Bagsik®
www.bagsik.net

User manual of DMV 5000 inteligent digital pressure indicator

Bagsik Sp. z o.o.
ul. Toruńska 8, 44-100 Gliwice
tel: +32 334 0000, fax: +32 331 7520, office@bagsik.net, www.bagsik.net

Notes

⚠ **Dangerous** Attention Risk of Electronic Shock

When we connect the power, please do not touch AC wire to avoid shock

⚠ **Warning** This instrument is an open device, so when to make applications for the risk, Such as: they will cause harm and damage to other equipment, make sure to install security devices to automatic devices.

- You should carefully check the wiring is correct before Instrument power supply terminal, to avoid serious damage to instrumentation.
- Make sure to wiring, signal devices have access to correct and appropriate terminal; Pleases do not use any left terminal.
- This instrument is an open case, to be installed in a dust, humidity, shock and strong shocks from distribution box; Do not alter, disassemble the instrument.
- The instrument should be installed as far as possible away from the high voltage and electromagnetic interference region, to ensure stable and reliable instrument.
- Do not touch the meter power terminals or repair the body to avoid electric shock.
- Please avoid this harsh environment of the instrument:
  The dust and corrosive gases over the place;
  High humidity and high radiation areas;
  Strong vibration and strong impact of workplace.

Functional and technical specifications

DMV 5000 series intelligent digital pressure indicator is the production company to develop new industrial control instruments, which can completely replace the imported products of similar high-grade pressure indicator. Highly cost-effective, and can adapt to volatile network occasion. The pressure indicator appearance, complete functions, interference with excellent performance to ensure reliability of the system work.

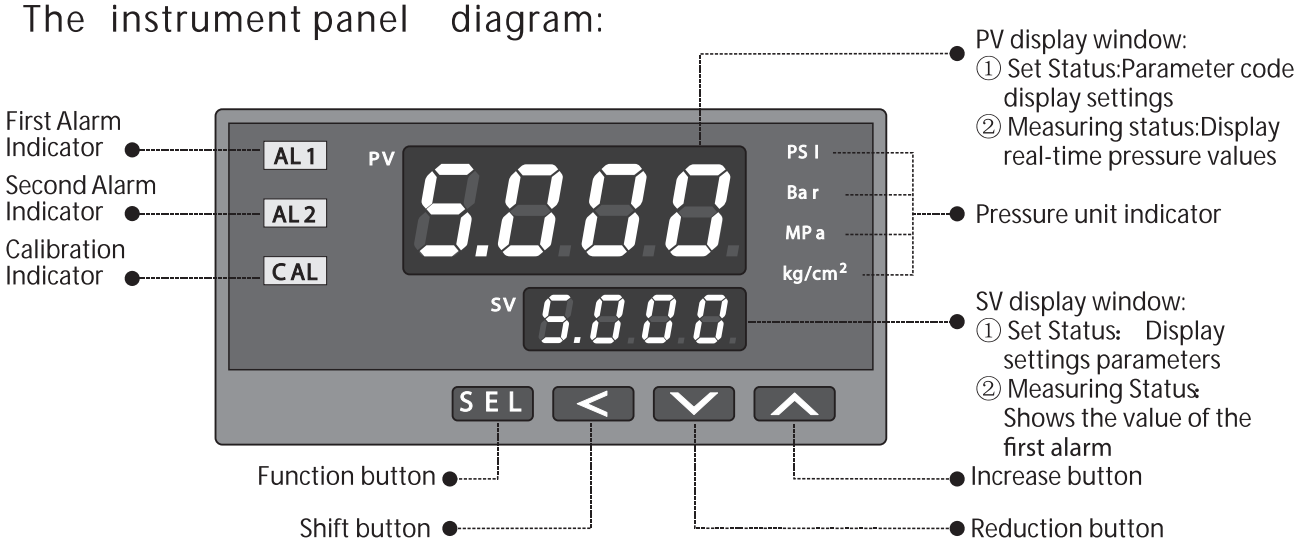
☆ Figures show bits: double-color 4;
☆ Within the resolution: 32000;
☆ External Resolution:
0001,0002,0005,0010 Panel Switch (power failure protection setting of ≥ 40 years);
☆ Nonlinear:
0.05% ± 1 word, 0.1% ± 1 word, 0.2% ± 1 word, 0.5% ± 1 word;
☆ Pressure Range: programmable options;
☆ Engineering units: MPa, psi, bar, kgf / cm2 programmable options;
☆ Decimal point location: Programmable;
☆ Alarm settings: Two programmable alarm settings;
☆ Relay contact output: 250VAC, 5A;
☆ Linear output:
0 ~ 10mA, 0 ~ 20mA, 4 ~ 20mA, 0 ~ 5V, 1 ~ 5V, 0 ~ 10V programmable options;
☆ Instrument Communication: RS485 interface (optional);
Mailing address: 0001 ~ 0255;
Communication baud rate 2400bps, 4800bps, 9600bps, 19200bps, 38400bps;
☆ Power supply: 85~ 265V AC;
☆ Ambient temperature: -10 ℃ ~ +85 ℃;
☆ Humidity: ≤ 80% RH;
☆ Continuous trouble-free working time: ≥ 50000 hours.

DMV 5000 User Instructions

Welcome to use DMV 5000 Series Intelligent pressure indicator from Bagsik Sp. zo.o. This manual details the functions of the form and use, please read carefully before use!

