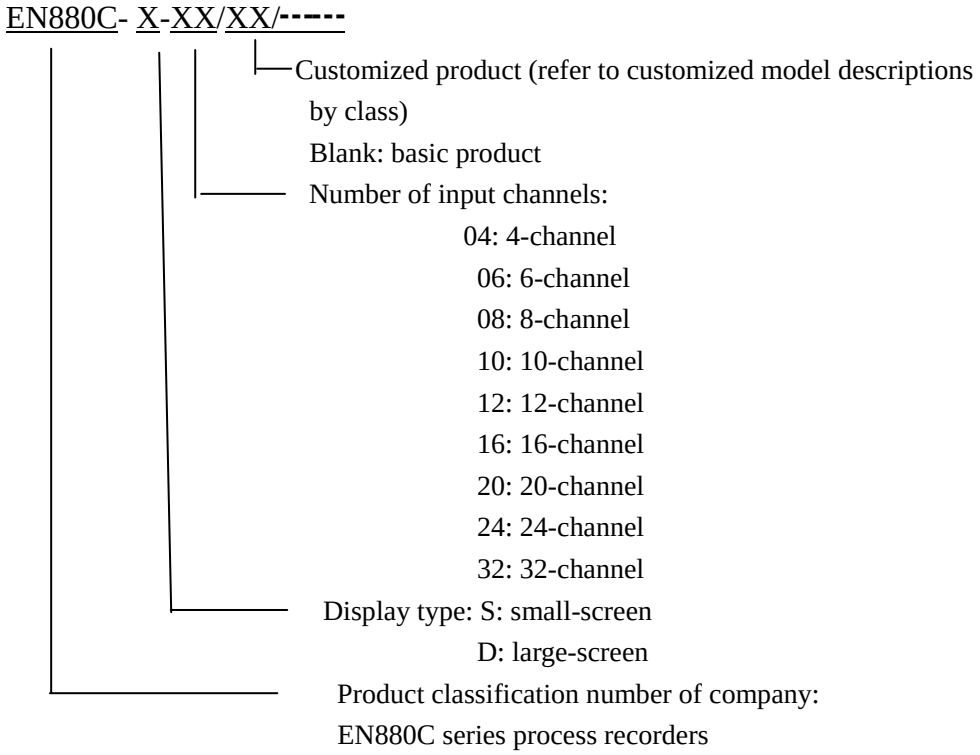
1.1 Product Classification

EN880C serial products include models in diversified specifications, mainly standard or customized model. The standard model has all of the main general functionality of a process recorder. They have the colorful LCD screen specified in the size of 5.7 inches (small-screen, 320×240 lattice) or 10.4 inches (large-screen, 640×480 lattice). There are nine alternative models giving the options of 4-channel, 6-channel, 8-channel, 10-channel, 12-channel, 16-channel, 20-channel, 24-channel and 32-channel inputs. The standard model (small-screen) has 4, 6, 8, 10 and 12 input channels (16 at most) and alarm output is designed to trip a standard relay. A small-screen standard EN880C has 12 independent relay trips, and a large-screen one has 16 independent relay trips. You can define the relationship between all alarm relays and channels through the setup procedure.

Customized products can be provided with additional functions as required by you. Additional features include: PID control (including fixed value control, switch control and process control), rotation speed and frequency measurement, productive capacity cumulation and correlated trend analysis. Our ability to add functions allows ENVADA to customize EN880 instruments to your unique process recorder requirements in a cost effective manner.

EN880 Model serial number mapping to technical specification:



Note: channels are divided into input channels (for access signals, also known as analog channels or physical channels) and computation channels (also known as virtual channels). Small-screen products may have 4, 6, 8, 10 and 12 input channels (16 at most); large-screen products may have 4, 6, 8, 10, 12, 16, 20, 24 and 32 input channels. The total number of input channels and computation channels is more than 48 for both large-screen and small-screen products.

Classified models of customized EN880C products

1. Special communication mode:

EN880C-X-XX/ CS: user defined communication protocol and data format

2. Special input signal:

EN880C-X-XX/ IF: pulse or sine signal input for measurement of frequency or rotation speed

EN880C-X-XX/ IS: switch input (active or passive)

EN880C-X-XX/ IN: non-standard signal input, i.e. dipole signal or large voltage (0- 100V) signal

EN880C-X-XX/ IT: non-standard thermal resistance input or thermocouple

signal input

3. Special output mode

EN880C-X-XX/ OI: 4-20mA PID output or transduced output via alarm terminal;

EN880C-X-XX/ OS: switch PID output, suitable for SSR control devices, via alarm terminal;

EN880C-X-XX/OP: Output via LPT;

4. Special alarm mode

EN880C-X-XX/ AM: channel multi-level alarm output mode (At any warning condition)

5. Special flow compensation algorithm

EN880C-X–XX / QX: flow compensation by user specified compensation algorithm

6. Special range limits

EN880C-X –XX / SA: Pt100 accurate measurement between 0°C and 100°C, maximum error < 0.03°C

7. Special power supply mode

EN880C-X – XX / P1: 100V AC power supply

8**.** Other Special Functions:

According to the customers' requests, ENVADA can produce the EN880Cs with specific functions in the possible shortest time. When placing the purchase order, you should specify the Special Functions you requested to ENVADA, and some special EN880 products used before will continue in service in order to facilitate installation and operation and your understanding is expected.

