Cat® Energy Control System

CAT®

Image shown may not reflect actual configuration.

Cat® Energy Control System (ECS) Off-Package Human Machine Interface (HMI) Display

The Cat ECS Off-Package HMI display uses system graphic icons and labels that allows simple operation. The easy-to-use 203 mm (8 inch) color LED touchscreen display features scroll navigation to provide engine, generator and utility parameters that are multi-language supported.

FEATURES

- Display graphics are configurable with embedded runtime tool that provides the capability to customize screens. This capability supports modern and classic icon graphics. Where classic style has traditional representation for gauges.
- Lockout security provision to assure platform integrity.
- Active screen may be changed by scrolling.
- Display functionality includes off-package start-stop when generator set engine control switch is set to automatic.
- Designed for field installation using mounting template and terminals that facilitate inter-connection at site.
- Field configurable alarm output driver.

Specification	
Touch Screen	Multi-touch w/ gloves
Ethernet	10/100 Base-T, 4 wire 300 ft without Repeater
USB (1)	USB 2.0, 500 mA
Response time	25 ms
Mode Settings	Backlight Saver Options
Real-time clock	Accurate Time
Speaker	Amplified Audio
Alarm Audio Output Terminals	100 mA Driver Output

High-Resolution LCD	
Colors	16.7 million
Backlit	LED
Resolution 8"	800 x 480

Display Readability	
Outdoor Sunlight Viewable	
Polarized Sunglass Compatible	
Dimmable	
Wide Viewing Angles	85° / 85°

Input Voltage and Current Consumption	
Nominal Operation (12/24 V DC)	1.2/0.7A

Environment	
Operating Temp	-40°C to +85°C
Storage Temp	-50°C to +85°C
Ingress Protection	HMI front Face Installed IP66

Interfaces and Connectors	
Primary Connector	44 Position
USB 2.0 (1)	Type-A receptacle

Enhanced Control Features

Off-Package Displays
The Cat ECS supports up to four (4) optional full-function off-package HMI displays with the addition of an unmanaged ethernet switch as shown on diagram-1.

HMI Webserver
The Cat ECS HMIs include an embedded web server. The embedded web server allows the operator to operate a virtual HMI with the same control and permissions as the host HMI (local or off-package, if applicable) over an Ethernet connection to a local and/or off-package station. Custom screen creation is also available. Each HMI webserver is independent.
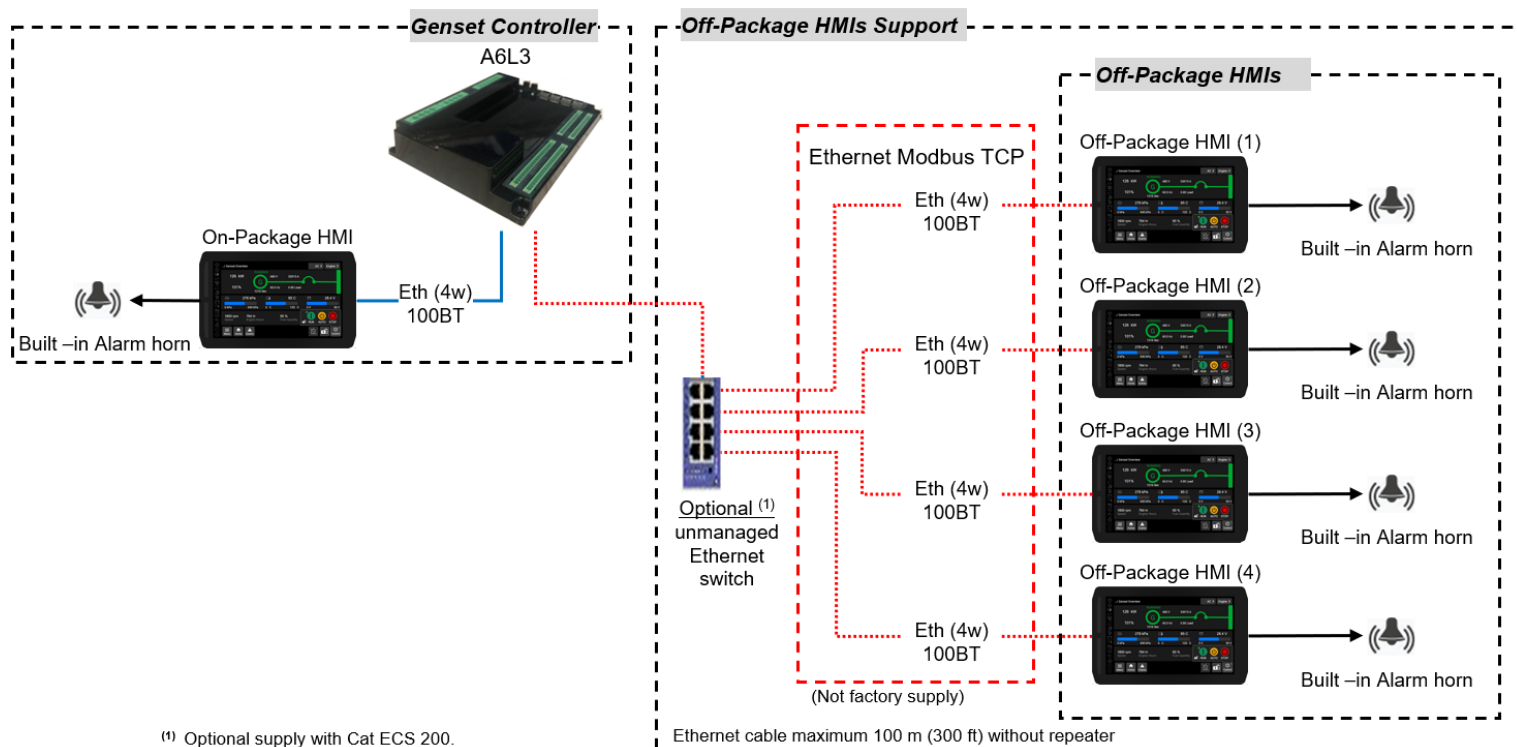

