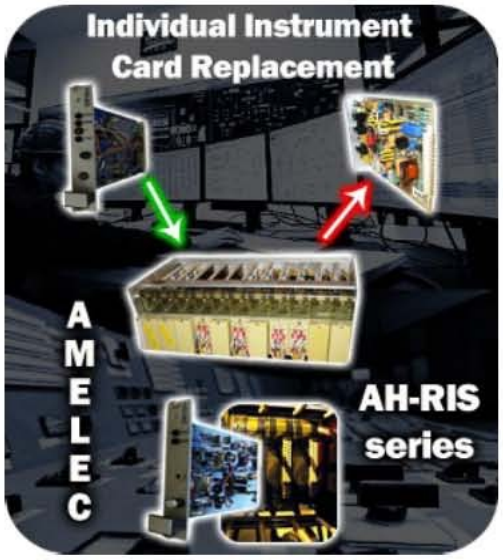
INTRODUCING THE AH-RIS SERIES REPLACEMENT OPTIONS WHEN FACED WITH OBSOLETE ROCHESTER INSTRUMENTATION ON PLANT

Tel: 01908 567003
E-Mail: sales@amelec-uk.com
Website: www.amelec-uk.com
Fax: 01908 566735

AMELEC
SIGNAL CONDITIONING

AMELEC

SIGNAL CONDITIONING



AMELEC manufacture & supply a vast array of analogue Signal Conditioning/Process Monitoring & Control Instrumentation with up to 10 Year Warranty.

35+ years' experience in the nuclear sector supplying to Sellafield, AWE, Urenco, Magnox, CCFE, Westinghouse/Springfields Fuels, British Energy/EDF & the UK Nuclear fleet of Power Stations, for New Build through to Decommissioning Projects.

We still fully support our own instrumentation originally supplied over 30 years ago, and have also produced like-for-like pin compatible replacement products for systems not originally of our supply or manufacture!

AMELEC also supports numerous clients throughout the petrochemical, oil and gas, food & brew, steels, railways, general utilities and power generation sectors.

This Obsolescence & Refurbishment Support service is especially favourable when you may be faced with potentially costly mechanical and wiring modifications on plant, as well as maintenance staff re-training, etc.

One of the recent example of AMELEC obsolescence and system life Extension support is;

The development of our Plug-in cards directly compatible with obsolete Rochester Instruments, suitable for use in the existing RIS rack systems across various plant facilities.

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AMELEC
SIGNAL CONDITIONING

Individual instrument replacement cards available for:

- **ET8204(W)/8204A** Thermocouple Single Trip Amplifier
- **ET8205(W)/8205A** Thermocouple Dual Trip Amplifier
- **ET8214/8214A** Alarm Single Trip Amplifier
- **ET8215/8215A** Alarm Dual Trip Amplifier
- **ET8274/8274A** RTD Alarm Single Trip Amplifier
- **ET8275/8275A** RTD Alarm Dual Trip Amplifier
- **SC8300R** Slidewire Transmitter
- **SC8302/8302E** Isolated Transmitter
- **SC8326/8326W/8327** Isolated Thermocouple Transmitter
- **SC8330/8330E** Square Root Transmitter
- **SC8350** Frequency Transmitter
- **SC8372/8374** RTD Transmitter
- **SC8391** Strain Gauge Power Supply
- **SC8006** Power Supply Unit

Please see AMELEC ADT & ADM DIN Rail/Surface Mounting modules for RIS ET1200/ ET7200 & SC1300/SC7300/SC7400 series replacement options.

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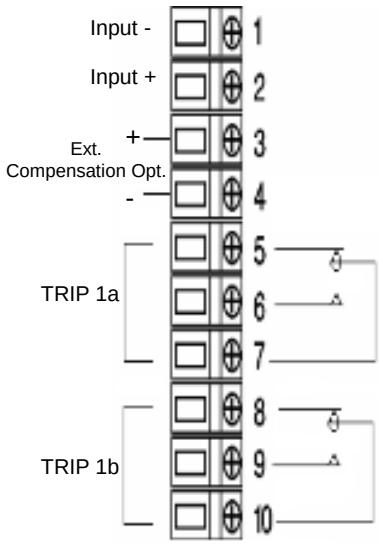
AMELEC INSTRUMENTS, Cochran Close, Presley Way, Crownhill, Milton Keynes, MK8 0AJ

AHT611-P-RIS Thermocouple Trip Amplifier

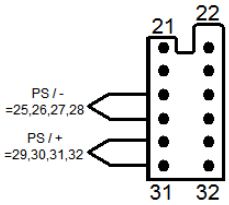
- Suitable for any BS4937 T/C type input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)
- RIS ET8204W Series Replacement Card.

TERMINATION



FRONT VIEW

Internal 24Vdc SUPPLY BUSS



TECHNICAL SPECIFICATION

FUNCTION

High Trip: Relay de-energise on rising temperature.
OR
Low Trip: Relay de-energise on falling temperature.

INPUT

Can be configured to accept mV signal from any thermocouple. Type S, R, B, J, T, E, N and other special types also available on request.

Automatic Cold Junction compensation fitted as standard.

Typical input: 0-500 Deg°C / TC type “K"

OUTPUT

The Trip output is a pair of changeover contacts DPCO, rated at 250VAC, 3A, 100VA (resistive).

CONTROLS

Zero / Span: 15 turn potentiometers, used to set internal reference 0 – 2Vdc for 0 to 100% input.

Set point: 15 turn potentiometer to set Trip point within set input range.

TEST POINT

Trip set point can be monitored using the supplied test plug on any standard DVM. 0 – 2Vdc for 0 – 100%.

INDICATOR

Amber Led: power ON indicator
Red Led: Trip status indicator
LED Off / Relay Energised = Healthy Condition
LED ON / Relay De-energised = Trip Condition

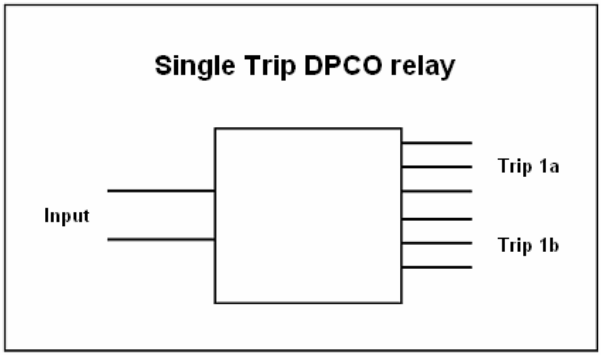
PERFORMANCE

Trip repeatability: < ±0.1%
Response time: Typically < 400mS
Trip settability: < ±0.1%
Hysteresis: 1%

PROTECTION

Isolation 1000V RMS*. Input/Contacts/Supply/
Internal Fuse.
Fail safe on loss of power (Relay de-energised)
Input over range typically at 300%.

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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 (Trip set point monitoring)
Non standard Power supply ranges available

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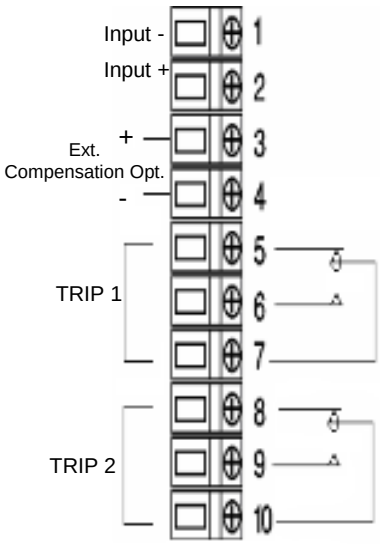
Issue 3 2011

AHT612-P-RIS Thermocouple Trip Amplifier

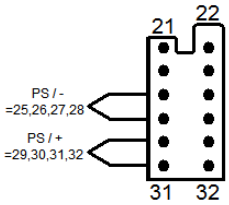
- Suitable for any BS4937 T/C type input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)
- RIS ET8205W Series Replacement Card.

TERMINATION



FRONT VIEW

Internal 24Vdc SUPPLY BUSS



TECHNICAL SPECIFICATION

FUNCTION

High Trip: Relay de-energise on rising temperature.
OR
Low Trip: Relay de-energise on falling temperature.

INPUT

Can be configured to accept mV signal from any thermocouple. Type S, R, B, J, T, E, N and other special types also available on request.

Automatic Cold Junction compensation fitted as standard.

Typical input: 0-500 Deg°C / TC type “K"

OUTPUT

Each Trip output is a pair of changeover contacts SPCO, rated at 250VAC, 3A, 100VA (resistive).

CONTROLS

Zero / Span: 15 turn potentiometers, used to set internal reference 0 – 2Vdc for 0 to 100% input.

Set point: 15 turn potentiometer to set Trip point within set input range.

TEST POINT

Trip set points can be monitored using the supplied test plug on any standard DVM. 0 – 2Vdc for 0 – 100%.

INDICATOR
Amber Led: power ON indicator
Red Led: Trip status indicator
LED Off / Relay Energised = Healthy Condition
LED ON / Relay De-energised = Trip Condition

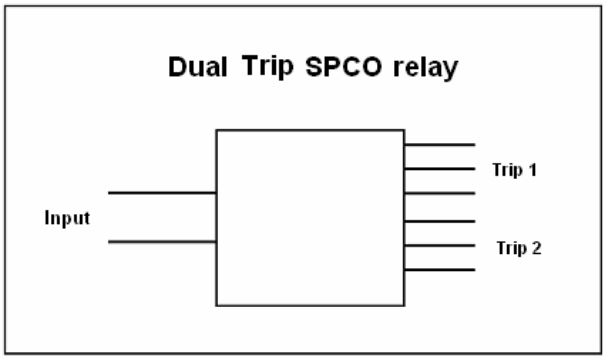
PERFORMANCE

Trip repeatability: < ±0.1%
Response time: Typically < 400mS
Trip settability: < ±0.1%
Hysteresis: 1%

PROTECTION

Isolation 1000V RMS*. Input/Contacts/Supply/
Internal Fuse.
Fail safe on loss of power (Relay de-energised)
Input over range typically at 300%.

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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 (Trip set point monitoring)
Non standard Power supply ranges available

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Issue 3 2011

AHT631-P-RIS Process Trip Amplifier

- Suitable for any DC current or Voltage input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)
- RIS ET8214/8214A Series Replacement Card.

TECHNICAL SPECIFICATION

FUNCTION

High Trip: Relay de-energise on rising I/V input.
OR
Low Trip: Relay de-energise on falling I/V input.

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

The Trip output is a pair of changeover contacts DPCO, rated at 250VAC, 3A, 100VA (resistive).

CONTROLS

Zero / Span: 15 turn potentiometers, used to set internal reference 0 – 2Vdc for 0 to 100% input.

Set point: 15 turn potentiometer to set Trip point within set input range.

