

humidry®

**Automation Control Implementation Guideline
&
Altrason Centralized Control Protocol**

V1.1

2023/10/16

Automation Control Distribution Switch (ACDS)



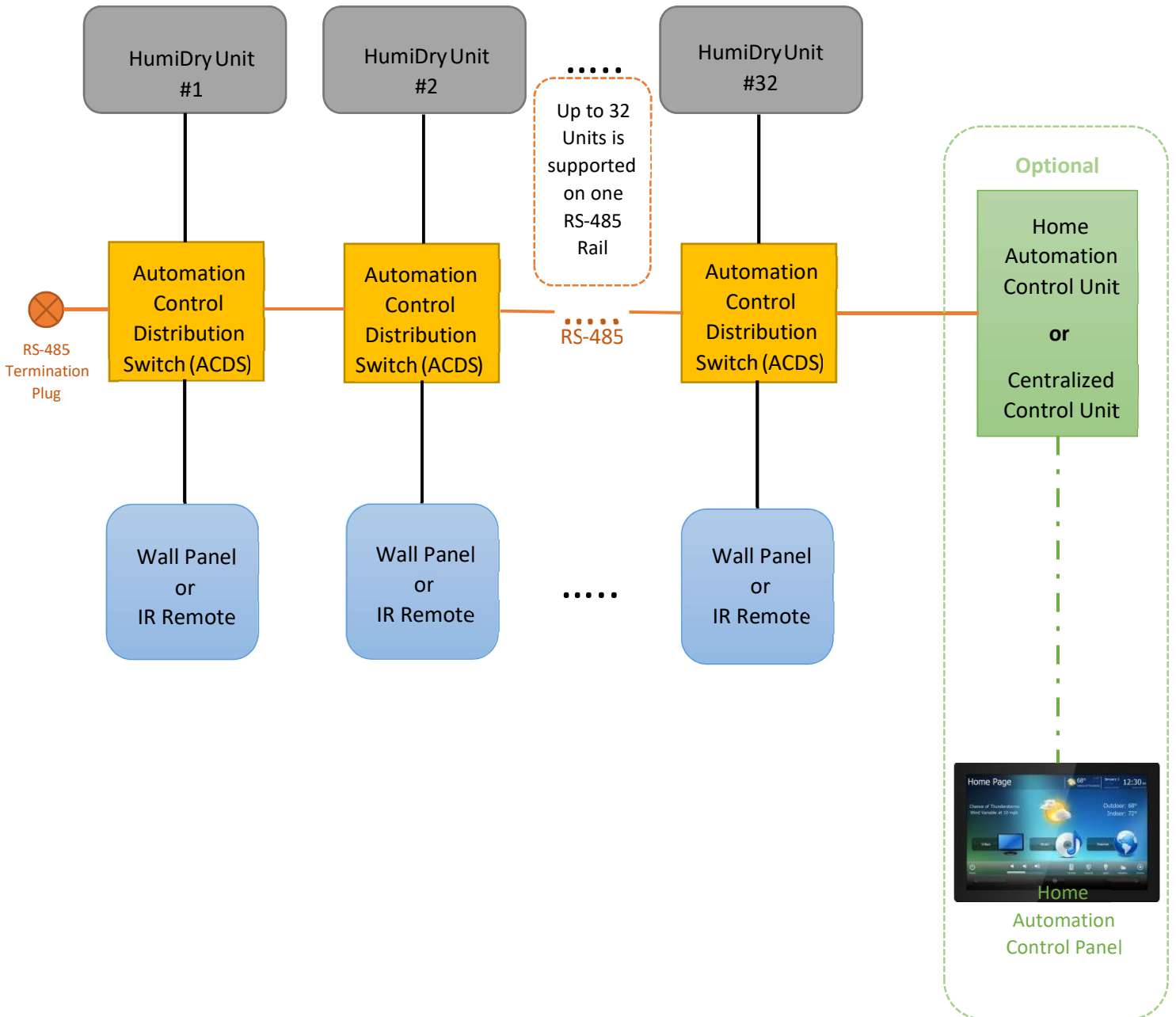
Automation Control Distribution Switch (ACDS) is part of the “Automation Control Kit”, the ACDS allows RS-485 expansion capability, which could be used to connect to mainstream home automation systems offered by various makers.** This allows full control of up to 32 HumiDry units via a single rail of RS485.

There are four RJ-45 connector sockets on the ACDS, their connection is listed by the follow:

- (1) UNIT Socket – This socket is connects to the HumiDry unit.
- (2) PANEL Socket – This socket is connects to the Wall Panel or WiFi Wall Panel.
- (3) RS-485 Sockets – This socket is to connect to other ACDS on the RS-485 rail in the daisy chain fashion or home automation control unit.

** Customization and implementation of Altrason Centralized Control Protocol is required and is done by home automation makers.

HumiDry™ Automation Control Block Diagram

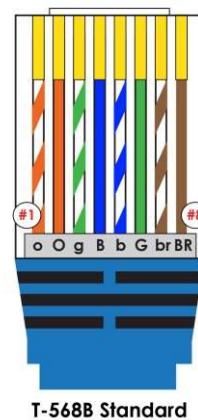


HumiDry™ RS-485 Implementation Guidelines

HumiDry™ supports data acquisition and commanding via RS-485 which could be easily implemented into mainstream Home Automation systems. The Altrason Centralized Control Protocol allows simple implementation while giving total control and data acquisition ability from each individual HumiDry™ units.

The RS-485 port is implemented on one of the RJ-45 ports on the HumiDry™, the pinout is given by the following diagram:

- (1) +5V
- (2) +5V
- (3) Reserved
- (4) D+ or A (Solid Blue)
- (5) D- or B (Striped Blue)
- (6) Reserved
- (7) GND
- (8) GND



The RS-485 is as below configuration:

- 8 data bits
- 0 parity bits (turn Parity checking off)
- 1 stop bit
- No flow control
- 115,200bps Baud rate configurable

Maximum supported RS-485 distance: up to 2,000 meters.