1. Instrument panel

1.1 The instrument panel diagram:



1.2 Indicator

DMV 5000Series Intelligent pressure indicator on the left panel contains two alarm lights, a calibrated light and four pressure unit lights on the right, its functions as follows:

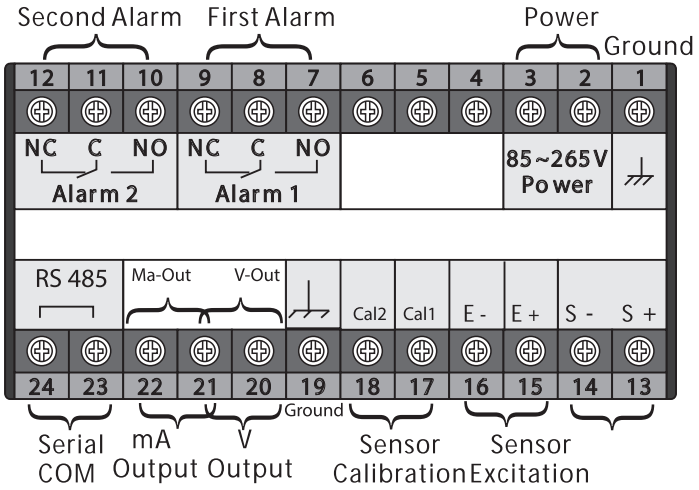
1) The first alarm indicator AL1: long light alarm light, no alarm light goes out;
2) The second alarm indicator AL2: long bright alarm light, no warning light goes out;
3) Calibration status indicator CAL: calibration of pressure indicator, the light starts flashing, the calibration end then the light off;
4) The unit of pressure indicator: programmable selection of the corresponding pressure, the corresponding length indicator light

1.3 Button

DMV 5000Series Intelligent Pressure indicator consists of four function keys, respectively, SEL function keys, shift key, to increase and decrease keys function keys as follows:

* SEL Function button: used to access the programming menu and set the points and long by two kinds of manipulation by way of ;
* < Shift button;
* ∨ Reduction button;
* ∧ Increase button;
* SEL + < Clear button: while pressing the 2 keys 5 seconds to restore the pressure to zero;
* SEL + ∨ Restore button: the pressure value after the error is cleared, pressing two keys simultaneously for more than 5 seconds to restore pressure to zero;
* SEL + ∧ Calibration key: see page 10 of the calibration instructions;

2. Instrumentation wiring



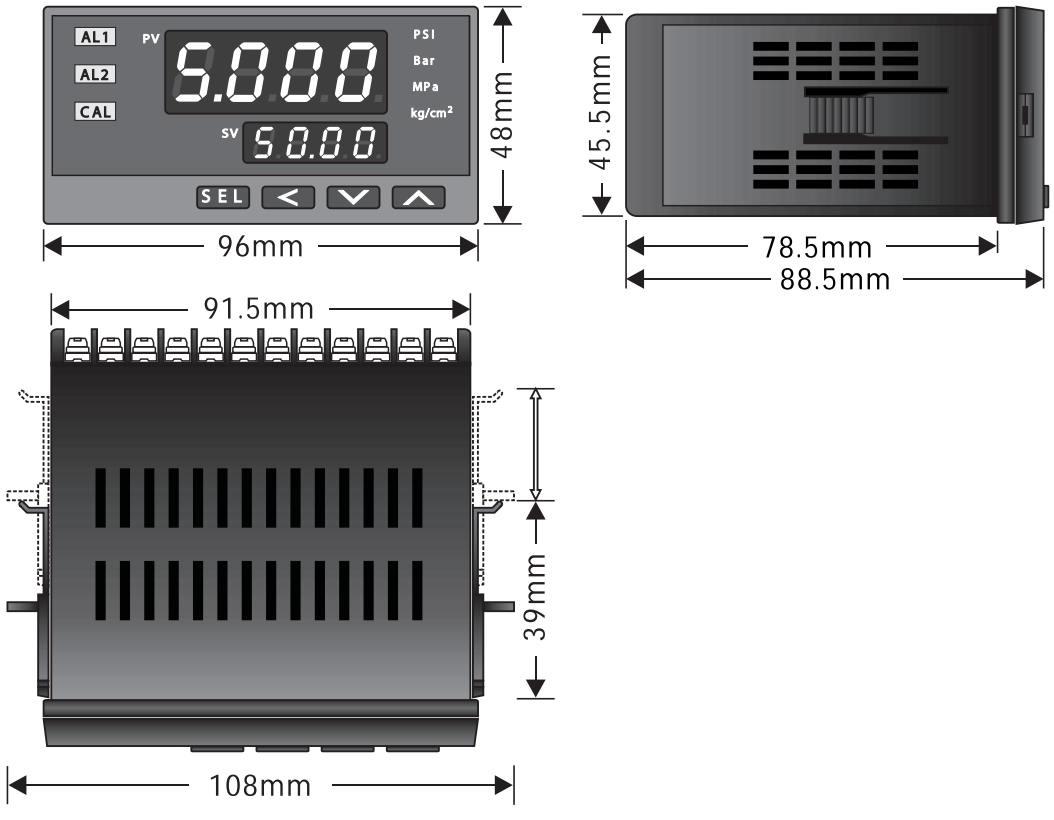
Alarm Terminals Description:

First Alarm Terminal Blocks	NC	Relay normally closed terminal
	C	Relaypublic-side
	NO	Relay normally opend terminal
Second Alarm Terminal Blocks	NC	Relay normally closed terminal
	C	Relaypublic-side
	NO	Relay normally opend terminal

Transducer Terminals Description:

Sensor Signal	S+	Sensor signal S+
	S-	Sensor signal S–
Sensor Excitation	E+	Sensor Bridge PowerE+
	E-	Sensor Bridge PowerE –
Sensor Calibration	Cal1	80%FSO Calibration 1
	Cal2	80%FSO Calibration 2

3. Overall dimension



4. Parameter setting

4.1 The three working states of pressure indicator :

DMV 5000series pressure indicator,there are three working states:"Measure working state", "Fast set-up working state" and the"System set-up working state".After power on both the pressure indicator into the "Measure working state."

