Voltage
12
24

Standard M-LINK Instruments Provided:
PowerView, Oil Pressure, Coolant Temperature, Battery Voltage, Tachometer

Additional Indicator Options
(choose up to 2 or none)
00 = None
Optional M-LINK Gauges
AA = Audible Alarm
PL = Percent Load Gauge

Blank = Enclosure (includes 4 shock mounts)
FP = Flat Panel (includes 4 shock mounts)

Control Codes
Select one:
C = Single speed, no adjust
E = Run/Idle speed select
F = Inc/Dec on speed

Lamp Configurations
Information Only,
Options C-F = 2 Lamps
(Warning, Stop)

Optional Mounting Brackets
To be used with Enclosure
(Not applicable to FP, Flat Panel)
32-00-0033 = Surface Mounting Kit
32-00-0035 = Recessed Mounting Kit
Note: Kits include hardware and brackets.

M-LINK External Harnesses for PERKINS-1100 Series or CATERPILLAR-3000 Series (ADEM4 ECM)

Example: **MEH-M010 - B03 - 6**

Base Model No.

ENGINE/ECM CODE
B03** = Perkins - 1100 Series
(1104, 1106)
Caterpillar - 3000 Series
(3054E, 3056E)
****HARNESS REQUIRES RELAY(S) SEE BELOW**
Contact FW Murphy if your engine is not listed

HARNESS LENGTH: ft (m)
6 ft. (1.8)
12 ft. (3.6)
20 ft. (6.1)
30 ft. (9.1)

NOTE: All PERKINS/CATERPILLAR external harnesses support wiring for Single Speed, Run/Idle and Increment/Decrement

****HARNESS REQUIRES RELAY(S)
(B03)**
00008799 = 12V Relay [1104/3054E (2) Required, 1106/3056E (1) Required]
00008800 = 24V Relay [1104/3054E (2) Required, 1106/3056E (1) Required]
NOTE: Relays sold separately. Relays must have minimum 30 amp contact rating.

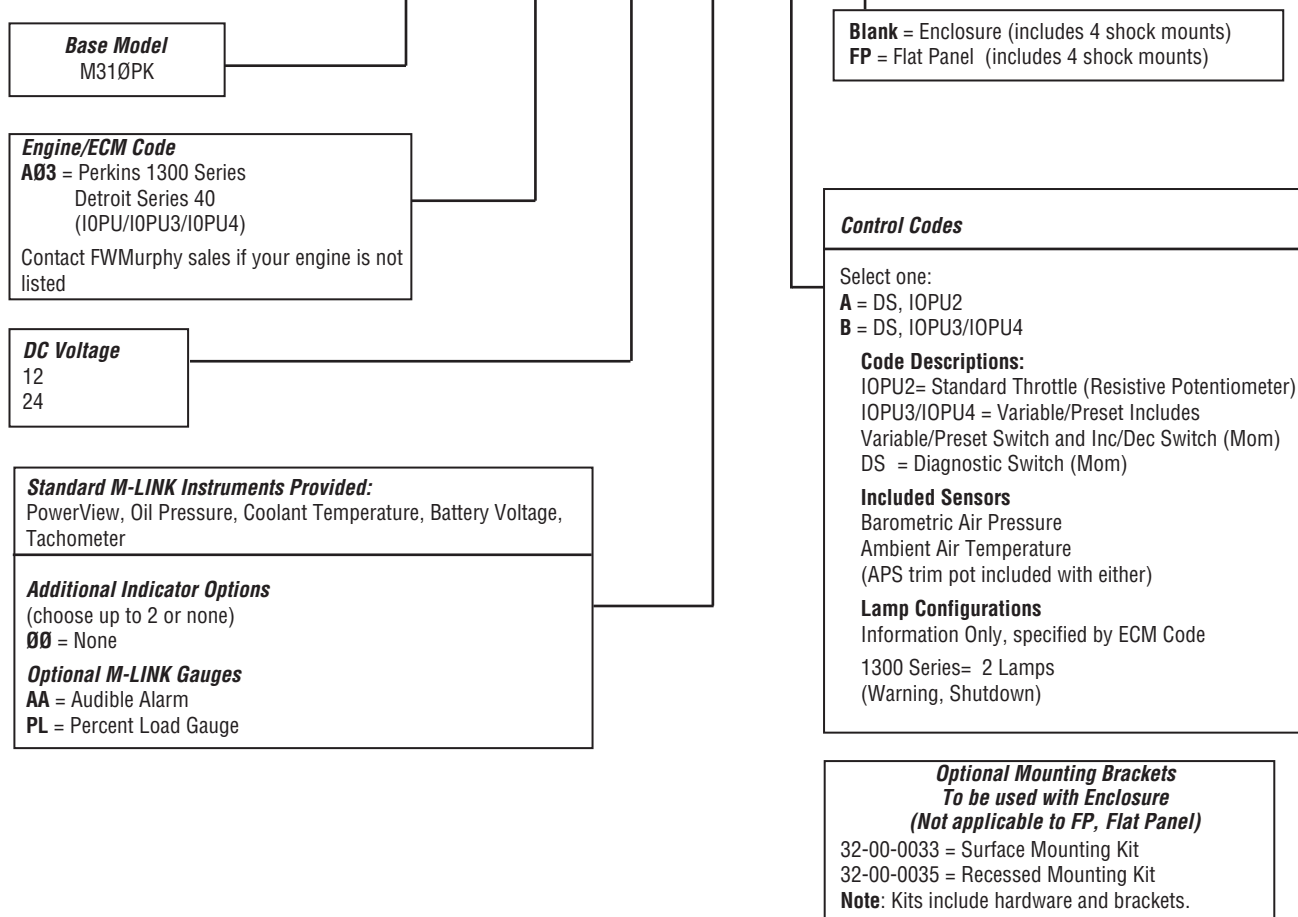
Universal Extensions Harness (Optional)
32000048 = 6 ft. (1.8 m) MEH extension
32000044 = 12 ft. (3.6 m) MEH extension
32000049 = 20 ft. (6.1 m) MEH extension
32000050 = 30 ft. (9.1 m) MEH extension
32000045 = 40 ft. (12.1 m) MEH extension