TEST POINT

Trip set point can be monitored using the supplied test plug on any standard DVM. 0 – 2Vdc for 0 – 100%.

INDICATOR
Amber Led: power ON indicator
Red Led:Trip status indicator
LED Off / Relay Energised = Healthy Condition
LED ON / Relay De-energised = Trip Condition

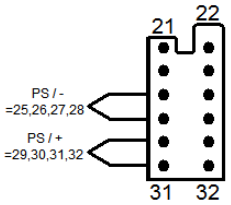
PERFORMANCE

Trip repeatability: < ±0.1%
Response time: Typically <100mS
Trip settability: < ±0.1%
Hysteresis: 1%
Input O/C response: Downscale drive
(Upscale drive option available)

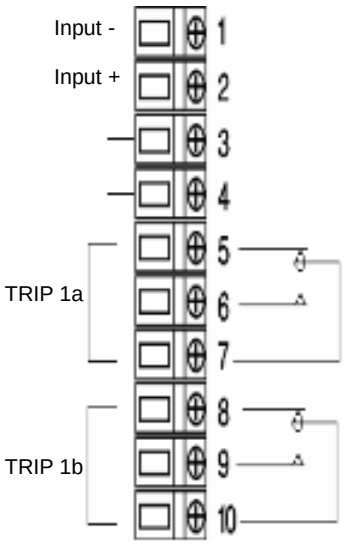
PROTECTION

Isolation 1000V RMS*. Input/Contacts/Supply/
Internal Fuse.
Fail safe on loss of power (Relay de-energised)
Input over range typically at 300%.

Internal 24Vdc SUPPLY BUSS

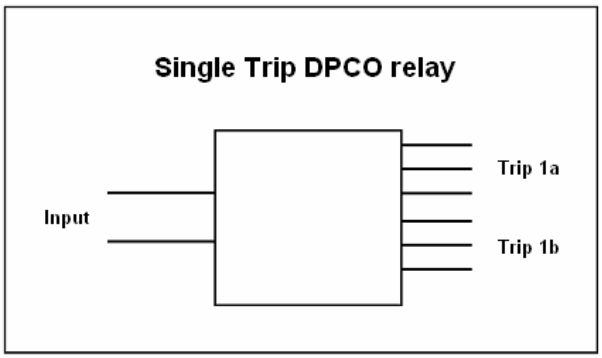


TERMINATION



FRONT VIEW

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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

X: Input O/C response Upscale drive
DI: Common LCD display for local monitoring
J : Input injection jack socket
P: Test point (Trip set point monitoring)

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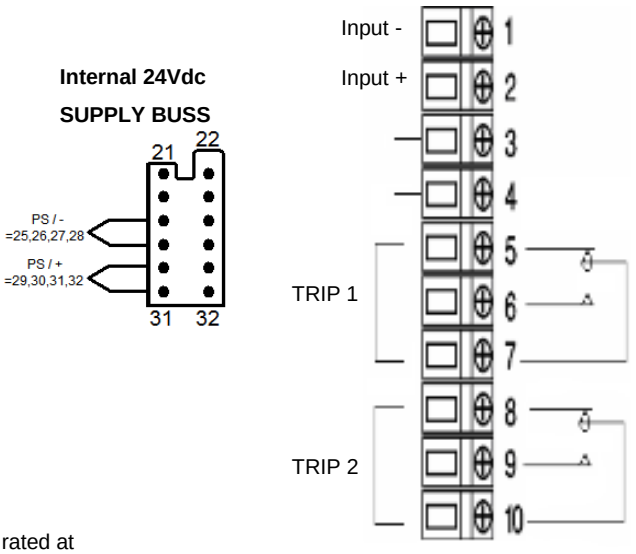
Issue 4 2014

AHT632-P-RIS Process Trip Amplifier

- Suitable for any DC current or Voltage input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)
- RIS ET8215/8215A Series Replacement Card.

TERMINATION



FRONT VIEW

TECHNICAL SPECIFICATION

FUNCTION

High Trip: Relay de-energise on rising I/V input.
OR
Low Trip: Relay de-energise on falling I/V input.

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

The Trip output is a pair of changeover contacts SPCO, rated at 250VAC, 3A, 100VA (resistive).

CONTROLS

Zero / Span: 15 turn potentiometers, used to set internal reference 0 – 2Vdc for 0 to 100% input.

Set point: 15 turn potentiometer to set Trip point within set input range.

TEST POINT

Trip set points can be monitored using the supplied test plug on any standard DVM. 0 – 2Vdc for 0 – 100%.

INDICATOR

Amber Led: power ON indicator
Red Led: Trip status indicator
LED Off / Relay Energised = Healthy Condition
LED ON / Relay De-energised = Trip Condition

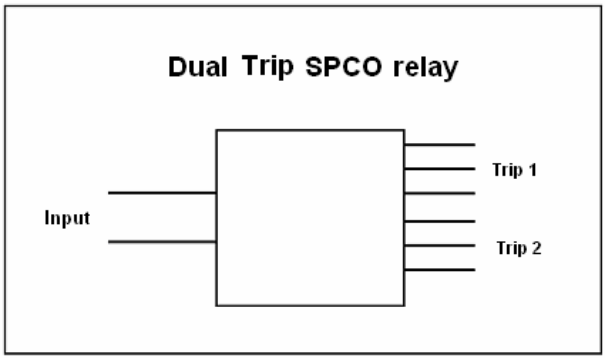
PERFORMANCE

Trip repeatability: < ±0.1%
Response time: Typically < 100mS
Trip settability: < ±0.1%
Hysteresis: 1%

PROTECTION

Isolation 1000V RMS*. Input/Contacts/Supply/
Internal Fuse.
Fail safe on loss of power (Relay de-energised)
Input over range typically at 300%.

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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 (Trip set point monitoring)
Non standard Power supply ranges available

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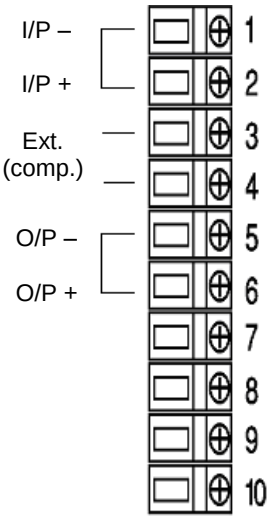
Issue 3 2011

AHM710-P-RIS Thermocouple Temperature Transmitter

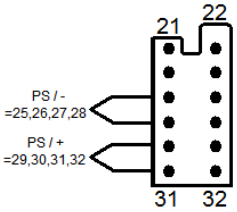
- Suitable for any BS4937 Thermocouple input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)
- RIS SC8326W/8327 Series Replacement Card.

FRONT VIEW

RIS Back Plate TERMINATION



Internal 24Vdc SUPPLY BUSS



TECHNICAL SPECIFICATION

FUNCTION

Temperature input signal Converter / Isolator

INPUT

Can be configured to accept mV signal from thermocouple. Type S, R, B, J, K, T, E, N and other special types also available on request.

Automatic Cold Junction compensation fitted as standard. (External compensation option available)

Typical input: 0 – 500 Deg℃ / TC type “K”

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

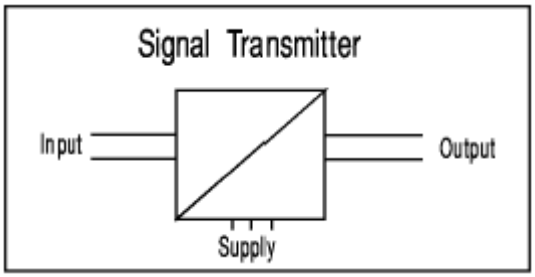
PERFORMANCE

Response time: Typically < 400mS
Linearity : ±0.1%

PROTECTION

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

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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

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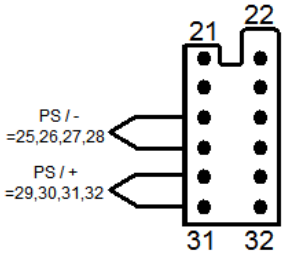
Issue 1 2012

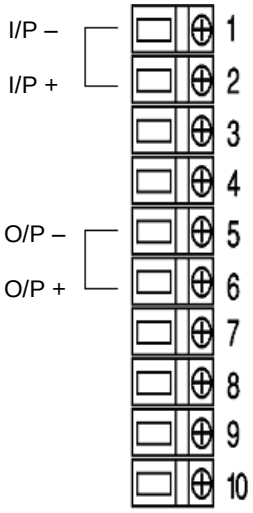
AHM713-P-RIS Millivolt Transmitter

- Suitable for any Millivolt input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)
- RIS SC8326 Series Replacement Card

Internal 24Vdc SUPPLY BUSS



RIS Back Plate TERMINATION



FRONT VIEW

TECHNICAL SPECIFICATION

FUNCTION

Millivolt input signal Converter / Isolator

INPUT

Any signal from 4 to 300 mV.

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

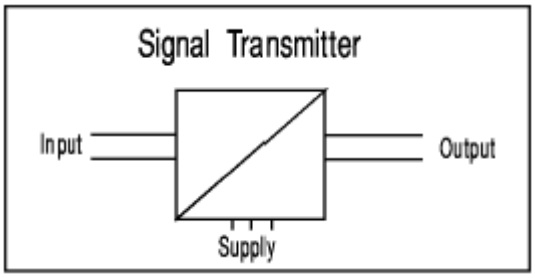
PERFORMANCE

Response time: Typically < 400mS
Linearity : ±0.1%

PROTECTION

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

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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

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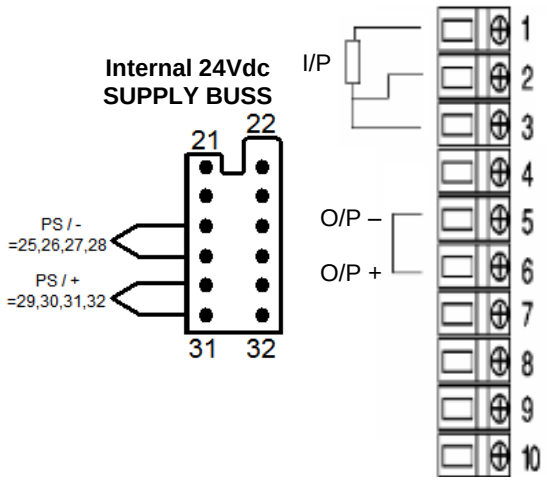
Issue 1 2012

AHM720-P-RIS RTD Transmitter

- Suitable for PT100/1000 RTD inputs
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)
- RIS SC8372/8374 Series Replacement Card

RIS Back Plate TERMINATION



FRONT VIEW

TECHNICAL SPECIFICATION

FUNCTION

RTD input signal Converter / Isolator

INPUT

Any 2, 3 or 4 wire resistance temperature sensor.
Lead resistance compensation as standard.

