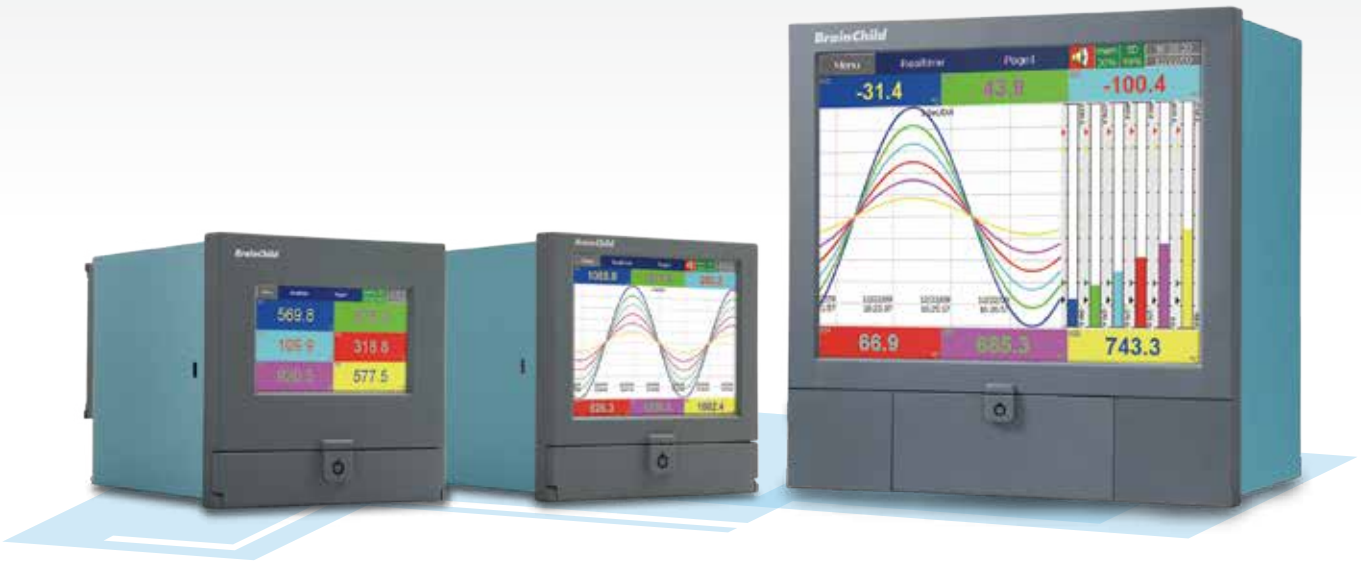
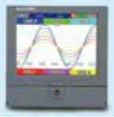
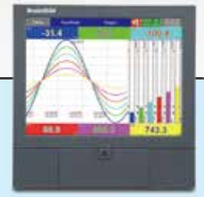
BrainChild



