

AQ3485 网络型室外型温湿度变送器 使用说明书

- *高品质数字集成传感器**
- *超强的抗化学品污染**
- *直观清晰的 LCD 显示**
- *温湿两用一体化更轻巧**
- *高可靠的单片机处理电路**
- *数字化全自动校准功能**
- *性能可靠维护更便捷**
- *精度高低价位更经济**

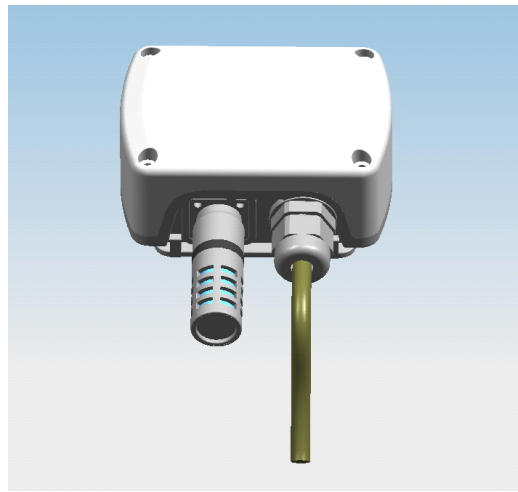
一、产品概述

AQ3485 网络型温湿度一体化变送器是采用高品质数字集成传感器 AM2302 做探头，配以可靠的数字化处理电路，从而将-40℃~80℃的环境中的温度和湿度转换成与之相对应的标准的 MODBUS RS-485 信号，能可靠地与上位机系统等进行集散监控。它具有体积小、重量轻、量程宽、精度高且响应速度快和长期工作稳定性好等特点，使它广泛用于气象、国防、科研、邮电、化工、环保、医药、宾馆、粮食等物资仓储、暖通空调等各种需要对空气中的温湿度进行测量和控制的领域。

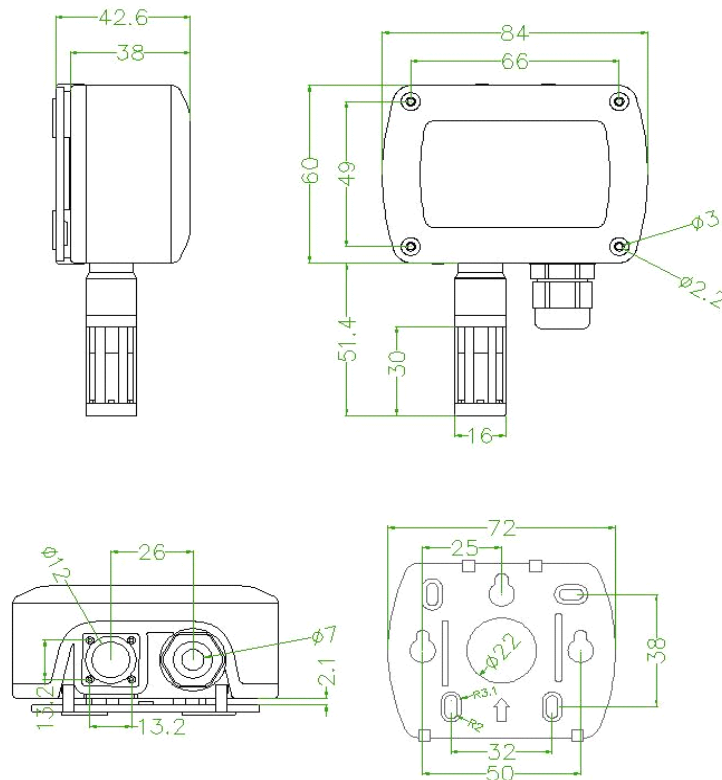
二、产品外观与尺寸（单位：mm）



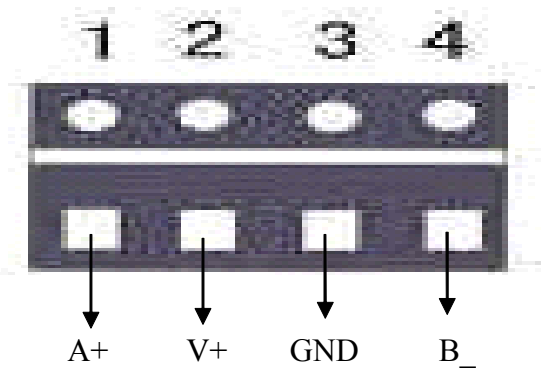
1.AQ3485 网络型温湿度变送器(带显示功能)



