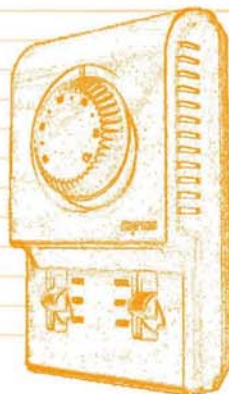




CYPRUS

Valves and Controls



CONTROLLERS

The CAL24 Series is a stand alone microprocessor based controller, providing 0-10V DC control or 3-point outputs. This series controls a variety of two-pipe and four-pipe air-handling units, heat pumps unitary equipment and various heating and cooling applications controlled by valve, damper and fan systems.



Supply Voltage: 24 VAC +/- 15%, 50-60 Hz
 Outputs: 0-10 VDC (CAL24A)
 24 VAC (CAL24T)
 Power Consumption: 24 VAC, 2VA
 Deadband: -1...+1K
 Setpoint Range: 0...30 °C
 Shipping Weight: 100 g

CAL24A1	Single output 0-10 VDC
CAL24A2	Dual output 0-10 VDC
CAL24T1	Single output 24 VAC, 20 VA

The TC24 Series is a stand alone microprocessor based controller, providing PI 0-10V DC control or 3-point outputs. This series controls a variety of two-pipe and four-pipe air-handling units, heat pumps unitary equipment and various heating and cooling applications controlled by valve, damper and fan systems.



Supply Voltage: 24 VAC +/- 15%, 50-60 Hz
 Outputs: 0-10 VDC (TC24A)
 24 VAC (TC24T)
 Power Consumption: 24 VAC, 2VA
 Deadband: -3...+3K
 Setpoint Range: 5...40 °C
 Shipping Weight: 120 g

TC24A1	Single output 0-10 VDC
TC24A2	Dual output 0-10 VDC
TC24T1	Single output 24 VAC, 20 VA
TC24T2	Dual output 24 VAC, 20 VA

The ED24 Series is a duct-mount stand alone microprocessor based controller, providing 0-10V DC control or 3-point outputs. This series controls a variety of two-pipe and four-pipe air-handling units, heat pumps unitary equipment and various heating and cooling applications controlled by valve, damper and fan systems.



Supply Voltage: 24 VAC +/- 15%, 50-60 Hz
 Outputs: 0-10 VDC (ED24A)
 24 VAC (ED24T)
 Power Consumption: 24 VAC, 2VA
 Deadband: -1...+1K
 Setpoint Range: 0...30 °C
 Shipping Weight: 100 g

ED24A1	Single output 0-10 VDC
ED24A2	Dual output 0-10 VDC
ED24T1	Single output 24 VAC, 20 VA
ED24T2	Dual output 24 VAC, 20 VA

CONTROLLERS

The TS24 Series is a touch-screen LCD stand alone microprocessor based controller, providing PI 0-10V DC control or 3-point outputs. This series controls a variety of two-pipe and four-pipe air-handling units, heat pumps unitary equipment and various heating and cooling applications controlled by valve, damper and fan systems.

Supply Voltage: 24 VAC +/- 15%, 50-60 Hz
 Outputs: 0-10 VDC (TC24A)
 24 VAC (TC24T)
 Power Consumption: 24 VAC, 2VA
 Deadband: -3...+3K
 Setpoint Range: 5...40 °C
 Shipping Weight: 160 g

TS24A1	Single output 0-10 VDC
TS24A2	Dual output 0-10 VDC
TS24T1	Single output 24 VAC, 20 VA
TS24T2	Dual output 24 VAC, 20 VA
TS24AH	0-10 VDC cooling = 2-wire on-off heating



SA-01 is an active LCD setpoint adjuster energized with 24 VAC supply that is designed for use with external controllers. It provides 0...10VDC signal directly proportional to the adjusted value of percentage. The LCD display and the rotary dial allow the users to view and adjust the output value in unit of percentage. It operates with a priority selector that compares the setpoint with either minimum and maximum limit signal.

Supply Voltage: 24 VAC +/- 15%, 50-60 Hz
 Setpoint range: 0-100 %
 Outputs: 0-10 VDC
 Shipping Weight: 120 g

SA-01	0-100 % setpoint
-------	------------------



TSM is an active LCD Temperature Setpoint Module energized with 24 VAC supply that is designed for use with external controllers. On-board high accuracy NTC sensor allows precision comfort control over occupied space area. Integrate with a setpoint dial and the LCD display, allows the users to adjust the setpoint temperature and to view the sensing temperature. It provides 0...10VDC signal outputs for the external controller, directly proportional to the value of setpoint temperature and sensing temperature.