Typical input: 0 – 200 Deg°C / PT100 3 wire RTD

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

O/P Test Point on Front Fascia allows for monitoring of the output signal.
(supplied with Test Plugs on flying leads)

INDICATOR

Amber Led: power ON indicator

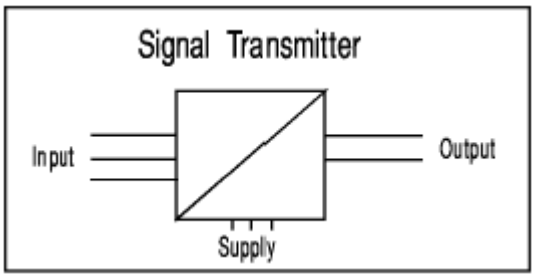
PERFORMANCE

Response time: Typically < 400mS
Linearity : ±0.1%

PROTECTION

Isolation 1000V RMS*. Input/Output/Supply
Internal Fuse.
Output saturation 125%

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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
P: Test point

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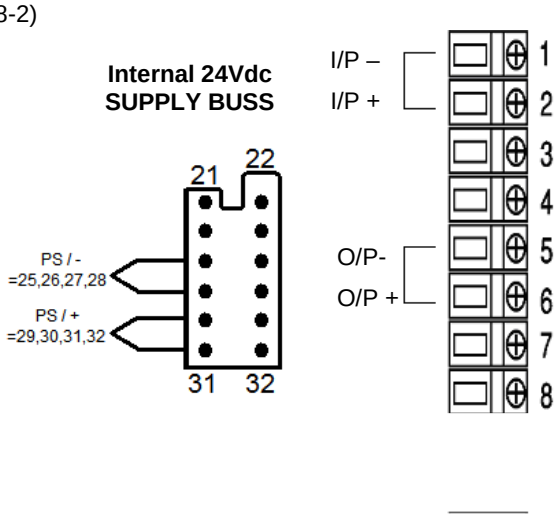
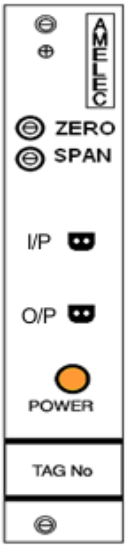
AHM730-P-RIS-8302 Process Transmitter

- Suitable for any DC Voltage or Miliamp input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)
- RIS SC8302 / 8302E / 8356 / 8358 Series Replacement Card

RIS Back Plate TERMINATION



FRONT VIEW



TECHNICAL SPECIFICATION

FUNCTION

Process input signal Converter / Isolator

INPUT

DC Current / Voltage can be specified in the range of:
Current up to 100mA max (Passive)
Voltage 0.4 to 10V max
Typical Input: 4 -20nA (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 Point on Front Fascia allows for monitoring of the intput signal& monitoring of the output signal.

(supplied with Test Plugs on flying leads)

INDICATOR

Amber Led: power ON indicator

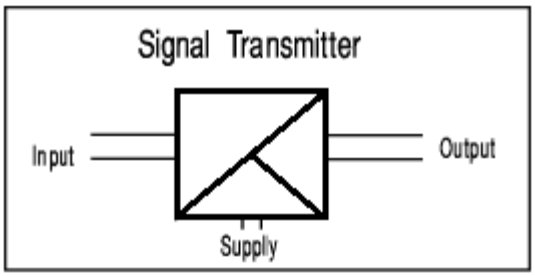
PERFORMANCE

Response time: Typically < 400mS
Linearity : ±0.1%
Input open circuit response - Downscale Drive as standard

PROTECTION

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

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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

OPTIONS

Suffix DI: Common LCD display for local monitoring
Suffix M: 24dc @ 21mA Input Loop Excitation for two-riee transmitter
Suffix X: Input O/C Upscale Drive

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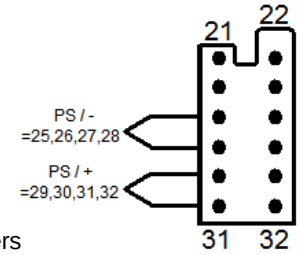
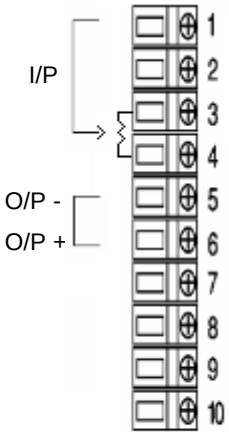
AHM740-P-RIS Slidewire Transmitter

- Suitable for any potentiometer input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)
- RIS SC8300R Series Replacement Card

Internal 24Vdc SUPPLY BUSS



RIS Back Plate TERMINATION



FRONT VIEW

TECHNICAL SPECIFICATION

FUNCTION

Resistance input signal Converter / Isolator

INPUT

From any wire wound potentiometer
Version available for plastic film potentiometers

Typical input: 5Kohms, 3 wire potentiometer.

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

O/P Test Point on Front Fascia allows for monitoring of the output signal.
(supplied with Test Plugs on flying leads)

INDICATOR

Amber Led: power ON indicator

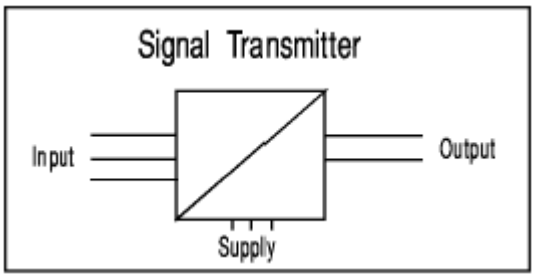
PERFORMANCE

Response time: Typically < 400mS
Linearity : ±0.1%

PROTECTION

Isolation 1000V RMS*. Input/Output/Supply
Internal Fuse.
Output saturation 125%

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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
P: Test point

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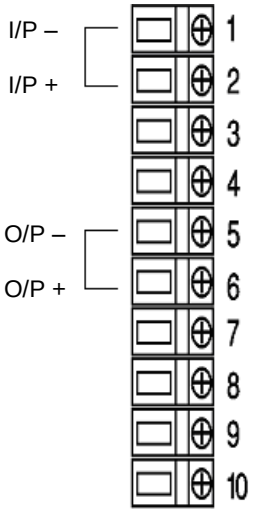
AHM780-P-RIS Frequency to Process Transmitter

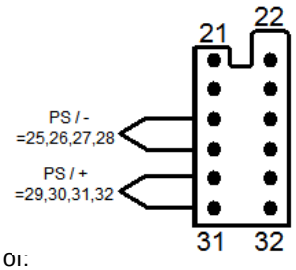
- Suitable for frequency inputs and process outputs
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)
- RIS SC8350 Series Replacement Card

FRONT VIEW

RIS Back Plate TERMINATION



Internal 24Vdc SUPPLY BUSS



TECHNICAL SPECIFICATION

FUNCTION
Frequency input to process output signal Converter/Isolator.

INPUT
Option of sine, square or sawtooth wave form. Minimum 25Hz, maximum 10KHz

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.

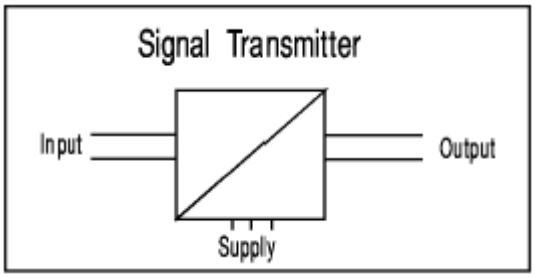
TEST POINTS
I/P & O/P Test Points on Front Fascia allows for simulation of the input & monitoring of the output signal
(supplied with Test Plugs on flying leads)

INDICATOR
Amber Led: power ON indicator

PERFORMANCE
Response time: Typically < 400mS
Linearity : ±0.1%

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

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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

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Issue 1 2012

AHP991-RIS-8006 High Current Power Supply

- Suitable for use with **Rochester (RIS)** 3U high 19” rack mounted instrumentation
- Supply voltage: 115V or 230Vac (+ / - 10%)

TECHNICAL SPECIFICATION

FUNCTION

Power Supply module for 3U high 19” RIS Rack Systems

OUTPUT

24Vdc @ up to 2.5 Amp

AUX SUPPLY RANGE SELECTABLE

115 Vac / 230 Vac

CONSUMPTION

Up to 75VA (@ 2.5A output)

PROTECTION

Supply – Output Isolation: 3750Vac
Supply – Earth Isolation: 1500Vac
Output – Earth Isolation: 500Vdc

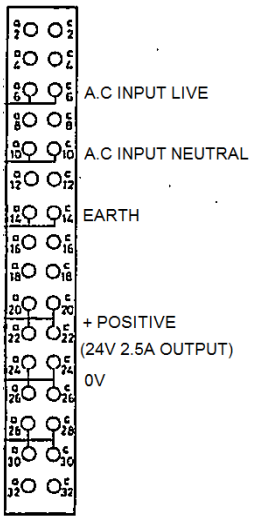
ENVIROMENTAL CONDITION

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

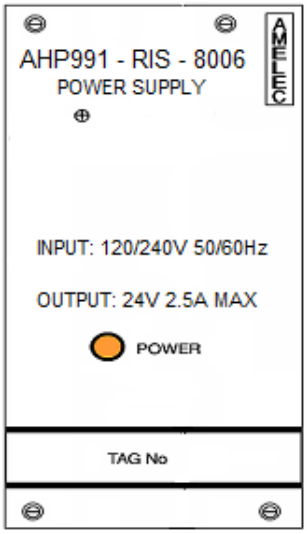
MOUNTING / DIMENSION

Card 3U high 16E wide
Mounting 19” rack / 84E wide (See rack GA for details)
Card weight < 500g

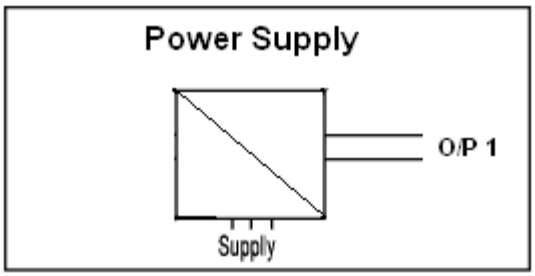
TERMINATION



FRONT VIEW



FUNCTION BLOCK DIAGRAM



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Issue 2.2014

AMELEC
SIGNAL CONDITIONING

Complete replacement rack retro fit:

- **AHT611** Thermocouple Trip Transmitter
- **AHT612** Thermocouple Trip Transmitter
- **AHT621** RTD Trip Amplifier
- **AHT622** RTD Trip Amplifier
- **AHT631** Process Trip Amplifier
- **AHT631V-4** Four Channel Single Trip Amplifier
- **AHT632** Process Trip Amplifier
- **AHT638V** Dual Channel Dual Trip Amplifier
- **AHM710** Thermocouple Temperature Transmitter
- **AHM713** Millivolt Transmitter
- **AHM720** RTD Transmitter
- **AHM730** Process Signal Transmitter
- **AHM730-4** Four Channel Signal Isolator
- **AHM740** Slidewire Transmitter
- **AHM780** Frequency to Process Transmitter
- **AHM990DI** Display Unit

Surface mounting rack also available as replacement for the RIS rack housing ET5200/SC5300

Please see AMELEC ADT & ADM DIN Rail/Surface Mounting modules for RIS ET1200/ ET7200 & SC1300/SC7300/SC7400 series replacement options.