2.AQ3485 网络型温湿度变送器(不带显示功能)



三、 电气连接图

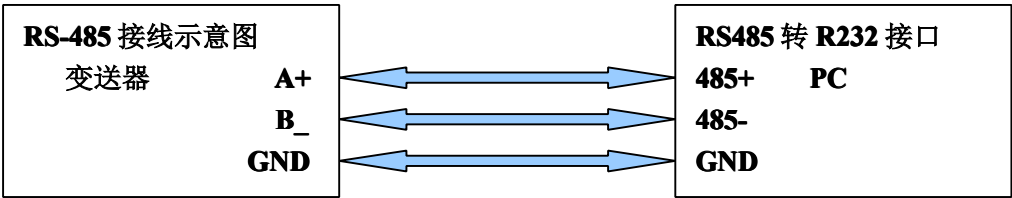


四、 技术指标参数

额定电压	12V—36V DC	
测量范围	温度	湿度
	-40~80℃	0-100%RH
输出信号	标准的 MOBUS RS-485 通讯信号	
输出分辨率	温度	湿度
	±0.1℃	0.1%RH
精度	温度	湿度
	±0.3℃	±2%RH(20-90%RH)
稳定性能	±0.2℃ ≥3 年	±2%RH ≥3 年
外壳材料	PC 塑料	
外壳尺寸	100×84×22 (mm)	

五、 产品配置方法 （将变送器的后盖打开后按照以下步骤进行）

1.变送器与计算机的连接图 （PCB 电路板上 有标识）



注：（A 和 B 务必要连接正确，否则变送器与电脑之间不能正常通讯。当需要远距离传输时，建议使用带有屏蔽的双绞线）

2.波特率的设置

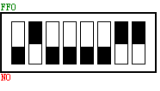
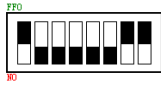
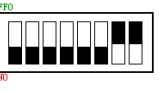
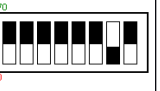
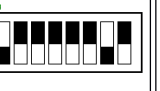
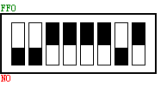
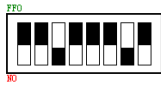
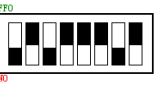
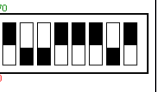
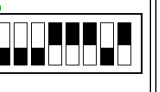
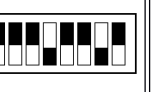
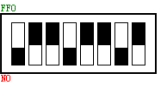
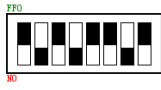
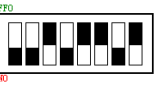
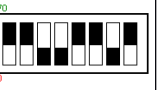
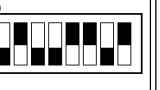
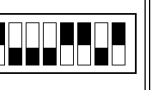
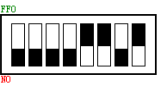
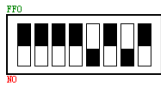
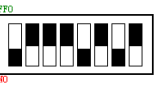
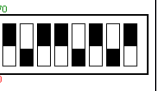
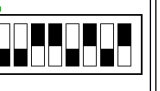
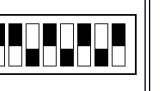
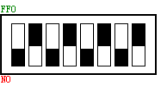
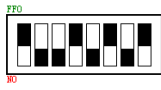
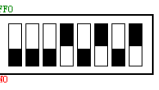
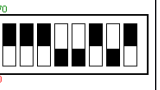
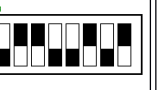
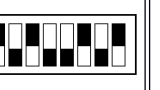
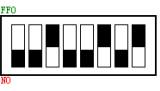
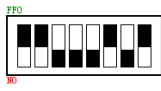
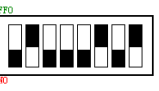
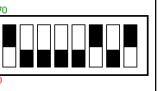
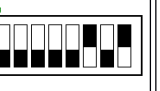
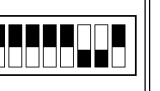
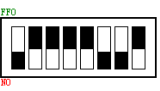
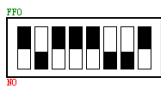
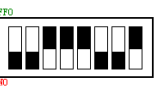
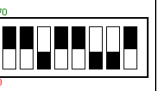
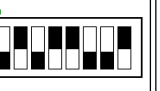
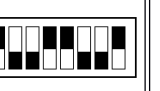
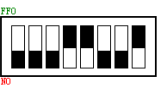
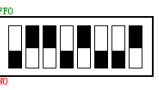
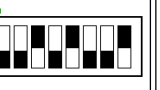
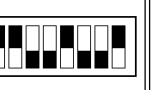
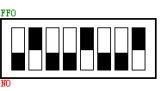
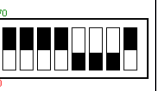
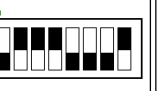
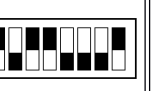
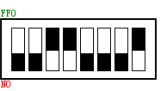
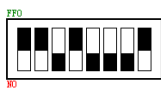
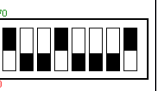
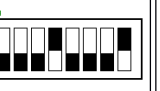
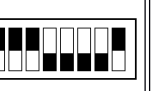
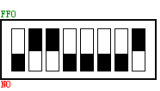
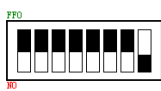
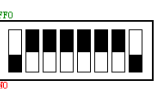
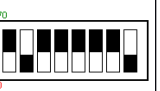
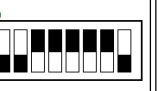
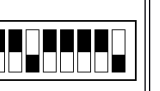
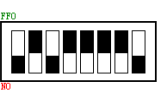
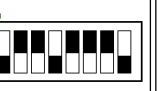
根据 PCB 板后的两位拨码开关来设定选择需要的波特率，详情见下表。

