

Machine Master Control – Colour Display

Application Platform

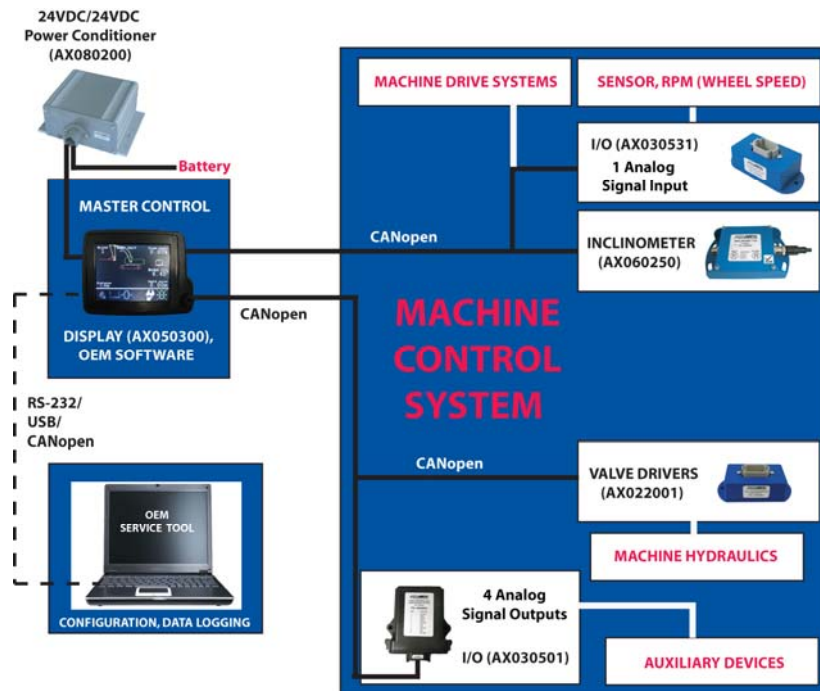
Features:

- Colour display with an operating temperature range of -30...+85°C
- Master module in a CANopen networked machine control system or SAE J1939 networking available
- Flexible communications (2 CAN ports, 1 RS-232 port)
- 1 USB port for software updates
- Ruggedly packaged for mobile and mining machine applications
- Screen displays selected via a mode selector knob with push button
- Application-specific functionality
- Linux distribution with onboard peripheral drivers or the system can use standalone binaries for Simulink® customizable embedded control logic



Applications:

- mobile equipment, commercial vehicles, work machines, mining equipment, ag equipment
- cranes, elevators
- robotics, material handling machines



<p>Order codes</p>	<p>Display: Colour Display, 2 CAN, 1 RS-232, 1 USB with RAM Mount Bracket P/N AX050300</p> <p>Software: Application-specific embedded software is available on request. A specific part number will be maintained for the custom software.</p> <p>Accessories: RS-232 Null Cable p/n: RS232NULL For other mating connectors/cables, contact Axiomatic.</p>
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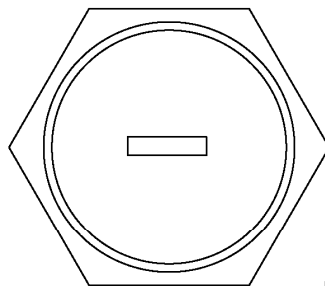
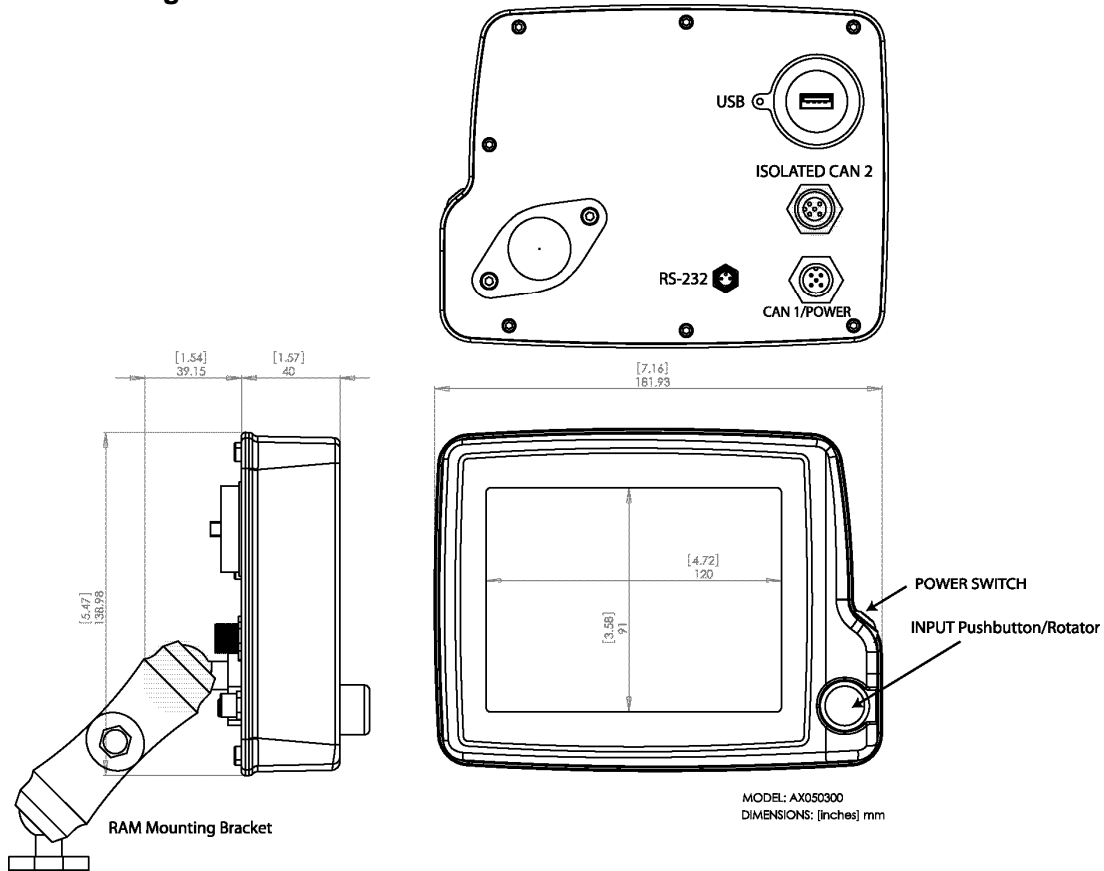
Technical Specifications – AX050300