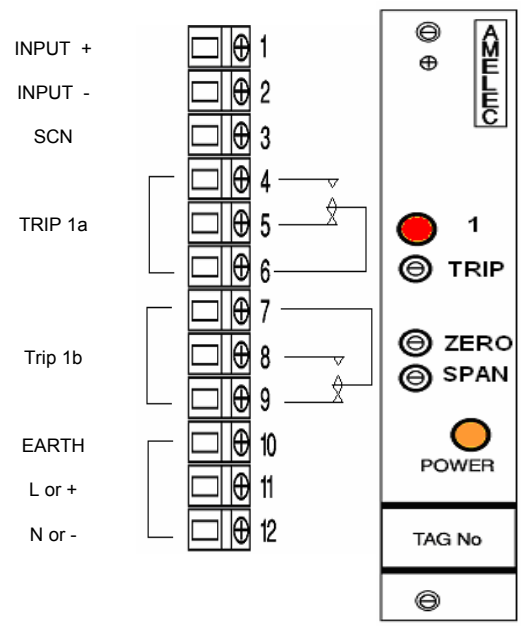
Tel: 01908 567003 E-Mail: sales@amelec-uk.com Website: www.amelec-uk.com Fax: 01908 566735

AMELEC INSTRUMENTS, Cochran Close, Presley Way, Crownhill, Milton Keynes, MK8 0AJ

AHT611 Thermocouple Trip Amplifier

- Suitable for any BS4937 Thermocouple input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)

TERMINATION



FRONT VIEW

TECHNICAL SPECIFICATION

FUNCTION

High Trip: Relay de-energise on rising temperature.
Low Trip: Relay de-energise on falling temperature.

INPUT

Can be configured to accept mV signal from thermocouple Type S, R, B, J, K, T, E, N and other special types also available on request.

Automatic Cold Junction compensation fitted as standard.

Typical input: 0 – 500 Deg ℃ / TC type “K”

OUTPUT

The Trip output is a pair of changeover contacts DPCO, rated at 250VAC, 2A, 100VA (resistive).

CONTROLS

Zero / Span: 15 turn potentiometers, only fitted when used with common display.

Set point: 15 turn potentiometer to set Trip point within set temperature range.

INDICATOR

Amber Led: power ON indicator
Red Led: Relay status indicator

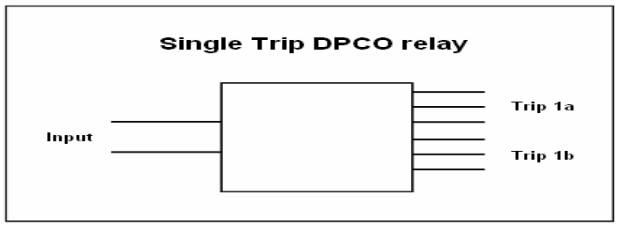
PERFORMANCE

Trip repeatability: < ±0.1%
Response time: Typically < 400mS
Trip settability: < ±0.1%

PROTECTION

Isolation 1000V RMS*. Input/Contacts/Supply/Earth
*500VDC if RFI option (K) is specified.
Internal Fuse.
Fail safe on loss of power
Input over range typically at 300%.

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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 (Trip set point monitoring)
K: RFI protection to IEC801-3
Non standard Power supply ranges available

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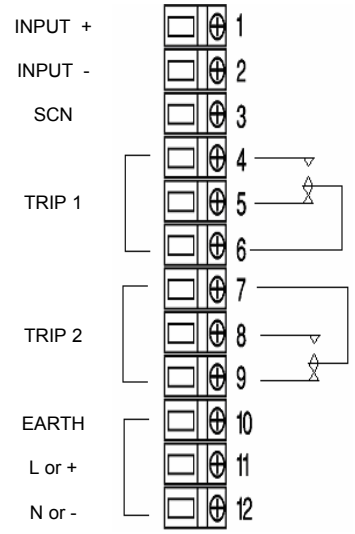
Issue 1 2009

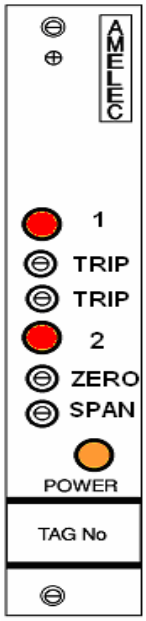
AHT612 Thermocouple Trip Amplifier

- Suitable for any BS4937 Thermocouple input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)

TERMINATION



FRONT VIEW



TECHNICAL SPECIFICATION

FUNCTION

High Trip: Relay de-energise on rising temperature.
Low Trip: Relay de-energise on falling temperature.

INPUT

Can be configured to accept mV signal from thermocouple Type S, R, B, J, K, T, E, N and other special types also available on request.

Automatic Cold Junction compensation fitted as standard.

Typical input: 0 – 500 Deg ℃ / TC type “K”

OUTPUT

The Trip output is a pair of changeover contacts SPCO per set point, rated at 250VAC, 2A, 100VA (resistive).

CONTROLS

Zero / Span: 15 turn potentiometers, only fitted when used with common display.

Set point: 15 turn potentiometer to set Trip point within set input range.

INDICATOR

Amber Led: power ON indicator
Red Led: Relay status indicators

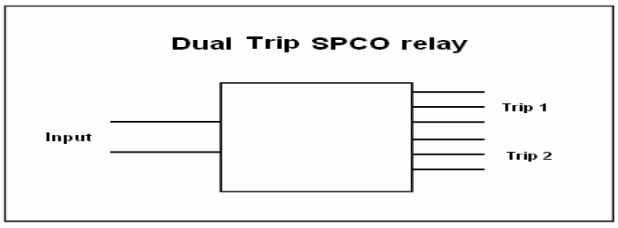
PERFORMANCE

Trip repeatability: < ±0.1%
Response time: Typically < 400mS
Trip settability: < ±0.1%

PROTECTION

Isolation 1000V RMS*. Input/Contacts/Supply/Earth
*500VDC if RFI option (K) is specified.
Internal Fuse.
Fail safe on loss of power
Input over range typically at 300%.

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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 (Trip set point monitoring)
K: RFI protection to IEC801-3
Non standard Power supply ranges available

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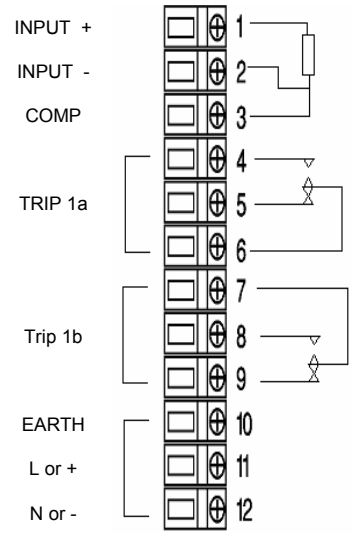
Issue 1 2009

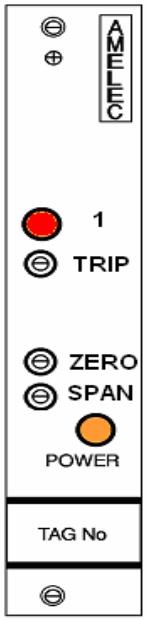
AHT621 RTD Trip Amplifier

- Suitable for 2, 3 or 4 wire resistance temperature sensor
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)

TERMINATION



FRONT VIEW



TECHNICAL SPECIFICATION

FUNCTION

High Trip: Relay de-energise on rising temperature.
Low Trip: Relay de-energise on falling temperature.

INPUT

Any 2, 3 wire resistance temperature sensor.
Lead resistance compensation as standard.

Typical input: 0 – 200 Deg℃ / PT100 3 wire RTD

OUTPUT

The Trip output is a pair of changeover contacts DPCO, rated at 250VAC, 2A, 100VA (resistive).

CONTROLS

Zero / Span: 15 turn potentiometers, only fitted when used with common display.

Set point: 15 turn potentiometer to set Trip point within set input range.

INDICATOR

Amber Led: power ON indicator
Red Led: Relay status indicator

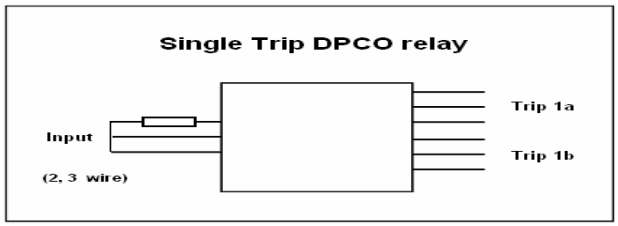
PERFORMANCE

Trip repeatability: < ±0.1%
Response time: Typically < 400mS
Trip settability: < ±0.1%

PROTECTION

Isolation 1000V RMS*. Input/Contacts/Supply/Earth
*500VDC if RFI option (K) is specified.
Internal Fuse.
Fail safe on loss of power
Input over range typically at 300%.

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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 (Trip set point monitoring)
K: RFI protection to IEC801-3
Non standard Power supply ranges available

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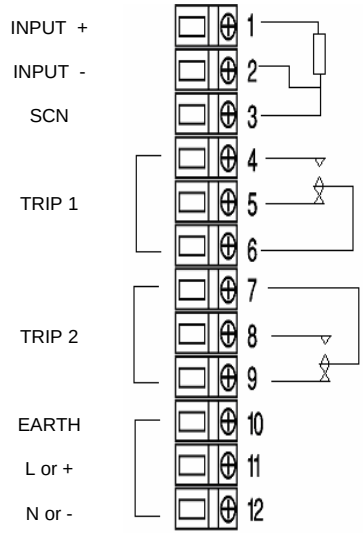
Issue 1 2009

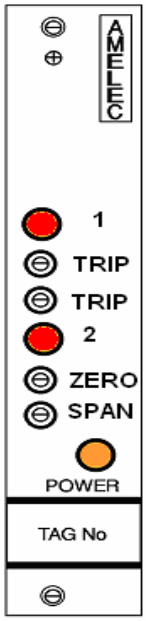
AHT622 RTD Trip Amplifier

- Suitable for 2, 3 or 4 wire resistance temperature sensor
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)

TERMINATION



FRONT VIEW



TECHNICAL SPECIFICATION

FUNCTION

High Trip: Relay de-energise on rising temperature.
Low Trip: Relay de-energise on falling temperature.

