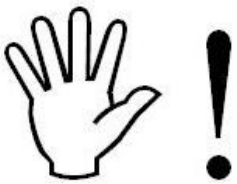
Instruction Manual

P/N 30-0303
X-SERIES GAUGE
VOLTAGE 8 TO 18V



STOP! - READ THIS BEFORE INSTALL OR USE!

WARNING:
THIS INSTALLATION REQUIRES WELDING AND INTEGRATION INTO A VEHICLE'S ELECTRICAL SYSTEM. DAMAGE TO SENSITIVE ELECTRONICS, FIRE, OR EXPLOSION MAY OCCUR IF PROPER PRECAUTION IS NOT TAKEN. IF THERE IS ANY DOUBT, **DO NOT** ATTEMPT THE INSTALLATION AND CONSULT A PROFESSIONAL.
NOTE: IT IS THE RESPONSIBILITY OF THE ENGINE TUNER TO ULTIMATELY CONFIRM THE CALIBRATION USE FOR ANY PARTICULAR ENGINE IS SAFE FOR ITS INTENDED USE. AEM HOLDS NO RESPONSIBILITY FOR ANY ENGINE DAMAGE THAT RESULTS FROM THE MISUSE OF THIS PRODUCT.

The 52mm (2-1/16") AEM X-Series Gauge features a four digit central readout and sweeping 24-color-coded LED display, providing immediate reference to the sensor reading in real-time.

Features

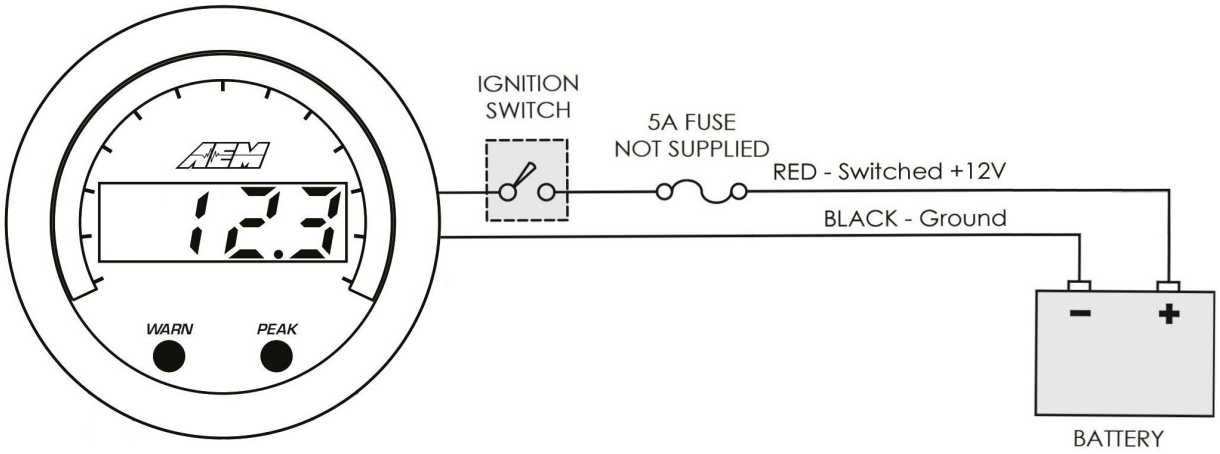
- 2-1/16" / 52mm outer diameter mounting
- Flashing warn / alarm feature
- Peak recall
- Black bezel / "Volt" faceplate supplied; Silver / white available as optional purchase
- Locking connectors
- Supports vehicle / system voltages up to 16V
- Auto-dimming display

