![MurCal logo]
MurCal ®
ONE CALL, PROBLEM SOLVED

CAT RETROFIT PANEL
MPC-20 AUTO-START REPLACEMENT PANEL

GO FROM A STANDARD PANEL . . .   **TO AN AUTO-START PANEL**

FEATURES :

- Provides Auto-Start capability when you replace the panel on CAT C9.3 - C32 engines

- For both Mechanical and Electronically governed engines

- Supports CAN J1939 / RS485 communications

- Built around the simple-to-configure Murphy PowerCore® MPC-20 Controller

- Meets Tier 4 Final Compliance

- Add an optional telematics [2] unit to remotely monitor and/or control your engines

![TIER 4 FINAL logo]

ADD AUTO-START
& TELEMATICS CAPABILITY

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MurCal's CAT Retrofit Panel is a superior panel offering which includes the powerful, yet simple-to-configure MPC-20-R2 Controller. This fully sealed industrial controller, part of the Murphy PowerCore® family, gives CAT engine operators the ability to choose manual/auto start, manual/auto throttling options, and add a countdown timer or multiple start/stop times utilizing the internal clock.

Our Retrofit Panel replaces the CAT factory panel with minimum effort. Deutsch connectors and mounting inserts are exactly the same. If the default parameters set by MurCal are not desired, the operator has the ability to fully configure the software from the front user interface or change these settings with the optional [1] configuration tool.

This panel upgrade allows users to automate or remotely control and monitor their engines from a computer or mobile device using the optional [2] Murphy CONNECT Plug-and-Play Telematics Unit. With this cloud-based dashboard, engine owners can control or schedule engine functions to reduce costs, establish alarms or warnings to prevent downtime, and optimize operational efficiency with intelligent analytics.

MurCal's CAT Retrofit Panel is capable of handling sophisticated engine diagnostics whether installed on the simplest mechanical engine or the most advanced, fully electronic Tier 4 engine supporting CAN J1939 and RS485 communications. The MPC-20's large 3.8-inch QVGA Monochrome LCD screen is viewable in full-sun conditions. The panel's input/output capabilities allow the operator to change the input type for the analog inputs, use additional analog inputs as digital ground inputs, assign functions and actions to digital inputs, and to use digital inputs as battery or ground inputs on 24VDC systems.

1. Optional Murphy PowerVision Configuration Studio™ (78000752), sold separately.
2. Optional Murphy CONNECT Plug-and-Play Telematics Unit (40700525), sold separately.

CAT RETROFIT PANEL

MPC-20 AUTO-START REPLACEMENT PANEL

DIMENSIONS

Panel Height   11.0″ (280mm)
Panel Width   13.0″ (330mm)
Panel Depth   6.0″ (152mm)

11.0"
6.0"
13.0"

PRODUCT SPECIFICATIONS

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. MurCal products and the MurCal logo are registered and/or common law trademarks of Murphy Switch of California, Inc.

MPC-20 DISPLAY

DISPLAY TYPE	3.8″ (97mm) QVGA (320 x 240 pixels); monochrome transflective LCD with white LED backlight and heater
KEYPAD	Eleven (11) tactile feedback buttons with silicon pads
LED LIGHTS (3)	(1) red shutdown, (1) amber warning, (1) green auto mode

INPUTS: (14) User Defined, (1) Dedicated

DIGITAL	Six (6) high / low
ANALOG	Eight (8) resistive, 4-20mA, 0-5 VDC or digital low
DEDICATED	One (1) frequency input, 2Hz-10KHz, 3.6-120VAC

OUTPUTS

USER DEFINED	Two (2) 1A max low-side (B-) FETs
USER DEFINED	Two (2) 2A max high-side (B+) FETs
USER DEFINED	Two (2) 200mA max 5VDC
USER DEFINED	One (1) 0-5VDC analog
USER DEFINED	Six (6) 10A max form C relays

COMMUNICATIONS

CAN BUS	SAE J1939 compliant
RS485	Modbus RTU
USB	Programming

CONNECTORS

MPC-20	FCI, SICMA 90 way
PANEL (SIDE)	I/O and Auxiliary Connection (Deutsch 31 pin)
PANEL (BOTTOM)	Engine Connection (Deutsch 21 pin)
PANEL (FACEPLATE)	Service Tool Connection (Deutsch 9 pin)

FACEPLATE FEATURES

SWITCHES	Three (3) way selector switch (On, Off, Override)
CIRCUIT BREAKERS	One (1) 10A, Four (4) 15A, One (1) 60A,

ENVIRONMENTAL SPECS

OPERATING VOLTAGE	Panel: 24VDC
OPERATING TEMP.	-40°F to +185°F (-40°C to +85°C)
STORAGE TEMP.	-40°F to +185°F (-40°C to +85°C)
ENVIRON. SEALING	IP67: complete controller IP66: panel mount with gasket

DIMENSIONS & WEIGHTS

PANEL DIMENSIONS	13.0″(330mm) W x 11.0″(280mm) H x 6.0″(152mm) D
PANEL WEIGHT	16 pounds (7.26 kilos)
SHIP. DIMENSIONS	14.0″(356mm) W x 10.0″(254mm) H x 14.0″(356mm) D
SHIPPING WEIGHT	17.5 pounds (7.94 kilos)

HOW TO ORDER

40-19-037   CAT C9.3 - C32 MPC-20 Retrofit Enclosure
40000566   Optional Programming Harness

ALSO AVAILABLE

40-19-041   CAT C9.3 - C32 MPC-20 Faceplate Kit

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