maxAI 430*i*

Advanced Instrumentation
Engine Monitoring System

Information is power. That's why maximatecc continually looks for innovative ways to bring critical vehicle data to operators and to display it in the brightest, clearest, smartest designs possible. Introducing the maxAI 430*i* engine monitoring system, a rugged, all-in-one instrumentation display for vehicles put to the test every day in the world's most demanding applications — from small construction equipment to large specialty vehicles.

maximatecc

THERE'S NO SUCH THING AS TOO MUCH INFORMATION

The new maxAI 430*i* engine monitoring system from maximatecc combines a vibrant 4.3" TFT display and 20 LED telltales to display engine parameters, warnings, and system messages within a sleek, compact design. Backlit buttons simplify Tier 4 Control and GUI navigation for optimal flexibility and performance.

- Primary Engine Monitoring using 2x CAN channels and 5x analog inputs
  - 250/500 kbps auto baud rate detection
  - Fast boot time (<3s)
- Designed for use inside or outside the cab
  - 4.3" TFT display with 480 x 272 resolution
  - Wide viewing angles and 18-bit color for vibrant graphics
  - -20°C to 70°C operating temperature
  - Sealed construction (IP67 / IP65)
- Integrated 20x LED warning lights with deadfront, black lens
  - Eliminates the need for separate warning light banks
- Tier 4 final with active regeneration
- Displays up to 5 screens, each with 5 parameters and associated information
- Configurable application software for display screen and warning light setup without the need for programming
- Contact maximatecc for applications requiring full customization

The maximatecc maxAI 430*i* engine monitoring system will change the way you look at things... for the better. To learn more, contact info@maximatecc.com.

maxAI 430*i* PRODUCT SPECIFICATIONS

PROCESSING

Main Processor	Microcontroller based on ARM® Cortex®-M7 32-bit
Storage	Flash memory 1 MB internal + 4 MB external for operating system and applications
RAM	SDRAM 16Mbit

DISPLAY

Type	Premium TFT, high brightness, transmissive
Size and Resolution	4.3" diagonal, 480 x 272 pixels, 75x75x75 multi viewing angle
Color Depth	18-bit RGB
Contrast Ratio	500:1
Brightness	850 Cd/m²
Dimming	0 -100%, dimming can be controlled manually via keypad

INTERFACES

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Keypad	4 buttons keypad, can be used to navigate/select menu items
Connectors	1 x Deutsch DTM06-08 connector 1 x Deutsch DTM06-06 connector
CAN	2 x CAN, J1939, bitrate configurable 20 kbps - 1 Mbps
Inputs	5 x configurable input (voltage 0-5V, resistive, frequency, digital) 1 x 4-20mA current measure
Outputs	1x configurable output, low-side mode up to 1A, high-side mode up to .5A, may be used for continuous driver or PWM output
Power Supply	12 and 24 volt systems, 9-32 VDC
Warning Lights	20X LED

SOFTWARE

Operating System	RTOS
Application Software	maximatecc proprietary

ENVIRONMENT

IP Class	IP67 (front) & IP66 (rear with connectors mated)
EMC Conformity	ISO 13766 (emissions) SAE J1113-21 (immunity)
SAE Standard	Vibration, UV, salt spray and chemical compatibility
Temperature Range (°C)	-20 C to 70 C (operational) -30 C to 85 C (storage)