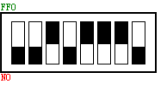
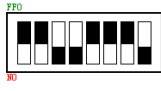
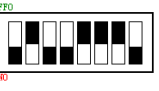
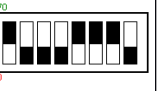
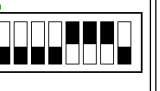
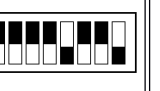
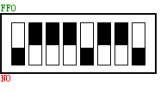
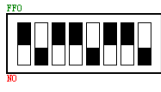
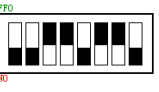
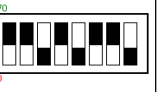
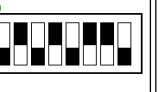
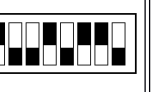
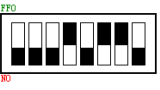
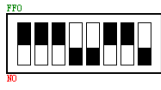
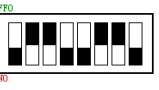
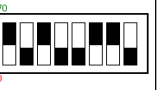
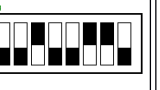
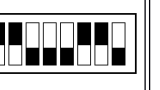
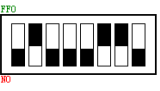
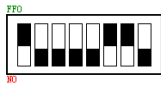
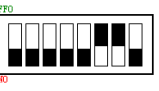
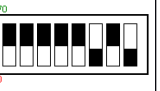
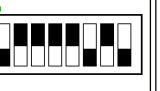
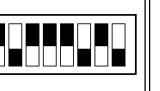
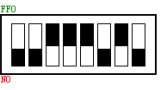
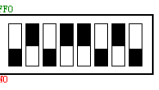
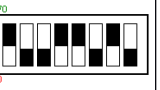
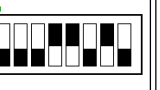
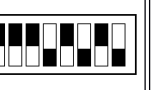
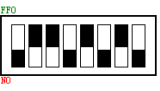
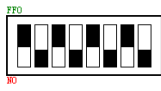
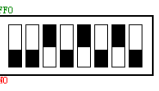
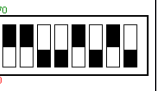
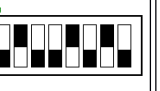
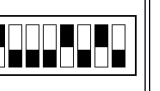
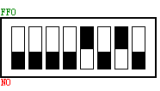
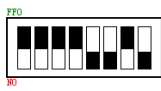
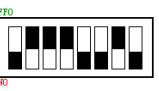
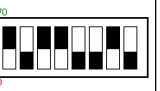
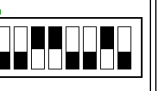
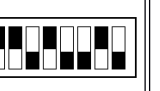
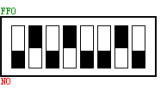
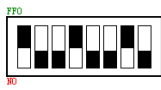
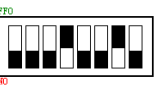
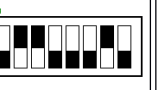
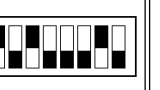
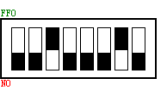
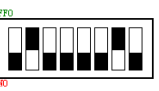
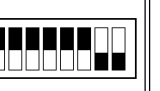
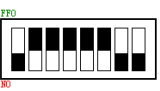
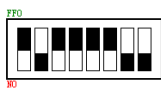
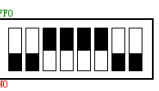
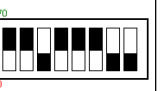
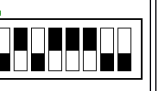
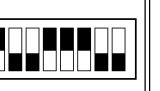
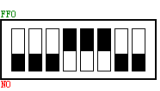
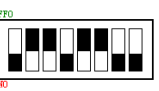
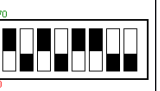
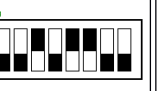
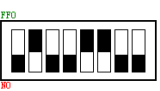
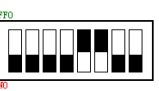
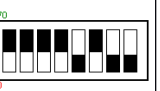
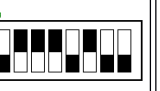
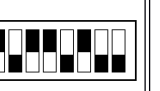
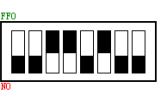
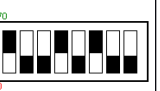
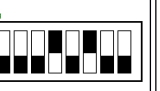
1	2	bps
OFF/0	OFF/0	9600
ON/1	OFF/0	1200
OFF/0	ON/1	2400
ON/1	ON/1	19200

