

1. Cautions:

- 1.1 Please install according to the wiring diagram, in order to avoid incorrect wiring.
- 1.2 Before wiring, please make sure that power is switched off to prevent from getting electric shock.
- 1.3 Please do not install it in humid environment to ensure good signal communication.
- 1.4 Before supply power, please double check the wiring and input power.
- 1.5 The product is beyond our warranty if any damage is caused by incorrect wiring.

2. Specification:

- 2.1 Size: 100 x 60 x 45 ± 2mm
- 2.2 Mount holes:
 - 2.2.1 Duct type: diameter 18 ± 1 mm (the clamp is included)
 - 2.2.2 Immersion type : 1/2" PT pipe thread (SUS sleeve is included)
- 2.3 Ambient environment:
 - 2.3.1 Operating temperature: 0°C~50°C, < 90%RH (no-condensing)
 - 2.3.2 Storage temperature: -10°C~70°C, < 90%RH (no-condensing)
- 2.4 Input power: AC24V ± 10%, 50/60Hz
- 2.5 Temperature sensing:
 - 2.5.1 Sensing range: -40~105°C(-40~221°F), 0.1°C/°F in step; it shows "FAIL" while failure occurred.
 - 2.5.2 Accuracy: ±0.6°C @ 0~50°C(±1.1°F @ 32~122°F)
 - 2.5.3 Voltage output (01FV/ 01WV/ 02FV): DC0~5V or DC0~10V
 - 2.5.4 Current output (01FA/ 01WA/ 02FA): DC4~20mA (resistance load ≤ 500Ω, it is not adjustable in larger resistance.)
- 2.6 Humidity sensing (02FA / 02FV)
 - 2.6.1 Sensing range: 0~100%RH, in 0.1%RH step, it shows "FAIL" while failure occurred.
 - 2.6.2 Accuracy: ±5%RH
 - 2.6.3 Voltage output (02FV): DC0~10V
 - 2.6.4 Current output (02FA): DC4~20mA (resistance load ≤ 500Ω, it is not adjustable in larger resistance)
- 2.7 high temperature alarm output contact: 3A/250V 1C x 2

3. Function:

- 3.1 operation / setting:
 - 3.1.1 Temperature unit setting: press "SET" for 3 seconds into parameter setting, and press "SET" to select Unit and press " + " or " - " to select °C/°F.
 - 3.1.2 Temperature compensation: press "SET" for 3 seconds into parameter setting, and press "SET" to select tCbr and then press " + " or " - " to set temperature compensation.
 - 3.1.3 Humidity compensation: repeat above steps and to select HCbr and then press " + " or " - " for setting.
 - 3.1.4 Temperature full scale voltage selection: repeat above steps and to select tOFS and then press " + " or " - " to set 5V or 10V.
 - 3.1.5 Temperature voltage output compensation: repeat above steps and to select tOFP and then press " + " or " - " to set temperature voltage output compensation.
 - 3.1.6 Temperature current output compensation: repeat above steps and to select tOFA and then press " + " or " - " to set temperature current output compensation.
 - 3.1.7 Humidity voltage output compensation: repeat above steps and to select HOFFP and then press " + " or " - " to set humidity voltage output compensation.
 - 3.1.8 Humidity current output compensation: repeat above steps and to select HOFA and then press " + " or " - " to set humidity current output compensation.
 - 3.1.9 Min. temperature output setting: repeat above steps and to select tOLS and then press " + " or " - " to set.
 - 3.1.10 Max. temperature output setting: repeat above steps and to select tOHS and then press " + " or " - " to set.
 - 3.1.11 First-step high temperature alert: repeat above steps and to select tAht and then press " + " or " - " to set.
 - 3.1.12 First-step low temperature alert: repeat above steps and to select tAlt and then press " + " or " - " to set.
 - 3.1.13 Second-step high temperature alert: repeat above steps and to select tbHt and then press " + " or " - " to set.
 - 3.1.14 Second-step low temperature alert: repeat above steps and to select tbLt and then press " + " or " - " to set.
 - 3.1.15 Alarm temperature output delay setting: repeat above steps and to select tAdL and then press

3.2 Output:

- 3.2.1 Two-step temperature alert output mode:
 - 3.2.1.1 When temperature is higher than tAht or lower than tAlt, the system starts counting alarm delay time (alarm icon blinks); when it reaches the alarm delay time, alarm contact RLY1 will be activated, and alarm icon will keep lighting up.