PR Series
Paperless Recorders

Outstanding Specifications & Features

			
	PR10	PR20	PR30
Product position	low-cost one, good for replacing 6-dotting chart recorders, and 1, 2, 3 pen recorders	medium size and powerful one, input numbers up to the highest 24 channels	big size and high-end one, good for sophisticated applications, for example power industry
Input numbers	3, 6 channels	3, 6, 12, 18, 24 channels	6, 12, 18, 24, 30, 36, 42, 48 channels
True universal inputs	Thermocouples: J, K, T, E, B, R, S, N, L, U, P, W5, W3, LR, A1, A2, A3, M RTD: Pt50, Pt100, Pt200, Pt500, Pt1000 (α=0.00385), Pt50, Pt100 (α=0.00391) JPt50, JPt100, JPt200, JPt500, JPt1000 (α=0.003916) Cu10 (α=0.00427), Cu50, Cu100(α=0.00426, 0.00428), Ni100, Ni200, Ni500, Ni1000 (α=0.00617) mA, V, mV		
The fastest sampling rate	to reach 100 msec / dot, default setting at 1 sec / dot		
Math, External channels, Batch, Custom display, FDA 21 CFR part 11	only available by Plus versions		
Display	4.3" TFT wide touch screen	5.6" TFT touch screen	12.1" TFT touch screen
Resolution	480 x 272	640 x 480	1024 x 768
MTFB backlight at 25°C	30,000 hrs	30,000 hrs	60,000 hrs
Backlight	LED		
Screen saver, Email	Yes		
A faster CPU	ARM Cortex-A8, 1Ghz		
Internal Flash memory	256 MB		
RAM	256 MB		
Ethernet	Modbus TCP/IP		
RS-232/422/485	optional RS-232 or RS-422/485 Modbus RTU		
SD card Slot, USB host x 2	standard, one USB in the front, another USB in the back		
Pulse input	optional DI card offering either logic or high frequency pulse counter		
START / STOP key	to start / stop record and to turn off the display only, not the power so that a quick restart possible later		
Calibration correction	on-site calibration possible, or using handy features of Offset and Gain for correction		
Multilingual	convenient for local users by offering languages in Brazil Portuguese, Chinese (simplified, traditional), Czech, Danish, Dutch, English, French, German, Greek, Italian, Japanese, Korean, Polish, Portuguese, Russian, Spanish, Swedish, Thai, Turkish, other languages negotiable		
PC software Historical Viewer+ Configuration	standard		
Extensive software Data Acquisition Studio	optional real-time monitoring		
Power supply	90-250VAC or 11-36VDC		
Outer dimensions (W x H x L mm)	144 x 144 x189	144 x 144 x189	288 x 288 x 189
Shorter mounting depth (mm)	171	171	171
DIN Panel cutout (W x H mm)	137 x 137	137 x 137	281 x 281
Protection	IP65 front, IP20 rear		
Operating temperature	0°C to 50°C		
Storage temperature	-30°C to 70°C		
Safety standards	CE, cULus, RoHS		

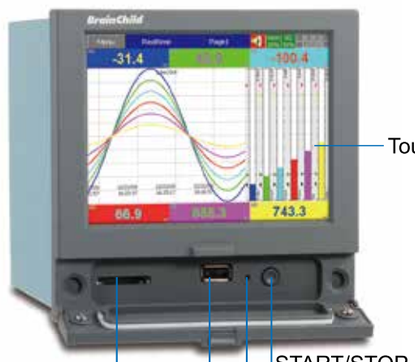
Overview

The new PR series paperless recorders are launched in full product range with outstanding specifications and features. PR series includes a low-cost PR10, a popular PR20 and a high-end PR30. Compared with the first generation VR series, PR series offers much more, for example recorders in 4.3" & 12.1" displays in addition to 5.6", 100 msec. sampling rate, external channels, batch, custom display, more strict FDA 21 CFR part 11, handwriting messages, SD slot, 2 USBs, pulse input, field calibration, Web Server, email, multilingual , IP65, and yet in shorter depth 171mm.

