DIGIPRESSURE®
Digital multi pressure Gauge&Switch

MODEL : DPC-H1L2-50K

20140102(REV : 03)

▣ Specifications

- Item : **DIGIPRESSURE**®
- Supply Voltage: 100V~240V 10% 50-60HZ
- Current Consumption: 200mA
- Display: 3 Digit FND x 2 for HP & LP
- Pressure Ranges: -1.0 ~ 50.0Kgf/cm^2
  (Both Low & High)
- Output Contact Rating: SPDT 250V/ 3A
- Operating Temperature: -20~60℃ RH 60%
- Accuracy: 0.5%
- Method of Communication : RS-485 (Option)
- CURRENT OUTPUT
  (HIGH & LOW) 4-20mA (Option)

(Refrigerant Pressure,
Temperature Display Type)

▣ Configuration

- DPC-HL Body   - 1set
- Power Cable Assembly - 1set
- Bracket / Fixing Bolt - 1set
- User's Guide

▣ Model selection & Option

DPC-	HL-	CM-	AH / AL
		C : Communication OPTION (RS-485) CM : Modbus	A : Current OPTION (4~20mA) AH : High AL : Low AHL : HIGH /LOW

Pressure sensor 2 (low pressure / high pressure)
- **Hermetic reciprocating / screw / scroll type chiller control**
- **Pressure points, high pressure fan control points, one point**
- **Low ON/OFF, High Pressure OFF delay timer**

MODEL : DPC-SERIES

- **Default input value unit 0.1 Kgf/cm^2 pressure**
- **Option to pre-configure unit of pressure (kgf/cm^2, Mpa, bar) when ordering**
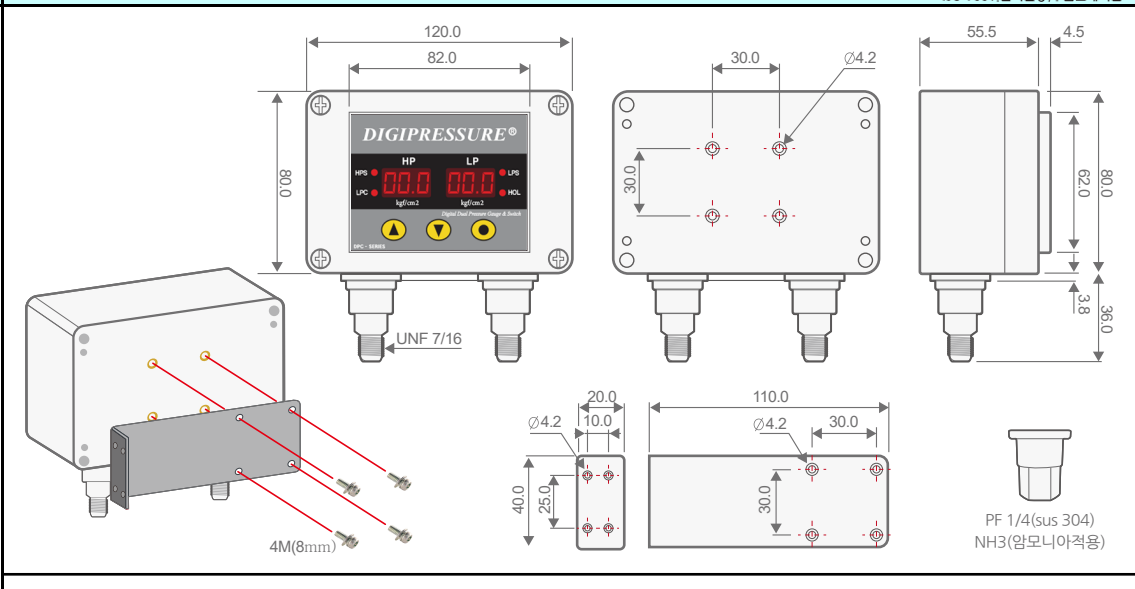- **Pressure range: -1.0 ~ 50 Kgf/cm^2**

