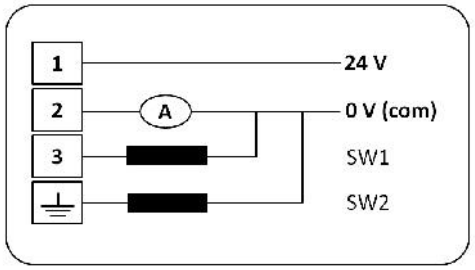
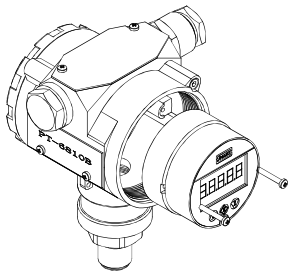
Digital display quick use guidence

SMART_2015-1

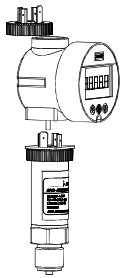
Label



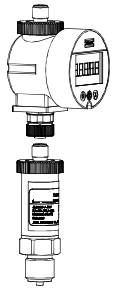
Installation Instruction



(IP67)
LCD-10



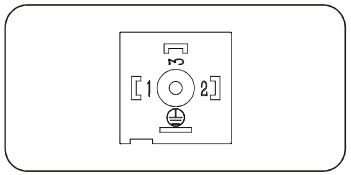
(IP55)
LCD-11



(IP55)
LCD-11

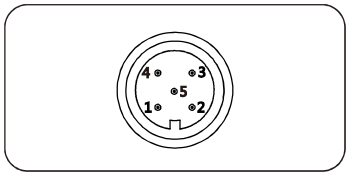
Electrical connection with transmitter

DIN43650



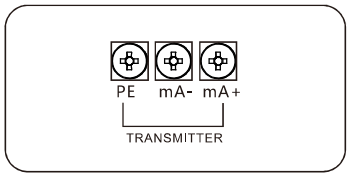
Label	Function
1	Power+
2	Power-
3	
⏚	Ground

M12X1(4-pin)



Label	Function
1/Brown	Power+
2/White	
3/Blue	
4/Black	Power-
5/Gray	

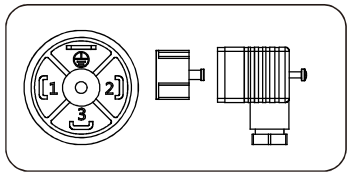
Module terminals-LCD10



Label	Function
mA+	Power+
mA-	Power-
PE	Ground

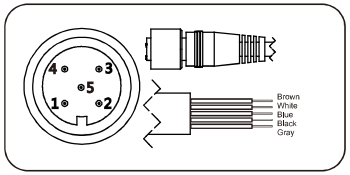
Electrical connection with system

DIN43650



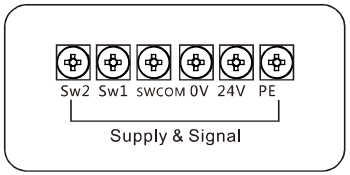
Label	Function
1	Power+
2	Power-
3	Switch1
⏚	Common point

M12X1(4-pin)



Label	Function
1/Brown	Power+
2/White	Switch1
3/Blue	Switch2
4/Black	Power-
5/Gray	Common point

Module terminals-LCD10

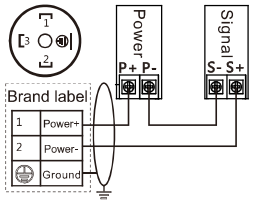


Label	Function
24V	Power+
0V	Power-
Sw1	Switch1
Sw2	Switch2
SWCOM	Common point
PE	Protected area

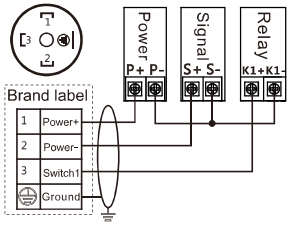
⚠ Please note detail specifications is subject to the signal output on the label.