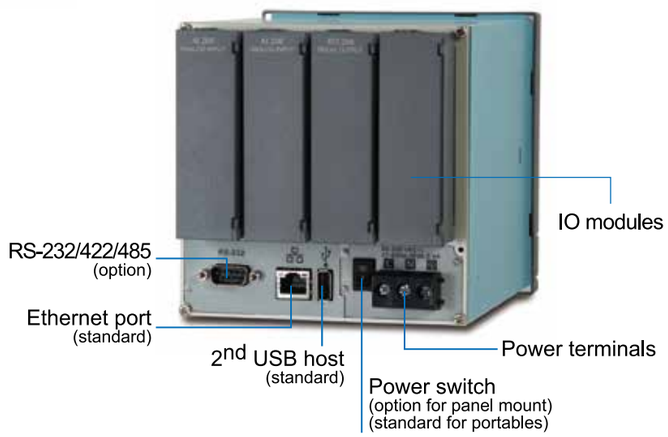
Smart Mechanism

Front view, Back view

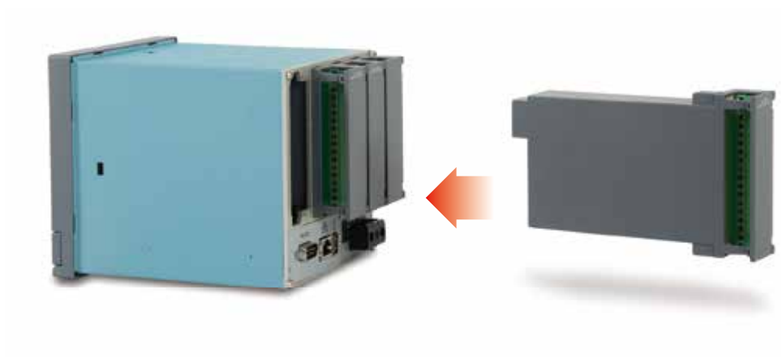
PR20 Front view



PR20 Back view



IO modules easy for expansion



Expandable modules of inputs & outputs

AI206
6 AI (6 analog inputs)



AI203
3 AI (3 analog inputs)



RO206
6 relay outputs



DI206
6 DI (6 digital inputs)



RD233
3 relays + 3DI



AO206
6 AO (6 analog outputs)





PR10
(4 Slots, up to 6 AI)



PR20
(4 Slots, up to 24 AI)



PR30
(16 Slots, up to 48 AI)

Portable recorders, Security key

Portable recorders



PR10

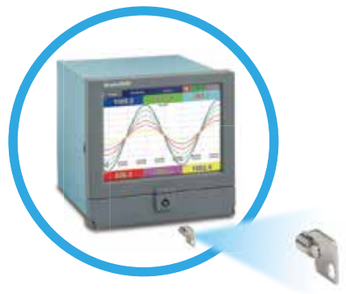


PR20



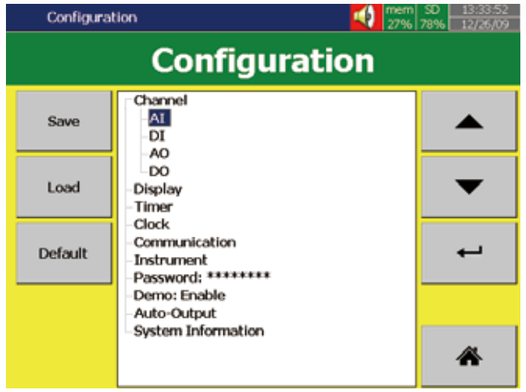
PR30

Security key

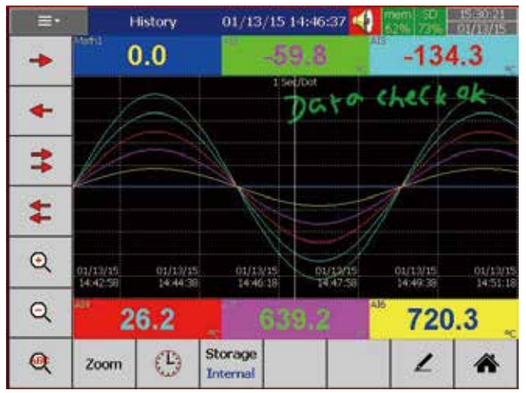


Friendly functions in recorders

Configuration in Tree Layout is easy for operation



Handwriting messages are handy for users



Circular display (PR30 only)

For some industries preferred circular display, PR30 can offer this unique feature and set the display speed for each page/circle in 30 minutes, 1, 2, 4, 8, 12 hours, or 1, 2 days, or 1, 2, 4 weeks.



