

## AHC812-P-RIS Square Root Extractor

- Suitable for any DC Voltage or Milliamp input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL 1 & SIL 2 rated (IEC 61508-2) safety system loop applications, as 1oo1 architecture (HFT:0)
- RIS SC8330 Series Replacement Card (for 3U,19" Rack)
- AMELEC std 10 year warranty

### TECHNICAL SPECIFICATION

#### FUNCTION

Process V / I signal Square Rooter / Isolator

#### INPUT

DC Current / voltage can be specified in the range of:  
Current up to 100mA max (Passive)  
Voltage 0.4 to 100V max  
Typical input: 4 – 20mA (Passive)

#### OUTPUT

DC current or voltage specified in the range of:  
Current up to 100mA max in Sink configuration (externally powered)  
Current up 22mA max Source configuration (Internally powered)  
Voltage any from 0.4 to 20V max @ up to 20mA.  
Typical output range: 4 - 20mA (Source)

#### CONTROLS

Zero / Span: 15 turn potentiometers to calibrate Output.

#### SUPPLY VOLTAGE

Nom 24Vdc Buss line within RIS Rack Backplane.

#### TEST POINTS

I/P & O/P Test Points on Front Fascia allows for simulation of the input & monitoring of the output signal (supplied with Test Plugs on flying leads)

#### INDICATOR

Amber Led: power ON indicator

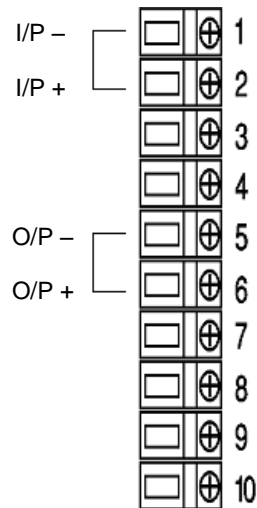
#### PERFORMANCE

Response time: Typically <100mS  
Accuracy: 4% > Input < 100%; +/-0.1% span.  
0.2% > Input < 4% ; +/-0.5% span.  
Low flow cut off at 0.1% of input span.

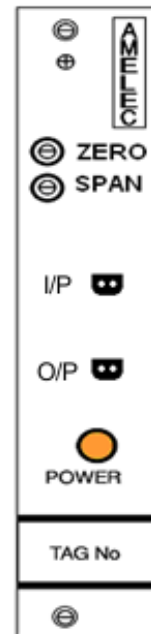
#### PROTECTION

Isolation 1000V RMS Input/Output/Supply  
Internal Fuse.  
Input over range typically at 300%.  
Output saturation 125%

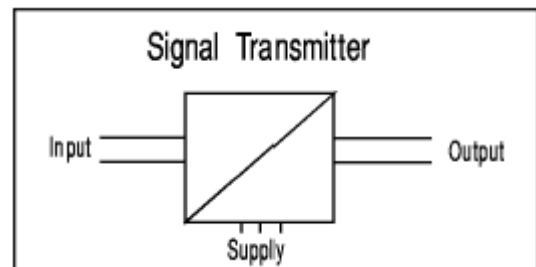
#### RIS Back Plate TERMINATION



#### FRONT VIEW



#### FUNCTION BLOCK DIAGRAM



#### ENVIRONMENTAL CONDITION

Storage temperature: - 40 to +70 °C  
Operating Ambient: -15 to +55 °C  
Relative Humidity: 5 to 95% RH

#### MOUNTING / DIMENSION

Card 3U high 4E wide  
Mounting 19" rack / 84E wide (See rack GA for details)  
Card weight < 200g

#### ADD ON / OPTIONS

DI: Common LCD display for local monitoring  
J : Input injection jack socket  
P: Test point