



บริษัท เอบีฟ เฟอร์เนส จำกัด ABB FURNACE CO., LTD

56 ซ.บรมราชชนนี 70 ถ.บรมราชชนนี ศาลาธรรมสพน์ ทวีวัฒนา กทม. 10170.

56, Borommaratchachonnani 70, Thanon Borommaratchachonnani, Sala Thammassop, Thawi Watthana, Bangkok, Thailand, 10170.

โทร: 02-888-3472 โทร(ออกแบบ): 08-08-170-170 แฟกซ์: 02-888-3258

<http://www.abb-furnace.com> E-mail: sales@abb-furnace.com

VR06 6 - channel paperless recorder



ORDERING

CODE

:

VR06 - - -

1 2 3 4 - 5 6 7 - 8 9 10

1 Power

4: 90-250 VAC, 47-63 Hz

5: 20-28 VAC, 47-63 Hz

6: 11-18 VDC

7: 18-36 VDC

8: 36-72 VDC

9: Special order

2 Analog Input Card

0: none

1: 1 channel with AI181

2: 2 channels with AI182

3: 3 channels with AI183

4: 4 channels with AI181 & AI183

5: 5 channels with AI182 & AI183

6: 6 channels with AI183

G: 3 channels with AI183V

H: 6 channels with AI183V





บริษัท เอบีฟ เฟอร์เนส จำกัด ABB FURNACE CO., LTD

56 ซ.บรมราชชนนี 70 ถ.บรมราชชนนี ศาลาธรรมสพน์ ทวีวัฒนา กทม. 10170.

56, Borommaratchachonnani 70, Thanon Borommaratchachonnani, Sala Thammasop, Thawi Watthana, Bangkok, Thailand, 10170.

โทร: 02-888-3472 โทร(ออกแบบ): 08-08-170-170 แฟกซ์: 02-888-3258

<http://www.abb-furnace.com> E-mail: sales@abb-furnace.com

*See AI181/2/3(V) in Accessories below.

3 Digital Input Card

0: none

1: 6 channels

4 Digital Output Card

0: none

1: 6 relays

2: 12 relays

5 Communication

0: standard Ethernet interface

1: RS-232/422/485 (three in one) + Ethernet interface

9: special order

6 PC software

1: Free basic software Observer I for non-communication application

2: Extensive software Observer II for communication of RS-232/422/485 or Ethernet

7 Firmware

0: Basic function

1: with Mathematics, Counter & Totalizer & FDA 21 CFR part 11 compliance

8 Storage Media

1. 512 MB Compact Flash card

6: 1 GB Compact Flash card

X: other options

9 Case/Mounting

4: standard panel mounting, black case

5: Bench top / portable style with handle, USA power cable, black case

6: Bench top with handle, European power cable, black case

10 Special Option

0: none





บริษัท เอบี เฟอเรนส จำกัด ABB FURNACE CO., LTD

56 ซ.บรมราชชนนี 70 ถ.บรมราชชนนี ศาลาธรรมสพน์ ทวีวัฒนา กทม. 10170.

56, Borommaratchachonnani 70, Thanon Borommaratchachonnani, Sala Thammassop, Thawi Watthana, Bangkok, Thailand, 10170.

โทร: 02-888-3472 โทร(ออกแบบ):.08-08-170-170 แฟกซ์: 02-888-3258

http://www.abb-furnace.com E-mail: sales@abb-furnace.com

1: 24VDC auxiliary power supply (for transmitter, 6 channels)

2: 3-channel current output

3: 6-channel current output

4: 9-channel current output

D: 3-channel voltage output

E: 6-channel voltage output

F: 9-channel voltage output

5: panel mounting with rear power plug

6: panel mounting with front power switch

7: 7=1+5

8: 8=1+6

9: 9=1+5+6

X: other options

VR06 6 - channel paperless recorder

DESCRIPTION

Features

Specifications

Ordering Code

Documentation



It is the Low Cost paperless recorder in bigger size 6.4" with highest resolution 640x480 pixels VGA TFT display, infrared detector, maximum 6 channels, plug & play I/O cards. It has many other unique features too, 12 soft keys for easy operation, universal input, the shortest depth 174mm, well designed portable handle, fully isolated channels, reliable and high capacity storage media CF card.

