HUMIDITY + TEMPERATURE CONTROLLER

HTC307



96 x 96mm

Features :

Humidity

- 4 digit LED display (Green)
- RH Sensor Input
- Sensor enclosed with unit
- Proportional / ON-OFF control
- 10A Control Relay output
- 0% - 100% Humidity control range
- 5A Alarm Relay Output

Temperature

- 4 digit LED display (White)
- RTD Input (PT100)
- ON-OFF / PID control
- Auto tune / Self tune PID / Adaptive Tune
- 10A Control Relay output
- 5A Alarm Relay Output
- MODBUS RS485 Communication

Certifications : CE RoHS compliant, IP65

Technical specifications

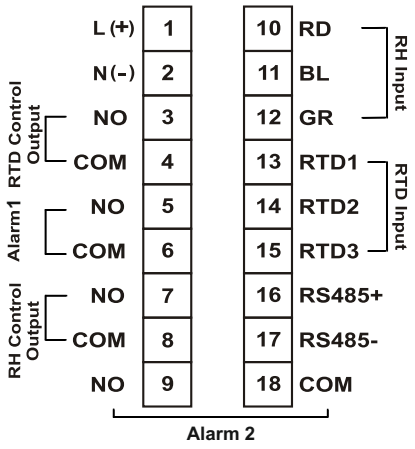
Display specifications	
Display	4+4 Digits 7 Segment LED Display
Height of digit	White digit(Temp process value) : 18.5mm, Green digit(Humidity process value) : 10.9mm
LED indication	OUT1: RTD control OUT2: RH control AT : Auto Tune AL1 : Alarm output AL2 : Alarm output ⇌ : Communication in progress
Input specifications	
Input signal	RH (HS-A-100), RTD PT100
Sampling time	200 msec
Input filter (FTC)	1 to 99 sec
Indication Accuracy	**RTD:** ±0.25% of span or 1° whichever is greater (20min of warm up time) Cold Junction calibration accuracy for RTD input 0.1% of F.S ± 1° C **Humidity:** ±3% for RH 10% to 80%, ±4% for below 10% or above 80%.
Resolution	For RTD & RH 1°/0.1°
Temperature unit	°C / °F selectable
Humidity unit	%RH
Output specifications	
RH control output (SPST)	Relay 10A@250VAC or 28VDC
Temperature control output (SPST)	Relay 10A@250VAC or 28VDC
Alarm output (SPST)	2X 5A@250VAC / 30V DC
Functional specifications	
Control action	For Temperature:- Auto tune,Self tune,Adaptive tune. For Humidity:- Proportional,ON-OFF Control
Alarm modes	Deviation high, Deviation low, Band, Full scale high, Full scale low, Break.
Proportional band (P)	0 to 400
Integral time (I)	0 to 3600 sec
Derivative time (D)	0 to 200 sec
Cycle time	0.1 to 100.0 sec
Hysteresis width	0.1 to 99.9°
Auxiliary supply specifications	
Supply voltage	90 to 270V AC / DC @ 50 / 60Hz
Power consumption	6 VA max @250VAC
Environment specifications	
Temperature	Operating : 0°C to 50°C Storage : -20°C to 75°C
Humidity (non - condensing)	95% RH
Mechanical specifications	
Mounting	Panel
Weight	280 gms

HUMIDITY + TEMPERATURE CONTROLLER

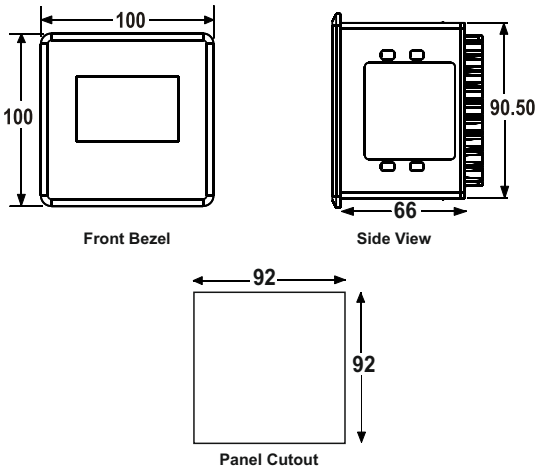
HTC307

Sensor information	
Cable length	1 meter
Dimensions (mm)	52 x 28.8 x 18
Input range	5V DC
Output range	0.5 to 4.5V DC
Sensor temprature	Operating : -20 to 100°C Storage : -40 to 120°C
Weight	33 gms
Optional specifications	
Serial communication	
Interface standard	RS485
Communication address	1 to 99, maximum of 32 units per line
Transmission mode	Half duplex
Transmission protocol	MODBUS RTU
Transmission distance	500m maximum
Transmission speed	115200, 57600, 38400, 19200, 9600, 4800, 2400 bits / sec
Parity	None, Odd, Even
Stop bits	1 or 2
Response time	100 ms (Max and independent of baud rate)

