ACCU-SORT®

AXIOM™ Line Bar Code Reader
Quick Reference Guide

Introduction

The AXIOM is designed for easy installation and setup. Use this guide as a cross reference to locate the content you need in the **AXIOM/AXIOM–X Product Line Manual**.

Safety Precautions *(Chapter 2)*

Observe all safety precautions regarding:

- Power, electrical, grounding (p. 13)
- Electrostatic discharge (ESD) (p. 14)
- Laser Exposure (p. 15)

LASER LIGHT
AVOID DIRECT EYE EXPOSURE
CLASS 3R LASER PRODUCT
(IEC-60825-1): 1993+A1: 1997+A2: 2001
CLASS II LASER PRODUCT (21CFR1040)
<5.0 mW PEAK AT 630-700nm

Observe Laser Safety Warnings on AXIOM

Mechanical Installation *(Chapter 3, see also mounting illustrations, side 2)*

1. Assemble mounting structure according to your mounting diagram, if applicable.

2. Mount wiring base in the defined location using orientation consideration as a guideline (p. 19-21). A universal mounting bracket is available (p. 24–26).

3. Mount the Trigger Photoeye and reflector (p. 30).

4. Mount the tachometer, if applicable (p. 33).

5. Install optional I/O modules into wiring base, if applicable (p. 34-35).

Electrical Installation *(Chapter 4, Appendix E)*

Use the wiring base label *(see side 2)* as a reference when performing electrical installation.

1. Properly ground wiring base to protective earth (PE) ground (p. 46-47).

2. Connect power supply to wiring base and perform polarity check (p. 51-53).

3. Connect Trigger photoeye to Trigger terminal blocks (p. 54).

4. Connect tachometer to TACH terminal blocks and use ferrite clamps (p. 55-56).

5. Connect RS232/422 communications to SERIAL COM terminals (p. 57).

6. Connect Ethernet communications to ETHERNET terminals (p. 58).

Installing Scan Head to Wiring Base

7. Connect I/O module wiring to I/O 1 through I/O 4, as required (p. 59-60).

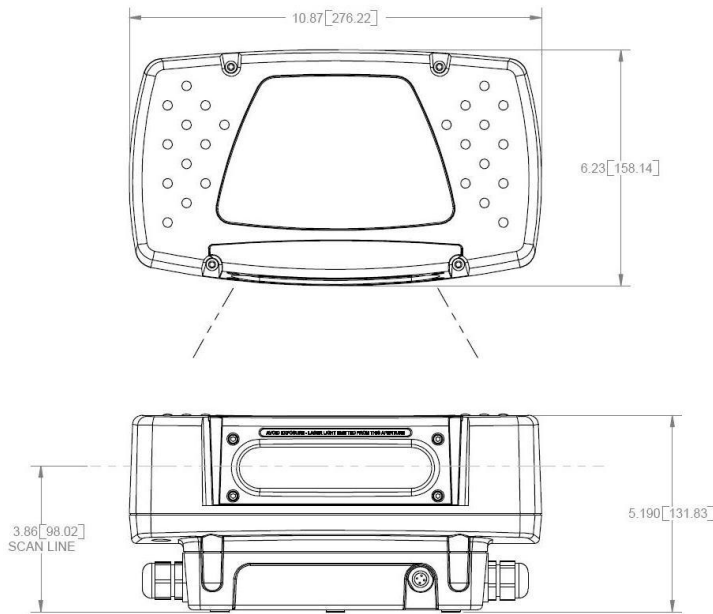8. Install scan head to wiring base as outlined in Chapter 3 (p. 39-42).