▣ Caution for usage

1. The point of contact of alarm signal for High Pressure can be set from either manual Mode or Automatic Mode.
2. When applying the power current, install a breaker or the rating fuse as a circuit protector.
3. Use a Capillary Tube when applying pressure, (The sensor for HP Gas may be damaged by a flash high pressure, so must install a reducer, like a capillary tube.)
4. Overload at the point of contact of output power may lead to malfunction, so please use magnetic or relay switch (Under Rated 2A) (In case of the AC power control relay contacts, Spark Killer should be installed together with Relays.)
5. Select proper locations and methods for installation to prevent short circuit and other damages caused by rain or water whilecleaning. (Warranty will not be provided if the equipment is used in a manner not specified by the manufacturer)
6. Avoid areas of direct sunlight, moisture, high temperatures, condensation, when installing and be careful to pin down the connecting part firmly (Pressure Sensor is a emiconductor chip and is suspectible to damage)
7. Plastic case is ABS. Be careful to avoid when installing. When using tools such as screwdriver do not apply too much pressure or the display may get damaged.
8. Be careful not to let oil drip into the device. It may cause malfuncation and damage. Wipe away oil before start using.

※ Specifications, measurements and details outlined in this manual can change without notice.

▣ Caution for safety ⚠

Caution

If this product is to be used in hazardous setting such as sites using nuclear power and areas of medical treatment and transportation where injury and property damage may occur, please use it after installing dual safety devices to prevent loss of damage from accident caused by fire and bodily harm.

Attention

1. Please install and use it according to the instruction in manual.
2. Please finish the connection, inspection and repair of electric wires before connecting to power source.
3. Only, authorized engineers can modify and improve the goods.
4. Please use it in the recommended range of performance.
5. Please use terminals of In/Out power without insulation covers carefully.
6. Please connect wires and terminals according to their matching colors.
7. Please do the cleaning with a dry towel, and do not use industrial cleanser.
8. Please consider the location for when installing the product, avoid areas that accumulate inflammable and explosive gas, and high temperature areas with moisture and sunshine.
9. Please install carefully to prevent dusts and another things from entering into the product.
10. Please make a cover for outdoors.
11. Install a screen and add a noise filter, in the following settings: Where there is a high occurance of inductive noise, a inverter or SCR is set up, and where high voltage wires pass through.

▣ External Dimension

ISO 9001,벤처인증,부품소재기업 IAF Venture CE

120.0
82.0
80.0
UNF 7/16
30.0
Ø4.2
30.0
55.5
4.5
80.0
62.0
36.0
3.8
4M(8mm)
Ø4.2
20.0
10.0
40.0
25.0
110.0
Ø4.2
30.0
30.0
PF 1/4(sus 304)
NH3(암모니아적용)

▣ Function documentation

HPS : high pressure setting value, Alarm contact output of the high pressure side of the compressor discharge. Automatically return to setting and manually return. (H-A) set

Hdt : high pressure alarm delay timer HPS alarm delay set from 1 to 200 seconds momentary high pressure Vibration, high pressure switch OFF delay timers.

HPC : compressor, high pressure FAN driving pressure value.

HIF : HPC values for fan differential pressure value input mode. Related to the compressor and condenser Discharge pressure sensor switch and the fan motor control.

LPS : low pressure set value input mode. Automatically return to compressor suction side pressure Control switch. Mode input the LP differential pressure values for

LIF : LPS values Compressor suction side pressure switch control.

Ldt : 0 to 200 at the beginning of low pressure delay timer. To prevent the hunting pressure switch ON delay timer.

H-A : Automatic and manual selection mode. H: Manual: A: Auto mode to choose one. HPS high pressure switch only.

GAS : refrigerant gas select mode. For refrigerant gas select mode by pressing the button is R-22,R23,R-134,R-404,R-407,R-410,R-507 as a display. Button is pressed, the corresponding rise in coolant temperature appears.