INPUT

Any 2, 3 resistance temperature sensor.
Lead resistance compensation as standard.

OUTPUT

The Trip output is a pair of changeover contacts SPCO per set point, rated at 250VAC, 2A, 100VA (resistive).

CONTROLS

Zero / Span: 15 turn potentiometers, only fitted when used with common display.

Set point: 15 turn potentiometer to set Trip point within set input range.
.

INDICATOR

Amber Led: power ON indicator
Red Led: Relay status indicator

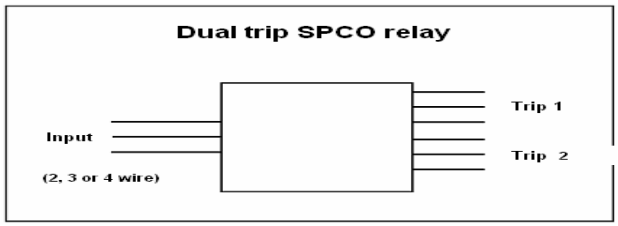
PERFORMANCE

Trip repeatability: < ±0.1%
Response time: Typically < 400mS
Trip settability: < ±0.1%

PROTECTION

Isolation 1000V RMS*. Input/Contacts/Supply/Earth
*500VDC if RFI option (K) is specified.
Internal Fuse.
Fail safe on loss of power
Input over range typically at 300%.

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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 (Trip set point monitoring)
K: RFI protection to IEC801-3
Non standard Power supply ranges available

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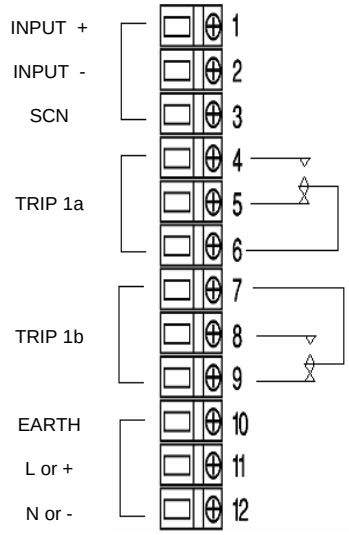
Issue 1 2009

AHT631 Process Trip Amplifier

- Suitable for any process input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)

TERMINATION



FRONT VIEW

TECHNICAL SPECIFICATION

FUNCTION

High Trip: Relay de-energise on rising input.
Low Trip: Relay de-energise on falling input.

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

The Trip output is a pair of changeover contacts DPCO, rated at 250VAC, 2A, 100VA (resistive).

CONTROLS

Zero / Span: 15 turn potentiometers, only fitted when used with common display.

Set point: 15 turn potentiometer to set Trip point within set Input range.

INDICATOR

Amber Led: power ON indicator
Red Led: Relay status indicator

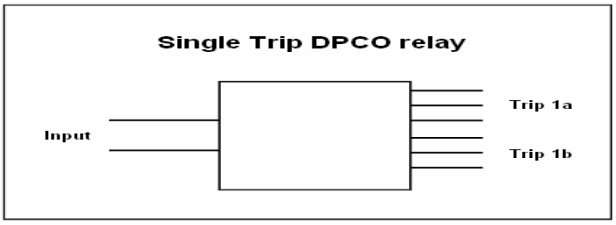
PERFORMANCE

Trip repeatability: < ±0.1%
Response time: Typically < 400mS
Trip settability: < ±0.1%

PROTECTION

Isolation 1000V RMS*. Input/Contacts/Supply/Earth
*500VDC if RFI option (K) is specified.
Internal Fuse.
Fail safe on loss of power
Input over range typically at 300%.

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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 (Trip set point monitoring)
K: RFI protection to IEC801-3
Non standard Power supply ranges available

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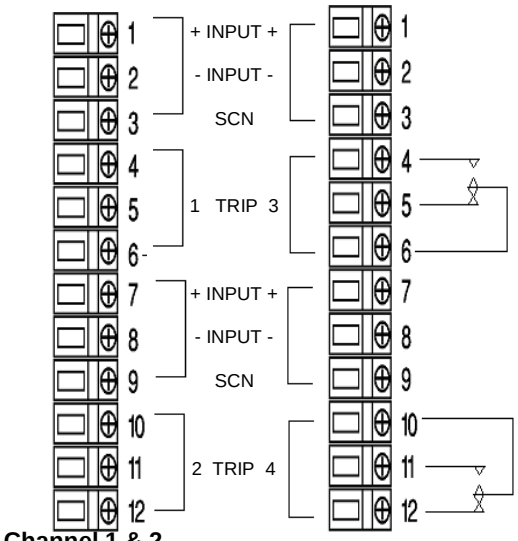
Issue 2 2009

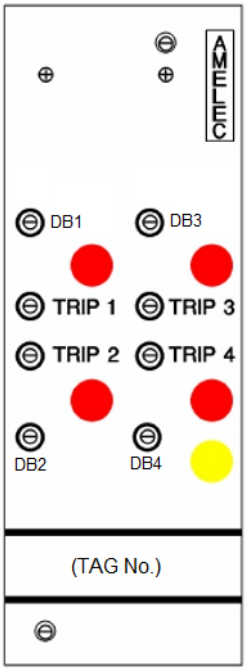
AHT631V-4 - Four Channel Single Trip Amplifier

- Suitable for any process input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)

TERMINATION



FRONT VIEW



TECHNICAL SPECIFICATION

FUNCTION

High Trip: Relay de-energise on rising input.
Low Trip: Relay de-energise on falling input.

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

The Trip output is a set of changeover contacts SPCO, rated at 250VAC, 3A, 100VA (resistive).

CONTROLS

Zero / Span: 15 turn potentiometers, only fitted when used with common display.

Set point: 15 turn potentiometer to set each Trip point within calibrated input range.

DB1/2/3/4: 15 turn potentiometers to set Trip hysteresis within 1 to 20% of input Span.

INDICATOR

Amber Led: power ON indicator
Red Led: Relay status indicator

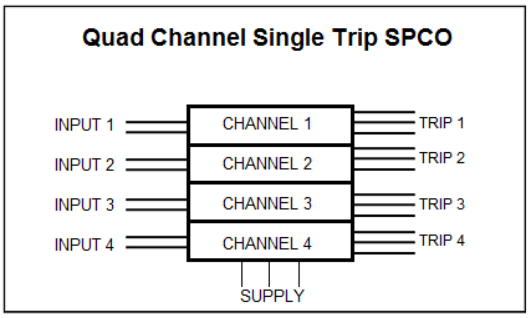
PERFORMANCE

Trip repeatability: < ±0.1%
Response time: Typically < 100mS
Trip settability: < ±0.1%
Input O/C response: Downscale drive
(Upscale drive option available)

PROTECTION

Isolation 1000V RMS*. Input/Contacts/Supply/Earth
*500VDC if RFI option (K) is specified.
Internal Fuse.
Fail safe on loss of power
Input over range typically at 300%.

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 8E wide
Mounting 19" rack / 84E wide (See rack GA for details)
Card weight < 300g

ADD ON / OPTIONS

X: Input O/C response Upscale drive
DI: Common LCD display for local monitoring
J : Input injection jack socket
P: Test point (Trip set point monitoring)
K: RFI protection to IEC61000-4-3

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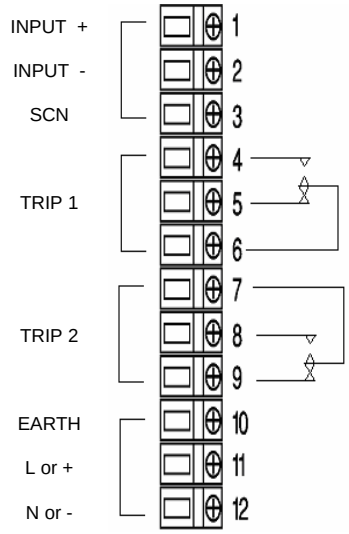
Issue 1.2014

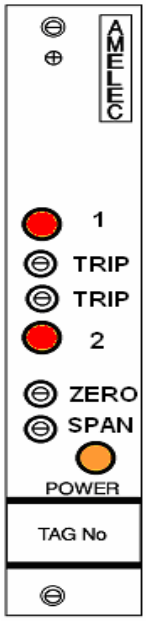
AHT632 Process Trip Amplifier

- Suitable for any process input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)

TERMINATION



FRONT VIEW



TECHNICAL SPECIFICATION

FUNCTION

High Trip: Relay de-energise on rising input.
Low Trip: Relay de-energise on falling input.

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

The Trip output is a pair of changeover contacts SPCO per set point, rated at 250VAC, 2A, 100VA (resistive).

CONTROLS

Zero / Span: 15 turn potentiometers, only fitted when used with common display.

Set point: 15 turn potentiometer to set Trip point within set input range.

INDICATOR

Amber Led: power ON indicator
Red Led: Relay status indicators

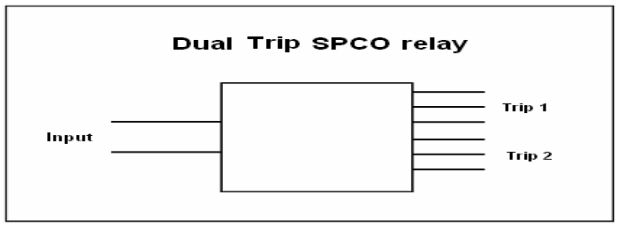
PERFORMANCE

Trip repeatability: < ±0.1%
Response time: Typically < 400mS
Trip settability: < ±0.1%

PROTECTION

Isolation 1000V RMS*. Input/Contacts/Supply/Earth
*500VDC if RFI option (K) is specified.
Internal Fuse.
Fail safe on loss of power
Input over range typically at 300%.

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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 (Trip set point monitoring)
K: RFI protection to IEC801-3
Non standard Power supply ranges available

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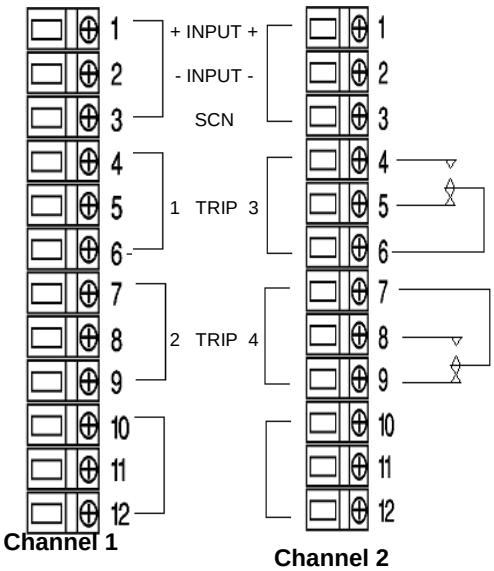
Issue 1 2009

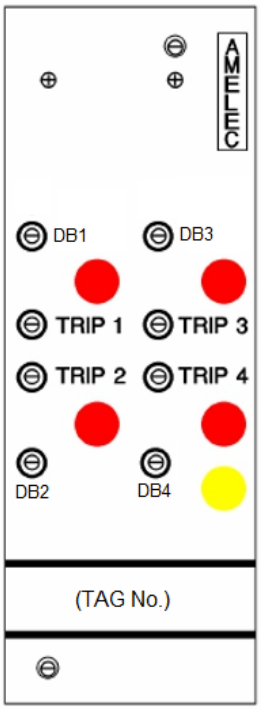
AHT638V - Dual Channel Dual Trip Amplifier

- Suitable for any process input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)

TERMINATION



FRONT VIEW



TECHNICAL SPECIFICATION

FUNCTION

High Trip: Relay de-energise on rising input.
Low Trip: Relay de-energise on falling input.