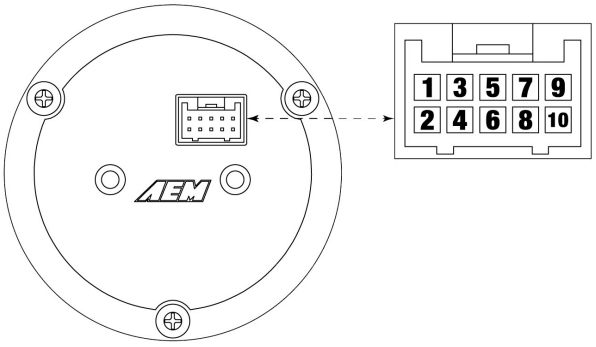
	KIT CONTENTS
PN	**Description**
10-0303	INST, X-SERIES VOLT GAUGE 8 TO 18V
35-0303	GAUGE ASSY, X-SERIES VOLT GAUGE 8 TO 18V
35-4302	RED INSULATED BUTT CONNECTORS (6)
35-8618	NUT, KNURLED, M4x0.7 (2)
35-8614	BRACKET, X-SERIES GAUGE
35-3435	CABLE, X-SERIES GAUGE PWR/IO BATT
35-8617	RUBBER BAND, X-SERIES GAUGE

OPTIONAL ACCESSORIES	
PN	**Description**
30-0303-ACC	BEZEL, X-SERIES GAUGE SILVER FACEPLATE, VOLTS 18V, WHITE

AEM Performance Electronics, 2205 126th Street Unit A, Hawthorne, CA 90250 - Phone: (310) 484-2322
http://www.aemelectronics.com

Wiring Installation Diagram





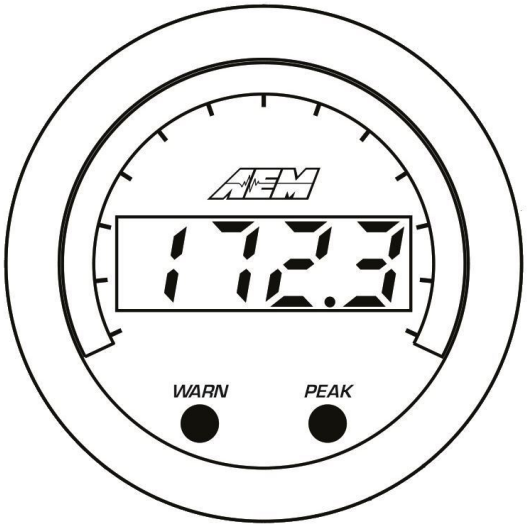
A

Connector A - Power / IO

Pin	Color	Description
1	RED	Switched 12V Power (5A Fuse)
2	BLACK	Power Ground
3 - 10	NC	NC

Operation

The inner numeric LEDs and outer ring LEDs display the currently measured sensor reading; the inner numeric LEDs will flash when the sensor reading exceeds the (configurable) warn/alarm threshold value. WARN and PEAK buttons are located on the face of the gauge and are used to perform the following functions.



Display or adjust warn/alarm threshold

- § Press the WARN button; the warn/alarm threshold will be displayed and the outer LEDs will flash
- § Use either the WARN or PEAK buttons to decrement or increment the threshold value
- § Depress and hold both the WARN and PEAK buttons until LESS or GrTr appears
- § Press the WARN button to toggle between LESS and GrTr modes
  - LESS — Warn/alarm activated when sensor reading is less than threshold value
  - GrTr — Warn/alarm activated when sensor reading is greater than threshold value
- § The gauge will return to normal display mode a few seconds after the last button press

