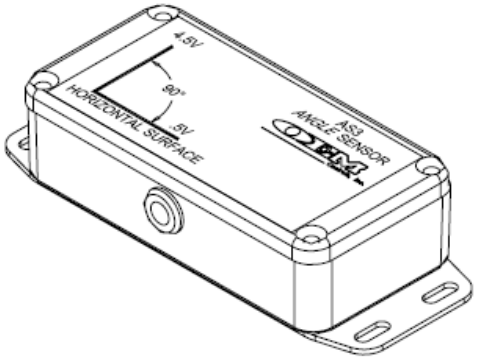
OEM CONTROLS INC.
CERTIFIED ISO 9001
CERT# US-1892

**New Product Bulletin**

# AS3 / LS3 & AS4: Angle & Level Sensors

**Description**:
The **AS3 (angle sensor) & LS3 (level sensor)** are gravity based, single axis sensors with a single proportional voltage output indicating the orientation of the sensor relative to straight down (horizontal for LS3). Applications include boom or ladder angle up to 140 degrees. Platform leveling **(LS3)**.
The **AS4** is a gravity based, single or dual axis sensor with either a proportional voltage output or CAN signal indicating the orientation of the sensor relative to straight down. This also has dual sensors for redundancy standards. Applications include boom or ladder angle 180 degrees. Platform leveling. Full 360 degree sensing. 2 axis Tilt sensing.




**Power**:
- AS3 & LS3: 9-30V or 5V +/- 0.25 volts
- AS4: 8-30V only

**Range of motion sensed**:
- AS3: Hardware configurable from 5 degrees to 140 degrees.
- LS3: Hardware configurable from +/ - 2.5 degrees to +/ - 70 degrees.
- AS4: Analog Single or dual axis Hardware configurable from +/ - 5 degrees to +/ - 180 degrees; CAN version software configurable 360 degrees

**Adjustment**:
- AS3 & LS3: One trimpot provided for fine leveling.
- AS4: Factory calibrated for level. The system application decides what is level in the machine.

**Output**:
- AS3 & LS3: 0.5-4.5V, digisensor option
- AS4: 0.5-4.5V, 0.5-9.5V (supply voltage above 9 volts), CAN, no digisensor option.
-

**Resolution:**
- AS3 & LS3: Infinite analog
- AS4: Infinite analog; 0.1 degree for CAN

**Damping**:
- AS3 & LS3: hardware configurable, 0.1-2 seconds for full-scale response
- AS4: hardware AND software configurable, 0.1 to hundreds of seconds if desired

**Connections**:
- AS3: 3 wires ( power, ground, signal )
- AS4: Single axis analog with 3 wires, Dual axis analog with 4 wires, CAN with 4 wires (internal ID) or CAN with 6 wires (external ID)

**Indicators**:
- AS3 & LS3: 2 optional LED indicators for level indication
- AS4: LED for diagnostics, CANopen LED

**Environment**:
- Temp: - 40C - +70C
- Humidity: 10- 95% RH
- EMI Certification:
  - Radiated Immunity, IEC 61000- 4- 3:1995, 30V/m
  - Electrical Fast Transient, IEC 61000- 4- 4:1994, +/ - 2kV, power and signal
  - Conducted Immunity, IEC 61000- 4- 6:1996, 10Vrms, power and signal
  - ESD, IEC 61000- 4- 2:1995, +/ - 8kV air discharge
  - Radiated Emissions, EN55011:1998, complies to class B, group 1
  - Radiated Emissions. EN55022:1998, complies to class B

**Enclosure**:
- AS3 & LS3: Die- cast aluminum, 2.0” H x 3.9” W (5.0” with mtg feet), x 1.0” D
- AS4: Die- cast aluminum, 2.4"H X 4.4"W (5.4" with mounting feet) X 1.2"D