Standard version of Firmware

AI: Analog input is offered various log speed in 100ms, 1, 2, 5, 10, 20, 30 Sec, 1, 2 Min/Dot.

DI: Digital input is offered either normal Logic or high frequency Pulse.

AO: In analog output, mA or V and its Expression can be defined.

DO: Digital output/relay output can be enabled. Each DO card has 6 relays.

Display: Various display speeds are available in 100ms, 1, 2, 5, 10, 20, 30 Sec/Dot, or 1, 2, 10, 30 Min/Page, 1, 2, 4, 8, 12 Hour/Page, or 1 Day/Page.

Timer: Timer in Countdown, Repeat Countdown, Daily, Weekly or Monthly base, and various jobs can be defined.

Clock: Date Style of MM/dd/yy or dd/MM/yy, Time Synchronize via Internet, and Summer Saving Time can be defined.

Communication: Web Server and Email functions are available in Communication in Standard firmware.

Instrument: Brightness adjustment and Screen Saver are available in Instrument.

Password: If Normal Security is chosen, then only one password is offered. If high Security of CFR-21 is chosen, then 9 levels of password can be defined.

Demo: Enable or disable the demonstration.

Auto-output: Automatic output can be set to specify the printer, to print Historical data & Report data in specified period of time.

System information: It gives Firmware version number, Internal & External memory status, IP address, and IO card status of each Slot.

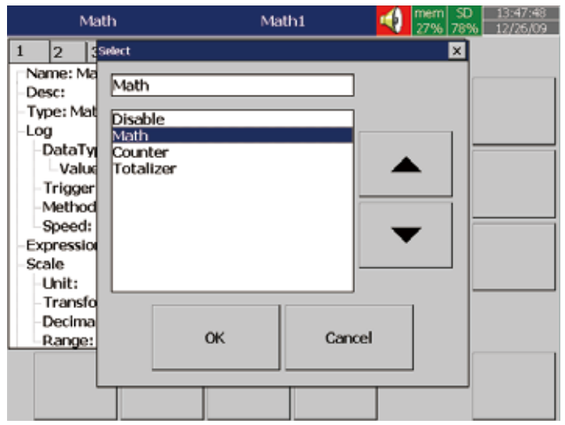
Calibrate: Sometimes the field calibration is required for high accuracy. In this case, a qualified engineer can do the necessary calibration.

Friendly functions in recorders

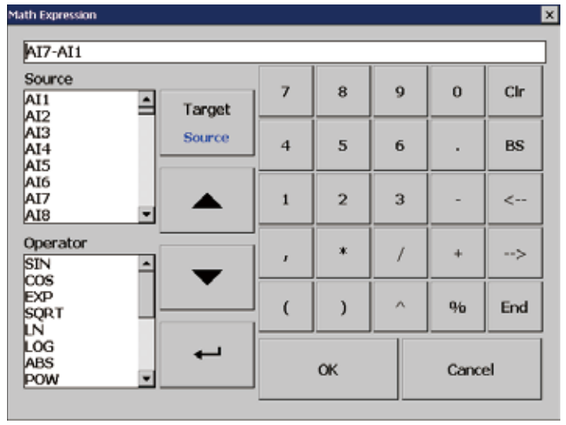
Plus version of Firmware

In addition to features of Standard firmware, Plus versions offer more features of Math, External Channels, Custom Display, Batch, FDA 21 CFR part 11.

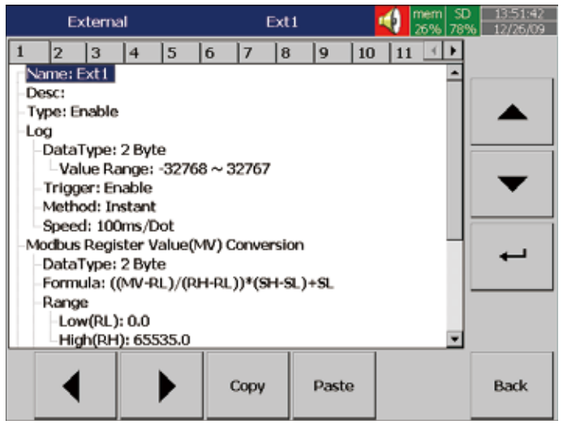
Math: It includes Math, Counter & Totalizer.



