innovation with reliability

DOTECH
SENSING & CONTROL

CX9230 series®

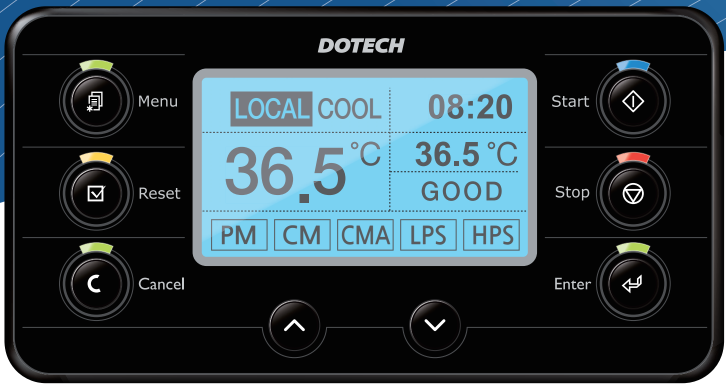
Smart Chiller Controller
CX9230

- High precision super PID control algorithm completed by autotuning technologies
- Accurate temperature measurement and rapid and elaborate noise filtering
- Powerful Trip Data Log(Max. 100)
- Various I/O controls
- Multilingual support for menus and parameters(Korean/English)

DOTECH, INC

Reciprocation/Scroll Compressor(Chiller, CDU)

Smart Chiller Controller **CX9230**



CX9230 series®

***The Wolrd Best High Precision Super PID Control Algorithm**
With super PID control algorithm developed by Dotech's innovative technologies, the precise ±0.1℃ control based on auto tuning is provided at unbelievable price. CX9230 transforms your chiller into a smart one.

***Dual Sensor Input Processing**
Dual sensors culminated by Dotech's temperature control technologies and knowhows measure the inlet and outlet temperatures and remove the noise rapidly and elaborately. Sensored temperatures set according to each proportion enables an ideal temperature control.

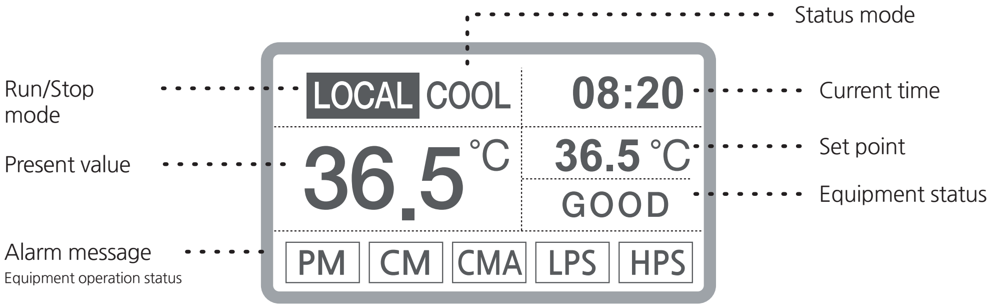
*** Powerful Trip Data Log**
Like DX Series, CX has a powerful trip data log. Up to 100 events can be traced and operators can handle the situations flexibly and exactly.

*** Various Analog Outputs**
2-channel analog outputs(4~20mA) are for heating/cooling control and can be applied to computed heating/cooling or condenser fan control. SSR control output can be set easily.

*** Multilangual Support**
Multilanguages are supported(Korean and English).

***Flexible and Reasonable Choice at Competitive Price**
Depending on the requirements and applications, the desired one can be selected among the specified models.