As a professional and experienced manufacturer, we supply high-performance and quality paperless recorders, video graphic recorders, paperless chart recorders, chart recorders, and temperature chart recorders.





บริษัท เอบีฟ เฟอร์เนส จำกัด ABB FURNACE CO., LTD

56 ซ.บรมราชชนนี 70 ถ.บรมราชชนนี ศาลาธรรมสพน์ ทวีวัฒนา กทม. 10170.

56, Borommaratchachonnani 70, Thanon Borommaratchachonnani, Sala Thammasop, Thawi Watthana, Bangkok, Thailand, 10170.

โทร: 02-888-3472 โทร(ออกแบบ) : 08-08-170-170 แฟกซ์: 02-888-3258

<http://www.abb-furnace.com> E-mail: sales@abb-furnace.com

FEATURES

6.4"Color TFT LCD with 640X480 pixels resolution

The Maximum Channels :

6 isolated analog input channels

Plug & Play Supported I / O card, 6 Slots

The High Flexibility :

User configurable I / O card

Expandable modular architecture

Flexible screen configuration

User-Friendly

Soft keys coupled with interactive dialog simplify

setup & operation procedures

Easy - to - access function keys

Infrared Detector:

Shut off LCD automatically to prolong LCD life

and save power while nobody near by

Save Space:

Only 174 mm (6.9") depth behind panel

Various Display Formats:

Vertical trend , Horizontal trend,

Bar Graph, Numerical or mixed

Save Data in Flash ROM,

Compact Flash Card or PC

Communication :

Standard Ethernet and optional RS-232 / 422 / 485

The Highest Accuracy

18 - bit A -D analog input, 15-bit D-A analog output.

Fast Sampling Rate:

Within 200 msec for all channels,

Programmable Filter or Moving Average Sampling Method

Statistics with Instant , Average , Min./ Max. Values

Programmable Alarms and Messages available

Portable / Bench Top Assembly Kit available





บริษัท เอบีฟ เฟอร์เนส จำกัด ABB FURNACE CO. , LTD

56 ซ.บรมราชชนนี 70 ถ.บรมราชชนนี ศาลาธรรมสพน์ ทวีวัฒนา กทม. 10170.

56, Borommaratchachonnani 70, Thanon Borommaratchachonnani, Sala Thammasop, Thawi Watthana, Bangkok, Thailand, 10170.

โทร: 02-888-3472 โทร(ออกแบบ): 08-08-170-170 แฟกซ์: 02-888-3258

http://www.abb-furnace.com E-mail: sales@abb-furnace.com

[Request a Quote](#)

[-Top-](#)

SPECIFICATIONS

Power

90-250VAC, 47-63Hz, 60VA, 30W maximum

11-18VDC or 18-36 VDC, 60VA, 30W maximum

Display

6.4" TFT LCD, 640X480 pixel resolution, 256 colors

Memory

8MB storage memory on board

Storage media: 128, 512 MB, 1 GB CF (Compact Flash) cards

Analog Input Cards (AI181, AI182, AI183)

Channels: AI181 ~ 1 channel, AI182 ~ 2 channels, AI183 ~ 3 channels

Resolution: 18 bits

Sampling Rate: 5 times/ second

Maximum Rating: -2 VDC minimum, 12 VDC maximum (1 minute for mA input)

Temperature Effect: $\pm 1.5 \mu\text{V}/\mu\text{C}$ for all inputs except mA $\pm 3.0 \mu\text{V}/\mu\text{C}$ for mA input

Sensor Lead Resistance Effect:

T/C: $0.2 \mu\text{V}/\text{ohm}$

3-wire RTD: $2.6 \mu\text{C}/\text{ohm}$ of resistance difference of two leads

2-wire RTD: $2.6 \mu\text{C}/\text{ohm}$ of resistance sum of two leads

Burn-out Current: 200nA

Common Mode Rejection Ratio (CMRR): 120dB

Normal Mode Rejection Ratio (NMRR): 55dB

Isolation Breakdown Voltage between channels: 430VAC min.

Sensor Break Detection:

Sensor opened for TC, RTD and mV inputs,





บริษัท เอบีฟ เฟอร์เนส จำกัด ABB FURNACE CO., LTD

56 ซ.บรมราชชนนี 70 ถ.บรมราชชนนี ศาลาธรรมสพน์ ทวีวัฒนา กทม. 10170.