How to Order, continued

To order, use the model number designation diagram below.

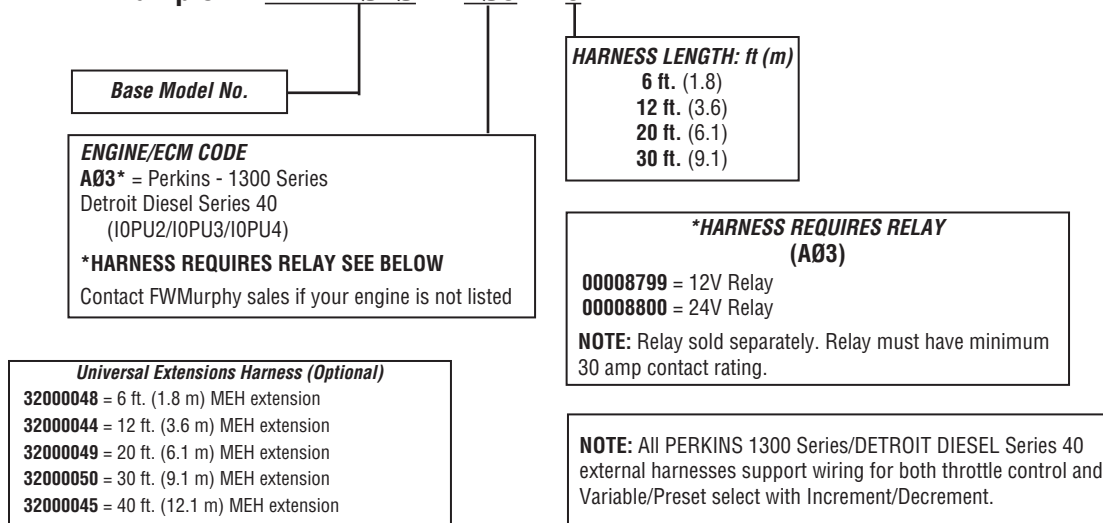
M-LINK M310 Panel Model Number Configurator for PERKINS Engines-1300 Series or DETROIT DIESEL-Series 40

Example: **M310PK - A03 - 24 - 00 - A - FP**



M-LINK External Harnesses for PERKINS 1300 Series or DETROIT DIESEL-Series 40 Engines