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

The Trip output is a pair of changeover contacts SPCO, rated at 250VAC, 3A, 100VA (resistive).

CONTROLS

Zero / Span: 15 turn potentiometers, only fitted when used with common display.

Set point: 15 turn potentiometer to set each Trip point within cal

DB1/2/3/4: 15 turn potentiometers to set Trip hysteresis within 1

INDICATOR

Amber Led: power ON indicator
Red Led: Relay status indicator

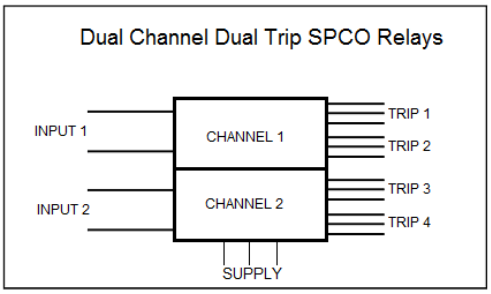
PERFORMANCE

Trip repeatability: < ±0.1%
Response time: Typically < 100mS
Trip settability: < ±0.1%
Input O/C response: Downscale drive
(Upscale drive option available)

PROTECTION

Isolation 1000V RMS*. Input/Contacts/Supply/Earth
*500VDC if RFI option (K) is specified.
Internal Fuse.
Fail safe on loss of power
Input over range typically at 300%.

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 8E wide
Mounting 19” rack / 84E wide (See rack GA for details)
Card weight < 300g

ADD ON / OPTIONS

X: Input O/C response Upscale drive
DI: Common LCD display for local monitoring
J : Input injection jack socket
P: Test point (Trip set point monitoring)
K: RFI protection to IEC801-3
Non standard Power supply ranges available

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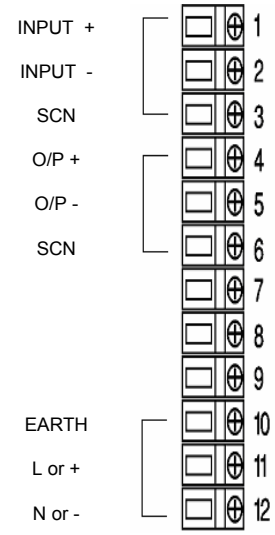
Issue 1.2014

AHM 710 Thermocouple Temperature Transmitter

- Suitable for any BS4937 Thermocouple input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)

TERMINATION



FRONT VIEW

TECHNICAL SPECIFICATION

FUNCTION

Temperature input signal Converter / Isolator

INPUT

Can be configured to accept mV signal from thermocouple Type S, R, B, J, K, T, E, N and other special types also available on request.

Automatic Cold Junction compensation fitted as standard.

Typical input: 0 – 500 Deg ℃ / TC type “K”

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.

INDICATOR

Amber Led: power ON indicator

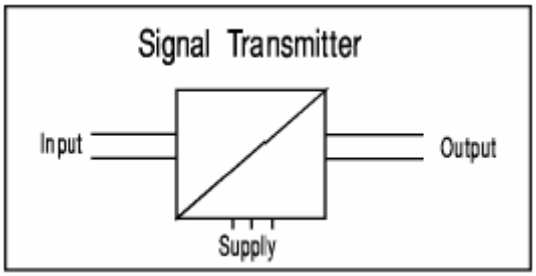
PERFORMANCE

Response time: Typically < 400mS
Linearity : ±0.1%

PROTECTION

Isolation 1000V RMS*. Input/Output/Supply
*500VDC if RFI option (K) is specified.
Internal Fuse.
Fail safe on loss of power
Input over range typically at 300%.
Output saturation 125%.

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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 (Trip set point monitoring)
K: RFI protection to IEC801-3
Non standard Power supply ranges available

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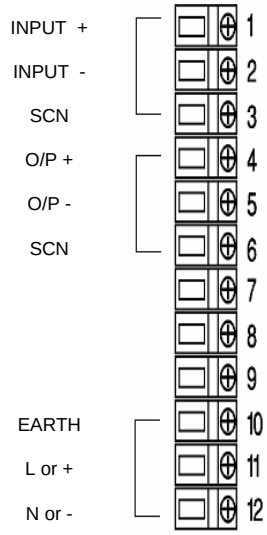
Issue 1 2009

AHM 713 Millivolt Transmitter

- Suitable for any Millivolt input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)

TERMINATION



FRONT VIEW

TECHNICAL SPECIFICATION

FUNCTION

Millivolt input signal Converter / Isolator

INPUT

Any signal from 4 to 300 mV.

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.

INDICATOR

Amber Led: power ON indicator

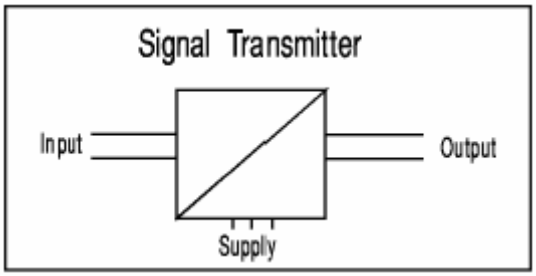
PERFORMANCE

Response time: Typically < 400mS
Linearity : ±0.1%

PROTECTION

Isolation 1000V RMS*. Input/Output/Supply
*500VDC if RFI option (K) is specified.
Internal Fuse.
Fail safe on loss of power
Input over range typically at 300%.
Output saturation 125%

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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 (Trip set point monitoring)
K: RFI protection to IEC801-3
Non standard Power supply ranges available

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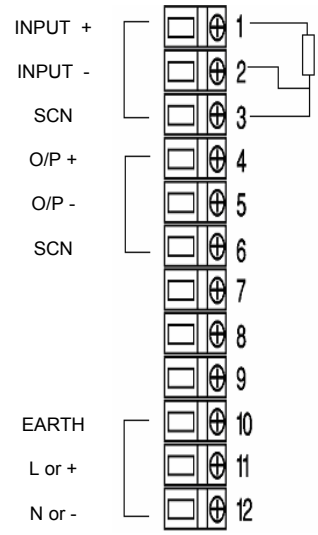
Issue 1 2009

AHM 720 RTD Transmitter

- Suitable for 2, 3 or 4 wire resistance temperature sensor
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)

TERMINATION



FRONT VIEW

TECHNICAL SPECIFICATION

FUNCTION

Temperature input signal Converter / Isolator

INPUT

Any 2, 3 wire resistance temperature sensor.
Lead resistance compensation as standard.

Typical input: 0 – 200 Deg℃ / PT100 3 wire RTD

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.

INDICATOR

Amber Led: power ON indicator

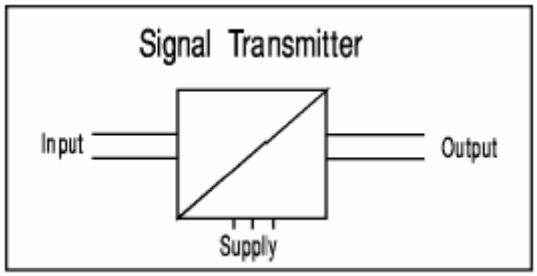
PERFORMANCE

Response time: Typically < 400mS
Linearity : ±0.1%

PROTECTION

Isolation 1000V RMS*. Input/Output/Supply
*500VDC if RFI option (K) is specified.
Internal Fuse.
Fail safe on loss of power
Input over range typically at 300%.
Output Saturation 125%

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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 (Trip set point monitoring)
K: RFI protection to IEC801-3
Non standard Power supply ranges available

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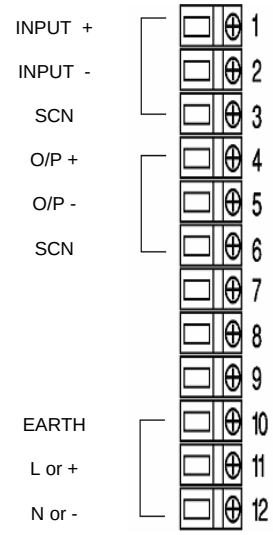
Issue 1 2009

AHM 730 Process Signal Transmitter

- Suitable for combinations of Process inputs and outputs
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)

TERMINATION



FRONT VIEW

TECHNICAL SPECIFICATION

FUNCTION

Process V / I input signal Converter / 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.

INDICATOR

Amber Led: power ON indicator

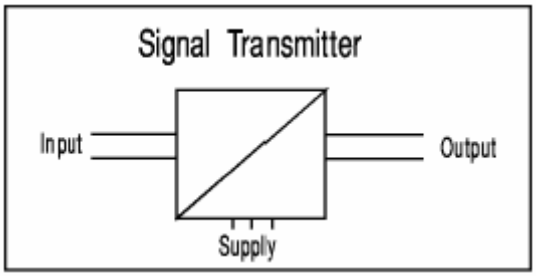
PERFORMANCE

Response time: Typically < 400mS
Linearity : ±0.1%

PROTECTION

Isolation 1000V RMS*. Input/Output/Supply
*500VDC if RFI option (K) is specified.
Internal Fuse.
Fail safe on loss of power
Input over range typically at 300%.
Output Saturation 125%

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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 (Trip set point monitoring)
K: RFI protection to IEC801-3
Non standard Power supply ranges available

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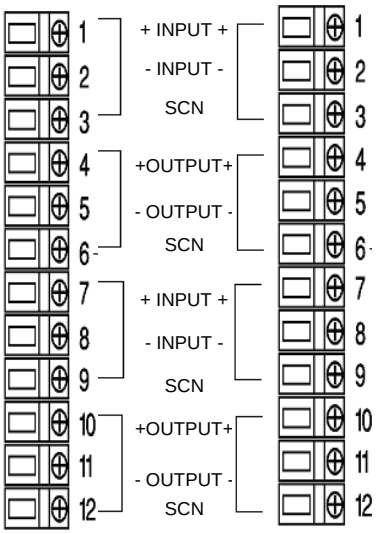
Issue 1 2009

AHM730-4 - Four Channel Signal Isolator

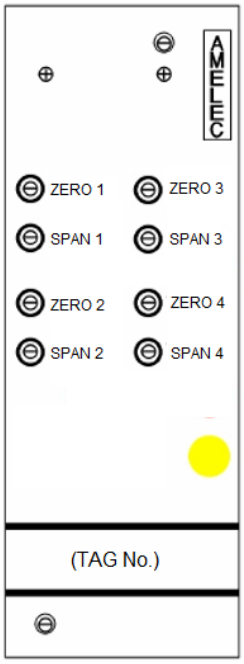
- Suitable for any process input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)

TERMINATION



Channel 1 & 2 **Channel 3 &4**

FRONT VIEW



TECHNICAL SPECIFICATION PER CHANNEL

FUNCTION

Process V / I input signal Converter / 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.