Setup and Operations *(Chapter 5 and 6)*

1. Use the first-time startup / setup procedures and operations checklist (p. 118-119).

2. Use AXCESS and a setup cable (p. 71) or network connection (p. 73) to modify operating parameters (p. 75-104).

3. Monitor operations using AXIOM Monitor and Log Viewer diagnostics (p. 124).

4. Backup parameters to the wiring base using AXCESS or the connector panel (p.104).

An AXIOM typically includes:
- AXIOM Scan Head
- Wiring Base
- Power Supply

Options that may be included:
- Universal Mounting Bracket
- Trigger Photoeye

Time Required: 45 minutes / unit
- Mechanical installation (30 minutes)
- Electrical installation (15 minutes)
- Setup *(see AXCESS Quick Reference Guide)*

Tools Required:
- Phillips Long-Handled #2 Screwdriver
- Slotted screwdriver (1/8")
- Adjustable Wrench (open-ended)
- Tape Measure

Quick Start References:
- AXIOM/AXIOM-X Product Line Manual
- Mounting structure drawings

Other Useful References:
- AXCESS for AXIOM Quick Reference Guide
- Interconnect drawings located in AXIOM/AXIOM-X Manual, App. E (p.209):
  107480 - Controller/Client with Tach
  107481 - Controller/Client/Client w/Tach
  107482 - Start/End Trigger Photoeyes
  107483 - Stack Light with Internal Relays

NOTICE: Application–specific documentation provided with your equipment may supersede the information provided here.

ACCU-SORT® SYSTEMS
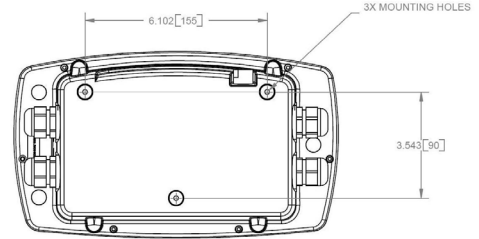
AXIOM™ Quick Reference Guide

Mounting Dimensions
(See Appendix E for dimensions with Universal Mounting Bracket (UMB))

10.87 [276.22]
6.23 [158.14]
3.86 [98.02] SCAN LINE
5.190 [131.83]

Mounting Footprint

3X MOUNTING HOLES
6.102 [155]
3.543 [90]

Range of Motion with UMB

YAW ±22.5°
ROLL 360°
PITCH 50° UP MAX 130° DOWN MAX
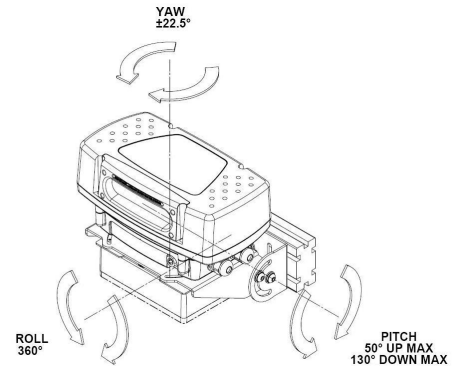
Wiring Base Label

Use the **diagrams** on the wiring base label to determine the proper connections for power, trigger, tachometer, communications and I/O *(pgs. 51–60).*

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AXIOM
BAR CODE SCANNING SOLUTION