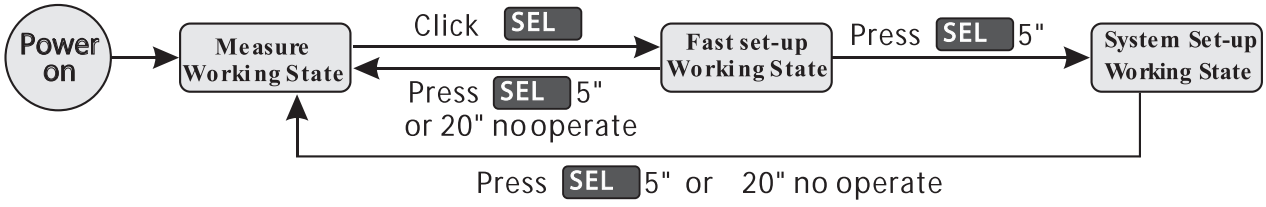
4.2 F ast set-up working state operating :

Boot into measure working state, click SEL key to enter the fast set-up working state. This state can set the first and second alarm values. PV window display alarm character; SV window display set-up alarm value, digit shines through th < key to set the desired alarm value. Setup is complete, click SEL key of 5 seconds to return to Measure working state.

Fast set-up working state
Set the first alarm value

Fast set-up workingstate
Set the second alarm value

4.3 S ystem set-up working state operating:

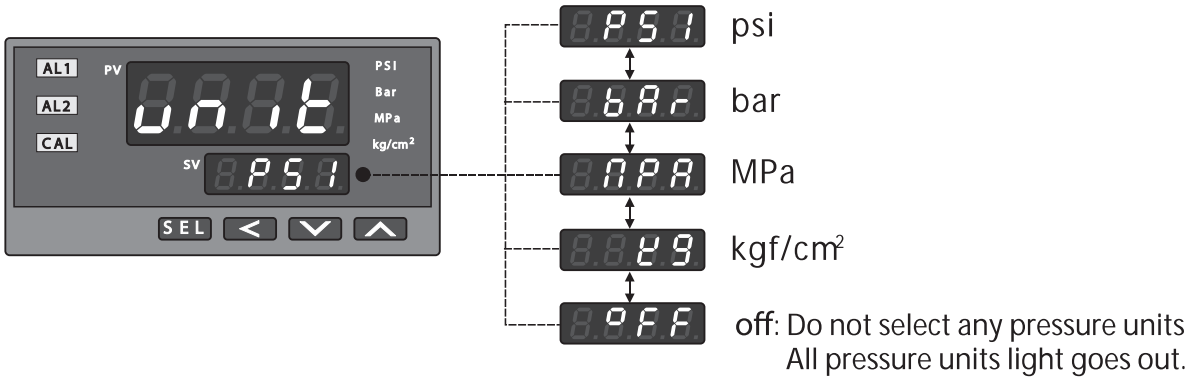


From the measure working state by clicking SEL key into the fast set-up working state. (SV window last digit flashing). Inthe fast set-up working state press SEL key more than 5 seconds into the system set-up working state.

Fast set-up working state
Set the first alarm value

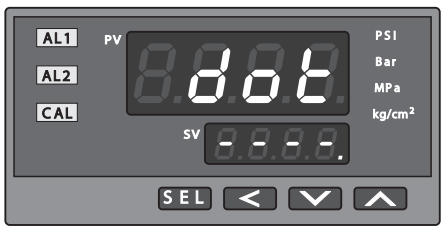
System set-up working state
Pressure unit setting

4.3.1 Pressure unit setting:



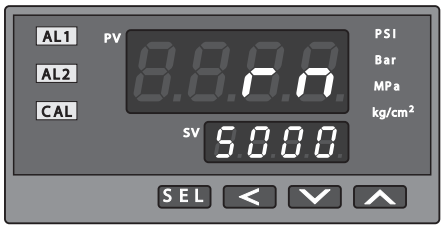
By clicking key and key select the desired unit of pressure. Click SEL key to confirm. Corresponding pressure unit lights lit, and enter the decimal place setting item.