Example: **MEH-M010 - A03 - 6**

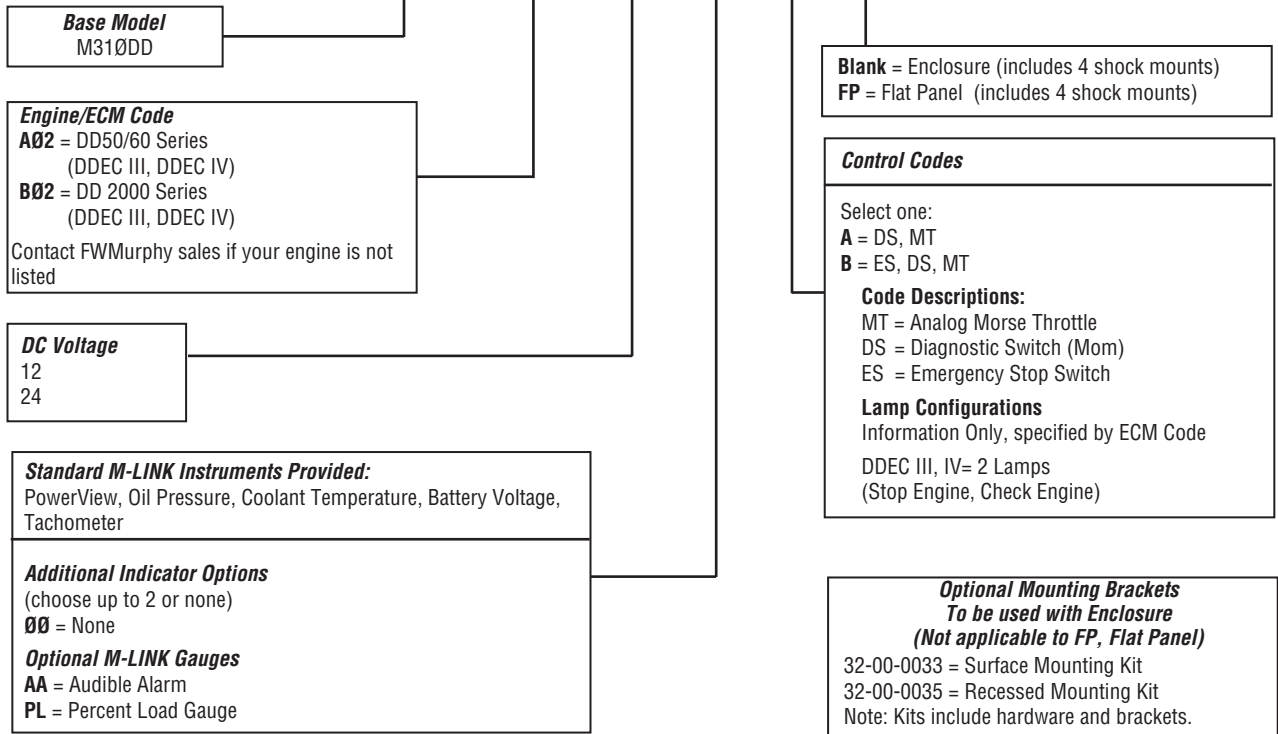


How to Order, continued

To order, use the model number designation diagram below.

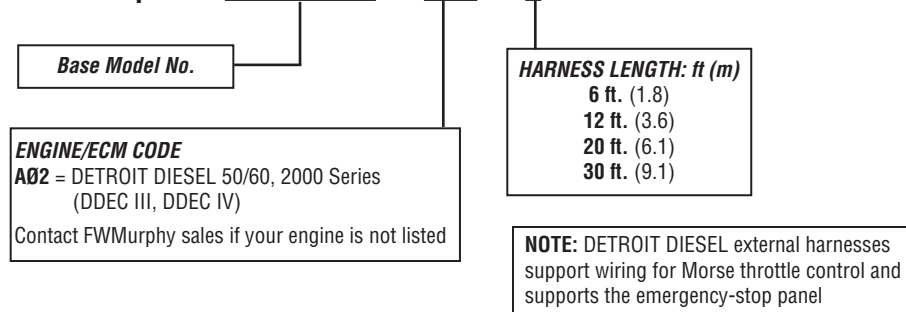
M-LINK M310 Panel Model Number Configurator for DETROIT DIESEL Engines—Series 50/60 and Series 2000

Example: **M310DD - A02 - 24 - 00 - B - FP**



M-LINK External Harnesses for DETROIT DIESEL—Series 50/60 and Series 2000

Example: **MEH-M010 - A02 - 6**



Universal Extensions Harness (Optional)
32000048 = 6 ft. (1.8 m) MEH extension
32000044 = 12 ft. (3.6 m) MEH extension
32000049 = 20 ft. (6.1 m) MEH extension
32000050 = 30 ft. (9.1 m) MEH extension
32000045 = 40 ft. (12.1 m) MEH extension

How to Order, continued

To order, use the model number designation diagram below.

M-LINK M310 Panel Model Number Configurator for FORD Engines

Example: **M310FD - D05 - 12 - 00 - C - FP**

Base Model
M310FD

ENGINE/ECM CODE
D05 = FORD - 1.6L, 2.5L, 4.2L)

Contact FWMurphy sales if your engine is not listed

DC Voltage
12

Standard M-LINK Instruments Provided:
PowerView, Oil Pressure, Coolant Temperature, Battery Voltage, Tachometer

Additional Indicator Options
(choose up to 2 or none)
00 = None
Optional M-LINK Gauges
AA = Audible Alarm
PL = Percent Load Gauge
TP = Transmission Oil Press. Gauge*
TT = Transmission Oil Temp. Gauge*
* = Verify engine model broadcasts this information.