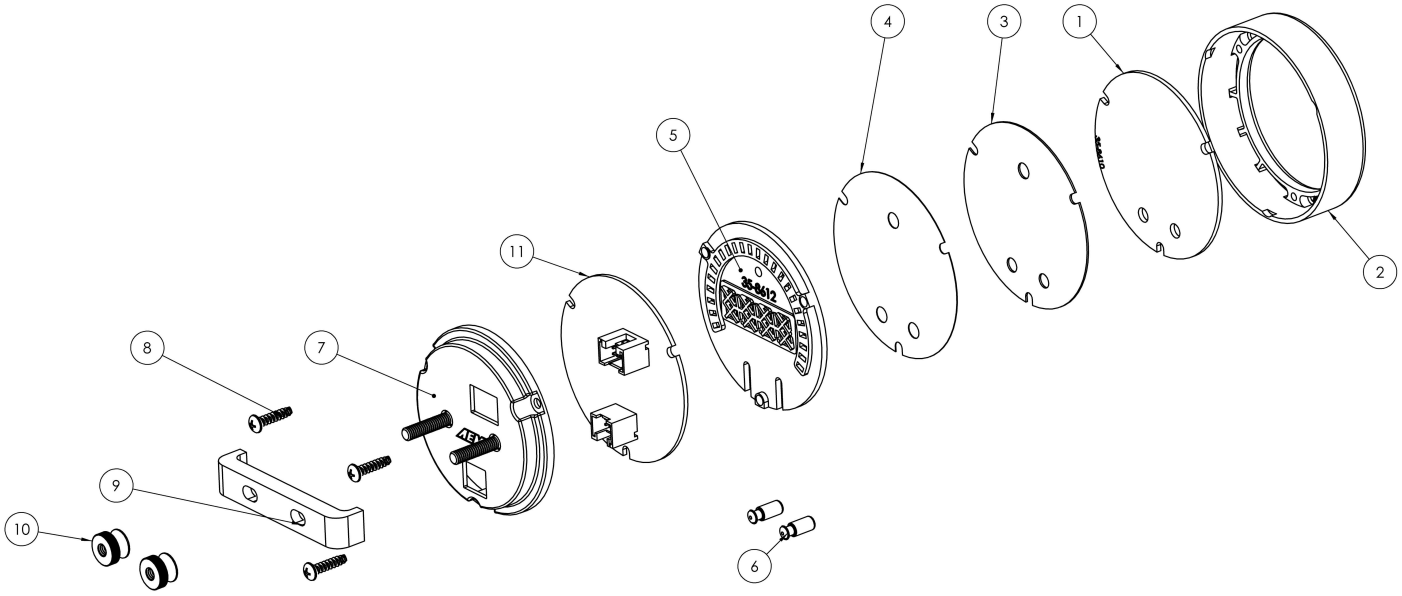
Display or clear stored peak value

- § Press the PEAK button; the peak (highest) sensor reading will be displayed and the outer LEDs will flash
- § The peak value will be retained across power cycles
- § While the peak value is being displayed, depress and hold the PEAK button for three seconds until "CLr" appears to clear the peak value
  - CLr — Will be displayed to confirm the peak value has been reset
- § The gauge will return to normal display mode shortly after the last button press

Faceplate / Bezel Installation

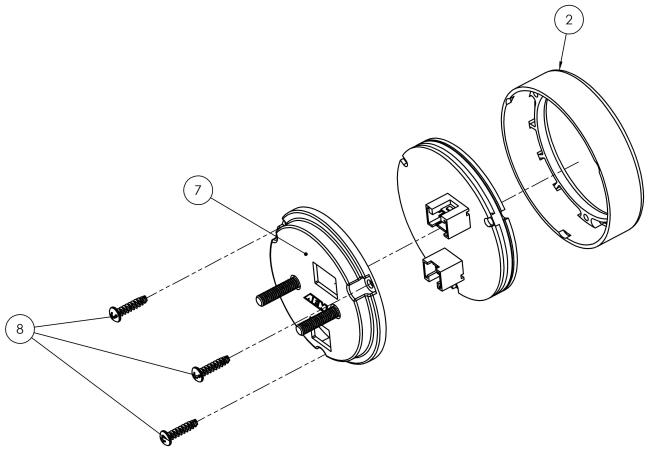
The gauge kit is supplied assembled with a black faceplate and black bezel. An accessory kit is available (for purchase through AEM dealers) which includes an optional silver bezel and white faceplate. Please reference the Optional Accessories section earlier in the document for the appropriate part numbers. Contact your dealer or visit www.aemelectronics.com for more information.

The faceplate is reversible, displaying alternative scalings on either side. Reference the Operation section of this manual for details on how to switch the display mode when reversing the faceplate. Disassembly is required to change the faceplate, flip/reverse the faceplate, or change the bezel of the gauge. The following diagram will provide familiarization with the major components of the gauge prior to beginning the procedure.