Signal connection

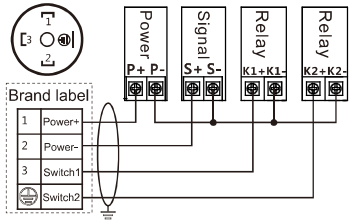
LCD display, no on-off output



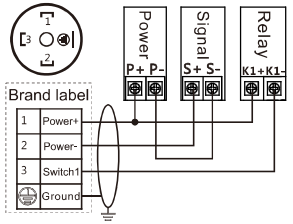
LCD display,1 way PNP output



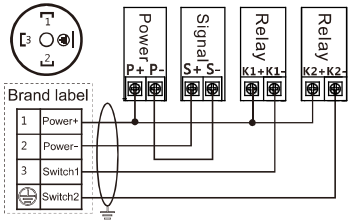
LCD display,2 way PNP output



LCD display,1 way NPN output



LCD display,2 way NPN output

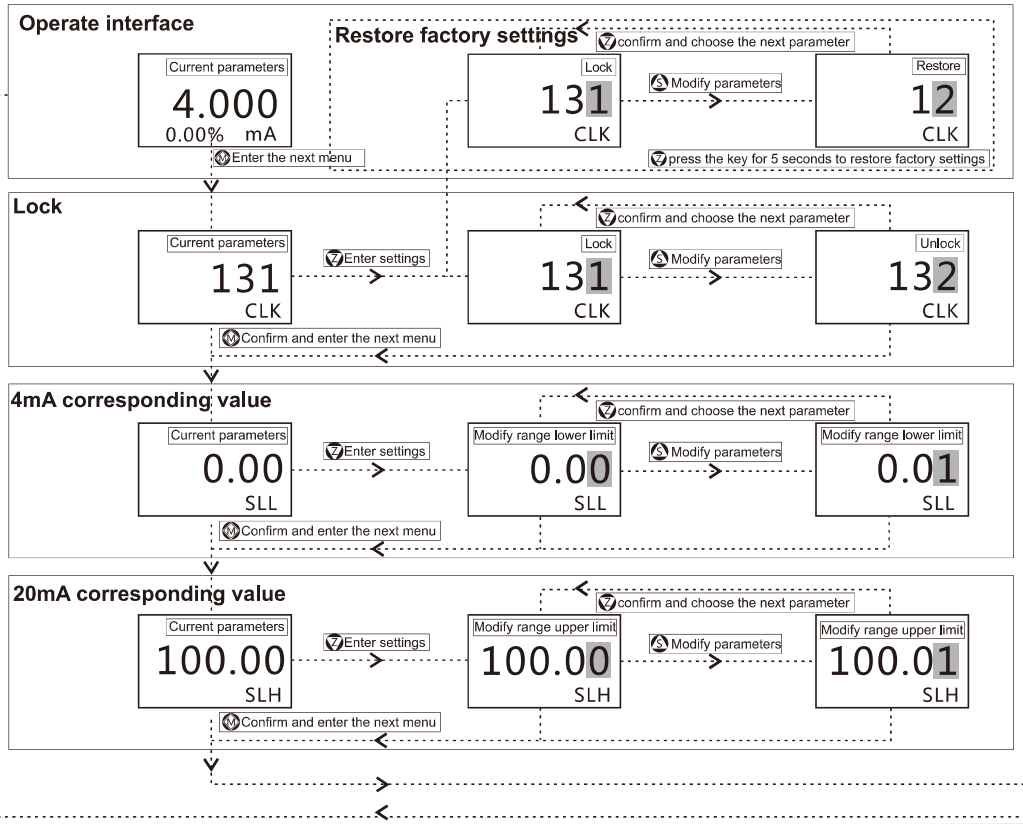


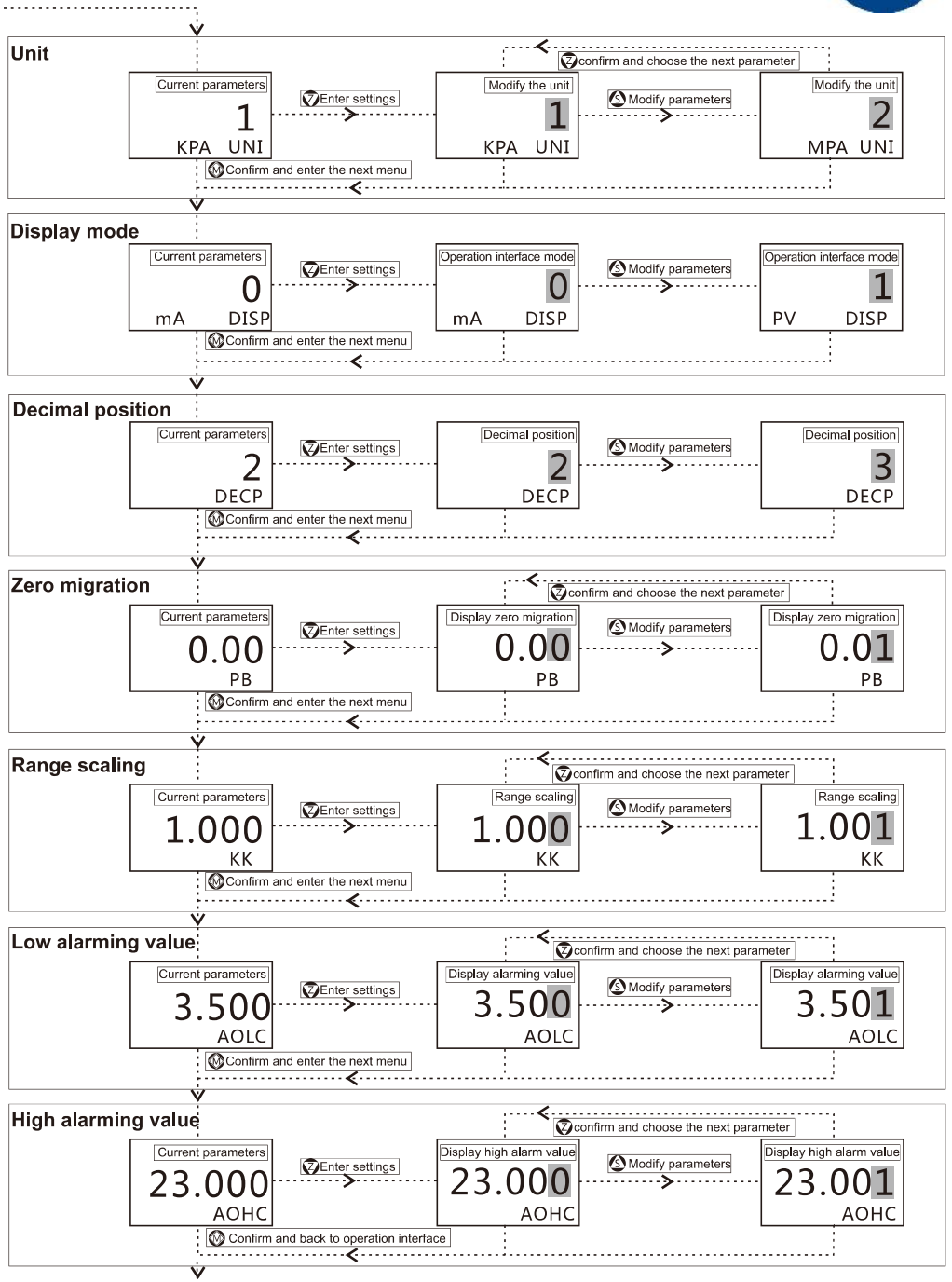
Digital display quick use guidence

Display settings function description

Label	Function instruction
CLK	locked , 0~255 ; CLK=132 , Unlocked ; CLK=12 , Restore factory settings ; other value,keep locked
SLL	Lower range value ; -19999~99999
SLH	Upper range value ; -19999~99999
UNI	Display unit , 0-36 ; Blank , kPa , MPa , Pa , bar , mbar , psi , mH2O , mmH2O , cmH2O , mmHg , Torr , atm , kg , g , mg , N , kN , ℃ , ℉ , K , %RH , %VOL , PPM , %LEL , pH , m , cm , mm , inch , m/s , Ω(ohm) , kΩ(kohm) , mV , V,L/Min,M3/Hour
DISP	Display interface , 0~2 ; DISP=0 , Current value , Percentage and mA ; 1 , Process Variable , percentage and unit 2 , Percentage , Percentage and % , Default is 1。
DECP	Decimal position , 0~4 ; DECP=0 , None ; 1 , First bit ; 2 , Second bit ; 3 , Third bit ; 4 , Fourth bit ; Default 2。
PB	Zero migration ; -19999~99999 , Default PB=0。
KK	Range scaling , 0~1.9999 times , Default KK=1。
AOLC	Input lower limit current alarming value , 3.500-3.800mA
AOHC	Input upper limit current alarming value , 20.800-24.000mA