4.3.2 Decimal place setting:



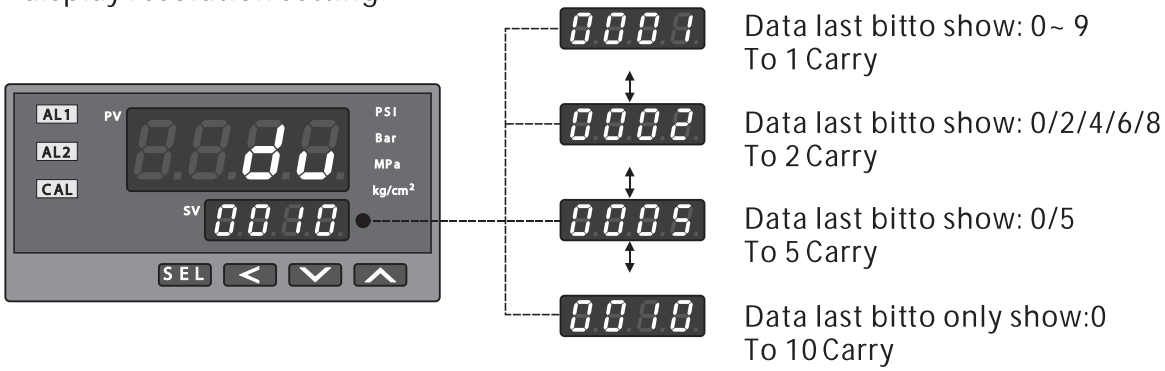
By clicking or key to select the desired decimal place. Click SEL key to confirm. And enter the pressure range setting item.

4.3.3 pressure range setting:



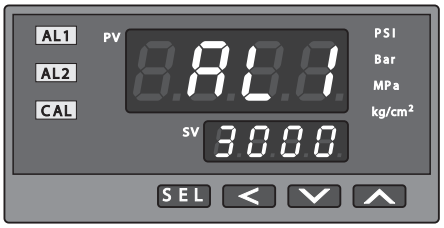
By clicking or key to select the desired pressure range. Click SEL key to confirm. And enter the display resolution setting item.

4.3.4 display resolution setting:



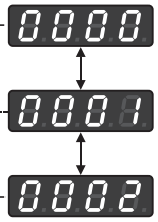
By clicking or key select the display resolution of pressure. (Recommended selection 0010). Click SEL key to confirm. And enter the first alarm pressure value setting item.

4.3.5 First alarm pressure value setting:



By clicking < ∨ ∧ key to set the first alarm pressure value. Click SEL key to confirm. And enter the first alarm way setting item.

4.3.6 First alarm way setting:



Turn off alarm;

Lower than the alarm pressure value set the alarm;

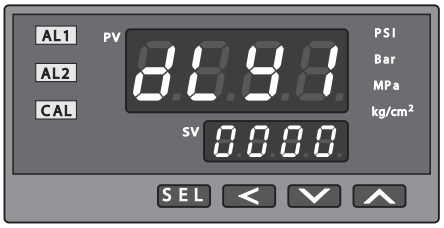
Higher than the alarm pressure value set the alarm;

"0001" way code Note: When measuring the pressure is lower than the alarm pressure value. AL1 alarm indicator lights. 7 , 8 terminals conduction; 8, 9 terminals disconnect. When measured pressure value is higher than the alarm pressure value, AL1 alarm indicator is off. 7,8 terminals disconnect; 8,9 terminals conduction.

"0002" way code Note: When measuring the pressure is lower than the alarm pressure value, AL1 alarm indicator is off. 7 ,8 terminals disconnect; 8 , 9 terminals conduction. When measured pressure value is higher than the alarm pressure value, AL1 alarm indicator lights. 7, 8 terminals conduction; 8 ,9 terminals disconnect.

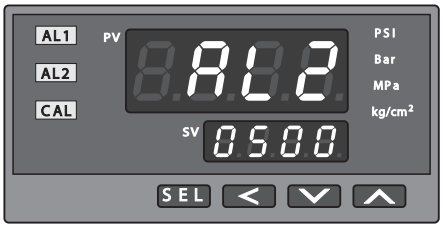
By clicking ∨ or ∧ key select the first alarm way . Click SEL key to confirm. And enter the second alarm pressure value setting item.

4.3.7 First alarm pressure hysteresis band setting:



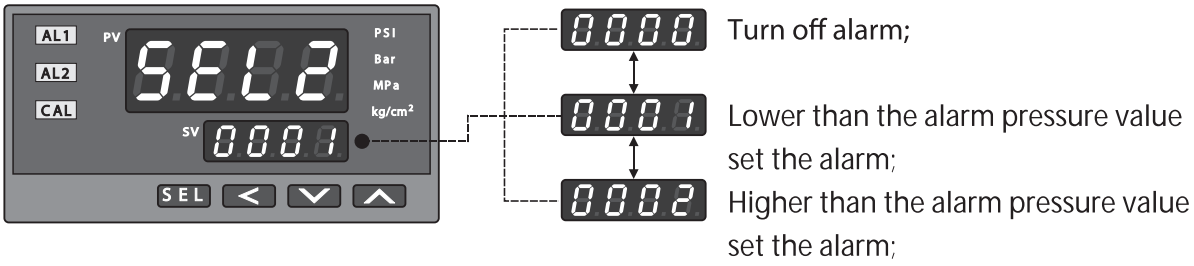
By clicking < ∨ ∧ key to set First alarm pressure hysteresis band. Click SEL key to confirm. And enter the second alarm pressure value setting item.

4.3.8 Second alarm pressure value setting:



By clicking < ∨ ∧ key to set the second alarm pressure value. Click SEL key to confirm. And enter the second alarm way setting item.

4.3.9 Second alarm way setting:

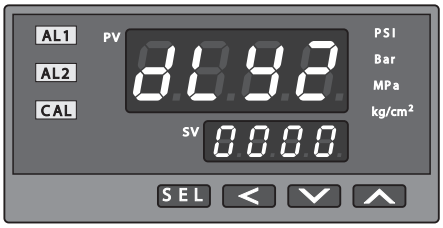


"0001" way code Note: When measuring the pressure is lower than the alarm pressure value. AL1 alarm indicator lights. 10,11 terminals conduction; 11, 12 terminals disconnect. When measured pressure value is higher than the alarm pressure value, AL1 alarm indicator is off. 10,11 terminals disconnect; 11,12 terminals conduction.