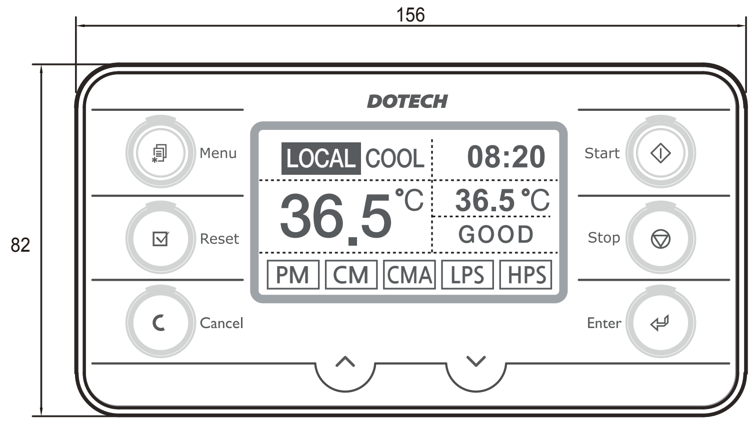
Front layout

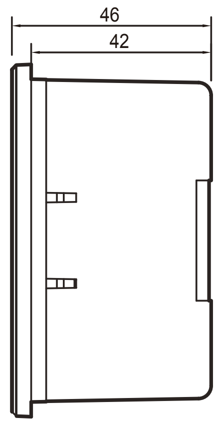


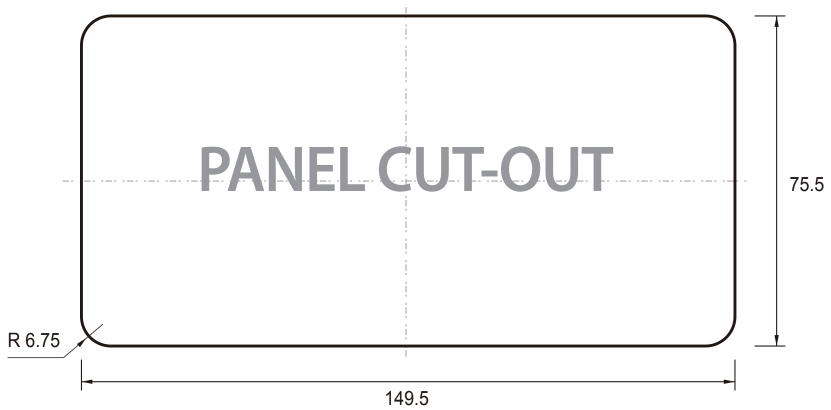
■ Specifications

		CX9230C-L1	CX9230C-L	CX9230C-M	CX9230D-V
Power		24Vac, 50/60Hz			
Power Consumption		MAX 20VA			
Digital	Input	8EA(1 Common)			
	Output	4P relay outputs		8P relay outputs	
Analog	Input	2P temperature sensors, 2P 4~20mA			
	Output	–	–	–	2P 4~20mA or SSR
RTC (Real Time Clock)		–	O	O	O
PID control logic		–	–	O	O
Communication (MODBUS RTU / RS485)		–	–	–	O
Electrical Connection		Screw terminal			
Display / Button		WIDE LCD(128X64) / TACTILE BUTTON			
Operating Condition		–10~50℃(Humidity 90%RH or less)			
Storage Condition		–20~60℃(Humidity 90%RH or less)			

■ Dimensions





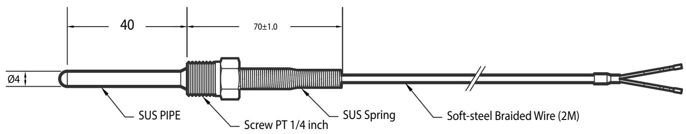


(unit: mm)

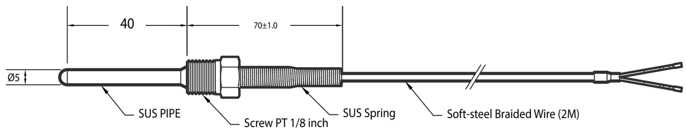
■ Accessories

Temperature sensor

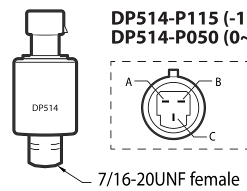
DPR-TH01-S4D40L*1/4*2M (NTC5Kohm,1%)



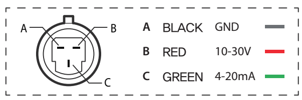
DPR-TH01-S5D40L*1/8*2M (NTC5Kohm,1%)



Pressure sensor

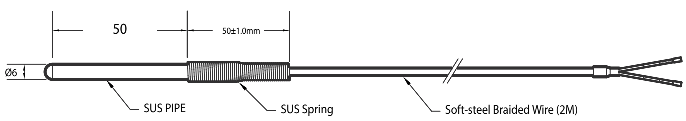


DP514-P115 (-1~15bar)
DP514-P050 (0~50bar)



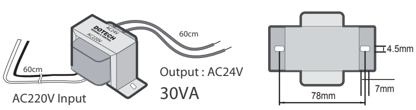
Discharged gas temperature sensor

DPR-TH02-P6D50L*2M (NTC 10Kohm, 1%)

