

BD-1000/I 系列 温湿度传感变送器用户手册

本手册适用于BD-1000/I系列工业级风道安装型温湿度传感变送器。

1. 用途

BD-1000/I系列温湿度传感器采用高可靠性检测探头及特殊设计的高精度模拟检测放大电路，该类传感变送器适用于厂房等对温湿度测量精度及抗干扰性能有较高要求的场合。

2. 规格

类别	型号	测量范围	输出信号 (DC)		电源电压
			温度	湿度	
温度	BD-10KT	(0~50) °C	电阻	(0~5)V	+15V~35V (DC)
	BD-1000TA/050 BD-1000TA/02050		(0~10)V		
	BD-1000TB/050 BD-1000TB/02050	(-20~50) °C	(4~20)mA		
	BD-1000HA	0%~100RH	(0~5)V (0~10)V		
湿度	BD-1000HB	0%~100RH	(4~20)mA	(0~5)V (0~10)V	
	BD-1000HTA/050 BD-1000HTA/02050		(0~50) °C	(0~5)V (0~10)V	
温湿度	BD-1000HTB/050 BD-1000HTB/02050	(-20~50) °C	(4~20)mA	(0~5)V (0~10)V	
	BD-1000HTB/050	0%~100RH	(4~20)mA	(0~5)V (0~10)V	
	BD-HAXXT	(-20~50) °C	铂电阻或 热敏电阻	(0~5)V (0~10)V	
	BD-HBXXT	0%~100RH	(4~20)mA	(4~20)mA	

注意：电压输出型的传感器可使用12V~24VAC供电，电流输出型的则仅能使用直流电压。

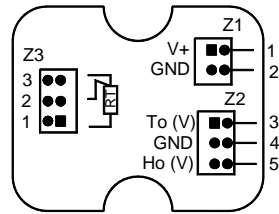
3. 安装

风道安装时可直接固定在风道管壁上见图1，开孔及安装方法见图2。切勿将传感器暴露在诸如丙酮蒸气、酸气、氯气或高浓度烟雾（香烟）等腐蚀性物质的环境中，否则将导致其损坏。安装时注意开孔尺寸不能过大且传感器必须紧贴管壁以避免管道漏风造成探头凝水，引线接头必须朝下，引线应至少下垂10cm。

4. 接线

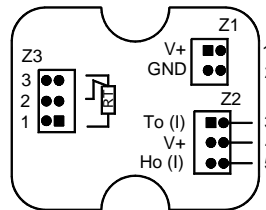
各接线端子可接1.5mm以下导线，最好采用屏蔽电缆以预防干扰，如采用屏蔽电缆需将屏蔽层接在控制器一侧的接线端子上（通常为地），传感变送器的接线应与电源走线或其它对高电感性负载（接触器、线圈、电机等）供电的导体分开，电

压输出型传感变送器，应避免电缆长度超过50m；电流输出型，其电缆长度则可相应延长。



BD-1000HTA BD-HAXXT

型号	接线端子	电源电压
BD-1000TA	Z1(1+2)+Z2(3)	24VDC
BD-1000HA	Z1(1+2)+Z2(5)	24VDC
BD-1000HTA	Z1(1+2)+Z2(3+5)	24VDC
BD-HA100T	Z1(1+2)+Z2(5)+Z3(1+2+3)	24VDC
BD-HA1000T	Z1(1+2)+Z2(5)+Z3(1+2+3)	24VDC
BD-HA10KT	Z1(1+2)+Z2(5)+Z3(1+2)	24VDC
BD-HA10KT-3	Z1(1+2)+Z2(5)+Z3(1+2)	24VDC
BD-HA20KT	Z1(1+2)+Z2(5)+Z3(1+2)	24VDC
BD-HA100KT	Z1(1+2)+Z2(5)+Z3(1+2)	24VDC



BD-1000HTB BD-HBXXT

型号	接线端子	电源电压
BD-1000TB	Z2(3)	24VDC
BD-1000HB	Z2(5)	24VDC
BD-1000HTB	Z2(3+5)	24VDC
BD-HB100T	Z2(5)+Z3(1+2+3)	24VDC
BD-HB1000T	Z2(5)+Z3(1+2+3)	24VDC
BD-HB10KT	Z2(5)+Z3(1+2)	24VDC
BD-HB10KT-3	Z2(5)+Z3(1+2)	24VDC
BD-HB20KT	Z2(5)+Z3(1+2)	24VDC
BD-HB100KT	Z2(5)+Z3(1+2)	24VDC