"0002" way code Note: When measuring the pressure is lower than the alarm pressure value, AL1 alarm indicator is off. 10,11 terminals disconnect; 11,12 terminals conduction. When measured pressure value is higher than the alarm pressure value, AL1 alarm indicator lights. 10,11 terminals conduction; 11,12 terminals disconnect.

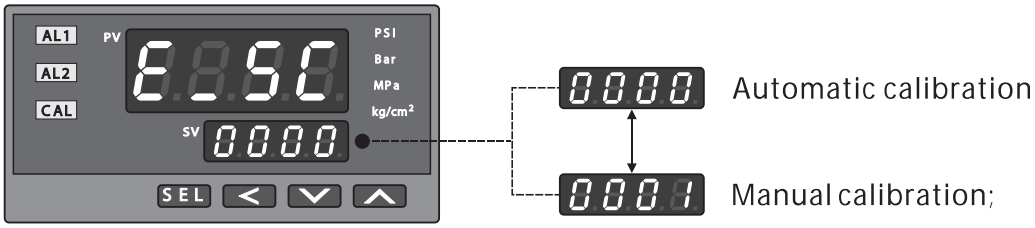
By clicking ∨ or ∧ key select the first alarm way. Click SEL key to confirm. And enter the second alarm pressure value setting item.

4.3.10 Second alarm pressure hysteresis band setting:



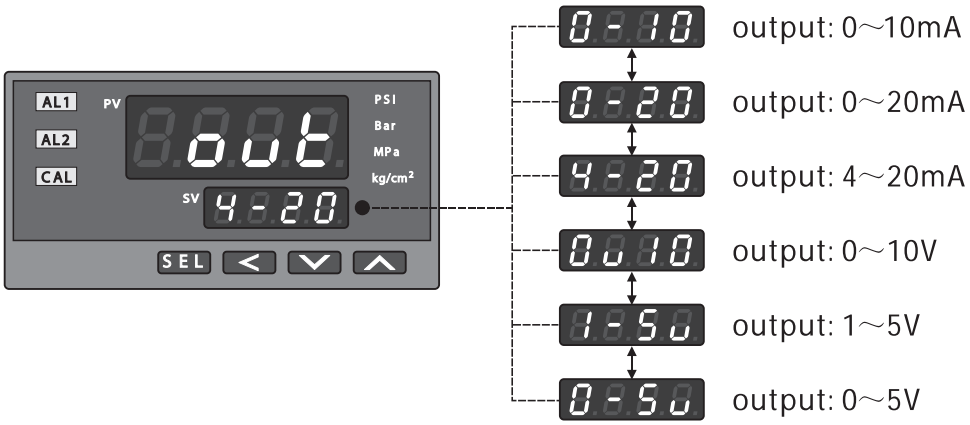
By clicking < ∨ ∧ key to set First alarm pressure hysteresis band. Click SEL key to confirm. And enter the Calibration way setting item.

4.3.11 Calibration way setting:



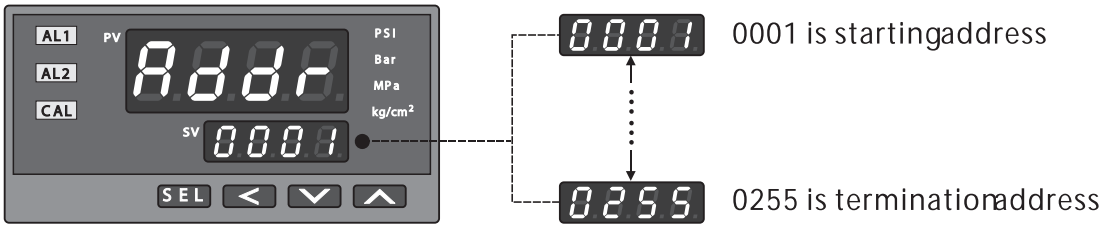
By clicking ▼ or ▲ key select the Calibration way. (Recommended selection 0000). Click SEL key to confirm. And enter into the output signal setting item.

4.3.12 Output signal setting：



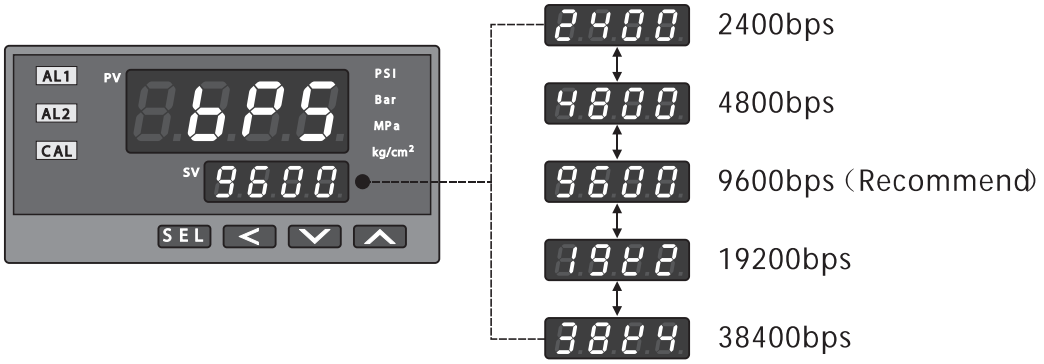
By clicking ▼ or ▲ key select the output signal . Click SEL key to confirm. If the pressure indicatorno communication function, then enter the key lock setting item (see 4.3.15). If the pressure indicator with a communication function, then enter the communication address setting item.