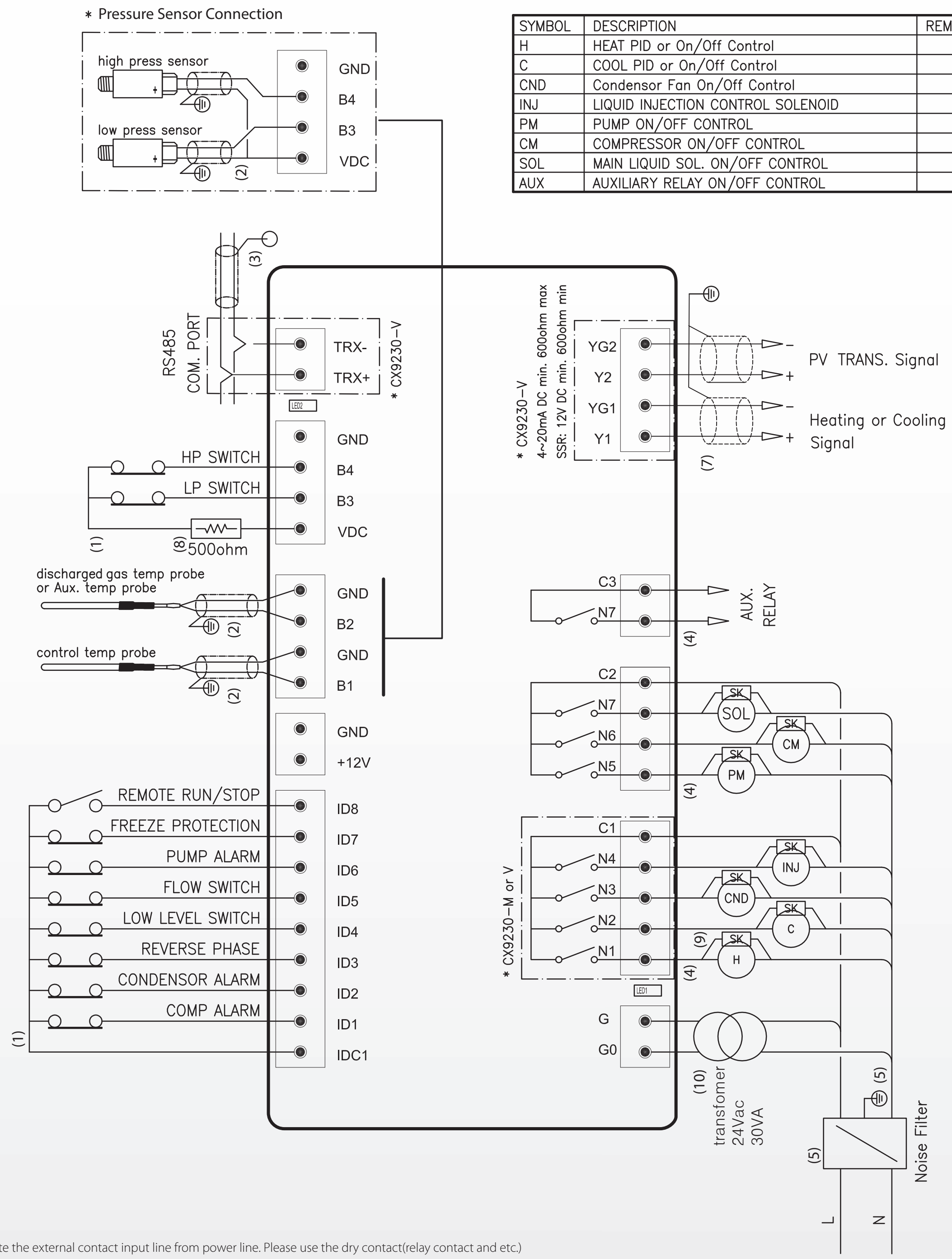


Power trans

24069001



■ Wiring Diagram



SYMBOL	DESCRIPTION	REMARK
H	HEAT PID or On/Off Control	
C	COOL PID or On/Off Control	
CND	Condensor Fan On/Off Control	
INJ	LIQUID INJECTION CONTROL SOLENOID	
PM	PUMP ON/OFF CONTROL	
CM	COMPRESSOR ON/OFF CONTROL	
SOL	MAIN LIQUID SOL. ON/OFF CONTROL	
AUX	AUXILIARY RELAY ON/OFF CONTROL	

1) Please separate the external contact input line from power line. Please use the dry contact(relay contact and etc.) for external contact.
2) Please use the separate shielded wires for sensors.
3) Please use the dedicated cable(BELDEN9841 or higher) for communicatino line.
4) Please separate the AC cable and AC control line from a digital signal line or a sensor wire.
5) Please use a noise filter and it must be grounded.
6) Please use a spark killer for inductive load.
7) Please be cautious about polarity of 4~20mA/SSR output signal. The wrong connection may cause a failure.
8) Please use a resistance of 500ohm(over 1/4W).
9) If load resistance exceeds the relay capacity, please use an auxiliary relay.
If an auxiliary relay and a solenoid use the same load resistance, it may cause malfunction or failure of relay.
Please insert the protection devices for spark elimination in parallel for use.
For AC, please use a CR spark killer(0.1uF+120ohm).
For DC, please use a diode(1N4007).
10) Please use an 24Vac/30VA double wiring power transformer.
Allowable voltage is 18~27Vac.
When a power input is unstable, please use a 24Vac/1A power transformer.

※ Warning: To avoid EMI, please separate the sensor probes and the digital input signal cables from the cables to deliver load resistance and the power cable.
※ Warning: Please do not place the power cable including electric panel wiring and the signal cable in the same pipe.
※ Please use 2sq or higher wires for groudning and wire according to the third grouding(ground resistance 100ohm or less). Please wire the ground cable within 20m.
※ Please do the single point grounding from grounding terminal and do not wire across the grounding terminal.

※Specifications are subject to change without prior notice.