Data Acquisition Commands:

*** All Commands Require Carriage Return (ASCII# 13) in the end**

**** To broadcast a command to all units, the [UNIT SERIAL NUMBER] is set to FFFFFFFF**

***** For all the examples below, we will assume [UNIT SERIAL NUMBER] to be 62188C7A**

[UNIT SERIAL NUMBER] MODEL

(Acquires Model Type)

EXAMPLE: 62188C7A MODEL

REPLY: UM BATHROOM

UM STANDARD

UM CLOSET

UM BATHROOM_LOWCOST

[UNIT SERIAL NUMBER] SERIAL

(Acquires Current Unit's Serial Number)

EXAMPLE: 62188C7A SERIAL

REPLY: SN 62188C7A

[UNIT SERIAL NUMBER] RUNTIME

(Acquires Total Cumulative Runtime in Hours)

EXAMPLE: 62188C7A RUNTIME

REPLY: RT 21143

[UNIT SERIAL NUMBER] TEMPC

(Acquires Current Temperature in Celsius)

EXAMPLE: 62188C7A TEMPC

REPLY: TC 25.47

[UNIT SERIAL NUMBER] TEMPF

(Acquires Current Temperature in Fahrenheit)

EXAMPLE: 62188C7A TEMPF

REPLY: TF 75.65

[UNIT SERIAL NUMBER] HUMID

(Acquires Current Humidity in %RH)

EXAMPLE: 62188C7A HUMID

REPLY: CH 58.65

[UNIT SERIAL NUMBER] ABSHUMID

(Acquires Current Absolute Humidity in g/m³)

EXAMPLE: 62188C7A ABSHUMID

REPLY: AH 12.5

[UNIT SERIAL NUMBER] BLOWER

(Acquires Current Blower Speed)

EXAMPLE: 62188C7A BLOWER

REPLY: SP 1500

[UNIT SERIAL NUMBER] MODE

(Acquires Current Operating Mode Setting)

EXAMPLE: 62188C7A MODE

REPLY: MD OFF

MD SMART ROOM HEATING

MD COOL AIR DEHUMIDIFYING

MD ENHANCED DEHUMIDIFYING

MD SMART CLOTHES DRYING

MD AIR VENTING

MD AIR CIRCULATION INDOOR

MD COOL AIR DEHUMIDIFYING STANDBY

MD ENHANCED DEHUMIDIFYING STANDBY

[UNIT SERIAL NUMBER] FILTER

(Acquires Filter Cleaning Reminder Countdown in Hours)

EXAMPLE: 62188C7A FILTER

REPLY: FL 540

[UNIT SERIAL NUMBER] RUNDURATION

(Acquires Count Down OFF Timer Remaining Time in Minutes)

EXAMPLE: 62188C7A RUNDURATION

REPLY: FT 120

FT AUTO

(FT AUTO means unit is running in Auto mode, OFF Timer disabled.)

[UNIT SERIAL NUMBER] FWVER

(Acquires Firmware Version)

EXAMPLE: 62188C7A FWVER

REPLY: FW 6.0

[UNIT SERIAL NUMBER] HWVER

(Acquires Hardware Version)

EXAMPLE: 62188C7A HWVER

REPLY: HW 1.1

Direct Setting Commands:

*** All Commands Require Carriage Return (ASCII# 13) in the end**

[UNIT SERIAL NUMBER] SETMODE [X] (Set Mode to:)

- 0 = OFF
- 1 = SMART ROOM HEATING
- 2 = COOL AIR DEHUMIDIFYING
- 3 = ENHANCED DEHUMIDIFYING
- 4 = SMART CLOTHES DRYING
- 5 = AIR VENTING
- 6 = AIR CIRCULATION INDOOR

EXAMPLE: 62188C7A SETMODE 3

REPLY: ST ENHANCED DEHUMIDIFYING

[UNIT SERIAL NUMBER] SETRUNDURATION [XX] (Sets Off Timer in Minutes, -1 = Auto)

Example: 62188C7A SETRUNDURATION 120
62188C7A SETRUNDURATION -1

Reply: FT 120 (reply value in Minutes)
FT AUTO (reply running in Auto)

[UNIT SERIAL NUMBER] SETBLOWERSILENTMODE [X] (Set blower running in Standard or Silent mode)

- 0 = STANDARD MODE
- 1 = SILENT MODE

EXAMPLE: 62188C7A SETBLOWERSILENTMODE 1

REPLY: SM BLOWER SPEED MODE: SILENT

[UNIT SERIAL NUMBER] SETPOWERLOSTRESUME [X] (Set Power Lost Resume Status)

- 0 =DISABLE
- 1 = ENABLE

EXAMPLE: 62188C7A SETPOWERLOSTRESUME 1

REPLY: PR POWER LOST RESUME ENABLED

[UNIT SERIAL NUMBER] RESUMEAUTO [X] (Set RESUME PREVIOUS AUTO DEHUMIDIFYING)

0 =DISABLE

1 = ENABLE

EXAMPLE: 62188C7A RESUMEAUTO 0

REPLY: RA RESUME PREVIOUS AUTO
DEHUMIDIFYING DISABLED

[UNIT SERIAL NUMBER] SETHUMIDITYPREFERENCE [X] 0=HUMIDITY_NORMAL

1=HUMIDITY_LOWER

2=HUMIDITY_HIHGER

EXAMPLE: 62188C7A SETHUMIDITYPREFERENCE 2

REPLY: HP CUSTOM HUMIDITY PREFERENCE: HIGHER