4.3.13 Communication address setting (Optional):



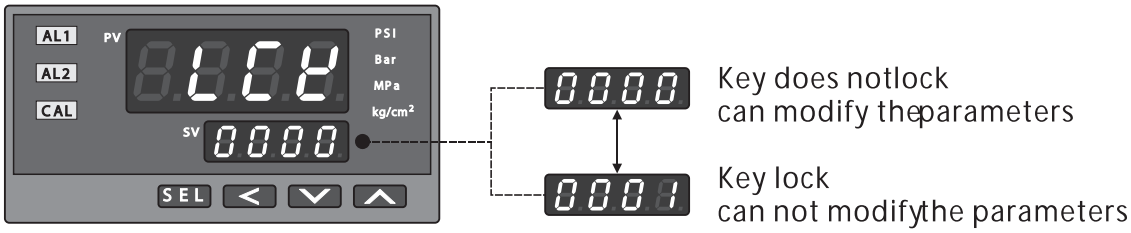
By clicking ◀ ▼ ▲ key select the communication address . Optional address: 0001 ~ 0255 . Click SEL key to confirm. then enter the Communication baud rate setting item.

4.3.14 Communication baud rate setting(Optional):



By clicking ▼ or ▲ key select the Communication baud rate. (Recommended selection 9600). Click SEL key to confirm. And enter the key lock setting item.

4.3.15 Key lock setting:



By clicking ▼ or ▲ key to select whether the indicator key lock, Click SEL key to confirm. And back enter the pressure units setting item(back 4.3.1).

4.4 System setting menu table：

Item	Name	Options	Explain	Initial V alue
unit Unit	Pressure Units Setting	psi bar MPa kgf/cm² off	Choice of fourpressure units and provide close pressure unit options.	By matching mass Sensor range Or According to theuser Demand set
dot dot	Decimal Place Setting	----. ---.- --.-- -.---	Decimal Position Setting	By matching mass Sensor range Or According to theuser Demand set
rn RN	Pressure Range Setting	1000、1500、2000 2500、3000、3500 4000、5000、6000 7000、7500、8000 9999	According to supporting sensor range, the pressure unit and decimal position setting.	By matching mass Sensor range Or According to theuser Demand set

(To be continued on next table)

4.4 System setting menu table：

(Connected to thebefore table)

Item	Name	Options	Explain	Initial Value
 dv	Display Resolution Setting	0001 0002 0005 0010	0001: the end of the display:0 ~ 9 0002: the end of the show:0,2,4,6,8 0005: the end of the show:0,5 0010: the end of the show only: 0	0010
 AL1	First Alarm Value Setting	0000 ～ 9999	According to user requirementssetting	80% RN
 SEL1	First Alarm Way Setting	0000 0001 0002	0000: Turn off alarm 0001: Pressure value less than setting Alarm 0002: Pressure value more than setting Alarm	0002
 DLY1	First Alarm Hysteresis Band Setting	0000 ～ 0200	According to user requirementssetting	0000
 AL2	Second Alarm value Setting	0000 ～ 9999	According to user requirementssetting	RN 20 %
 SEL2	Second Alarm way Setting	0000 0001 0002	0000: Turn off alarm 0001: Pressure value less than setting Alarm 0002: Pressure value more than setting Alarm	0001
 DLY2	Second Alarm Hysteresis Band Setting	0000 ～ 0200	According to user requirementssetting	0000
 E_SC	Calibration Way Setting	0000 0001	0000: Automaticcalibration method 0001: Manual calibration method	0000
 OUT	Output Signal Setting	0~5V 1~5V 0~10V 0~10mA 0~20mA 4~20mA	Provide 6 typesstandard output signal users todemand their own programming setting.	According to the user Demand set
 Addr	Communication Address setting (Optional)	0001 ～ 0255	Provide 1~255 address programmable setting (optional)	0001
 bps	Communication Baud Rate Setting (Optional)	2400 4800 9600 19200 38400	Provide 5 types standard baud rate programmable setting (optional)	9600
 LCK	Key Lock Setting	0000 0001	0000: Key not lock, can modify the parameters 0001: key lock, can not modify the parameters	0000

5 Pressure indicator calibration operation

5.1 Automatic calibration of pressure indicator operation:

Automatic calibration before the unlock key(the "LCK" parameter set "0000"), and calibration methods foautomatic calibration (the "E_SC" parameter set "0000").

Guarantee melt pressure transducer is working in environment temperature and working pressure is zero.

