AGE Technologies

HGPR-8600 Paperless Recorder

I. Overview

HGPR-8600 series 8-channel is a color flow paperless recorder. It is equipped with 24-channel universal input (able to measure by means of configuration: standard voltage, standard current, thermocouple, thermal resistance, frequency, millivolt, etc.). It is also equipped with alarm output and transmitting output of the relay as well as 8-channel flow integration function, can be equipped with RS232/485 communication interface, Ethernet interface, mini-printer interface, USB interface and SD card socket, can provide sensor distribution, is equipped with powerful display function, real-time curve display, historical curve retrospection, bar graph display, display of the state of alarm, flow display, report display, etc.

II. Main Technical Parameters

Input measurement	
Input signal	Current: 0 ~ 20 mA, 0 ~ 10 mA, 4 ~ 20 mA
	Voltage: 0 ~ 5 V, 1 ~ 5 V, 0 ~ 10 V, ±5 V, 0 ~ 20 mV, 0 ~ 100 mV, ±20 mV, ±100 mV
	Thermal resistance: Pt100, Cu50, Cu53, Cu100, BA1, BA2
	Linear resistance: 0 ~ 400 Ω
	Thermocouple: B, S, K, E, T, J, R, N, F2, Wre3-25, Wre5-26
	Frequency: PI
Output	
Output signal	Analog output: 4 ~ 20 mA (load resistance ≤ 380 Ω), 0 ~ 20 mA (load resistance ≤ 380 Ω), 0 ~ 10 mA (load resistance ≤ 760 Ω), 1 ~ 5 V (load resistance ≥250 KΩ), 0 ~ 5 V (load resistance ≥250 KΩ), 0 ~ 10 V (load resistance ≥10 KΩ)
	Alarm output: normally open relay contact output, where the contact capacity is 1 A/250 VAC (resistive load) (! Note: Please do not carry load directly in case the load exceeds the contact capacity of relay.)
	Feed output: DC24 V ±1, load current ≤ 250 mA
	Communication output: RS485/RS232 communication interface, 1,200 ~ 57,600 bps baud rate (able to be set); standard MODBUS RTU communication protocol; the communication distance of RS-485 can be as long as 1 kilometer; the communication distance of RS-232 can be as long as 15 m; Ethernet communication interface, where the communication speed is 10 Mb/s.
Comprehensive parameters	
Measurement accuracy	0.2% FS ± 1 d
Sampling	1 s

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period	
Setting mode	Panel soft touch; setting values of parameters are locked with passwords and will be saved permanently in case of outage.
Display method	7-inch 800 * 480 dot-matrix widescreen TFT high brightness color graphics and LCD display; LED backlight; with clear pictures and wide visual angle. Display contents can be composed of characters, figures, conditional curves, bar graphs, etc.; through panel button, page turning, forward and backward search of historical data, time scale change of curves, etc.
Data backup	Data backup and conversion storage of USB flash disk and SD card are supported, where the maximum capacity is 8 GB; FAT and FAT32 formats are supported.
Storage capacity	The capacity of the internal Flash memory is 64 M Byte.
Recording interval	Nine options including 1, 2, 4, 6, 15, 30, 60, 120 and 140 s can be selected.
Storage length (continuous record without power-off)	24 days (1 s interval) – 5825 days (240 s interval) $64 \times 1{,}024 \times 1{,}024 \times$ recording interval (S) Calculation formula: recorded time (day) $= \dfrac{64 * 1{,}024 * 1{,}024 * \text{recording interval (S)}}{\text{Channel number} * 2 * 24 * 3{,}600}$ (! Note: For calculation of channel number, the program divides the channel number into five options, namely 4, 8, 16, 32 and 64, and the bigger figure should be regarded as the channel number for calculation in case the channel number of the instrument is between the said two options. For example: If the channel number of the instrument is 12, then 16 should be adopted in the formula.)
Environment condition	Environment temperature: -10 ~ 50°C; relative humidity: 10 ~ 90% RH (without condensation of moisture); avoidance of contact of high corrosive gas. (! Note: If the field environment is poor, special instruction should be given when ordering.)
Working power supply	AC 85 ~ 264 V (power supply of the switches), 50/60 Hz; DC12 ~ 36 V (power supply of the switches); Power consumption: 20 W.

III. Ordering Instruction

HGPR-86 □/□/□-□-□-□-□

    ①   ②③④⑤

①Number of input channels (remark 1)						
Code	Analog quantity input	Code	Frequency input (12V distribution)	Code	Frequency input (24 V distribution)	
X	No input	X	No input	X	No input	
01	01-channel input	FB01	01-channel input	FC01	01-channel input	
02	02-channel input	FB02	02-channel input	FC02	02-channel input	
03	03-channel input	FB03	03-channel input	FC03	03-channel input	
.	.	.	.	.	.	
.	.	.	.	.	.	

23	23-channel input	FB11	11-channel input	FC11	11-channel input
24	24-channel input	FB12	12-channel input	FC12	12-channel input
②Number of transmitting output channels (remark 2)		③Number of alarm output channels (remark 2)		④Power supply	
Code	Output channel	Code	Alarm channel	Code	Voltage range
X	No output	X	No output	A	AC85 ~ 264 V (50/60 Hz)
01	1-channel output	01	1-limit alarm	D	DC12 ~ 36 V
02	2-channel output	02	2-limit alarm		
03	3-channel output	03	3-limit alarm		
.	.	.	.		
.	.	.	.		
11	11-channel output	17	17-limit alarm		
12	12-channel output	18	18-limit alarm		
⑤Additional functions (You can select all the following functions with "/" to separate them, and can omit the unselected functions.)					
Communication output		Print function		Feed output	
Code	Type of communication output	Code	Print interface	Code	Feed output
D1	RS485 communication	D3	RS232C print	P	DC 24V
D2	RS232 communication				
USB conversion storing function		SD card extended function		Ethernet communication function	
Code	USB conversion storage	Code	SD card extension	Code	Ethernet communication
U	USB conversion storage (USB flash disk)	SD	SD card extension (SD card)	E	Ethernet communication

Remark 1: 1 ~ 24 channels are optional for input channels (1 ~ 12 channels are optional for input channels of frequency signal; 1 ~ 24 channels are optional for input channels of analog signal; combinatorial input should not exceed 24 channels), inside which 1 ~ 8 channels are optional for flow channels and the rest channels can be regarded as flow compensation channels or measurement display channels.

Remark 2: Number of analog output channels + number of relay output channels ≤ 18.

IV Installation Dimension (Unit: mm)