Blank = Enclosure (includes 4 shock mounts)
FP = Flat Panel (includes 4 shock mounts)

Control Codes

Select one:
A = DS,ID
B = DS,ID,RI
C = DS,IT

Code Descriptions:
DS = Diagnostic Switch (Mom)
ID = Increment/Decrement (Mom)
RI = Run/Idle Switch
MT = Morse Throttle

Lamp Configurations
Information Only, specified by ECM Code
QSB/QSC = 1 Lamp
(MIL= Miantanance indicator light)

Optional Mounting Brackets
To be used with Enclosure
(Not applicable to FP, Flat Panel)
32-00-0033 = Surface Mounting Kit
32-00-0035 = Recessed Mounting Kit
Note: Kits include hardware and brackets.

M-LINK External Harnesses for FORD Engines

Example: **MEH-M010 - D05 - 6**

Base Model No.

ENGINE/ECM CODE
D05 = FORD - 1.6L, 2.5L, 4.2L)

Contact FWMurphy sales if your engine is not listed

HARNESS LENGTH: ft (m)
6 ft. (1.8)
12 ft. (3.6)

Universal Extensions Harness (Optional)
32000048 = 6 ft. (1.8 m) MEH extension
32000044 = 12 ft. (3.6 m) MEH extension
32000049 = 20 ft. (6.1 m) MEH extension
32000050 = 30 ft. (9.1 m) MEH extension
32000045 = 40 ft. (12.1 m) MEH extension

How to Order, continued

To order, use the model number designation diagram below.

M-LINK M310 Panel Model Number Configurator for IVECO Engines

Example: **M310IV - E01 - 24 - 00 - C - FP** (NOTE: Harness required, see below)

Base Model
M310IV

ENGINE/ECM CODE
E01 = IVECO (NEF)
Contact FWMurphy sales if your engine is not listed

DC Voltage
24VDC

Standard M-LINK Instruments Provided:
PowerView, Oil Pressure, Coolant Temperature, Battery Voltage, Tachometer

Additional Indicator Options
(choose up to 2 or none)
00 = None
Optional M-LINK Gauges
AA = Audible Alarm
PL = Percent Load Gauge
TP = Transmission Oil Press. Gauge*
TT = Transmission Oil Temp. Gauge*
* = Verify engine model broadcasts this information.

Blank = Enclosure (includes 4 shock mounts)
FP = Flat Panel (includes 4 shock mounts)

Control Codes

Select one:
A = DS, ID, TI (Please refer to Pricing Guide)
B = DS, PT for available panel-models

Code Descriptions:
DS = Diagnostic Switch (Mom)
ID = Increment/Decrement (Mom)
TI = Throttle Enable/Return to Idle
PT = Potentiometer Throttle (Resistive Pot)

Lamp Configurations
Information Only, specified by ECM Code
3 Lamps (Service, Diagnostic, Wait to Start)

Optional Mounting Brackets
To be used with Enclosure
(Not applicable to FP, Flat Panel)
32-00-0033 = Surface Mounting Kit
32-00-0035 = Recessed Mounting Kit
Note: Kits include hardware and brackets.

“REQUIRED”

M-LINK External Harnesses for IVECO Engines

“REQUIRED”

Example: **MEH-M010 - E01 - 6**

Base Model No.

ENGINE/ECM CODE
E01 = IVECO (NEF)
*(Harness requires Relays-see relays box)
Contact FWMurphy sales if your engine is not listed

HARNESS LENGTH: ft (m)
6 ft. (1.8)
12 ft. (3.6)

Universal Extensions Harness (Optional)
32000048 = 6 ft. (1.8 m) MEH extension
32000044 = 12 ft. (3.6 m) MEH extension
32000049 = 20 ft. (6.1 m) MEH extension
32000050 = 30 ft. (9.1 m) MEH extension
32000045 = 40 ft. (12.1 m) MEH extension

***HARNESS REQUIRES RELAY (E01)**
00008799 = 12V Relay (3 required)
00008800 = 24V Relay (3 required)
NOTE: Relay sold separately. Relay must have minimum 30 amp contact rating.

Warranty

A limited warranty on materials and workmanship is given with this FW Murphy product.
A copy of the warranty may be viewed or printed by going to www.fwmurphy.com/support/warranty.htm



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In order to consistently bring you the highest quality, full featured products, we reserve the right to change our specifications and designs at any time.