56, Borommaratchachonnani 70, Thanon Borommaratchachonnani, Sala Thammasop, Thawi Watthana, Bangkok, Thailand, 10170.

โทร: 02-888-3472 โทร(ออกแบบ): 08-08-170-170 แฟกซ์: 02-888-3258

<http://www.abb-furnace.com> E-mail: sales@abb-furnace.com

below 1 mA for 4-20mA input, below 0.25V for 1-5V inputs,
unavailable for other inputs.

Sensor Break Responding Time:

Within 10 seconds for TC, RTD and mV inputs,

0.1 second for 4-20 mA and 1-5V inputs.

Characteristics:

Type	Range	Accuracy@ 25 °C	Input Impedance
J	-120 ~ 1000 °C (-184 ~ 1832 °F)	±1 °C	2.2MΩ
K	-200 ~ 1370 °C (-328 ~ 2498°F)	±1 °C	2.2MΩ
T	-250 ~ 400°C (-418 ~ 752°F)	±1 °C	2.2MΩ
E	-100 ~ 900 °C (-148 ~ 1652 °F)	±1°C	2.2MΩ
B	0 ~ 1820 °C (32 ~ 3308 °F)	±2°C	2.2MΩ
R	0 ~ 1768 °C (32 ~ 3214 °F)	±2°C	2.2MΩ
S	0 ~ 1768 °C (32 ~ 3214 °F)	±2°C	2.2MΩ
N	-250 ~ 1300 °C (-418 ~ 2372 °F)	±1 °C	2.2MΩ
L	-200 ~ 900 °C (-328 ~ 1652 °F)	±1 °C	2.2MΩ
PT100 (DIN)	-210 ~ 700 °C (-346 ~ 1292 °F)	±0.4°C	1.3KΩ
PT100 (JIS)	-200 ~ 600 °C (-328 ~ 1112 °F)	±0.4°C	1.3KΩ
mV	-8 ~ 70mV	±0.05%	2.2MΩ
mA	-3 ~ 27mA	±0.05%	70.5Ω





บริษัท เอบีฟ เฟอร์เนส จำกัด ABB FURNACE CO., LTD

56 ซ.บรมราชชนนี 70 ถ.บรมราชชนนี ศาลาธรรมสพน์ ทวีวัฒนา กทม. 10170.

56, Borommaratchachonnani 70, Thanon Borommaratchachonnani, Sala Thammasop, Thawi Watthana, Bangkok, Thailand, 10170.

โทร: 02-888-3472 โทร(ออกแบบ): 08-08-170-170 แฟกซ์: 02-888-3258

<http://www.abb-furnace.com> E-mail: sales@abb-furnace.com

0~1V	-0.12 ~ 1.15V	±0.05%	32KΩ
0~5V	-1.3 ~ 11.5V	±0.05%	332KΩ
1~5V	-1.3 ~ 11.5V	±0.05%	332KΩ
0~10V	-1.3 ~ 11.5V	±0.05%	332KΩ

Analog Input Cards (AI183V)

Type	Range	Accuracy@ 25 °C	Input Impedance
-60~60mV	-62~62mV	±0.1%	2.2 MΩ
-2~2V	-2.2~2.2V	±0.3%	332KΩ
-20~20 V	-22~22 V	±0.1%	332KΩ
-20~20 mA	-22~22 mA	±0.1%	70.5Ω

Digital Input Card (DI181)

Channels: 6 per card Logic

Low: -5V minimum, 0.8V maximum

Logic High: 2V minimum, 5V maximum

External pull-down Resistance: 1KΩ maximum

External pull-up Resistance: 1.5MΩ minimum

Digital Output Card (DO181)

Channels: 6 per card

Contact Form: N.O. (form A)

Relay Rating: 5A/240 VAC, life cycles 200,000 for resistive load

Analog Output Card (AO183I, AO183V)

Channels: 3 per card Output signal: AO183I: 4-20mA, 0-20mA, AO183V: 0-5V, 1-5V, 0-10V

Resolution: 15 bits

Accuracy: ±0.05% of Span ±0.0025% /°C

Load Resistance: 0-500 ohms (current), 10K ohms minimum (voltage)

Output Regulation: 0.01% for full load change





บริษัท เอบีฟ เฟอร์เนส จำกัด ABB FURNACE CO., LTD

56 ซ.บรมราชชนนี 70 ถ.บรมราชชนนี ศาลาธรรมสพน์ ทวีวัฒนา กทม. 10170.