Display Settings detailed instructions



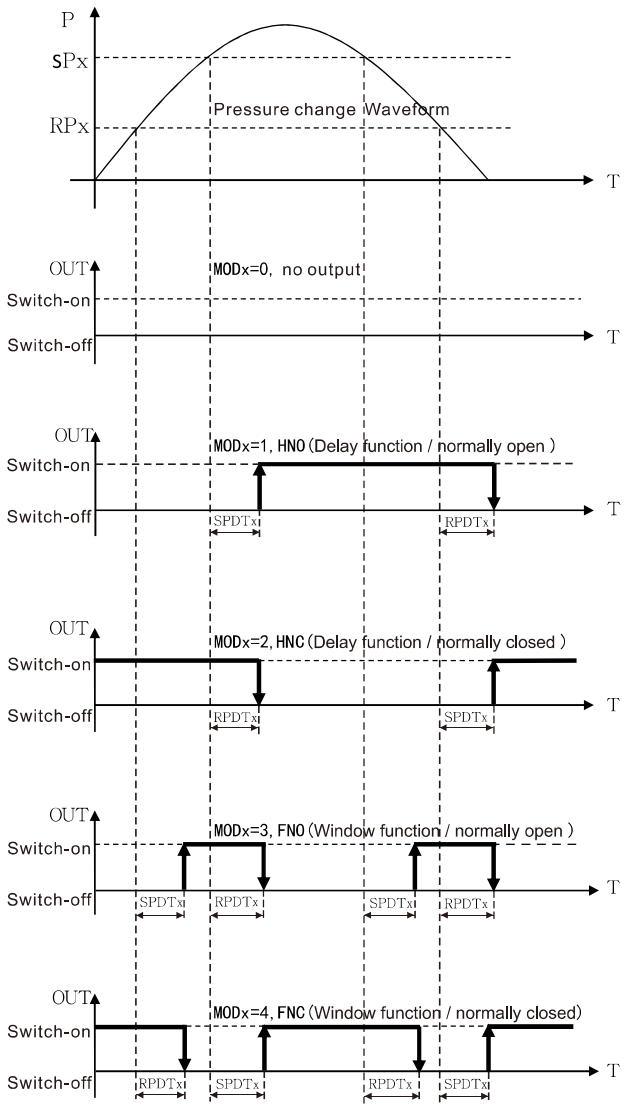


Alarming settings function description

Label	Name	Range setting	Function instruction
CLK	Parameters setting locked	0~255	CLK=132,lock, set other parameter (Note1,note 2)
			CLK=12,Press Z key for 5 seconds, restore factory settings
			CLK≠132,Unlock, can't set other parameter
Spx (Note3)	OUT Upper range value	-19999~99999	Transistor output upper range value
RPx	OUT Lower range value	-19999~99999	Transistor output lower range value
SPDTx	OUT switch-on delay	0~60.0(S)	Transistor output switch-on delay time.
RPDTx	OUT switch-off delay	0~60.0(S)	Transistor output switch-off delay time
MODx	OUT working module	MODx=0	No output, OUTx keep switch-off state
		MODx=1	When measuring value>SPx and delay SPDTx, OUTx is switch-on (Note 4)
			When measuring value<RPx, delay RPDTx,OUTx is switch-off (OV, following the same)
		MODx=2	When measuring value>SPx, delay RPDTx,OUTx is switch-off
			When measuring value<RPx, delay SPDTx, OUTx is is switch-on
		MODx=3	RPx<measuring value<SPx, delay SPDTx, OUTx is is switch-on
			Measuring value>SPx or measuring value<RPx, delay RPDTx,OUTx is switch-off
		MODx=4	Measuring value>SPx or measuring value<RPx, delay SPDTx,OUTx is switch-on
			Rpx< measuring value< SPx, delay RPDTx,OUTx is switch-off

Notes: Note1, keep press Z key under measuring state, then press M key (M+Z) and keep more than 5 seconds, enter the first output (SW1) parameters setting menu
Note 2, When CLK=132, keep press S key under measuring state, then press M key (M+Z)and keep more than 5 seconds, enter the second output (SW1) parameters setting menu
Note3, x=1 or 2.
Note4, valid level is lower than power level 2V,;for example if power level is 24V, then valid level is 22V

The output waveform with delay function



Applications examples

High alarm