4.1 注意：

所有引线应与域码相符，并且接线工作只能由专业人员实施。

传感器敏感元件应避免凝水、酸气浸蚀，并避免静电，请注意不要用手触摸，以防损坏。

4.2 警告

通电之前完成全部接线并核对其正确性，不正确的接线可造成本单元损坏。

5. 校准

传感变送器在工厂校准，不可现场校准。

6. 系统检查

确认正确安装并对测量控制器进行必要调节之后，应通过主设备运行至少一个完整周期来检查系统。如出现异常现象，应对系统各单元和接线（包括传感变送器）进行重新检查。

7. 修理与更换

不可进行现场修理，出现异常情况，请您最近的供应商联系，如需修理或更换，请提供尽可能详尽的故障说明。

8. 特别说明

由于产品不断改进，本说明书电气连接图仅供参考，详细的电气接线图印于产品本身。

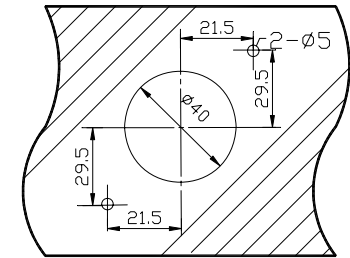
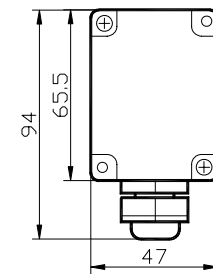
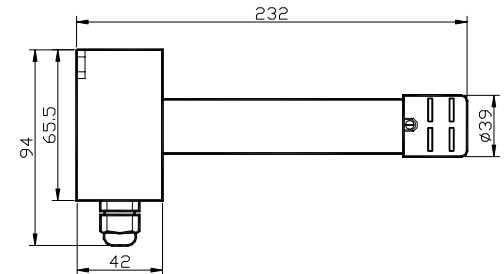


图2



外形尺寸图

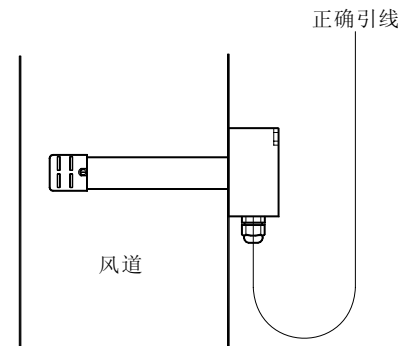


图1

BD-1000/I Series

User's manual of Duct Temperature & Humidity Sense Transmitter

1. Application

BD-1000/I Series temperature and humidity sensor with high reliability test probes and a specially designed high-precision analog detection amplifier circuit. This type of sense transmitter is applicable for factory and so on, this occasion of the temperature and humidity measurement with high accuracy and anti-interference performance requirements.

2. Specifications

Category	Model	Measuring scope	Output signal(DC)		Power supply	
			Temperature	Humidity		
Temperature	BD-10KT/I	(0~50)°C (-20~50)°C	Resistance		+15V~35V DC	
	BD-1000TA/050/I BD-1000TA/02050/I		(0~5)V (0~10)V			
	BD-1000TB/050/I BD-1000TB/02050/I		(4~20)mA			
Humidity	BD-1000HA/I	0%~100%RH		(0~5)V (0~10)V		
	BD-1000HB/I			(4~20)mA		
Temperature and Humidity	BD-1000HTA/050/I BD-1000HTA/02050/I	0%~100%RH	(0~5)°C (-20~50)°C	(0~5)V (0~10)V	(0~5)V (0~10)V	
	BD-1000HTB/050/I BD-1000HTB/02050/I			(4~20)mA		(4~20)mA
	BD-HAXXT/I		(-20~50)°C	Platinum resistance or thermistor		(0~5)V (0~10)V
	BD-HBXXT/I		0%~100%RH			(4~20)mA

Note: Power supply 12V~24VAC/15V~35VDC, voltage output. 15V~35VDC, current output.

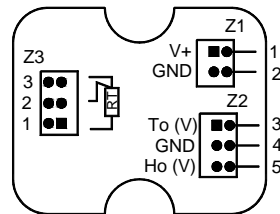
3. Installation

When installing in the wind channel, it can be directly fixed on the tube wall, please refer to the figure for the methods of trepanning and installing (see Figure 1 and Figure 2). The sensor should not be exposed to the circumstances such as acetone steam, acid steam, chlorine, as well as high density smoke, etc., or it will be damaged. Make sure that the dimension of the trepanning is not too large and the sensor is cling with the tube wall in order to avoid the leak air of the pipeline, which will cause the water condensation of the probe. The joint of the fuse must adown, and the fuse should hang down at least 10cm.