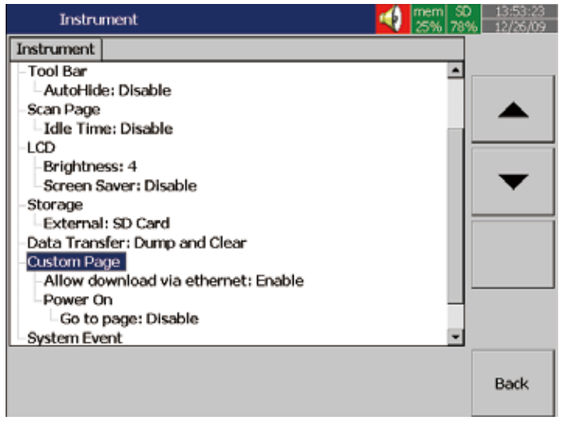
Math Expression is keyed in an easy way.



External Channels: Besides AI & DI inputs, PR recorders accept inputs through communication called External Channels. PR10, PR20 & PR30 can work External Channels maximum up to 24, 48 & 96 respectively.



Custom Edited Display: In Plus versions, PC software Panel Studio allows users to edit the specific display instead of standard one, and then download it onto PR recorders.



Batch: Batch production record is constantly required for more strict production, for example food and drugs.

FDA 21 CFR part 11: This feature is complied with U.S. Food and Drug Administration with human health concern. All data should be avoided from manipulating after recording.

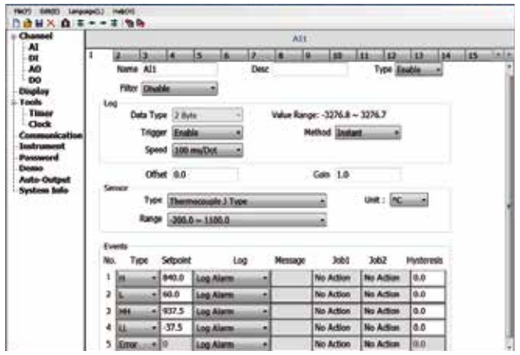
Powerful functions in PC Software

Free basic software

It consists of two parts, which are Configuration and Historical Viewer.

I. Configuration

It is easy to do recorder configuration on PC.
Then, send the configuration files from PC to recorder.



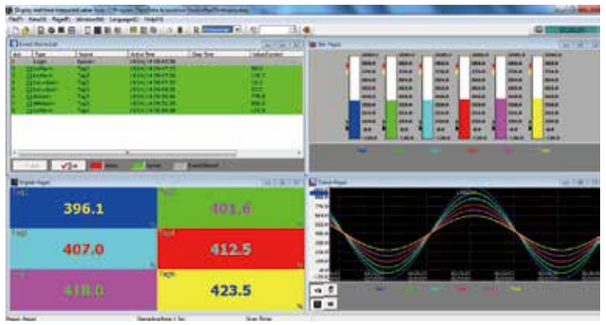
II. Historical Viewer

It can display historical trends, historical alarms, events, and then print it. It can search data by time, time period, tag, alarm, events and remarks. It also can export data in CSV format.

Extensive software Data Acquisition Studio

III. RealTime Viewer

Besides Configuration & Historical Viewer, it offers additional software RealTime Viewer for real-time monitoring.