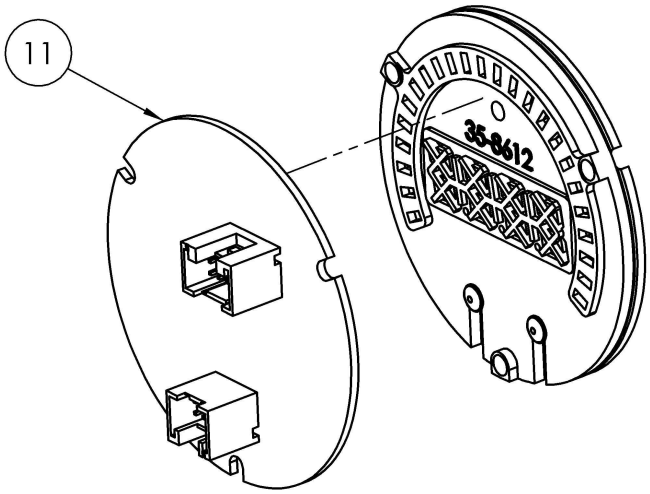


Item	Qty	Description
1	1	Lens
2	1	Bezel
3	1	Faceplate
4	1	Diffuser
5	1	Light Guide
6	2	Button
7	2	Mounting Stud (M4 x 0.7)
8	3	Assembly Screw
9	1	Mounting Bracket
10	2	Brass Thumb Screw (M4 x 0.7)
11	1	Printed Circuit Board (PCB)

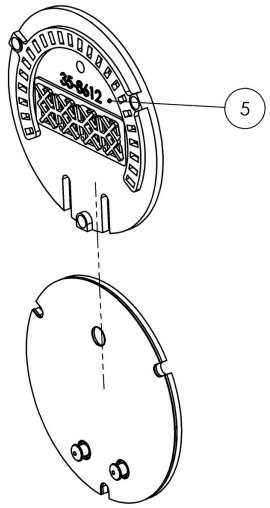
Gauge Disassembly



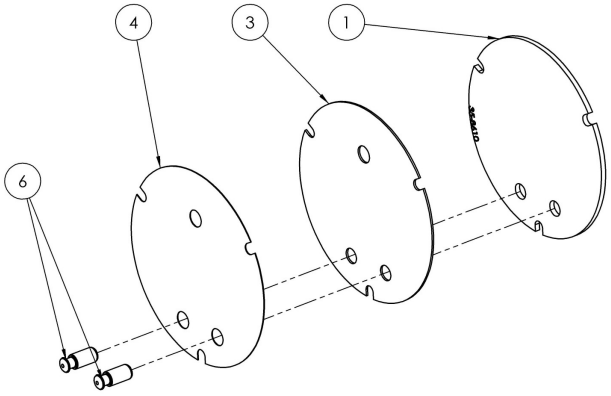
STEP 1 - Remove the three assembly screws (8) using a #1 Phillips head screwdriver. Separate the bezel (2) and cup (7) from the rest of the assembly. If you have purchased the optional accessory kit, the silver bezel may be replaced for the existing bezel at this time



STEP 2 - Separate the PCB (11) from the remaining components

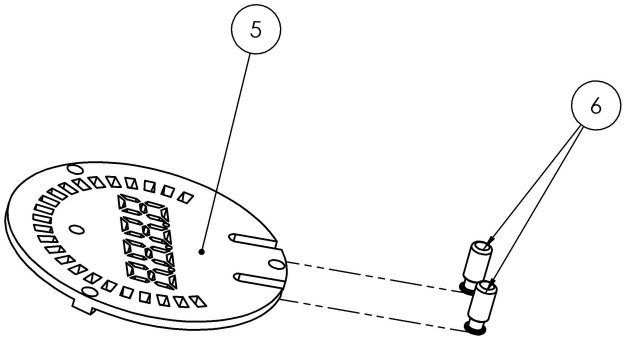


STEP 3 - Slide the light guide (5) upward to remove it, the buttons may fall out at this time - take care not to lose them