INDICATOR

Amber Led: power ON indicator

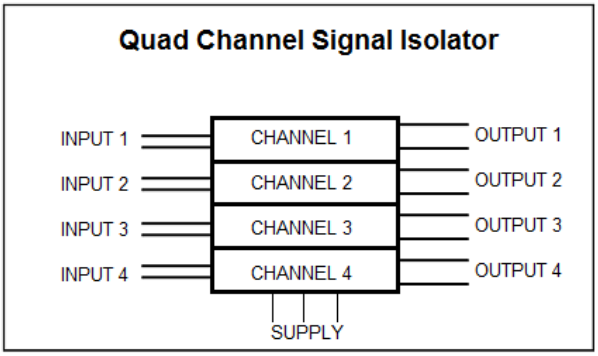
PERFORMANCE

Response time: Typically < 100mS
Linearity : ±0.1%

PROTECTION

Isolation 1000V RMS*. Input/Output/Supply
*500VDC if RFI option (K) is specified.
Internal Fuse.
Input over range typically at 300%.
Output Saturation 125%

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 8E wide
Mounting 19" rack / 84E wide (See rack GA for details)
Card weight < 300g

ADD ON / OPTIONS
J : Input injection jack socket
P: Test point (Trip set point monitoring)
K: RFI protection to IEC801-3
Non standard Power supply ranges available

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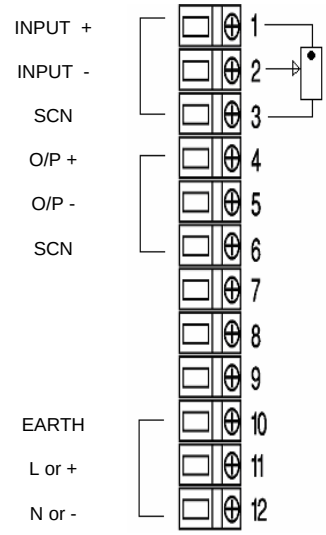
Issue 1.2014

AHM 740 Slidewire Transmitter

- Suitable for any potentiometer input
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)

TERMINATION



FRONT VIEW

TECHNICAL SPECIFICATION

FUNCTION

Resistance to Process signal Converter / Isolator

INPUT

From any wire wound potentiometer
Version available for plastic film potentiometers

Typical input: 5Kohms, 3 wire potentiometer.

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.

INDICATOR

Amber Led: power ON indicator

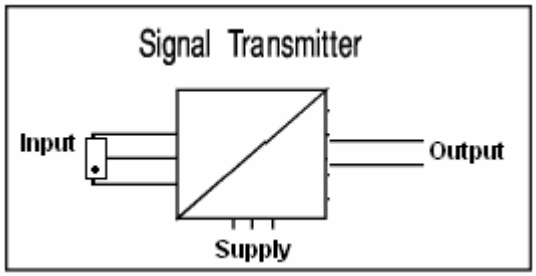
PERFORMANCE

Response time: Typically < 400mS
Linearity : ±0.1%

PROTECTION

Isolation 1000V RMS*. Input/Output/Supply
*500VDC if RFI option (K) is specified.
Internal Fuse.
Fail safe on loss of power
Input over range typically at 300%.
Output Saturation 125%

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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 (Trip set point monitoring)
K: RFI protection to IEC801-3
Non standard Power supply ranges available

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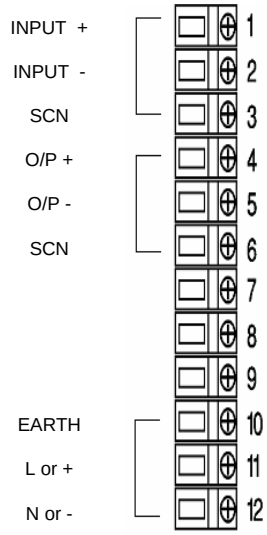
Issue 1 2009

AHM 780 Frequency to Process Transmitter

- Suitable for frequency inputs and process outputs
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)

TERMINATION



FRONT VIEW

TECHNICAL SPECIFICATION

FUNCTION

Frequency input to process output signal converter/isolator

INPUT

Option of sine, square or sawtooth wave form.
Minimum 25Hz, maximum 10KHz

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.

INDICATOR

Amber Led: power ON indicator

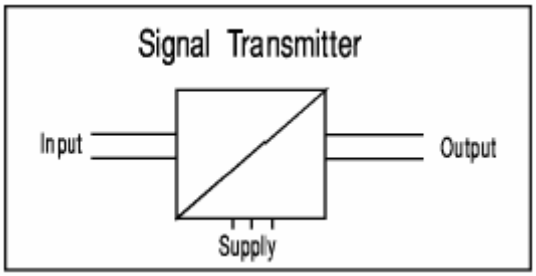
PERFORMANCE

Response time: Typically < 400mS
Linearity : ±0.1%

PROTECTION

Isolation 1000V RMS*. Input/Output/Supply
*500VDC if RFI option (K) is specified.
Internal Fuse.
Fail safe on loss of power
Input over range typically at 300%.
Output Saturation 125%

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL 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 (Trip set point monitoring)
K: RFI protection to IEC801-3
Non standard Power supply ranges available

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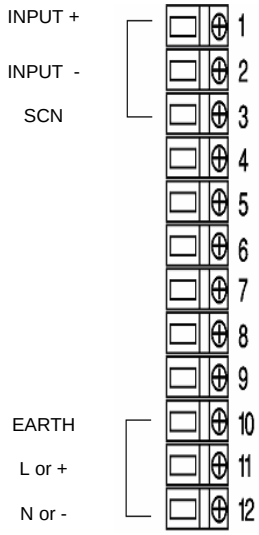
Issue 1 2009

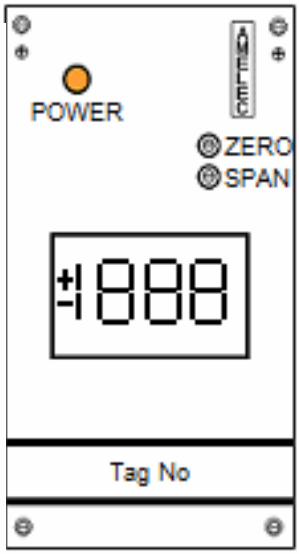
AHM990DI Display Unit

- Suitable for any process input: typically 0–2V from read line
- Supply voltage 21 to 30Vdc
- Amelec standard 10 year guarantee
- Suitable for SIL Level 1, 2, & 3 (IEC 61508-2)

TERMINATION



FRONT VIEW



TECHNICAL SPECIFICATION

FUNCTION

Operating the push buttons (read or trip) on any card within The rack displays the relevant data on this common display module.

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)

For use as common display in our 19" Rack, the Input signal is from the internal read line and is typically 0-2V .

OUTPUT

Three and a half digit liquid crystal display,
Factory settable in the range of: -1999 to +1999,
Typically scaled 0-100.0%

CONTROLS

Zero / Span: 15 turn potentiometer to calibrate Display range.

INDICATOR

Amber Led: power ON indicator

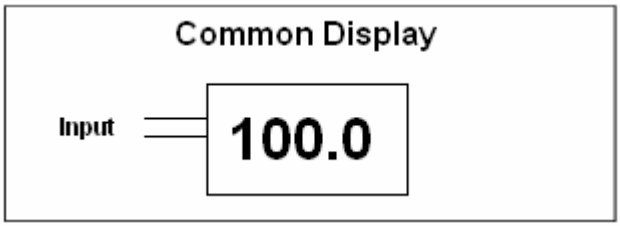
PERFORMANCE

Linearity: < ±0.1%
Response time: Typically < 400mS
Accuracy: < ±0.1%

PROTECTION

Isolation 1000V RMS*. Input/Supply/Earth
*500VDC if RFI option (K) is specified.
Internal Fuse.
Input O/C fail downscale or upscale on request.
Input over range typically at 300%.

FUNCTION BLOCK DIAGRAM



ENVIROMENTAL CONDITION

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

MOUNTING / DIMENSION

To the extreme right of the rack
Card 3U high 12HP wide
Mounting 19" rack / 84E wide (See rack GA for details)
Card weight < 200g

ADD ON / OPTIONS

J : Input injection jack socket
P: Test point
K: RFI protection to IEC801-3
Non standard Power supply ranges available

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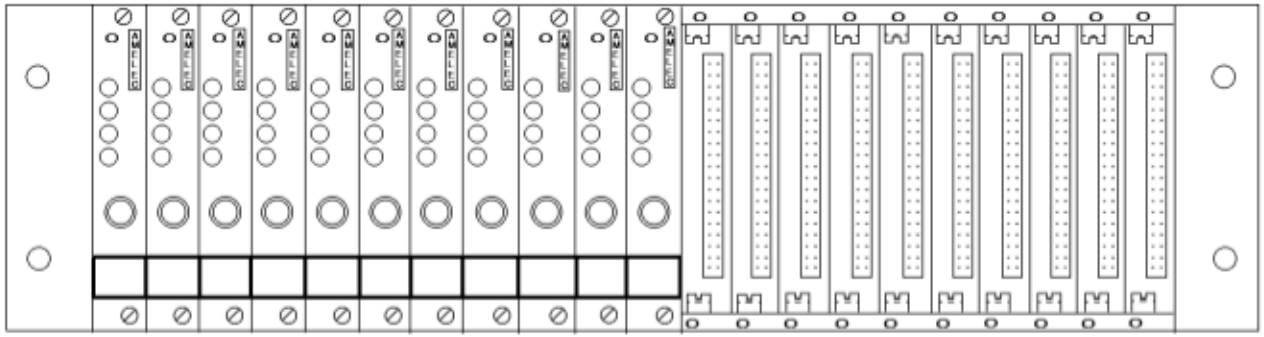


