

BrainChild

PR 2.0

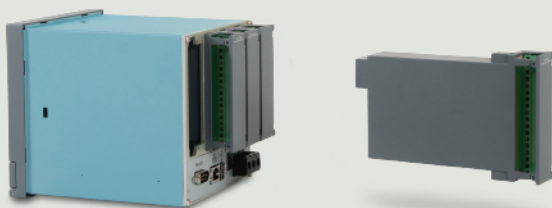
Paperless Recorder

- ✓ More Accurate
- ✓ More Comprehensive
- ✓ More Integrated



- **Support for AI306 :** AMS 2750H compliance enables higher PR accuracy and facilitates precise thermal process control.
- **Energy Management System (EMS) Power Management Feature :** Records and displays real-time power status on the user interface (UI).

High-Accuracy Analog Input I/O



AI306-Analog Input Module

To deliver optimal data accuracy, AI306 is bundled with the PR V2.0 and is not offered as a standalone product.

*Support PR10 , PR20 only.

Energy Management SyStem, EMS

View data such as power consumption, phase, power metrics, air quality, and energy performance indicators.

The transmitter features a wide AC voltage input range of 50–600V, making it compatible with various power systems. It supports flexible CT options from 0–5A to 0–2000A to meet diverse monitoring requirements.

Please contact our sales team for more information.



A transmitter is needed

AMS2750H Analog Input Module

- Channels:6 channels
- Resolution: 24 bits
- Sampling Rate: 100 milliseconds
- Temperature Effect: mA Input: $\pm 30\text{PPM}$
- All inputs except mA: $\pm 0.1\mu\text{V} \pm 15\text{PPM}$
- Sensor Lead Resistance Effect:
 - T/C: 0.32PPM/ohm
 - 3-wire RTD: 2.6 °C/of resistance difference of two leads
 - 2-wire RTD: 2.6 °C/of resistance sum of two leads
- Burn-out Current: 10uA
- Common Mode Rejection Ratio (CMRR): 120dB
- Normal Mode Rejection Ratio (NMRR): 55dB
- Isolation Breakdown Voltage between channels: 1500VAC min
- Sensor Break Detection:
 - Sensor opened for TC, RTD and mV inputs
 - Below 1 mA for 4-20mA input
 - Below 0.25V for 1-5V inputs
 - Not available for other inputs
- Sensor Break Responding Time:
 - Within 1 seconds for TC, RTD and mV inputs
 - 0.1 second for 4-20 mA and 1-5V inputs

