

AFX

Description

The Analog Field Indicator (AFX), manufactured by Moore Industries, is a loop-powered instrument that converts a 4-20 mA input into a proportional analog meter reading that is linear with the input.

The AFX is designed to fit inside explosion-proof enclosures and to provide a scaled read-out for process transmitters. Enclosures used to house the AFX must have glass tops for viewing the indicator.

Special fixturing allows the AFX to be mounted in either a low- or high-cover enclosure. The fixture used for each application is different and the application must be specified at the time the AFX is ordered.

A loop maintenance diode is standard with the AFX. This diode maintains the 4-20 mA process loop should the indicator fail or be removed from the loop.

The AFX is available with a 0-100 percent linear scale, a 0-10 square root scale, and a 0-100 square root scale, or with a user-specified scale — all with ± 2 percent accuracy. Special scales with three, four, or five major segments are available. The AFX provides an output reading that is proportional to the input regardless of which scale is selected.

Installation

The AFX mounts inside standard explosion-proof enclosures, like Moore Industries 2LG, 2HG, 3LG, and 3HG enclosures. Figure 1 illustrates how the AFX mounts inside a low-cover, glass-top, explosion-proof enclosure.

The scaled indicator has two banana-type plugs on its rear that mate with receptacles at the wire terminals, which are secured to the fixture. To access the wire terminals or to remove the wire shunt from the indicator, the indicator must be pulled off the receptacles.

Electrical connections are made to a positive (+) and a negative (-) terminal on the base of the fixture. A label affixed to the fixture indicates the correct polarity for the process loop connections.

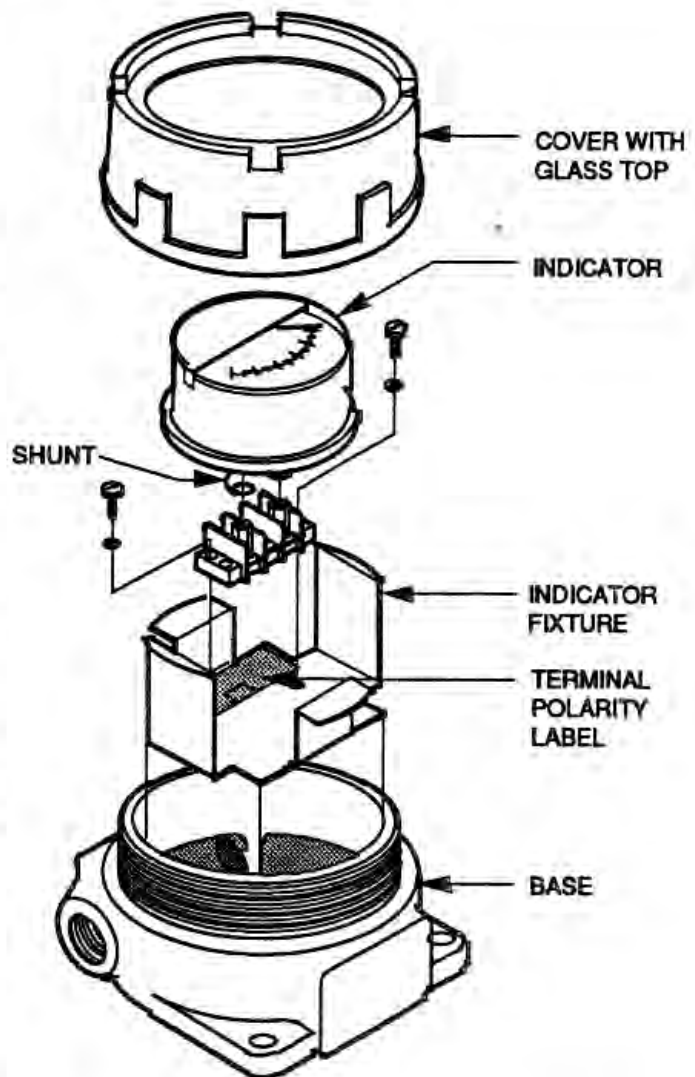


Figure 1. AFX Mounting Diagram in a Low-cover Explosion-proof Enclosure

Figure 2 is a typical hookup diagram for the AFX.

CAUTION

The wire shunt across the two indicator leads must be removed before placing the unit into service. To avoid damage to the indicator, the shunt must be placed across the leads prior to shipment.