Input devices	Adjustment knob (optical encoder with a push button) Power switch
Control Outputs	CAN messages (CANopen® or SAE J1939)
Interfaces	1 x RS-232 (COM 0 TTL level without handshake signal) – M8 Female, 3-pin 2 x CAN 2.0b (1 Isolated) (CANopen® or SAE J1939) – M12 Male and Female, 5-pin, A coding 1 x USB 1.0 (host and device) – Bulgin Buccaneer PX0848/A
CAN protocol	CANopen® SAE J1939 Both CAN protocols are supported. The AX050300 display hardware with Linux drivers will work with a customer's CAN software stack, either CANopen® or SAE J1939.
Display type	16-bit TFT colour display interface with LED backlight 640 x 480 pixel resolution Sharp LQ057V3DG02 Protected with an 3 mm polycarbonate plastic shield in housing Screen is readable in sunlight.
Display size	With packaging shown, model AX050300 5.6" (115 x 86 mm active area) 640 x 480 pixels LED Backlight
Operating system	Contact Axiomatic with your requirements. <i>Axiomatic can provide Linux distribution with onboard peripheral drivers or the system could use standalone binaries for Simulink® customizable embedded control logic.</i>
Main processor	ARM 9 64MB RAM 128MB Flash + 8 MB Boot Flash
Control Logic	Application-specific. <i>Contact Axiomatic with your requirements.</i> Axiomatic works with the following design tools. Please specify your preference. Simulink® Simulink® Model-Based Design from The Mathworks, Inc. It provides an interactive graphical environment and a customizable set of block libraries that let the OEM model application-specific control operation to fine tune specific algorithms for the embedded code. The final embedded code is generated by Axiomatic for production units. Linux Axiomatic can provide Linux kernel modules and libraries for interfacing with the I/O, communication interfaces and the display. Graphics can include bitmaps, charts and trend displays or box characters created by any Linux based software or can be designed by the manufacturer to suit the application. For user programming in C language, Axiomatic provides libraries and documentation. Additional information is found on the Atmel website. http://www.atmel.com/dyn/resources/prod_documents/SAM9263_CDRom_image.zip
CAN controllers	STM32F105 (ARM Cortex M3)
Clock	Real time clock with battery back up
Operating voltage	7 – 60VDC (12, 24, 48VDC nominal) Protection against reverse battery connection, overvoltage, and load-dump situations
Operating temperature range	-30...+85°C (-22...+185°F)
Packaging and Dimensions	Plastic enclosure, PC-ABS (Polycarbonate-ABS) Dimensions of Display module in housing shown, model AX050300 181.93 x 139.00 x 40.00 mm 7.16 x 5.47 x 1.57 inches (W x H x D excluding connectors and RAM mount bracket)
Protection Class	IP65 for Display module shown
Weight	2.10 lbs. (0.95 kg)
Accessories	A RAM mounting bracket, P/N RAM-B-102, is supplied with the display. Mating connectors for the CAN connectors are available on request. A RS-232 communications cable, P/N: RS232NULL, is available.

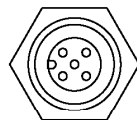
Note: CANopen® is a registered community trade mark of CAN in Automation e.V.

Specifications are indicative and subject to change. Actual performance will vary depending on the application and operating conditions. Users should satisfy themselves that the product is suitable for use in the intended application. All our products carry a limited warranty against defects in material and workmanship. Please refer to our Warranty, Application Approvals/Limitations and Return Materials Process as described on www.axiomatic.com/service.html.

Dimensional Drawing and Pin out



USB connector
Bulgin Buccaneer PX0845/A
A type USB connector inside sealed connector case
Must be used with one of these: (to fulfill IP rating)
-Sealing cup PX0711
-USB flash cover PX0852
-sealed Bulgin USB cable e.g. PX0840/A2M00



CAN (2) bus (isolated)
M12 female 5-pin A-coding
1 CAN shield (2)
2 N.C.
3 reference ground for CAN (2), isolated
4 CAN hi (2)
5 CAN lo (2)

RS232
M8 female 3-pin
1 RXD
2 NA
3 TXD
4 Ground



CAN (1) bus, Power supply
M12 male 5-pin A-coding
1 CAN shield (1)
2 Power +, 7-60V (DC)
3 Power -
4 CAN hi (1)
5 CAN lo (1)

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