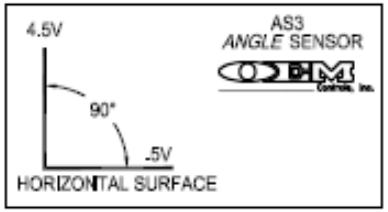
F-11705 Rev. A 11-30-00 [B-TBlock]

| DWG. NO. | SHT. | REV. |
|---|---|---|
| B17119 | 1 | A |

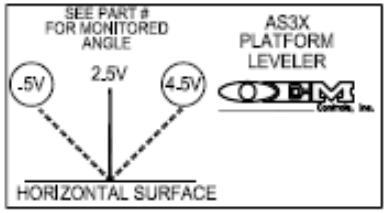


REVISIONS

| ZONE | REV | DESCRIPTION | DATE | APPROVED |
|---|---|---|---|---|
| – | A | ORIGINAL | DOC 8/16/05 | |

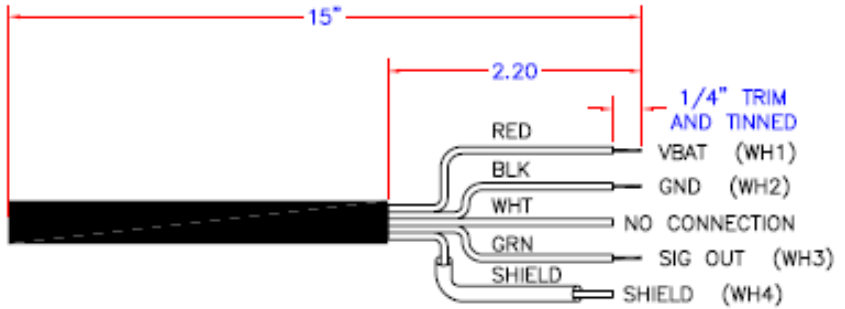



OR










PART NUMBER / ORDER ENTRY

AS3-□-□-□-□

Termination Option
- −00 = Pigtail (No Connector)
- −01 = 3 Pin Deutsch Connector (Male)
- −02 = 3 Pin Deutzch Connector (Female)

Cable Length in feet
- −01 = 1 foot (Standard)
- −02 = 2 feet
- −03 = 3 feet (etc)

Monitored Angle
- −010 = ± 1 degree
- −015 = ± 1.5 degrees
- −020 = ± 2 degrees

Up to
- −450 = ± 45.5 degrees (Platform Leveler Max)
- −900 = 90 degrees (Angle Sensor Max)

Sensor Type
- – Blank = Angle Sensor
  Monitors from Horizontal to 90 degrees
- – X = Platform Leveler
  Monitors from Horizontal to ± 45 degrees

**NOTES:**

**STEP #1**: SOLDER EPWB/676 (ITEM #3) CABLE TO PC BOARD (ITEM #2) USING WIRES TO AREA'S AS SHOWN.

**STEP #2**: INSTALL GROMMET (ITEM #4) INTO ENCLOSURE (ITEM #1).

**STEP #3**: INSTALL CABLE (ITEM #3) THROUGH GROMMET (ITEM#4) AND SECURE PC BOARD (ITEM #2) TO ENCLOSURE WITH SCREWS (ITEM #5).

**STEP #4**: TYRAP (ITEM #6) STRAIN RELIEF (ITEM #4).

**STEP #5**: APPLY EPOXY POTTING MATERIAL (ITEM #7) EVEN TO TOP OF TRIM POT.

| UNLESS OTHERWISE SPECIFIED | | | |
|---|---|---|---|
| TOLERANCE | | ANGLES | |
| .X | ±.1 | X | ±1° |
| .XX | ±.01 | X | ±.5° |
| .XXX | ±.005 | | |
| .XXXX | ±.0010 | | |
| DIMENSIONAL UNITS: INCHES | | | |
| UNDIMENSIONED RADII: 0 | | | |
| BREAK ALL SHARP CORNERS, EDGES & BURRS. | | | |

| | | |
|---|---|---|
| DRAWN BY | DOC | DATE 8/16/05 |
| CHECKED | | |
| APVD ENG. | | |
| APVD DESN | | |
| APVD SALES | | |
| PROJECTION | | 1 |

OEM Controls, Inc.
10 Controls Drive – Shelton, CT 06484
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MECHANICAL ASSEMBLY
AS-3 ANGLE SENSOR

| PART NO. SEE DWG | DWG NO. B17119 | REV A |
|---|---|---|
| SCALE NTS | SHEET 1 of 1 | SIZE B |