Some occasions require pressure higher than 1MPa output alarming signal , general settings:through switch 1 to realize, SP1=1MPa, RP1=0.95MPa, MOD1=1, SPDT1=1, RPDT1=1. When pressure up to 1MPa,delay 1 second, switch 1 on (connect),when pressure down to 0.95MPa, delay 1 seconds, switch1 off(disconnect).

Low alarm

In some occasions, pressure is required to lower than 1MPa output alarm signal, general settings: through switch 1 to realize, set RP1=1, SP1=1.05, MOD1=2, SPDT1=1, RPDT1=1。When pressure down to 1MPa, delay 1 second, switch 1 on (connect)), when pressure up to 1.05MPa, delay 1 second, switch 1 off (disconnect).

Window function

In some occasions, normal start equipment requires the pressure between 0.5~1Mpa,general settings: through switch 1 to realize SP1=1MPa,RP1=0.5MPa,MOD1=3,SPDT1=1,RPDT1=1. When pressure up to 0.5MPa, delay 1 second, switch 1 on (connect), when pressure up to 1MPa, delay 1 second, switch 1 off (disconnect);When pressure down to 1MPa again, delay 1 second, switch 1 on (connect), pressure down to 0.5MPa again, delay 1 second, switch 1 off (disconnect).

Automatic keep pressure function

In some occasions, compressor is used to pressurize equipment automatically, and keep the equipment pressure between 0.5~1Mpa,it needs two switches to realize, switch 1 is used to control the compressor, switch 2 is used to control the equipment. Switch 1 setting:SP1=0.9MPa, RP1=0.6MPa,MOD1=2,SPDT1=1,RPDT1=1。Switch 1 controls the compressor power to cut off when pressure is bigger than 0.9MPa through the middle relay, and connect when pressure smaller than 0.6MPa, the pressure value is controlled between 0.6~0.9Mpa. Switch 2 setting SP2=1MPa,RP2=0.5MPa,MOD2=3,SPDT2=1,RPDT2=1。 When equipment working pressure is over range 0.5MPa~1MPa, after delay 1 second, switch 2 controls the equipment alarm output through middle relay, to ensure timely finding and treatment when equipment working pressure is abnormal.