Add : setting serial communication bungee RS-485 (ordering optional) If you want to use the RS-485 communication port, you can use this mode. ModBUS the range 0 to 255 can be selected.

End : set shutdown mode, In the shut down mode (▲ or ▼ button is pressed, the setting is complete.)

System Special Features
* Her & Ler: pressure sensor range (-1.0 ~ 50.0 kgf/㎠) This feature in Grange-over pressure sensor error or one or more of the pressure measurement To protect the compressor function to prevent malfunction due to burnout . Type: Pressure Sensor Range escape when the alarm output.
* Pressure sensor breakage or short time , such as sensor failure alarm output. ● Do The Reset button .

※ *HPo* (high pressure) or *LPo* (low pressure), the pressure correction How to set : ● + ▲ button for 3 seconds to enter the calibration mode, AM HPo or flickering LPo FND: pressure compensation value display Pressure value displayed right FND: current pressure display (indicated by the second decimal place)

Correction method :
① ● button to calibrate the *HPo* (high pressure) or *LPo* (low pressure) for Choose.
② ▲ ▼ (up / down) to change the key you want to set the current pressure value So that the pressure is corrected .
③ After the calibration is complete , press ● KEY END --- mode with the ▲ or ▼ KEY Press and hold the ends with a buzzer rings .

LPd : low- delay time ON / OFF using the selection change

※ error alarm function: the sensor failure, signal lines open, short, or exceeds the range by Occurs, the system halts. (HPS alarm relay is ON, all other When the relay is OFF.), The corresponding pressure value displayed on the sensor FND display and error Pressure values at intervals of 0.5 seconds at a time, grind as the buzzer flashes 0.5 seconds Spacing rings. (Manual reset, if necessary)

▣ The Method for SET Mode

MODEL : DPC-H1L2-50K

▼ + ⊙ You can enter the Set DATA mode by pressing the ▼ (Down) button and the ⊙(mode) button Simultaneously for 2 seconds.

MODE	FUNCTION	RANGE	VALUE	Indicator	point of contact.
HPS	High Pressure Switch Setting Value	0.0~50.0	26.0	HPS	HPS: C-A,B
Hdt	High Pressure Switch Delay Time	0~200	0		
HPC	High Pressure Fan Switch Setting Value	0.0~50.0	15.0	HPC	HPC: C-A
HIF	High Pressure Fan Switch differential Setting Value	0.0~30.0	1.5		
LPS	Low Pressure Switch Setting Value	(-)1.0~50.0	3.5	LPS	LPS: C-A,B
LIF	Low Pressure Switch differential Setting Value	0.0~30.0	2.5		
Ldt	Low Pressure Alarm Delay Time	0~200	0		
H-A	Manual/Auto Return mode of HPS	H (Hold) / A (Auto Retrun)	H		
GAS	Gas Type	22,134,404, 407, 410, 507	22		
Add	RS-485 Communication Address	0~255	1	Available when communication (OPTION)	
End	End of Set up ⊙				

▲ + ⊙ You can enter the Set ENG mode by pressing the (Up) button and the ⊙ button Simultaneously for 2 seconds.

HPo	HP pressure value correction	-999~999	0	
LPo	LP pressure value correction	-999~999	0	
Hco	HP pwm Current output calibration	-45~45	0	OPTION
Lco	LP pwm Current output calibration	-45~45	0	OPTION
LPd	Low pressure switch-delay timer	OFF/ON	OFF	Delay TIME ON, OFF Available change
End	End of Set up ▲	---	---	---

High Pressure Alarm
If the current HP is more than the HPS Setting value, HPS Alarm Relay is ON the LED is ON. If lower than the (HPS Setting value), In case of auto return mode, HPS Alarm Relay is OFF automatically and the LED is OFF. If Manual Return mode, you need to reset manually by pressing the