FRONT VIEW

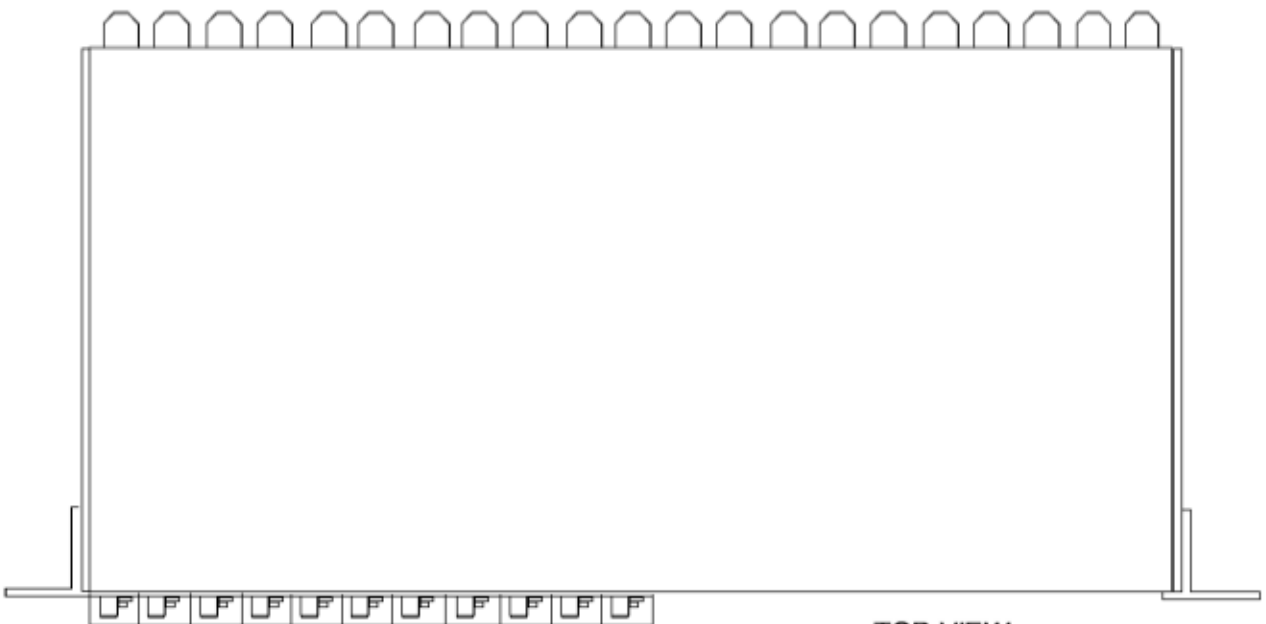
END VIEW

483mm

440mm

180 (290) mm

192 (302) mm



TOP VIEW

NOTES:

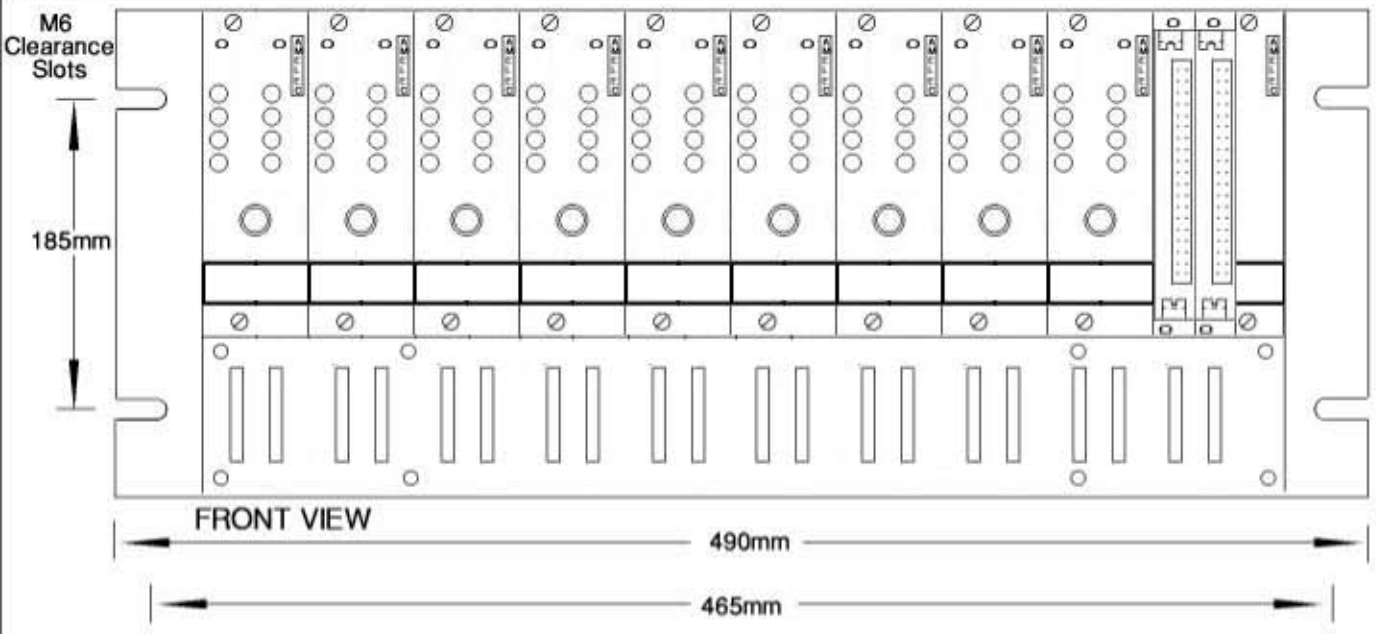
1) The rack is shown with eleven units fitted and ten unused positions.

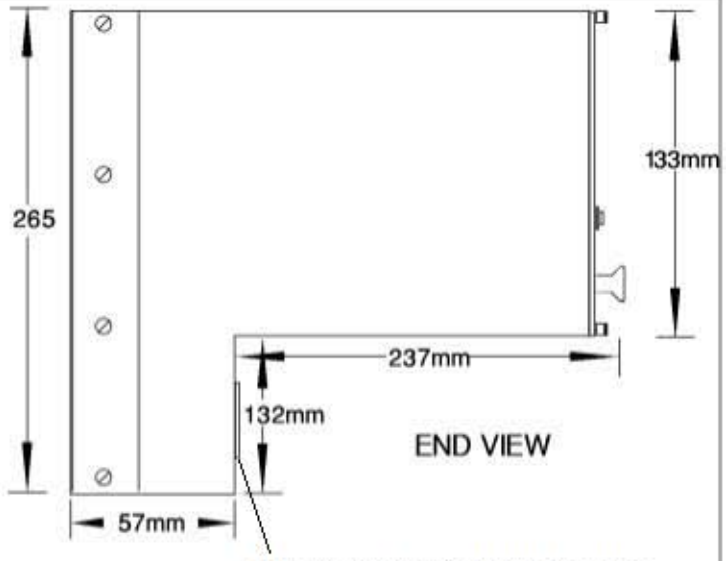
2) Connector assemblies shown in the unused positions are normally only fittted when that position is expected to be occupied. Unused positions slways have a blanking plate fitted to maintain RFI integrity.

3) 180mm should be left at the front of the rack to allow for unit withdrawal.

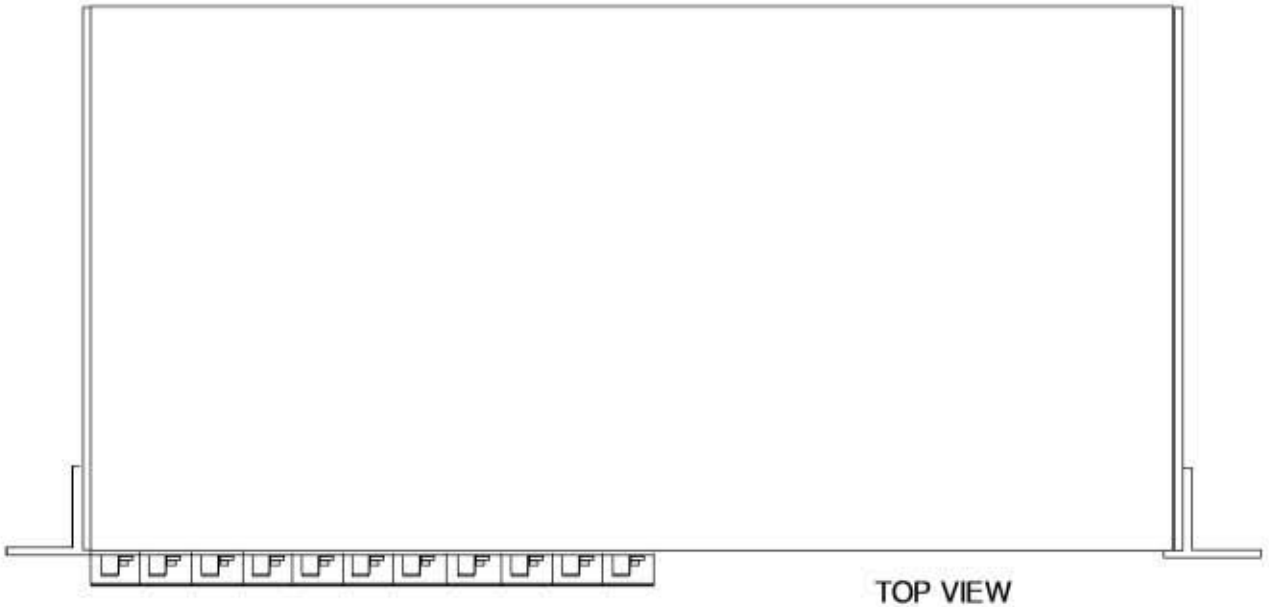
4) Dimensions in brackets refer to the increase in length for a type 'K' enclosure.

DIMENSIONS in mm TOLERANCES ± Nominal 0.4 mm Decimal 0.15 mm Unless shown otherwise	Drawn: SLK Checked: Approved: Date: 5/7/00	REVISION Redrawn 7/2000	TITLE: Views of enclosure showing major dimensions. Used on Assembly AH series product	SCALE N.T.S.	AMELEC INSTRUMENTS Cochran Close, Presley Way Crownhill, Milton Keynes, MK8 0AJ DRAWING NO. AH enclosure Sht 1 of 1





Note: Customer termination blocks located beneath each instrument.



NOTES:

1) The rack is shown with nine units fitted and one unused position
2) Connector assemblies shown in the unused positions are normally only fittted when that position is expected to be occupied. Unused positions slways have a blanking plate fitted to maintain RFI integrity.
3) 180mm should be left at the front of the rack to allow for unit withdrawal.

DIMENSIONS in mm TOLERANCES ± Nominal 0.4 mm Decimal 0.15 mm Unless shown otherwise	Drawn: SG Checked: DM Approved: Date: 08/05/2014		Title: AH Surface Enclosure - RIS 5300-11 Replacement Views of enclosure showing major dimensions.	AMELEC INSTRUMENTS Cochran Close, Prosley Way Crownhill, Milton Keynes, MK8 0AJ	
			Used on Assembly AH-RIS Product Series	SCALE N.T.S.	DRAWING NO. AH-RIS Surface Rack Sht 1 of 1