Supply Voltage: 24 VAC +/- 15%, 50-60 Hz
 Setpoint range: 0-40 °C
 Outputs: 0-10 VDC
 Shipping Weight: 120 g

TSM-01	0-10 VDC output
TSM-02	0-10 VDC output 24 VAC unoccupied output



ROOM THERMOSTATS

The ET610 electronic room thermostat is designed for line-voltage control of cooling coils, fan heaters, fans and DX-cooling and especially for control of ventilation fans in elevator motor rooms and transformer rooms in commercial, industrial and residential buildings.



Operating Differential Range	Approximately 1-10 K 20...60 °C
Sensing Element	NTC 10k ohm
Housing Materials	Self-extinguishing, molded ABS
Relay Rating	16A (6A) - 230VAC
Shipping weight	180g

ET610	Electronic Type, NTC
-------	----------------------

The ET300 series room thermostats provide on/off control, 3-speed fan switch, consistent performance and contemporary styling. The series controls a variety of two-pipe and four-pipe fan coil systems as well as other heating and cooling applications.



Operating Differential Range	Approximately 1K 10...30 °C
Sensing Element	NTC 10k ohm
Housing Materials	Self-extinguishing, molded ABS
Thermostat Rating	1A cooling, 1A heating,
Switches Rating	6A resistive, 2A inductive,
Shipping weight	120g

ET300 Series	Electronic Type, NTC
--------------	----------------------

The ET350 series room thermostats provide 0-10 VDC control, 3-speed fan switch, consistent performance and contemporary styling. The series controls a variety of two-pipe and four-pipe fan coil systems as well as other heating and cooling applications.



Operating Differential Range	Approximately 1K 10...30 °C
Sensing Element	NTC 10k ohm
Housing Materials	Self-extinguishing, molded ABS
Thermostat Rating	1A cooling, 1A heating,
Switches Rating	6A resistive, 2A inductive,
Shipping weight	120g

ET350 Series	0-10 VDC Room Thermostat
--------------	--------------------------

LCD ROOM THERMOSTATS

The ET10 Series LCD microprocessor based room thermostats provide on/off, 3-wire floating and 0-10 VDC control, consistent performance and contemporary styling. The series controls a variety of two-pipe and four-pipe fan coil systems as well as other heating and cooling applications.

Supply Voltage: 220 VAC +/- 15%, 50/60 Hz
 Output relays: 220 VAC, 5A
 Setpoint Deadband: -3...+3K
 Setpoint Range: 5...35 °C
 Ambient Limitations: 0...50 °C, 90% RH
 Sensing element: Thermistor (NTC)
 Shipping Weight: 600 g

ET10	LCD room thermostat Grey faceplate is available
------	--



The ET40 Series Touch-screen LCD microprocessor based room thermostats provide on/off, 3-wire floating and 0-10 VDC control, consistent performance and contemporary styling. The series controls a variety of two-pipe and four-pipe fan coil systems as well as other heating and cooling applications.

Supply Voltage: 220 VAC +/- 15%, 50/60 Hz
 Output relays: 220 VAC, 5A
 Setpoint Deadband: -3...+3K
 Setpoint Range: 5...35 °C
 Ambient Limitations: 0...50 °C, 90% RH
 Sensing element: Thermistor (NTC)
 Shipping Weight: 700 g

ET40	LCD room thermostat Vertical LCD is available
------	--



The ET50 Series LCD microprocessor based room thermostats provide on/off, 3-wire floating and 0-10 VDC control, consistent performance and contemporary styling. The series controls a variety of two-pipe and four-pipe fan coil systems as well as other heating and cooling applications.

Supply Voltage: 110-230 VAC +/- 15%, 50/60 Hz
 Output relays: 110-230 VAC, 5A
 Setpoint Deadband: -3...+3K
 Setpoint Range: 5...35 °C
 Ambient Limitations: 0...50 °C, 90% RH
 Sensing element: Thermistor (NTC)
 Shipping Weight: 350 g

ET50	LCD room thermostat White faceplate is available
------	---



LCD ROOM THERMOSTATS

The ET200 Series LCD microprocessor based room thermostats provide on/off, 3-wire floating and 0-10 VDC control, consistent performance and contemporary styling. The series controls a variety of two-pipe and four-pipe fan coil systems as well as other heating and cooling applications.