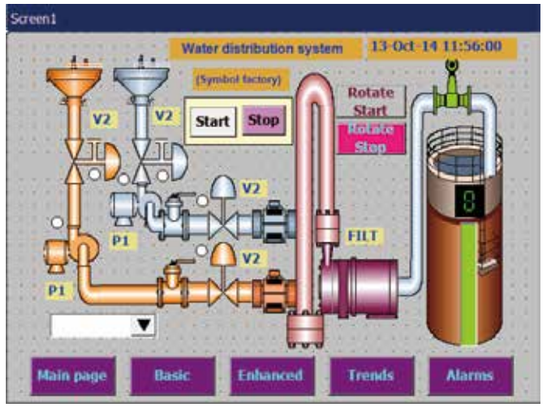
IV. Panel Studio

If Plus version 2 or 3 of Firmware is purchased, additional software Panel Studio is offered for editing custom display. The users can use it to edit specific displays on PC first, and then download it onto recorders. The custom edited displays will be additional pages to standard ones.

Edit it on PC



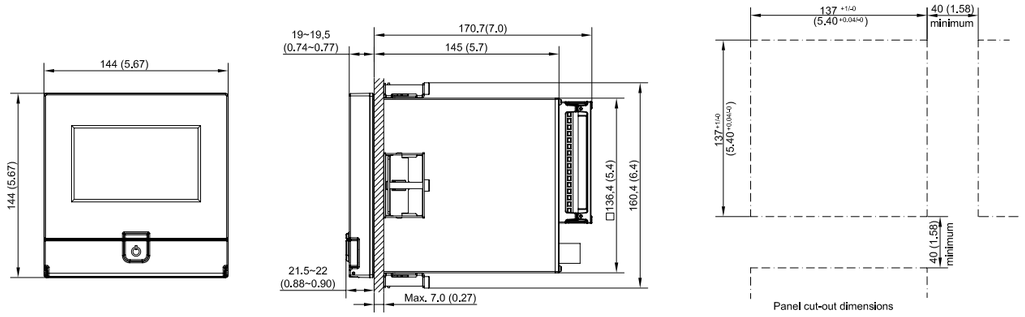
Download it onto recorders



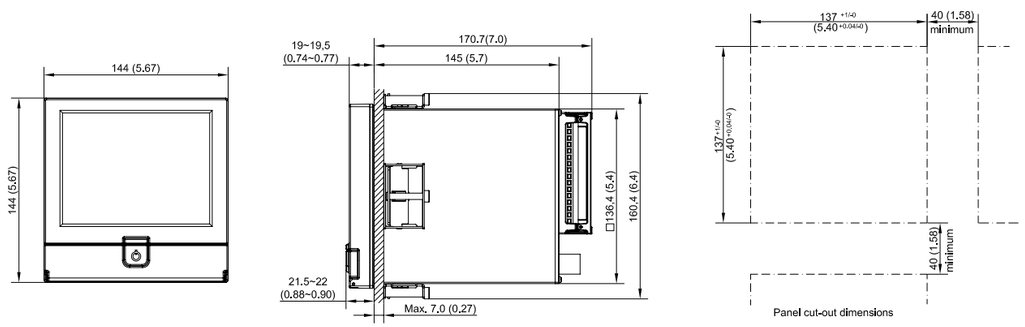
Installation

Dimensions in mm (in.)