Input Type	Range	Accuracy at 25 °C
J	-120 ~ 1000°C (-184 ~ 1832°F)	$\pm 0.6^{\circ}\text{C}$
K	-200 ~ 1370°C (-328 ~ 2498°F)	$\pm 0.6^{\circ}\text{C}$
T	-250 ~ 400°C (-418 ~ 752°F)	$\pm 0.6^{\circ}\text{C}$
E	-100 ~ 900°C (-148 ~ 1652°F)	$\pm 0.6^{\circ}\text{C}$
B	0 ~ 1820°C (32 ~ 3308°F)	$\pm 0.6^{\circ}\text{C}$ (200 ~ 1820°C)
R	0 ~ 1768°C (32 ~ 3214°F)	$\pm 0.6^{\circ}\text{C}$
S	0 ~ 1768°C (32 ~ 3214°F)	$\pm 0.6^{\circ}\text{C}$
N	-250 ~ 1300°C (-418 ~ 2372°F)	$\pm 0.6^{\circ}\text{C}$
L	-200 ~ 900°C (-328 ~ 1652°F)	$\pm 0.6^{\circ}\text{C}$
U	-200 ~ 600°C (-328 ~ 1112°F)	$\pm 0.6^{\circ}\text{C}$
P	0 ~ 1395°C (32~2543°F)	$\pm 0.6^{\circ}\text{C}$
W5	0 ~ 2315°C (32 ~ 4199°F)	$\pm 0.6^{\circ}\text{C}$
W3	0 ~ 2315°C (32 ~ 4199°F)	$\pm 0.6^{\circ}\text{C}$
LR	-200 ~ 800°C (-328 ~ 1472°F)	$\pm 0.6^{\circ}\text{C}$
A1	0 ~ 2500°C (-32 ~ 4532°F)	$\pm 0.6^{\circ}\text{C}$
A2	0 ~ 1800°C (-32 ~ 3272°F)	$\pm 0.6^{\circ}\text{C}$
A3	0 ~ 1800°C (-32 ~ 3272°F)	$\pm 0.6^{\circ}\text{C}$
M	-200 ~ 100°C (-328 ~ 212°F)	$\pm 0.6^{\circ}\text{C}$
PT50($\alpha = 0.00385$)	-200 ~ 850°C (-328 ~ 1562°F)	$\pm 0.4^{\circ}\text{C}$
PT100($\alpha = 0.00385$)	-200 ~ 850°C (-328~ 1562°F)	$\pm 0.4^{\circ}\text{C}$
PT200($\alpha = 0.00385$)	-200 ~ 850°C (-328~ 1562°F)	$\pm 0.4^{\circ}\text{C}$
PT500($\alpha = 0.00385$)	-200 ~ 850°C (-328~ 1562°F)	$\pm 0.4^{\circ}\text{C}$
PT1000($\alpha = 0.00385$)	-200 ~ 850°C (-328~ 1562°F)	$\pm 0.4^{\circ}\text{C}$
PT50($\alpha = 0.00391$)	-200 ~ 850°C (-328 ~ 1562°F)	$\pm 0.4^{\circ}\text{C}$
PT100($\alpha = 0.00391$)	-200 ~ 850°C (-328~ 1562°F)	$\pm 0.4^{\circ}\text{C}$
JPT50($\alpha = 0.003916$)	-200 ~ 850°C (-328 ~ 1562°F)	$\pm 0.4^{\circ}\text{C}$
JPT100($\alpha = 0.003916$)	-200 ~ 850°C (-328~ 1562°F)	$\pm 0.4^{\circ}\text{C}$
JPT200($\alpha = 0.003916$)	-200 ~ 850°C (-328~ 1562°F)	$\pm 0.4^{\circ}\text{C}$
JPT500($\alpha = 0.003916$)	-200 ~ 850°C (-328~ 1562°F)	$\pm 0.4^{\circ}\text{C}$
JPT1000($\alpha = 0.003916$)	-200 ~ 850°C (-328~ 1562°F)	$\pm 0.4^{\circ}\text{C}$
Ni100($\alpha = 0.00617$)	-60 ~ 180°C (-76 ~356°F)	$\pm 0.4^{\circ}\text{C}$
Ni200($\alpha = 0.00617$)	-60 ~ 180°C (-76 ~356°F)	$\pm 0.4^{\circ}\text{C}$
Ni500($\alpha = 0.00617$)	-60 ~ 180°C (-76 ~356°F)	$\pm 0.4^{\circ}\text{C}$
Ni1000($\alpha = 0.00617$)	-60 ~ 180°C (-76 ~356°F)	$\pm 0.4^{\circ}\text{C}$
$\pm 20\text{mA}$	-26 ~ 26mA	$\pm 0.05\%$
$\pm 60\text{mV}$	-122~122mV	$\pm 0.05\%$
$\pm 200\text{mV}$	-243~243mV	$\pm 0.05\%$
$\pm 1\text{V}$	3.16 ~ 3.16V	$\pm 0.05\%$
$\pm 6\text{V}$	-6.32 ~ 6.32V	$\pm 0.05\%$
$\pm 20\text{V}$	-25.3 ~ 25.3V	$\pm 0.05\%$
$\pm 50\text{V}$	-50.6 ~ 50.6V	$\pm 0.05\%$
0.4 ~ 2V	-3.16 ~ 3.16V	$\pm 0.05\%$
1~5V	-6.32 ~ 6.32V	$\pm 0.05\%$