3. 通讯地址的设置

图例从左到右的顺序为 8~1 位对应变送器上的拨码开关 8~1 位，黑色为开关拨动的方向。

1		2		3		4		5		6	
7		8		9		10		11		12	
13		14		15		16		17		18	
19		20		21		22		23		24	
25		26		27		28		29		30	
31		32		33		34		35		36	
37		38		39		40		41		42	
43		44		45		46		47		48	
49		50		51		52		53		54	
55		56		57		58		59		60	

61		62		63		64		65		66	
67		68		69		70		71		72	
73		74		75		76		77		78	
79		80		81		82		83		84	
85		86		87		88		89		90	
91		92		93		94		95		96	
97		98		99		100		101		102	
103		104		105		106		107		108	
109		110		111		112		113		114	
115		116		117		118		119		120	
121		122		123		124		125		126	
127		128		129		130		131		132	
133		134		135		136		137		138	

139		140		141		142		143		144	
145		146		147		148		149		150	
151		152		153		154		155		156	
157		158		159		160		161		162	
163		164		165		166		167		168	
169		170		171		172		173		174	
175		176		177		178		179		180	
181		182		183		184		185		186	
187		188		189		190		191		192	
193		194		195		196		197		198	
199		200		201		202		203		204	
205		206		207		208		209		210	
211		212		213		214		215		216	

217		218		219		220		221		222	
223		224		225		226		227		228	
229		230		231		232		233		234	
235		236		237		238		239		240	
241		242		243		244		245		246	
247		248		249		250		251		252	
253		254		255							

4.收发数据命令格式

*主机发送端:

第一字节	第二字节	第三字节	第四字节	第五字节	第六字节	第七字节	第八字节
设备地址	0X03	0X00	0X00	0X00	0X02	CRCH	CRCL

*从机接收返回端:

第一字节	第二字节	第三字节	第四字节	第五字节	第六字节	第七字节	第八字节	第九字节
设备地址	0X03	0X04	湿度高位	湿度低位	温度高位	温度低位	CRC 高位	CRC 低位

*温湿度的值计算：从机返回的值除以 10 即可。例如从机返回的湿度值为 0x01、0x52，那么将 0x0152 转为十进制得出的值为 338,然后用 338÷10 得到的值就是我们所要湿度值 33.8 (%RH)。 温度的同理故在此不再述。

六、数据的采集通讯

- 1.安装<温湿度记录仪>软件。安装软件请到本公司网站 www.aosong.com 下载，安装方法请参考软件中附带的安装说明即可。
- 2.设置好变送器的地址和波特率，用 RS232 转 RS485 接口将变送器与电脑连接。
- 3.打开已安装好的软件，按照软件说明进行软件的地址和波特率与变送器的地址和波特率设置一致即可进行数据的采集通讯了。（注：[软件的使用请参考软件说明](#)）

七、常见故障排除方法

变送器无显示	查电源电压是否在额定值内；查电源线是否连接正确
不能与电脑通讯	查 RS485 信号线是否连接正确；PCB 板上的波特率拨码开设置是否与软件窗口一致

如有疑问请致电本公司咨询或登录网站 www.aosong.com 查询