The melt pressure transducer and intelligent pressure indicator according to the instruction to connect well,and also connected the 220V AC power supply. Entered measurement instrument self-test state,then can be automatically calibrated, the concrete operation is as follows:

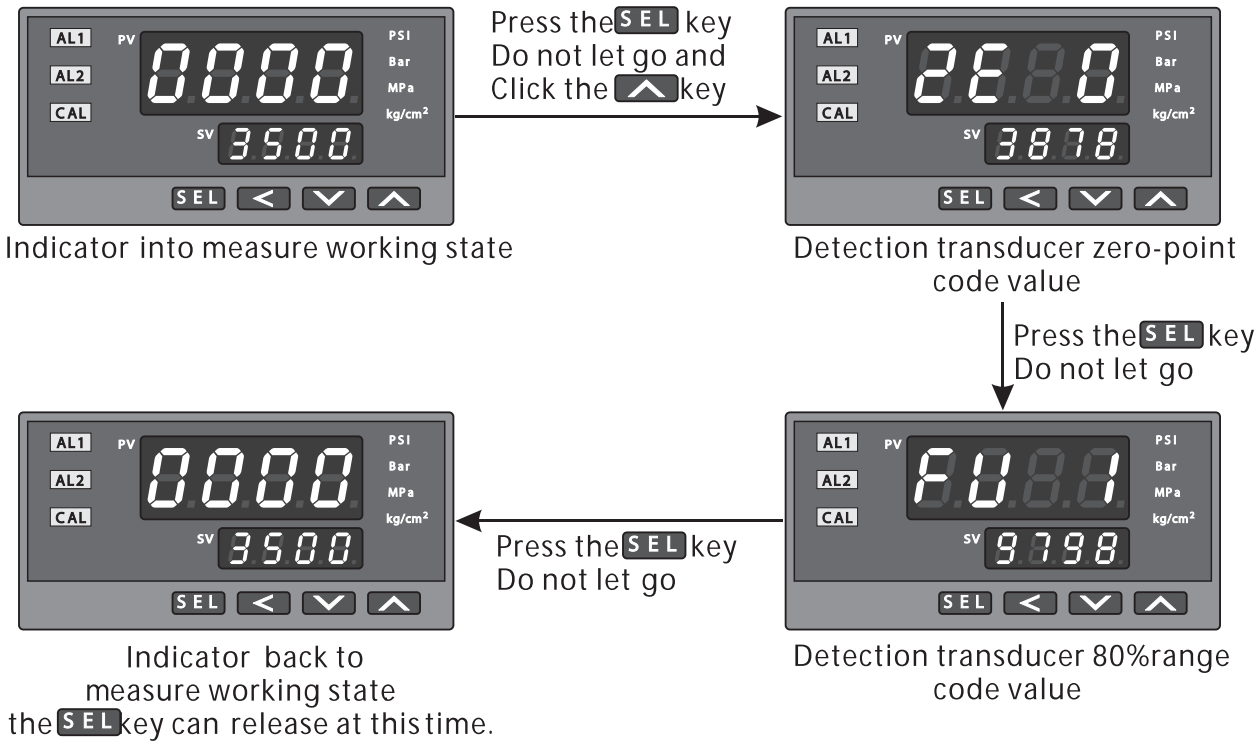
Click down the SEL key while you click the ^ key , PV window display ZERO , SV values in the window display "from 2000 to 6000" between, this value for the pressure transducer zero-point code value, while the CAL calibration-light flashes.

After about 5 seconds, PV window shows FUN1 or FUN2. SV values in the window display "16,000 ~ 25,000" between(ten thousand's place in PV window at the end of display). This number is the pressure transducer 80% range of the code values. Waiting in the calibration process of SEL key can not let go.

After about 5 seconds, PV window shows 0000 Pressure transducer calibration information has been written to indicator at this time at the end of the automatic calibration operation, calibration light goes out. Throughout the calibration process SEL key and do not let go. (If this process does not show that the 80% range value, or this value error is too large.please re-operation of the automatic calibration, and check either the indicator range settings are correct or pressure transducer and indicator connection are correct.)

Then, release the SEL key, the indicator is into the Fast set-up working state. Click the SEL key twice, the indicator will be back to measuring working state

Automatic calibration operation is complete.



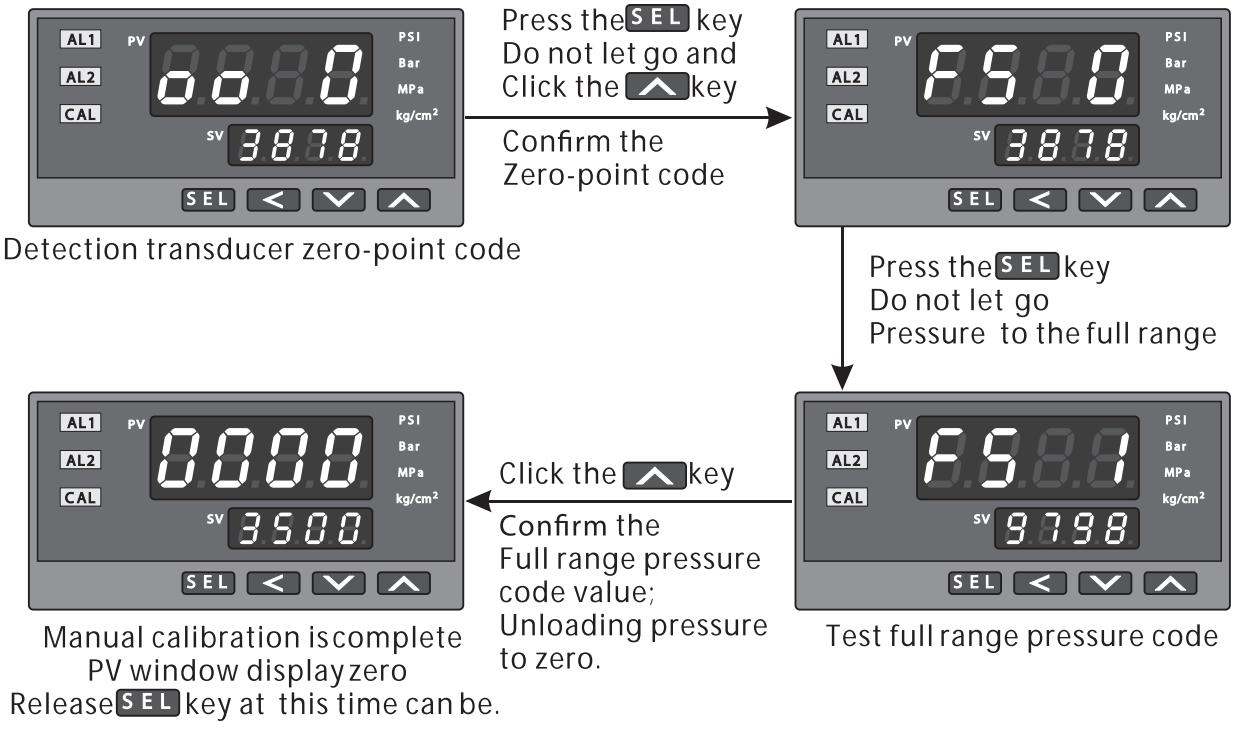
5.2 Manual calibration of pressure indicator operation:

This function is for pressure transducer without calibration signal or calibration signal error too large that can not adjust.Before manual calibration we should unlock the key (the "LCK" parameter set "0000"), and calibration methods for the manual calibration (the "E_SC" parameter set "0001"). Guarantee pressure transducer probe-pressure is zero.

First , Installing the pressure transducer to the provide standard pressure source device. Then connnect the pressure transducer and pressure indicator according to the instruction to connect, and then connected the 220V AC power. Indicator power-on self - test into measure working state, then in accordance with the operation entering to system parameter setting state (4.3 - page 3). The range is set to the corresponding pressure transducer range, and then can be manually calibrated, the concrete operation is as follows:

① Press the SEL key while you click the ^ key, PV window dis play oo0 SV window value shouldbe between" 2000 ～ 5000 " , this value is the pressure transducer zero-point's code value, while the CAL calibration-light flashes. click the ^ key to confirm the zero-point code. In the calibration process pressing th SEL key can not release.

② After confirming zero-point code, PV window display FS0 then through a standard pressure source to the pressure sensor to full pressure range, then PV win dow display FS01 or FS02 , SV window value should be between "16,000～32,000 " (ten thousand's place in PV window at the end of display), waiting f or the value of relative stability, then click the ^ to confirm and the calibration light goes out. PV window display the value of a standard source to provide of the pressure value. Release the SEL key and unload pressure to zero, then the indicator will be into the fast set-up working state Click the SEL key twice, indicator will be back to measure working state Manual calibration operation is complete. (If the PV window display the standard pressure value error is too large, return to step ① re-operation.)



6 Measure working state

6.1 Measure working state

PV window display the pressure measurement value, On the right correspond presure units light long SV window shows the first alarm pressure value. Normal measure working state on the left alarm and calibration light is off, when the test pressur value is lower or higher than the alarm pressure value, the AL2 or AL1 alarm lights turn on; wh en the test pressure value is to restore Normal, the AL2 or AL1 alarm lights turn off.

6.2 Measure working state drift - clear operation:

First automatic calibration operation (section5.1 on page10). After time, if there are temperature drift or time shift, you can hold down the SEL key at the same time click < key to clear the current drift value.if clear wrong ,you can hold down the SEL key and ∨ key, more than 5 seconds to restore zero.

9 Service

①Open the package, Please check the product whether it meets your requirements packaging, products if there is any damage, if found in error. Please contact us.

② This product is a precision measuring indicator. Can not be beat, pounding, powerful treatment. Improper operation due to man-made damage caused by products not under warranty.

③ The following are not covered under warranty:

Not in accordance with the instructions proper installation, man-made product damage;

Unauthorized users of the product for repairing or reconstruction;

By irresistible external forces caused by damage to the product;

Unclear or missing product label, the product looks seriously damaged.

④ If there is any problem when you are using our products, Please keep defective product, contact with our company, explain the phenomenon of failure and use of the environment, our company will provide timely technical support. Do not unauthorized repair.

Bagsik®
www.bagsik.net

Czujniki ciśnienia masy tworzyw sztucznych.

CDA - od 50 -1400 bar - sygnał 3.33mV/V
CDAI - sygnał analogowy 0-10 V, 4-20mA
CDTA - zintegrowana termopara, sygnał 3.33mV/V
CDTAI - zintegrowana termopara, sygnał analogowy

Akcesoria:

Wtyczki do czujników ciśnienia, 6 - PIN.
Wtyczki do czujników temperatury.

Akcesoria:

Kable do czujników ciśnienia, ekranowane z oplotem z włókna węglowego.
- Gotowy komplet z wtyczką do ciśnienia - 3m
- Według specyfikacji klienta z szpuli na metry

Bezpieczniki ciśnienia seria BP:
- gwint 1/2”
- zakres wg specyfikacji klienta

Zestaw do czyszczenia gwintów pod czujniki ciśnienia oraz temperatury.

Tuleje redukcyjne
- M16, M18x1.5, M24

Bagsik Sp. z o.o.
ul. Toruńska 8, 44-100 Gliwice
tel: +32 334 0000, fax: +32 331 7520, office@bagsik.net, www.bagsik.net