4. Wiring

Each wiring terminal can be connected with the wire whose dimension is under 1.5mm. It should be the best to adopt the shield cable in that it can prevent interference. In the condition that the shield wire is adopted, the shield layer should be connected on the wiring terminal (usually grounding) at one side of the controller, the wiring of sense transmitter should be separated from the wiring of voltage or other conductors which supply power to high inductive load (contactor, coil, electrical machinery). When using the voltage output sense transmitter, the length of the cable should be less than 50m, when using the current output sense transmitter, the length of the cable can be selected

relatively longer than that.



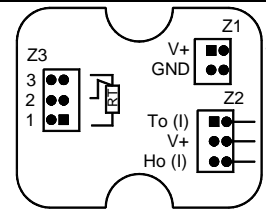
BD-1000HTA BD-HAXXT

Model	Wiring terminals	Supply voltage
BD-1000TA	Z1(1+2)+Z2(3)	24VDC
BD-1000HA	Z1(1+2)+Z2(5)	24VDC
BD-1000HTA	Z1(1+2)+Z2(3+5)	24VDC
BD-HA100T	Z1(1+2)+Z2(5)+Z3(1+2+3)	24VDC
BD-HA1000T	Z1(1+2)+Z2(5)+Z3(1+2+3)	24VDC
BD-HA10KT	Z1(1+2)+Z2(5)+Z3(1+2)	24VDC
BD-HA10KT-3	Z1(1+2)+Z2(5)+Z3(1+2)	24VDC
BD-HA20KT	Z1(1+2)+Z2(5)+Z3(1+2)	24VDC
BD-HA100KT	Z1(1+2)+Z2(5)+Z3(1+2)	24VDC

4.1 Note

All the fuses should be in accordance with the realm code, and the wiring process must be done by professional personnel.

The sensitive component of sensor should avoid acid attack or being eroded by water condensation, as well as static, please do not touch it by hand, or it may be damaged.



BD-1000HB BD-HBXXT

Model	Wiring terminals	Supply voltage
BD-1000TB	Z2(3)	24VDC
BD-1000HB	Z2(5)	24VDC
BD-1000HTB	Z2(3+5)	24VDC
BD-HB100T	Z2(5)+Z3(1+2+3)	24VDC
BD-HB1000T	Z2(5)+Z3(1+2+3)	24VDC
BD-HB10KT	Z2(5)+Z3(1+2)	24VDC
BD-HB10KT-3	Z2(5)+Z3(1+2)	24VDC
BD-HB20KT	Z2(5)+Z3(1+2)	24VDC
BD-HB100KT	Z2(5)+Z3(1+2)	24VDC

4.2 Warning

Accomplish the wiring task and check up its correctness before setting up an electric circuit, incorrect wiring may cause damage to the unit.

5. Calibration

The sense transmitters are calibrated in the factory, they can not be calibrated in the field.

6. System examination

After correct installation and necessary regulation of the measuring controller, the system should be examined by operating the main facilities at least one complete cycle. The examine and determine process of temperature & humidity value should be lasted at least 1 hour. If there is any unusual appearance appears, each unit of the system and the wiring (including the sense transmitter) should be examined repeatedly.

7. Repair and replacement

On the scene repair is forbidden, if there is something unusual happens, please get in touch with the nearest supplier. If repair or replacement is needed, please supply us with information about the condition of the trouble in detail.

8. Special Note

As the products are improved constantly, the manual electrical connection diagram for reference only, detailed electrical wiring diagram was printed on

the product.

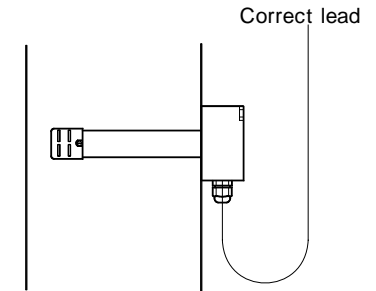


Figure 1

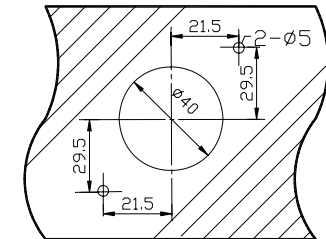
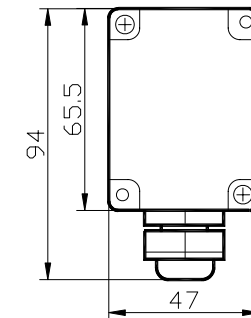
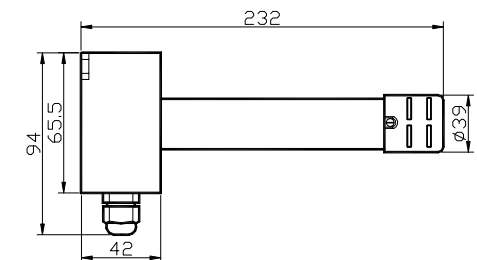


Figure 2



Dimension diagram