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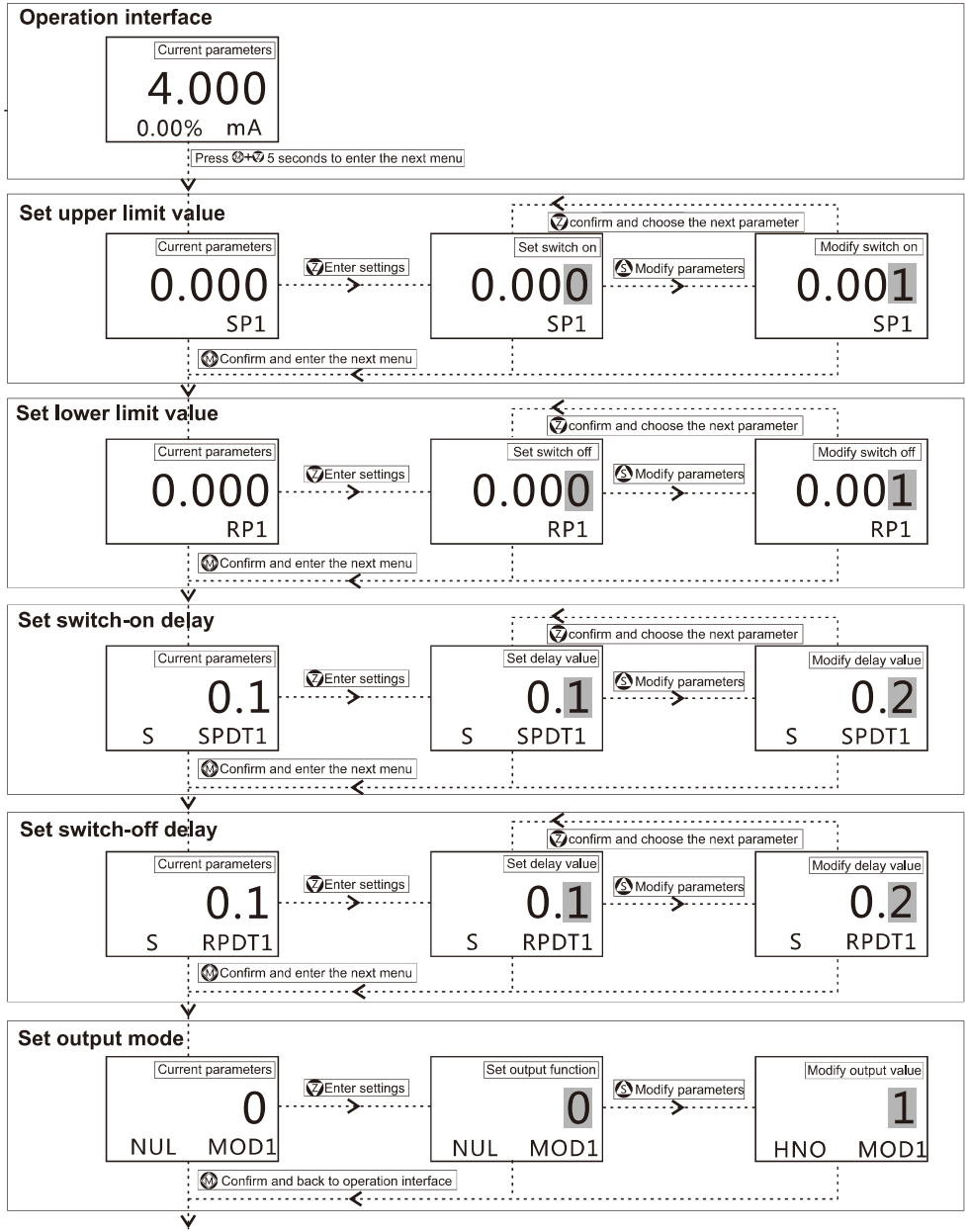
The first alarm setting detailed instructions



The second alarm setting detailed instructions