ALL TERMINALS MUST BE CONNECTED TO CLASS 2 OR LPS CIRCUITS

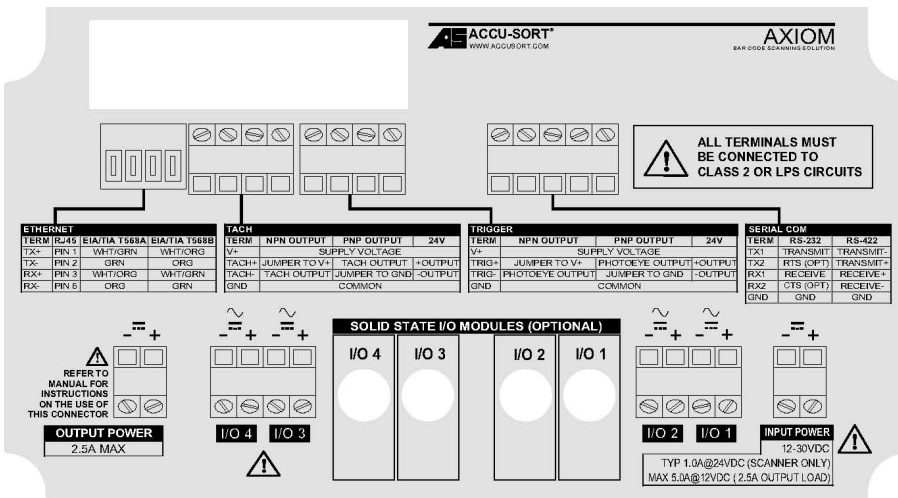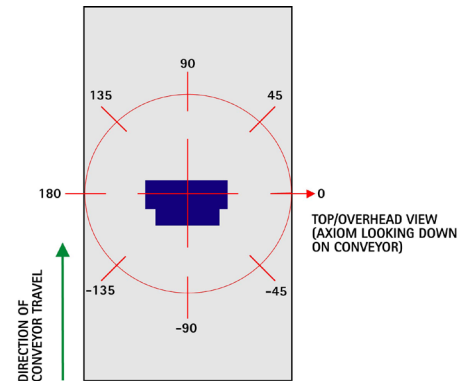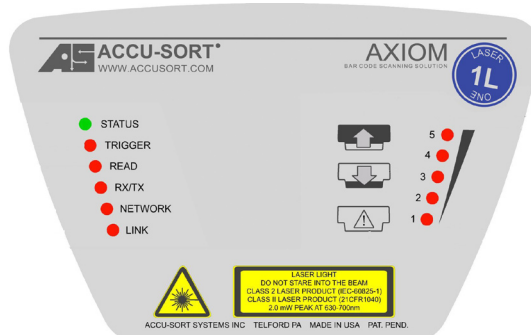| ETHERNET			
TERM	RJ45	EIA/TIA T568A	EIA/TIA T568B
TX+	PIN 1	WHT/GRN	WHT/ORG
TX-	PIN 2	GRN	ORG
RX+	PIN 3	WHT/ORG	WHT/GRN
RX-	PIN 6	ORG	GRN

TACH			
TERM	NPN OUTPUT	PNP OUTPUT	24V
V+	SUPPLY VOLTAGE		
TACH+	JUMPER TO V+	TACH OUTPUT	+OUTPUT
TACH-	TACH OUTPUT	JUMPER TO GND	-OUTPUT
GND	COMMON		

TRIGGER			
TERM	NPN OUTPUT	PNP OUTPUT	24V
V+	SUPPLY VOLTAGE		
TRIG+	JUMPER TO V+	PHOTOEYE OUTPUT	+OUTPUT
TRIG-	PHOTOEYE OUTPUT	JUMPER TO GND	-OUTPUT
GND	COMMON		

SERIAL COM		
TERM	RS-232	RS-422
TX1	TRANSMIT	TRANSMIT-
TX2	RTS (OPT)	TRANSMIT+
RX1	RECEIVE	RECEIVE+
RX2	CTS (OPT)	RECEIVE-
GND	GND	GND

REFER TO MANUAL FOR INSTRUCTIONS ON THE USE OF THIS CONNECTOR

OUTPUT POWER 2.5A MAX
I/O 4 I/O 3
SOLID STATE I/O MODULES (OPTIONAL)
I/O 4 I/O 3 I/O 2 I/O 1
I/O 2 I/O 1
INPUT POWER 12-30VDC
TYP 1.0A@24VDC (SCANNER ONLY)
MAX 5.0A@12VDC (2.5A OUTPUT LOAD)

AXIOM Orientation to Bar Code Scanning Area
(See pg. 21, 97–102)

90
135   45
180   0
-135   -45
-90

TOP/OVERHEAD VIEW (AXIOM LOOKING DOWN ON CONVEYOR)
DIRECTION OF CONVEYOR TRAVEL

AXIOM Control Panel

Use the **AXIOM control panel** to monitor operational status including trigger, communications and read quality *(pgs. 120–121, 140–141).*

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AXIOM
BAR CODE SCANNING SOLUTION
LASER ONE 1L

STATUS
TRIGGER
READ
RX/TX
NETWORK
LINK

5 4 3 2 1

LASER LIGHT
DO NOT STARE INTO THE BEAM
CLASS 2 LASER PRODUCT (IEC-60825-1)
CLASS II LASER PRODUCT (21CFR1040)
2.0 mW PEAK AT 630-700nm

ACCU-SORT SYSTEMS INC   TELFORD PA   MADE IN USA   PAT. PEND.

Need further assistance?
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