Genset Controller
A6L3

On-Package HMI

Built –in Alarm horn

Eth (4w) 100BT

(1) Optional supply with Cat ECS 200.

Off-Package HMIs Support

Off-Package HMIs

Ethernet Modbus TCP

Eth (4w) 100BT

Optional (1) unmanaged Ethernet switch

(Not factory supply)

Ethernet cable maximum 100 m (300 ft) without repeater

Off-Package HMI (1)

Built –in Alarm horn

Off-Package HMI (2)

Eth (4w) 100BT

Built –in Alarm horn

Off-Package HMI (3)

Eth (4w) 100BT

Built –in Alarm horn

Off-Package HMI (4)

Eth (4w) 100BT

Built –in Alarm horn

Diagram - 1

Data (when applicable)

- Histogram and data Logging
- Alarm & Shutdown Reset.
- Condition Status warning (amber) / shutdown (red)

Generator set data Conditions Displayed (NFPA®)*

Emergency stop shutdown
Overcrank shutdown
Low coolant temperature warning
High coolant temperature warning / shutdown
Low oil pressure warning / shutdown
Overspeed warning / shutdown
Low coolant level warning / shutdown
Low fuel level warning / shutdown
Low gas pressure warning / shutdown
Genset control switch not in auto warning
High battery voltage warning / shutdown
Low battery voltage warning / shutdown
Low cranking voltage
Battery charger AC failure warning / shutdown
EPS** supplying load status
Air Damper Shutdown
Overload Alarm
Custom Event #1
Custom Event #2

Engine Data Displayed
- Engine Hours, Total Cranks, Starts
- Temperatures (coolant, air, exhaust)
- Filters Diff. Pressures (oil, air, fuel)
- Pressure (Boost, Intake Manifold)
- Throttle Position, Battery Voltage

Generator Data Displayed
- Voltage L-L/L-N, Amps, Power Factor
- kW, kVA, kVAr, Hz
- Phase Values (Voltage, kW, Amps, Power Factor)
- Phase Winding Temperature
- Bearing Temperature
- Generator Breaker Status

Voltage Regulator Data Displayed
- Voltage, Amps
- kW, kVA, kVAr, Hz

Utility Data Display
- Utility Status
- Voltage L-L/L-N
- Phase Values (Voltage)
- kW, kVAr, Hz
- Utility Breaker Status

> * - National Fire Protection Association
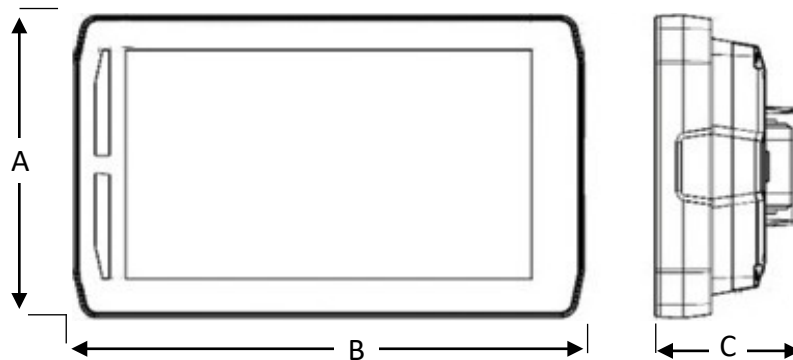> ** - Emergency Power Supply

Dimensions

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Dimensions	A	B	C	Weight
Units	mm (in)	mm (in)	mm (in)	kg (lbs)
Measure	139 (5.7)	220 (8.66)	59.4 (2.34)	1.32 (2.91)

Worldwide Product Support

Cat dealers have over 1,800 dealer branch stores operating in 200 countries and offer extensive post-sale support including maintenance and repair agreements.

Materials and specifications are subject to change without notice.
The International System of Units (SI) is used in this publication.

www.cat.com/electricpower