

December 2018

► **Description**

The 2-wire ACX Current Transmitter accepts standard AC inputs from current and potential transformers. It converts the AC input to a proportional DC current signal for monitoring motor currents, and interfacing with a distributed control system or another process instrument.

The ACX measuring circuit incorporates an internal toroidal transformer that steps a 0-5 amp AC input down to 0-5 milliamps AC. For personal safety, this input transformer can be optionally mounted externally (-EM option). Externally mounting the transformer assures the signal at the ACX terminals is a safe, low level. Servicing the ACX can be performed without shorting the secondary of the -EM transformer.

Additionally, the ACX has input/output isolation protecting the integrity of the measurement and can withstand large momentary surges of input current.

The ACX is offered with a variety of other options including complete RFI/EMI protection. For details, see the back page.

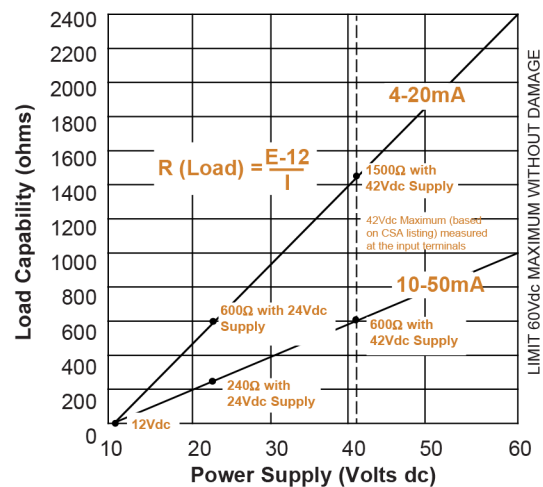


Figure 1. The ACX is offered in high-density DIN-style and hockey-puck housings. The hockey-puck housing mounts on a relay track or in an explosion-proof enclosure pictured on the left.

► **Features**

- **Wide range of inputs and outputs.** Interfaces almost any current/voltage device to any process control system, readout device, or process control instrument.
- **Low output ripple/high common mode rejection.** Low output ripple and high common mode rejection mean output signals are exceptionally accurate, stable, and noise-free.
- **Complete isolation.** Eliminates signal inaccuracies caused by ground loops

Figure 2. The load capability of the ACX increases with the power supply.



Certifications

CE CE Conformant – EMC Directive 2014/30/EU EN61326



ACX-HP in BH or SB2 Housing
Factory Mutual Approvals (FM Global Group):
Explosion-Proof & Dust-Ignition Proof
 Class I, Division 1, Groups A*, B, C & D
 Class II & III, Division 1, Groups E, F & G
Environmental Protection: Type 4X & IP66
 T6 @ 60°C Maximum Operating Ambient
 *For Group A applications, seal all conduits within 18"



CSA Group (Canadian Standards Association):
Explosion-Proof
 Class I, Division 1, Groups A*, B, C & D
 Class II, III, Groups E, F & G
 Type 4X, IP66
 Ambient Temp. Range: -20°C to +60°C; T6
 *For U.S. Group A applications, seal all conduits within 18"



ATEX Directive 2014/34/EU (ISSEP):
Explosion/Flameproof
 Ex II 2 G Ex d IIC T6 Gb
 Ex II 2 D Ex tb IIIC Db T85°C IP66



ANZEx (TestSafe):
Explosion/Flameproof
 Ex d IIC T6 (Tamb 60°C) IP66

ACX

AC Current Transmitter

► Specifications

<p>Performance</p> <p>Calibration Capability: ±0.2% of span (linearity and repeatability); ±0.5% of span at 0-10Vac range and lower</p> <p>Isolation: Input and output are transformer isolated up to 500Vdc</p> <p>Overload Capability: 35 amps for 30 seconds with - EM option; 150% overvoltage with voltage input</p>	<p>Performance Cont</p> <p>Load Capability: $R \text{ (Load)} = \frac{E - 12}{I}$</p> <p>Ripple: 10mV peak-to-peak maximum</p> <p>Ambient Temperature Range: -20°C to +82°C (-4°F to +180°F)</p> <p>Effect: ±0.015%/C (±0.01%/F) over above range</p>	<p>Adjustments</p> <p>Type: External multiturn potentiometers</p> <p>Span: With full-scale input, adjusts output to 100%, ±10% of selected output span</p> <p>Zero: With minimum input, adjusts output to 0%, ±10% of selected output span</p> <p>Weight 170 g (6 oz.)</p>
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► Ordering Information

Unit	Input	Output	Power	Options	Housing	
ACX AC Current Transmitter	Current (into 0.1ohm input impedance)	4-20MA into 600ohm with 24Vdc power supply	12-42DC (loop-powered on output side)	-EM Externally-mounted input transformer for current input -RF RFI/EMI protection (Requires -EM options for current inputs); DIN and hockey-puck housings rate 50V/m -ABC = 0.1% F.S. when tested according to SAMA Standard PMC 33.1 -RTB Removable terminal block (DIN housing only)	DIN Universal DIN-style housing mounts on 32mm G-type and 35mm Top Hat DIN-rails	
	0-1AAC	10-50MA into 600ohm with 42Vdc power supply			HP Hockey-puck housing with spring clips for mounting in an explosion-proof enclosure	
	0-2AAC				BH2NS (*) or (‡) Aluminum Explosion-Proof enclosure with two 1/2-inch NPT entry ports and a solid cover	
	0-3AAC				BH2TS (*) or (‡) Aluminum Explosion-Proof enclosure with two 3/4-inch NPT entry ports and a solid cover	
	0-4AAC				BH2MS (*) or (‡) Aluminum Explosion-Proof enclosure with two M20 x 1.5 NPT entry ports and a solid cover	
	0-5AAC				BH3NS (*) or (‡) Aluminum Explosion-Proof enclosure with three 1/2-inch NPT entry ports and a solid cover	
	Voltage (into 100ohm per volt input impedance)					BH3TS (*) or (‡) Aluminum Explosion-Proof enclosure with two 3/4-inch side-entry NPT ports, one 1/2" bottom port, and a solid cover
	0-.5VAC					BH3MS (*) or (‡) Aluminum Explosion-Proof enclosure with two, M20 x 1.5 side-entry ports, one 1/2" bottom-entry port, and a solid cover
	0-1.5VAC					SB2NS (*) or (‡) 316 Stainless Steel 2-Hub, Explosion-Proof enclosure with two, 1/2-inch NPT entry ports and a solid cover
	0-5VAC					SB2MS (*) or (‡) 316 Stainless Steel 2-Hub, Explosion-Proof enclosure with two, M20 x 1.5 entry ports and a solid cover
	0-10VAC					D2LS 2-Hub, Aluminum base, solid cover, IP66/NEMA 4X enclosure
	0-25VAC					
	0-50VAC					
0-120VAC						
0-150VAC						

* Either **A** or **E** suffix (comes supplied with 2" pipe mount hardware)
A suffix indicates ANZEx/TestSafe (Ex d) Flameproof approvals (i.e. BH2MSA)
E suffix indicates ATEX (Ex d and tD) Flameproof approvals (i.e. BH2MSE)
‡ **P** suffix indicates enclosure comes equipped with base plate and U-bolts for mounting on a 2-inch pipe (i.e. BH2NSP)
See BH, SB and D-BOX Datasheets for additional information.

To order, specify: Unit / Input / Output / Power / Options [Housing]
Model Number Example: ACX/0-5AAC/4-20MA/12-42DC/-EM [DIN]

Specifications and information subject to change without notice.



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