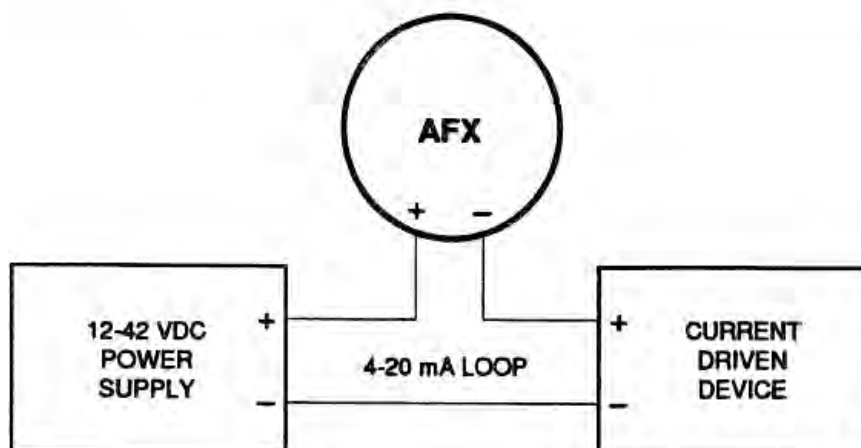


Figure 2. Typical AFX Installation Hookup

Table 1. AFX Equipment Specifications

Characteristic	Specification
Input	4-20 mA
Output	Scaled Analog Meter: 0-100% linear, 0-10 square root, 0-100 square root; OR, a custom segmented dial scale Accuracy: $\pm 2\%$ of full scale span
Power Requirements	Loop-power, 12-42 Vdc Unit has a maximum loop resistance of 10Ω
Environmental Ratings	Ambient Operating Temperature: -40 to 85 °C (-40 to 149 °F) Storage Temperature: -60 to 100 °C (-76 to 212 °F) Ambient Temperature Effect: Less than 2% of full scale at any point within the specified operating temperature limits
Weight	<141 grams (<5 oz), without enclosure
Certifications	BASEEFA Intrinsic Safety (I.S.) certification (consult factory for availability)

RETURN PROCEDURES

To return equipment to Moore Industries for repair, follow these four steps:

1. Call Moore Industries and request a Returned Material Authorization (RMA) number.

Warranty Repair –

If you are unsure if your unit is still under warranty, we can use the unit's serial number to verify the warranty status for you over the phone. Be sure to include the RMA number on all documentation.

Non-Warranty Repair –

If your unit is out of warranty, be prepared to give us a Purchase Order number when you call. In most cases, we will be able to quote you the repair costs at that time. The repair price you are quoted will be a "Not To Exceed" price, which means that the actual repair costs may be less than the quote. Be sure to include the RMA number on all documentation.

2. Provide us with the following documentation:
 - a) A note listing the symptoms that indicate the unit needs repair
 - b) Complete shipping information for return of the equipment after repair
 - c) The name and phone number of the person to contact if questions arise at the factory
3. Use sufficient packing material and carefully pack the equipment in a sturdy shipping container.
4. Ship the equipment to the Moore Industries location nearest you.

The returned equipment will be inspected and tested at the factory. A Moore Industries representative will contact the person designated on your documentation if more information is needed. The repaired equipment, or its replacement, will be returned to you in accordance with the shipping instructions furnished in your documentation.

WARRANTY DISCLAIMER

THE COMPANY MAKES NO EXPRESS, IMPLIED OR STATUTORY WARRANTIES (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE) WITH RESPECT TO ANY GOODS OR SERVICES SOLD BY THE COMPANY. THE COMPANY DISCLAIMS ALL WARRANTIES ARISING FROM ANY COURSE OF DEALING OR TRADE USAGE, AND ANY BUYER OF GOODS OR SERVICES FROM THE COMPANY ACKNOWLEDGES THAT THERE ARE NO WARRANTIES IMPLIED BY CUSTOM OR USAGE IN THE TRADE OF THE BUYER AND OF THE COMPANY, AND THAT ANY PRIOR DEALINGS OF THE BUYER WITH THE COMPANY DO NOT IMPLY THAT THE COMPANY WARRANTS THE GOODS OR SERVICES IN ANY WAY.

ANY BUYER OF GOODS OR SERVICES FROM THE COMPANY AGREES WITH THE COMPANY THAT THE SOLE AND EXCLUSIVE REMEDIES FOR BREACH OF ANY WARRANTY CONCERNING THE GOODS OR SERVICES SHALL BE FOR THE COMPANY, AT ITS OPTION, TO REPAIR OR REPLACE THE GOODS OR SERVICES OR REFUND THE PURCHASE PRICE. THE COMPANY SHALL IN NO EVENT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES EVEN IF THE COMPANY FAILS IN ANY ATTEMPT TO REMEDY DEFECTS IN THE GOODS OR SERVICES. BUT IN SUCH CASE THE BUYER SHALL BE ENTITLED TO NO MORE THAN A REFUND OF ALL MONIES PAID TO THE COMPANY BY THE BUYER FOR PURCHASE OF THE GOODS OR SERVICES.

ANY CAUSE OF ACTION FOR BREACH OF ANY WARRANTY BY THE COMPANY SHALL BE BARRED UNLESS THE COMPANY RECEIVES FROM THE BUYER A WRITTEN NOTICE OF THE ALLEGED DEFECT OR BREACH WITHIN TEN DAYS FROM THE EARLIEST DATE ON WHICH THE BUYER COULD REASONABLY HAVE DISCOVERED THE ALLEGED DEFECT OR BREACH, AND NO ACTION FOR THE BREACH OF ANY WARRANTY SHALL BE COMMENCED BY THE BUYER ANY LATER THAN TWELVE MONTHS FROM THE EARLIEST DATE ON WHICH THE BUYER COULD REASONABLY HAVE DISCOVERED THE ALLEGED DEFECT OR BREACH.

RETURN POLICY

For a period of thirty-six (36) months from the date of shipment, and under normal conditions of use and service, Moore Industries ("The Company") will at its option replace, repair or refund the purchase price for any of its manufactured products found, upon return to the Company (transportation charges prepaid and otherwise in accordance with the return procedures established by The Company), to be defective in material or workmanship. This policy extends to the original Buyer only and not to Buyer's customers or the users of Buyer's products, unless Buyer is an engineering contractor in which case the policy shall extend to Buyer's immediate customer only. This policy shall not apply if the product has been subject to alteration, misuse, accident, neglect or improper application, installation, or operation. THE COMPANY SHALL IN NO EVENT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.



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