HP FAN Operation
the current HP is more than the HPC Setting value, the HPC FAN Relay is ON and the LED is ON. If lower than HIF Setting Value, HPC FAN Relay is OFF automatically and the LED is OFF.
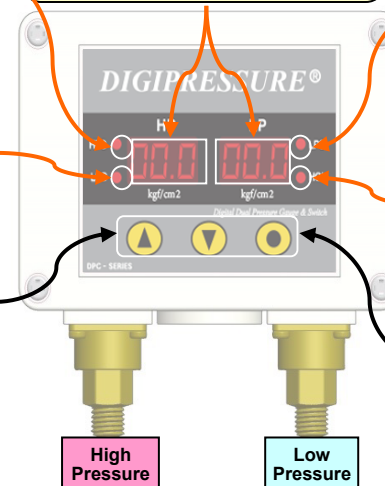
Display the Gas Temperature
Display the gas temperature by Pressing the ▲(Up) button. (According to pressing the button once, the Pressure and Gas Temperature is displayed by Alternating. If no key for 10 seconds, the display mode is returned to the Pressure display mode.)

- Sensor error display: 'HEr' (high pressure sensor error)
  'LEr' (low pressure sensor error)
※ error and a high-pressure alarm off function: sensor error or high-pressure alarm occurs ⊙ (if manual reset is required per mode) button pressed to return. Was restored to its normal state, only if (action)
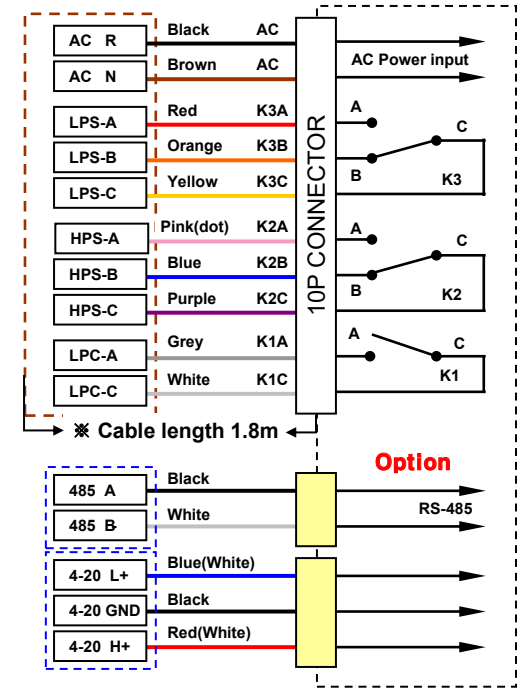
Display Current Pressure
Display the current High Pressure and Low Pressure value.

Alarm Signal for Low Pressure
If Current LP is more than the LPS Setting Value, the LPS Alarm Relay is ON and LED is ON. If lower than LIF Setting Value, LPS Alarm Relay is OFF automatically and LED is OFF.
over than the Set value in LPS Mode.

Display Manual/Auto Return mode
Display the Return Mode of HPS Alarm.
- Manual(Hold) mode (LED ON), Auto mode (LED OFF)
※ At the Set up Mode or the Gas temperature display mode, LED is blinking every 0.5 second.

Set up mode Buttons
see the Set up mode buttons described on the left side

Connection diagram of cables

AC R	Black	AC
AC N	Brown	AC
LPS-A	Red	K3A
LPS-B	Orange	K3B
LPS-C	Yellow	K3C
HPS-A	Pink(dot)	K2A
HPS-B	Blue	K2B
HPS-C	Purple	K2C
LPC-A	Grey	K1A
LPC-C	White	K1C

10P CONNECTOR

AC Power input

※ **Cable length 1.8m**

Option

485 A	Black	
485 B	White	RS-485
4-20 L+	Blue(White)	
4-20 GND	Black	
4-20 H+	Red(White)	

DIGIPRESSURE®

High Pressure   Low Pressure

DPC - SERIES