- 3.2.1.2 When temperature is higher than tbHt or lower than tbLt, the system starts counting alarm delay time (alarm icon blinks); when it reaches the alarm delay time, alarm contact RLY2 will be activated, and alarm icon will keep lighting up.
- 3.2.1.3 When temperature is 2 degrees lower than tAht or 2 degrees higher than tAlt, it will auto release alarm output and alarm contact RLY1 will be inactivated.
- 3.2.1.4 When temperature is 2 degrees lower than tbHt or 2 degrees higher than tbLt, it will auto release alarm output and alarm contact RLY2 will be inactivated. The alarm icon will disappear once two steps of alarm contacts are released.
- 3.2.1.5 When the temperature is between tAht and (tAht - 2), and also higher than tAlt ; or the temperature is between (tAlt + 2) and tAlt, and also lower than tAht, press any key to manual release alarm output and make RLY1 inactive.
- 3.2.1.6 When the temperature is between tbHt and (tbHt - 2), and also higher than tbLt; or the temperature is between (tbLt + 2) and tbLt, and also lower than tbHt, press any key to manual release alarm output and make RLY2 inactive. The alarm icon will disappear once two steps of alarm contacts are released.
- 3.2.2 Voltage / current output:
 - 3.2.2.1 Voltage-type of temperature output = 10(5) x (display value - tOLS) ÷ (tOHS - tOLS) V. If the calculated value is higher than tOHS, the display shows tOHS. If it is lower than tOLS, the display shows tOLS.
 - 3.2.2.2 Current-type of temperature output = 4 + [16 x (display value - tOLS) ÷ (tOHS - tOLS)] mA. If the calculated value is higher than tOHS, the display shows tOHS. If it is lower than tOLS, the display shows tOLS.
 - 3.2.2.3 Voltage-type of humidity output = Display value ÷ 10V.
 - 3.2.2.4 Current-type of humidity output = 4 + (16 x display value ÷ 100) mA.

4. Trouble shooting:

- 4.1 Memory failure: when supplying power, the controller will check parameter value range. If any parameter is out of the range, the controller will auto-load default and display EE in the screen. To re-supply the power, if EE is still there, it means the parameter memory fails, please send back the unit to factory for repairing.
- 4.2 Sensing component failed: when the temperature or humidity shows FAIL, it means the sensing component of temperature or humidity fails, please send back the unit to factory for repairing.

5. Parameter form:

Parameter code	Setting range			Description
	Max. Setting	Min. setting	Default	
Unit	°F	°C	°C	Temperature Unit
tCbr	12.7°C 25.4°F	- 12.8°C - 25.6°F	0	Temperature calibration, in 0.1°C/0.2°F step
HCbr	25.4%RH	- 25.6%RH	0	Humidity calibration, in 0.2%RH step
tOFS	5V	10V	10	Temperature full scale voltage
tOFP	3.0V	- 3.0V	0	Temperature voltage output calibration, in 0.05V step
tOFA	3.0mA	- 3.0mA	0	Temperature current output calibration, 0.05mA
HOFP	3.0V	- 3.0V	0	Humidity voltage output calibration, in 0.05V step
HOFA	3.0mA	- 3.0mA	0	Humidity current output calibration, in 0.05mA step
tOLS	0°C 32°F	- 40°C - 40°F	0 32	Minimum temperature output, in 1 °C/2°F step (if temperature is lower than setting, the output will be minimum of setting)
tOHS	105°C 220°F	50.0°C 120°F	50 120	Maximum temperature output, in 1°C/2°F step (if temperature is higher than setting, the output will be maximum of setting)
tAht	70°C 160°F	0.0°C 32°F	70 160	Alert temperature, in 1°C/2°F step
tAlt	70°C 160°F	0.0°C 32°F	0 32	Alert temperature, in 1°C/2°F step
tbHt	70°C 160°F	0.0°C 32°F	70 160	Alert temperature, in 1°C/2°F step
tbLt	70°C 160°F	0.0°C 32°F	0 32	Alert temperature, in 1°C/2°F step
tAdL	1200 sec	0 sec	0	Alert output delay, in 5 sec step
Out	-	-	-	Exit

6. Product model type:

- 01FA → 01FA 01WA → 01LA 02FA → 02FA
- 01FV → 01FP 01WV → 01LP 02FV → 02FP