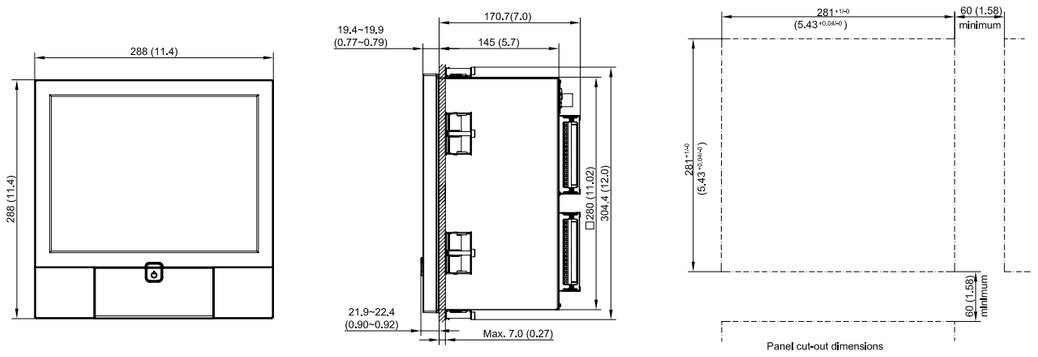
PR10



PR20



PR30



Ordering Code

PR10 Ordering Code

PR1003
(3 analog inputs)

Other inputs & outputs*
0: none
6: 3 relays + 3 DI

PR1006
(6 analog inputs)

Other inputs & outputs*
0: none
1: 6 relays
3: 6 DI
6: 3 relays + 3 DI
7: 6 relays + 6 DI

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

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

Firmware
0: standard version
1: Plus version 1 with extra mathematics, external channels, batch & FDA 21 CFR part 11
2: Plus version 2 with custom edited display, an 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
1: panel mount, no power cord, power switch
2: portable, UL & CSA power cord, power switch
3: portable, VDE power cord, power switch
4: portable, SAA power cord, power switch
5: portable, BS power cord, power switch

Special options
00: none
S1: 16G SD card
S2: 32G SD card

**Note: DI - digital inputs*

PR20 Ordering Code

PR2003
(3 analog inputs)

Other inputs & outputs*
0: none
6: 3 relays + 3 DI
C: 3 relays + 3 DI + 6 AO

PR2006
(6 analog inputs)

Other inputs & outputs*
0: none
1: 6 relays
3: 6 DI
5: 6 AO
6: 3 relays + 3 DI
7: 6 relays + 6 DI
A: 6 relays + 6 AO
B: 6 DI + 6 AO
C: 3 relays + 3 DI + 6 AO
D: 6 relays + 6 DI + 6 AO

PR2012
(12 analog inputs)

Other inputs & outputs*
0: none
1: 6 relays
2: 12 relays
3: 6 DI
4: 12 DI
5: 6 AO
6: 3 relays + 3 DI
7: 6 relays + 6 DI
8: 9 relays + 3 DI
9: 3 relays + 9 DI
A: 6 relays + 6 AO
B: 6 DI + 6 AO
C: 3 relays + 3 DI + 6 AO

PR2018
(18 analog inputs)

Other inputs & outputs*
0: none
1: 6 relays
3: 6 DI
5: 6 AO
6: 3 relays + 3 DI

PR2024
(24 analog inputs)

Other inputs & outputs*
0: none

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

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

Firmware
0: standard version
1: Plus version 1 with extra mathematics, external channels, batch & FDA 21 CFR part 11
2: Plus version 2 with custom edited display, an 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
1: panel mount, no power cord, power switch
2: portable, UL & CSA power cord, power switch
3: portable, VDE power cord, power switch
4: portable, SAA power cord, power switch
5: portable, BS power cord, power switch

Special options
00: none
S1: 16G SD card
S2: 32G SD card

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

PR30 Ordering Code

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)

Relay outputs
0: none
1: 6 relays
2: 12 relays
3: 18 relays
4: 24 relays

Digital inputs
0: none
1: 6 channels
2: 12 channels
3: 18 channels

Analog outputs
0: none
1: 6 channels
2: 12 channels

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

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

Firmware
0: standard version
1: Plus version 1 with extra mathematics, external channels, batch & FDA 21 CFR part 11
2: Plus version 2 with custom edited display, an 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
1: panel mount, no power cord, power switch
2: portable, UL & CSA power cord, power switch
3: portable, VDE power cord, power switch
4: portable, SAA power cord, power switch
5: portable, BS power cord, power switch

Special options
00: none
S1: 16G SD card
S2: 32G SD card

BrainChild

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