CASING

Housing Material	Plastic ABS PC
Cover Lens	PC with anti-scratch & anti-fog treatment
Mechanical Installation	Flush/panel mounting, mounting on stand/arm with diamond plate, fits with 3: round panel holes
W x H x D (in/mm)	6/15.24 x 4.61/11.71 x 1.73/4.39
Weight (lb/kg)	0.647/0.293
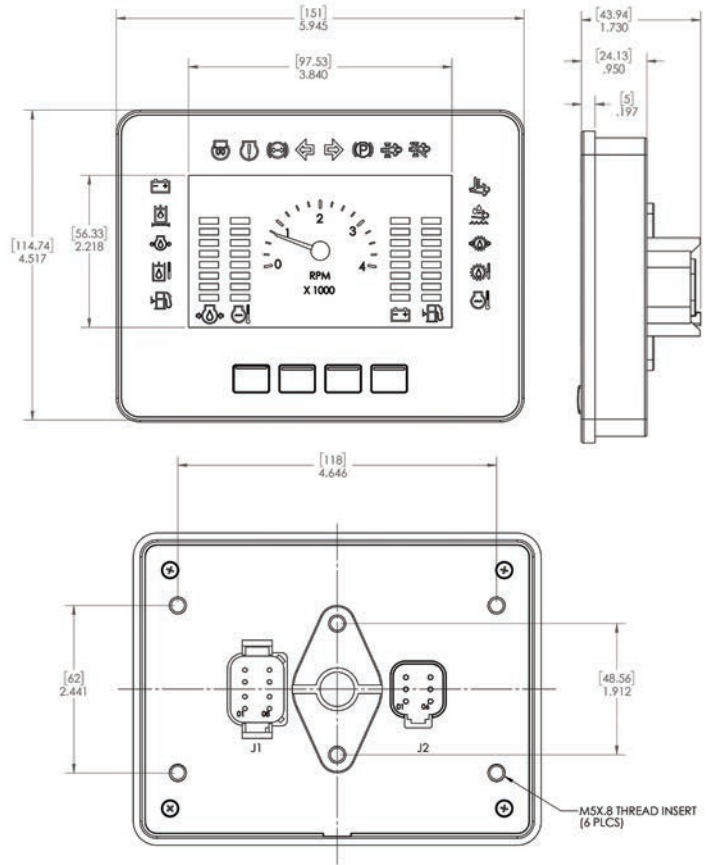
WARNING LIGHTS

LOCATION	COLOR	ICON
LD1	Amber	Open
LD2	Amber	Low fuel
LD3	Amber	Hydraulic oil temp
LD4	Red	Engine oil pressure
LD5	Amber	Hydraulic oil filter
LD6	Red	Battery charging condition
LD7	Amber	Engine start aid
LD8	Amber	Engine malfunction
LD9	Red	Brake system pressure
LD10	Green	Left turn
LD11	Green	Right turn
LD12	Red	Parking brakes
LD13	Amber	Engine emission filter
LD14	Amber	Engine emission filter disable
LD15	Red	Engine emission temperature
LD16	Amber	Diesel exhaust fluid
LD17	Red	Transmission oil pressure
LD18	Amber	Transmission oil temperature
LD19	Amber	Engine coolant temperature
LD20	Amber	Open

CONNECTOR PINOUT

#Pin	TYPE	STATE	FUNCTION
J1.1	Power	Battery +	Battery
J1.2	Power	Key on	Ignition
J1.3	CAN	CAN low	Primary CAN
J1.4	CAN	CAN high	Primary CAN
J1.5	CAN	CAN high	Secondary CAN
J1.6	CAN	CAN low	Secondary CAN
J1.7	Digital output	Low/high side driver	TBD
J1.8	Power	Ground	Ground
J2.1	Configurable input	Voltage/digital/resistance/frequency	TBD
J2.2	Configurable input	Voltage/digital/resistance/frequency	TBD
J2.3	Configurable input	Voltage/digital/resistance/frequency	TBD
J2.4	Configurable input	Voltage/digital/resistance/frequency	TBD
J2.5	Configurable input	Voltage/digital/resistance/frequency	TBD
J2.6	Analog input	4-20mAmp	TBD

THE DIFFERENCE IS IN THE DETAILS

Put the maxAI 403*i* engine monitoring system to work for you. Contact us today at info@maximatecc.com.

maximatecc specializes in operator-machine interface solutions for critical environments. We support industrial and off-highway equipment and vehicle OEMs and partners globally with a broad portfolio of products and services. Through technology, engineering expertise and operational excellence, we make machines smart, safe and productive. maximatecc.com

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