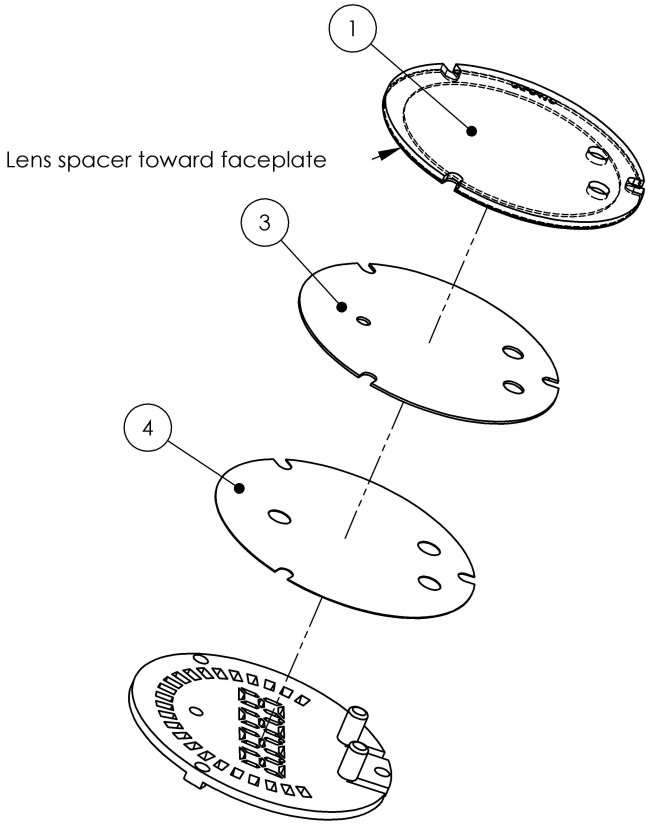


STEP 4 - As you separate the remaining components, diffuser (4), faceplate (3), lens (1), note the order in which they were assembled. The faceplate (3) may now be reversed to display an alternate scaling or replaced for a different color as included in the optional accessory kit

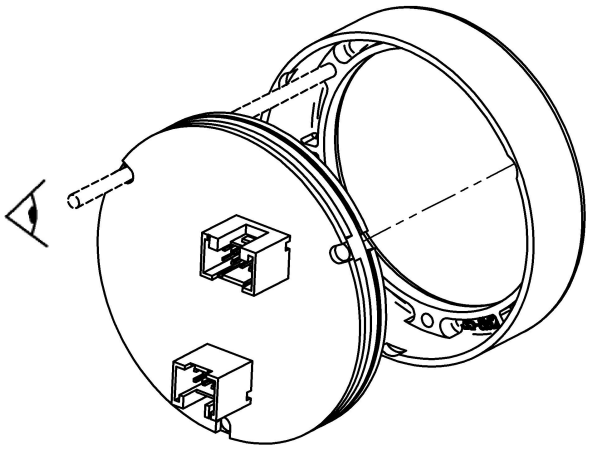
Gauge Assembly



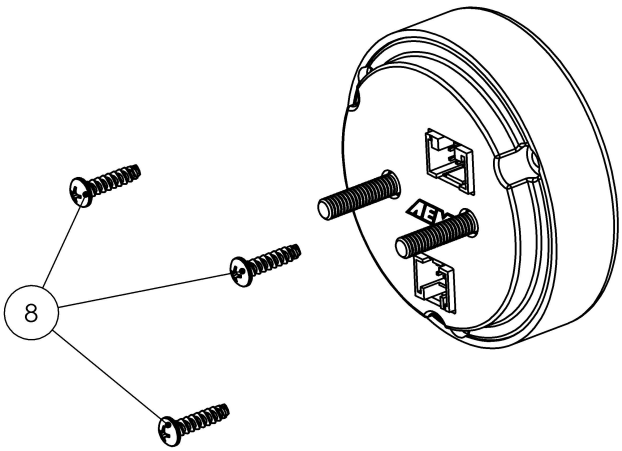
STEP 1 - Place the light guide (5) on a flat surface (black side up) and slide the buttons (6) into the slots



STEP 2 - Stack the diffuser (4), faceplate (3), and lens (1) in order, over the buttons, and on to the light guide

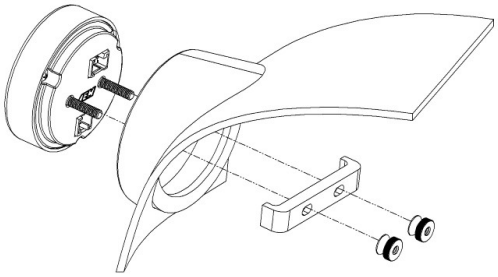


STEP 3 - Reassemble the PCB and display stack with the bezel, making sure screw holes are aligned through the entire assembly