Ordering Code - PR10 v2.0

PR1003

(3 analog inputs)

Other Inputs & Outputs*

- 0: None
- 6: 3 relays + 3DI

PR1006

(6 analog inputs)

Other Inputs & Outputs*

- 0: None
- 1: 6 relays
- 3: 6 DI
- 6: 3 relays + 3DI
- 7: 6 relays + 6DI

Power

- A: 90-250 VAC, 50/60Hz
- D: 11-36 VDC

Communication

- 0: Standard Ethernet
- 1: Ethernet + RS232
- 2: Ethernet + RS-422/485

Firmware

- 0: Standard version with mathematics
- 1: Plus version 1 with external channels, batch & FDA 21CFR part 11, **and EMS (Transmitter is not included)**
- 2: Plus version 2 with custom edited display, and editing software Panel Studio to be supplied
- 3: Plus version 3 including Plus version 1 + 2 above

PC software

- 1: Free basic software of Historical Viewer & Configuration
- 2: Extensive software Data Acquisition Studio (RealTime Viewer + Historical Viewer + Configuration)

Mounting types, power cord & switch

- | | |
|--|---|
| 0: Panel mount, no power cord, no power switch | 6: Portable, no power cord, power switch |
| 1: Panel mount, no power cord, power switch | 7: Panel mount, UL & CSA power cord, power switch |
| 2: Portable, UL & CSA power cord, power switch | 8: Panel mount, VDE power cord, power switch |
| 3: Portable, VDE power cord, power switch | 9: Panel mount, SAA power cord, power switch |
| 4: Portable, SAA power cord, power switch | A: Panel mount, BS power cord, power switch |
| 5: Portable, BS power cord, power switch | |

Special options

- | | |
|-----------------|---|
| 00: None | A0: AI 206 upgrade to AI 306 |
| S1: 16G SD card | A1: AI 206 upgrade to AI 306 + 16G SD card |
| S2: 32G SD card | A2: AI 206 upgrade to AI 306 + 32G SD card |

*Note : DI - digital inputs

PC201 - PID process control card can be purchased separately

Process Control card Ordering Code

PC201

Output 1

- 0: None
- 1: Relay 2A/240VAC
- 2: Pulse voltage to drive SSR, 5V/30mA
- 3: Isolated 4-20 A/0-20mA(OM95-3)
- 4: Isolated 1-5V/0-5V(OM95-4)
- 5: Isolated 0-10V(OM95-5)
- 6: Triac output 1A/240VAC, SSR
- C: Pulse voltage to drive SSR, 14V/40mA(OM94-7)

Output 2

- 0: None
- 1: Relay 2A/240VAC
- 2: Pulse voltage to drive SSR, 5V/30mA
- 3: Isolated 4-20 A/0-20mA(OM95-3)
- 4: Isolated 1-5V/0-5V(OM95-4)
- 5: Isolated 0-10V(OM95-5)
- 6: Triac output 1A/240VAC, SSR
- 7: Isolated 20VDC/25mA power supply(DC94-1)
- 8: Isolated 12VDC/40mA power supply(DC94-2)
- 9: Isolated 5VDC/80mA power supply(DC94-3)
- C: Pulse voltage to drive SSR, 14V/40mA(OM94-7)

Alarm 2

- 0: None
- 1: From A relay 2A/240VAC

Alarm 1

- 0: None
- 1: From C relay 2A/240VAC

Ordering Code - PR20 v2.0

PR2003

(3 analog inputs)

Other Inputs & Outputs*

- 0: None
- 6: 3 relays + 3DI
- C: 3 relays + 3DI + 6AO

PR2006

(6 analog inputs)