56, Borommaratchachonnani 70, Thanon Borommaratchachonnani, Sala Thammasop, Thawi Watthana, Bangkok, Thailand, 10170.

โทร: 02-888-3472 โทร(ออกแบบ): 08-08-170-170 แฟกซ์: 02-888-3258

<http://www.abb-furnace.com> E-mail: sales@abb-furnace.com

Output Setting Time: 0.1 second (stable to 99.9%)

Isolation Breakdown Voltage: 1000VAC min.

Integral Linearity Error: $\pm 0.005\%$ of Span

Temperature Effect: $\pm 0.0025\%$ of Span / $^{\circ}\text{C}$

24VDC Auxiliary Power Supply Card (AP181)

Channels: to be used for 6 transmitters

Output Rating: 24 ± 1 VDC, 180mA in maximum, 30mA / each channel

COMM Module (CM181)

Interface: RS-232 (1 unit), RS-485 or RS-422 (up to 247 units)

Protocol: Modbus Protocol RTU mode

Address: 1-247

Baud Rate: 0.3~38.4 Kbits/sec.

Measured data Bits: 7 or 8 bits

Parity Bit: None, Even or Odd

Stop Bit: 1 or 2 bits

Standard Ethernet Communication

Protocol: Modbus TCP/IP, 10 Base T

Ports: AUI (Attachment Unit Interface) and RJ-45, Auto- detect capability

Infrared Detector

Distance: Detect moving human body in distance around 2 meters

Time delayed: 10, 20, 30, 40, 50 or 60 minutes to be defined

Real time clock accuracy vs. temperature inside of housing

Temperature inside housing typical error per month

10 ~ 40 $^{\circ}\text{C}$ 18 seconds

0 $^{\circ}\text{C}$ or 50 $^{\circ}\text{C}$ 52 seconds

-10 $^{\circ}\text{C}$ or 60 $^{\circ}\text{C}$ 107 seconds

Environmental & Physical

Operating Temperature: 5 ~ 50 $^{\circ}\text{C}$

Storage Temperature: -25 ~ 60 $^{\circ}\text{C}$

Humidity: 20 to 80% RH (non-condensing), maximum relative humidity 80% for temperature up to 31 $^{\circ}\text{C}$ decreasing linearly to 50% relative humidity at 40 $^{\circ}\text{C}$





บริษัท เอบีฟ เฟอร์เนส จำกัด ABB FURNACE CO., LTD

56 ซ.บรมราชชนนี 70 ถ.บรมราชชนนี ศาลาธรรมสพน์ ทวีวัฒนา กทม. 10170.

56, Borommaratchachonnani 70, Thanon Borommaratchachonnani, Sala Thammasop, Thawi Watthana, Bangkok, Thailand, 10170.

โทร: 02-888-3472 โทร(ออกแบบ): 08-08-170-170 แฟกซ์: 02-888-3258

<http://www.abb-furnace.com> E-mail: sales@abb-furnace.com

Altitude: 2000 M maximum

Insulation Resistance: 20 M ohms min. (at 500 VDC)

Dielectric Strength: 1350 VAC, 50/60 Hz for 1 minute

Vibration Resistance: 10-55 Hz, 10m/ s² for 2 hours

Shock Resistance: 30m/ s²(3g) for operation, 100g for transportation

Operation Position: no inclined restriction

Dimensions: Panel Mount style: 166(W) x 144(H) x 174mm(D)

Bench Top style: 166 (W) x 192 (H) x 194mm (D)

Standard Panel Cutout: DIN size in 138 x 138mm

Approval Standards

Safety: UL61010C-1,

CSA C22.2 No. 24-93

CE: EN61010-1 (IEC1010-1)

over voltage category II, Pollution degree 2

Protective Class:

IP 30 front panel for indoor use,

IP 20 housing and terminals

EMC:

Emission: EN61326 (EN55022 class A, EN61000-3-2, EN61000-3-3)

Immunity: EN61326 (EN61000-4-2, EN61000-4-3, EN61000-4-4,

EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11)