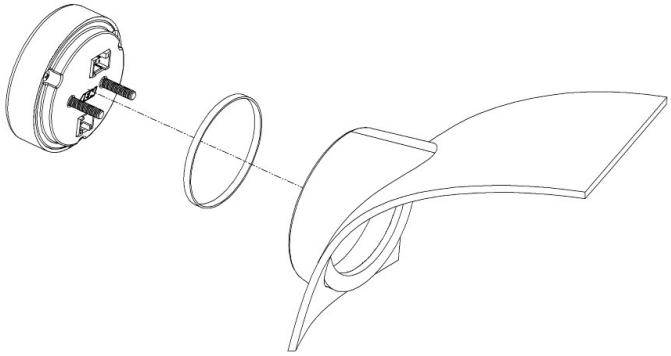


STEP 4 - Reassemble and tighten screws to 2 in-lb (previously assembled bezel) or 3 in-lb (new bezel). Do not over-tighten!

Gauge Installation



Installation using supplied bracket



Installation without bracket, using rubber band

A 2-1/6" (52mm) hole is required to mount the X-Series gauge. A bracket and thumbscrews are provided to facilitate installation into a panel or gauge pod. In some cases, the gauge cup may be pushed into a mounting hole causing an interference fit strong enough to retain the gauge; the supplied rubber band may be fit to the gauge to create a tighter fit in mounting holes slightly larger than 52mm. It is, however, recommended that gauges be mounted securely using the supplied bracket to ensure they never become loose and cause a hazard during vehicle operation.

Note: The gauge is not water-proof and should not be installed in a location with exposure to water or snow. Damage caused by water ingress will not be covered under warranty.

Specifications

Dimensions	diameter (bezel)	2.40 / 61	in / mm
	diameter (cup)	2-1/16 / 52	in / mm
	depth (incl. bezel)	0.825 / 21	in / mm
	depth (cup only)	0.200 / 5	in / mm
Supply Voltage	min	7	VDC
	max	18	VDC
Supply Current (13.8V)	nominal	50.0	mA
Operating Temperature	min	-4 / -20	degF / degC
	max (16V Supply)	185 / 85	degF / degC

12 Month Limited Warranty

Advanced Engine Management Inc. warrants to the consumer that all AEM High Performance products will be free from defects in material and workmanship for a period of twelve (12) months from date of the original purchase. Products that fail within this 12-month warranty period will be repaired or replaced at AEM's option, when determined by AEM that the product failed due to defects in material or workmanship. This warranty is limited to the repair or replacement of the AEM part. In no event shall this warranty exceed the original purchase price of the AEM part nor shall AEM be responsible for special, incidental or consequential damages or cost incurred due to the failure of this product. Warranty claims to AEM must be transportation prepaid and accompanied with dated proof of purchase. This warranty applies only to the original purchaser of product and is non-transferable. All implied warranties shall be limited in duration to the said 12-month warranty period. Improper use or installation, accident, abuse, unauthorized repairs or alterations voids this warranty. AEM disclaims any liability for consequential damages due to breach of any written or implied warranty on all products manufactured by AEM. Warranty returns will only be accepted by AEM when accompanied by a valid Return Merchandise Authorization (RMA) number. Product must be received by AEM within 30 days of the date the RMA is issued.

UEGO oxygen sensors are considered wear items and are not covered under warranty.

Please note that before AEM can issue an RMA for any electronic product, it is first necessary for the installer or end user to contact the EMS tech line at 1-800-423-0046 to discuss the problem. Most issues can be resolved over the phone. Under no circumstances should a system be returned or a RMA requested before the above process transpires.

AEM will not be responsible for electronic products that are installed incorrectly, installed in a non-approved application, misused, or tampered with.

Any AEM electronics product can be returned for repair if it is out of the warranty period. There is a minimum charge of $50.00 for inspection and diagnosis of AEM electronic parts. Parts used in the repair of AEM electronic components will be extra. AEM will provide an estimate of repairs and receive written or electronic authorization before repairs are made to the product.