Other Inputs & Outputs*

- 0: None
- 1: 6 relays
- 3: 6DI
- 5: 6AO
- 6: 3 relays + 3DI
- 7: 6 relays + 6DI
- A: 6 relays + 6AO
- B: 6DI + 6AO
- C: 3 relays + 3DI + 6AO
- D: 6 relays + 6DI + 6AO

PR2009/12

(9/12 analog inputs)

Other Inputs & Outputs*

- 0: None
- 1: 6 relays
- 2: 12 relays
- 3: 6DI
- 4: 12DI
- 5: 6AO
- 6: 3 relays + 3DI
- 7: 6 relays + 6DI
- 8: 9 relays + 3DI
- 9: 3 relays + 9DI
- A: 6 relays + 6AO
- B: 6DI + 6AO
- C: 3 relays + 3DI + 6AO

PR2015/18

(15/18 analog inputs)

Other Inputs & Outputs*

- 0: None
- 1: 6 relays
- 3: 6DI
- 5: 6AO
- 6: 3 relays + 3DI

PR2021/24

(21/24 analog inputs)

Other Inputs & Outputs*

- 0: None

1 Power

- A: 90-250 VAC, 50/60Hz
- D: 11-36 VDC

2 Communication

- 0: Standard Ethernet
- 1: Ethernet + RS232
- 2: Ethernet + RS-422/485

3 Firmware

- 0: Standard version with mathematics
- 1: Plus version 1 with external channels, batch & FDA 21CFR part 11 **and EMS (Transmitter is not included)**
- 2: Plus version 2 with custom edited display, and editing software Panel Studio to be supplied
- 3: Plus version 3 including Plus version 1 + 2 above(EMS support)

4 PC software

- 1: Free basic software of Historical Viewer & Configuration
- 2: Extensive software Data Acquisition Studio (RealTime Viewer + Historical Viewer + Configuration)

5 Mounting types, power cord & switch

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| 5: Portable, BS power cord, power switch | |

Special options

- | | |
|-----------------|--|
| 00: None | A0: AI 206 upgrade to AI 306 |
| S1: 16G SD card | A1: AI 206 upgrade to AI 306 + 16G SD card |
| S2: 32G SD card | A2: AI 206 upgrade to AI 306 + 32G SD card |

*Note : DI - digital inputs; AO - analog retransmission output

PID process control card can be purchased separately

Process control cannot be chosen together with PR2003, PR2006, PR2012, PR2018 order codes 5, A, B, C, D nor with PR2024 (24 analog inputs)

Ordering Code - PR30 v2.0

PR3006 (6 analog inputs)

PR3012 (12 analog inputs)

PR3018 (18 analog inputs)

PR3024 (24 analog inputs)

PR3030 (30 analog inputs)

PR3036 (36 analog inputs)

PR3042 (42 analog inputs)

PR3048 (48 analog inputs)

1 Relay outputs

- 0: None
- 1: 6 relays
- 2: 12 relays
- 3: 18 relays
- 4: 24 relays

2 Digital inputs

- 0: None
- 1: 6 channels
- 2: 12 channels
- 3: 18 channels

3 Analog outputs

- 0: None
- 1: 6 channels
- 2: 18 channels

4 Power

- A: 90-250 VAC, 50/60Hz
- D: 11-36 VDC

5 Communication

- 0: Standard Ethernet
- 1: Ethernet + RS232
- 2: Ethernet + RS-422/485

6 Firmware

- 0: Standard version with mathematics
- 1: Plus version 1 with external channels, batch & FDA 21CFR part 11, **and EMS (Transmitter is not included)**
- 2: Plus version 2 with custom edited display, and editing software Panel Studio to be supplied
- 3: Plus version 3 including Plus version 1 + 2 above(EMS support)

7 PC software

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8 Mounting types, power cord & switch

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| 4: Portable, SAA power cord, power switch | A: Panel mount, BS power cord, power switch |
| 5: Portable, BS power cord, power switch | |

Special options

- 00: None
- S1: 16G SD card
- S2: 32G SD card

**Note : PID process control card can be purchased separately*