Note:

1. You may choose more Special Functions that don't conflict with each other, for instance, EN880C-S-08/ IF/ OI refers to small-screen 8-channel EN880C process recorder with pulse or sinusoidal signal input, and 4-20mA current output. It

should be made clear the number of channels for pulse and sinusoidal input, the number of channels with 4-20mA current output, transduced output or PID adjusted output and occupancy of alarm terminal for current output.

2. Contact Envada or local office if you have any doubts as to product model selection.

1.2 Technical indicators

Main technical parameters (2-1)

Product model / Item description		EN880C-X-04	EN880C-X-06	EN880C-X-08	EN880C-X-10	EN880C-X-12	EN880C-X-16	EN880C-D-20	EN880C-D-24	EN880C-D-32
Input Channel	Channel number	4	6	8	10	12	16	20	24	32
	Signals	Voltage: 0-10mV, 0-20mV, 0-5V, 1-5V, 0-10V, 1-10V Current: 0-10mA, 4-20mA, 0-20mA Thermal resistance: Pt100, BA2, BA1, Cu100, Cu50, Cu53, Pt50 Thermocouple: S, R, B, K, N, E, J, T, WRe3- WRe25, WRe5 -WRe26, EA2								
	Power supply to sensor	24VDC, 30mA (excluding the last 2 channels of EN880C-S-12 and EN880C-X-16 and channel 15 and channel 16 of EN880C-D))								
	Filter times	0-10 times								
	Measuring range	Customized setup (excluding thermal resistance and thermocouple)								
	Channel's title	Customized setup								
	Signal's unit	Customized setup								
Screen display	Basic display mode	bar chart, digit, horizontal graph, vertical graph, recall, circular diagram, screen configuration, alarm record, operating information and flow record								
	Channel for display	Customized setup								
	Color of the graph & bar chart	Customized setup								
	Cyclical screen display period	1-1800 sec								
	Cyclical channel display period	1-60 sec								
	Upper and lower display limit	Customized setup								

	Display proportional factor		0.001-1000
	Graph shift time interval		1-399 sec
	Bar chart refresh time interval		1-399 sec
	Sleep mode time		1-499 min (0 for cancel)
	Recall display mode		Horizontal graph recall with cursor and recall time is configurable
Basic precision	Voltage:		(0-10mV, 0-20mV)±0.02mV
	Voltage:		(0-5V, 1-5V, 0-10V, 1-10V)±0.15%
	Current:		±0.15%
	Thermal resistance:		±0.15%
	Thermal resistance	S, R	±0.15%, ±4°C when below 100°C
		B	±0.15%, no guarantee for precision when below 300°C
		K, N, E, J, T WRe3-WRe25 WRe5-WRe26 EA2	±0.15%
	Recall accuracy		16- bit
	Communication accuracy		RS232/RS485: 14-bit; Ethernet: 16-bit
	Cold junction compensation precision		±1℃

Main technical parameters (2-2)

Item description \ Product model		EN880C-X-04	EN880C-X-06	EN880C-X-08	EN880C-X-10	EN880C-X-12	EN880C-X-16	EN880C-D-20	EN880C-D-24	EN880C-D-32
	Storage medium	40M ram disk inside and USB disk outside								
	Recording interval *	0.2 second- 30 minutes						0.5 second- 30 minutes		
	Recording period when interval is 10 seconds	10000h	6600h	5000h	4150h	3300h	2500h	2050h	1600h	1250h
	Data download	Auto, manual								
	Alarm type	Upper and lower limit, upper limit and danger, lower limit and danger, upper& lower limit and danger								
	Return difference warning	Customized setup								
	Vibration rate warning	Customized setup								
	Alarm limits	Customized setup								
	Number of alarm relays	small-screen: 12, large-screen: 16								
	Relay distribution	Customized setup								
	Capacity of contact	1A/24VDC,1A/220VAC								
	Contact type	Customized setup								
Flow	Flow channel selection	Random								

	Temperature and pressure compensation channel	Random	
	Communicate mode	RS232, RS485, Ethernet	
	Baud rate	1200, 2400, 4800, 9600, 19200, 38400 optional	
	Data length	8-bit	
	Stop bit	1-bit	
	Rated power voltage	220V±10%AC	
	Rated power frequency	50Hz±20%	
	power consumption of whole machine	25 W	30W
	Temperature	0- 40℃	
	Humidity	<80%	
Installation	Installation mode	Fixture, panel mounting	
	Starter size	small-screen 138×138mm, large-screen 200×200mm, error correction (0- 0.5)	
	External dimensions	small-screen 166×166×245mm, large-screen 288×288×248mm, error correction (0- 1.0)	