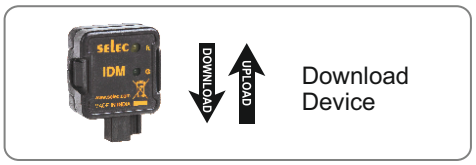
Terminal connections

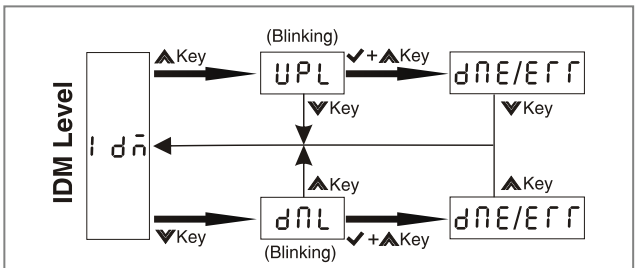


Dimensions (All are in mm)



Independent Downloader module (IDM)



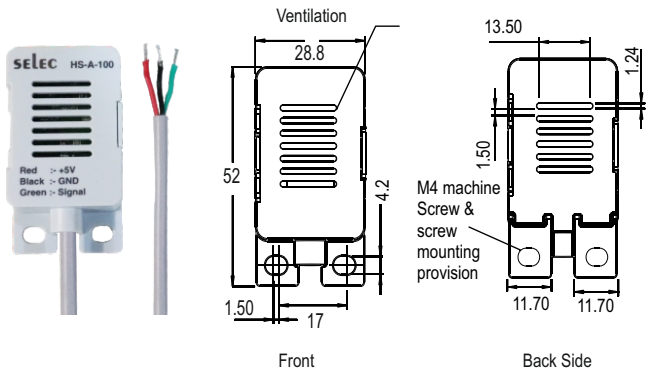


IDM Level	
Display	Parameter Description
IdA	Independent Downloader Module
UPLd	Upload from product to IDM
dNLd	Download from IDM to product
dONE	Operation Successful
ErR	Operation unsuccessful

HUMIDITY + TEMPERATURE CONTROLLER

HTC307

Sensor dimension (Top & Side)

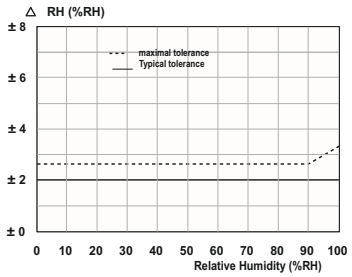


NOTE : Length of the cable can be increased by using compensation cable up to 3 meter. After that accuracy may vary by 1% / Meter.

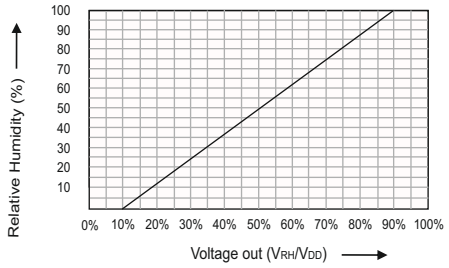
Compliance

Applicable EMI / EMC Standards		
Product Standard : IEC 61326-1		
Category		**Standards Compliance**
ESD Immunity	IEC 61000-4-2	Level III
Surge Immunity	IEC 61000-4-5	+/- 2 kV common mode, +/- 1 kV differential mode
Radiated Susceptibility	IEC 61000-4-3	Level III, 80 to 1000MHz Level II, 1.4GHz to 2GHz Level I, 2GHz to 2.7GHz
Conducted Susceptibility	IEC 61000-4-6	Level II
Voltage Dips and Interruptions	IEC 61000-4-11	**Dips** : 0% residual voltage / 1 cycle (Criteria B), 40% residual voltage / 10 cycles 50Hz / 12 cycles 60Hz (Criteria C)70% residual voltage / 25 cycles50Hz / 30 cycles 60Hz (Criteria C) **Interruptions** : 0% residual voltage / 250 cycles 50Hz / 300 cycles 60Hz (Criteria C)
Conducted Emission	CISPR-11	
Radiated Emission	CISPR-11	
Electrical Fast Transient	IEC 61000-4-4	Level III

Humidity Sensor Performance



Tolerance of RH at 25°C



Relation between the ratiometric analog voltage output and measured relative humidity.

Ordering information

Product Code	Input	Control Output		Alarm Output		Supply Voltage	Communication (RS485)	Certification
		Humidity	Temperature	AL-1	AL-2			
HTC307	RH + PT100	Relay (10A)	Relay (10A)	Relay (5A)	Relay (5A)	90 to 270V AC / DC	Yes	CE