Supply Voltage:	110-230 VAC +/- 15%, 50/60 Hz
Output relays:	110-230 VAC, 5A
Setpoint Deadband:	-3...+3K
Setpoint Range:	5...35 °C
Ambient Limitations:	0...50 °C, 90% RH
Sensing element:	Thermistor (NTC)
Shipping Weight:	350 g

ET200	LCD room thermostat
-------	---------------------

NETWORKING PRODUCTS

The NT50 are line voltage RS485 Modbus RTU networking LCD thermostat with 5 basic models that cover all type of FCU applications. There are models for cooling only, heating only and heating/cooling fan coil system integrate with 2-wire, 0-10 VDC or 3-wire input valve control

Supply Voltage: 220 VAC +/- 15%, 50/60 Hz
Output relays: 220 VAC, 5A
Setpoint Deadband: -3...+3K
Setpoint Range: 5...35 °C
Ambient Limitations: 0...50 °C, 90% RH
Sensing element: Thermistor (NTC)
Shipping Weight: 350 g

NT50 Series	Modbus RS-485 room thermostat White faceplate is available
-------------	---



The NT800 Series networking room thermostats are BACnet Master-Slave/Token-Passing (MS/TP) networked devices designed in strict accordance with ASHRAE standard 135-2001 and are considered "native" BACnet devices. These thermostats provide line voltage or 24-VAC on-off control or 3-wire floating or 0-10 VDC output to control valves in 2-pipe or 4-pipe fan coil units.

Supply Voltage: 220 VAC +/- 15%, 50/60 Hz
Output relays: 220 VAC, 5A
Setpoint Deadband: -3...+3K
Setpoint Range: 5...35 °C
Ambient Limitations: 0...50 °C, 90% RH
Sensing element: Thermistor (NTC)
Shipping Weight: 600 g

NT800 Series	BACnet MS/TP room thermostat Grey faceplate is available
--------------	---



The NT900 Series Touch-screen networking room thermostats are BACnet Master-Slave/Token-Passing (MS/TP) networked devices designed in strict accordance with ASHRAE standard 135-2001 and are considered "native" BACnet devices. These thermostats provide line voltage or 24-VAC on-off control or 3-wire floating or 0-10 VDC output to control valves in 2-pipe or 4-pipe fan coil units.

The technologically advanced NT900 Series thermostats feature a BACnet MS/TP communication capability that enables remote monitoring and programmability for efficient space or return air temperature control.

Supply Voltage: 220 VAC +/- 15%, 50/60 Hz
Output relays: 220 VAC, 5A
Setpoint Deadband: -3...+3K
Setpoint Range: 5...35 °C
Ambient Limitations: 0...50 °C, 90% RH
Sensing element: Thermistor (NTC)
Shipping Weight: 700 g

NT900 Series	Touch-screen BACnet MS/TP thermostat Horizontal LCD is available
--------------	---



NETWORKING PRODUCTS



The BMG Series is a BACnet network gateway module which routes communication traffic between BACnet MS/TP network and Modbus RTU network.

While the BMG (master) communicates on a RS-485 network at its NET1 communication port in BACnet MS/TP protocol, it can support up to 32 units of NT10 or NT50 RS-485 networking room thermostats (slaves) on a RS-485 network at its NET2 communication port in Modbus RTU protocol.

BMG-MR	BACnet MS/TP Gateway
--------	----------------------

The BFM networking input/output field modules provide remote analog inputs/outputs to any native BACnet MS/TP controllers. Each BFM field module communicates on a RS-485 network at its communication port using the BACnet MS/TP protocol technique.

The BFM Series field modules fit a diverse range application needs where additional analog or binary inputs and outputs are required or where a small number of analog points are remotely located.



Analogue models	
BFM-0800A	- 8 inputs
BFM-0404A	- 4 inputs and 4 outputs
Binary models	
BFM-1200B	- 12 inputs
BFM-0602B	- 6 inputs and 2 outputs

OTHERS

The remote temperature sensors are primarily used to transmit the measured air temperature in ducts or in immersion wells to CAL24, TC24, ET10 and ET300 controllers which require remote sensing.

Sensing element:	NTC
Temp. range:	0...30°C
Lead:	100 cm
Protection:	IP65 (TE10-1) IP53 (TE10-2)
Weight:	15g (TE10-1) 100g (TE10-2)

TE10-1	Surface Mount
TE10-2	Duct Mount



WFS Series flow controller is used as an operating control device and where an operating control device failure would result in personal injury and/or loss of property, it is the responsibility of the user to add safety devices that protect against control device failure.

Pressure rating:	10 bar (1,000 kPa)
Connection:	1" BSP
Fluid temp.:	1...100 °C
Working life:	500,000 times
Switches:	SPDT, snap action
Voltage and rating:	250 VAC, 15(7.5) A, 50/60 Hz
Protection:	IP 53
Weight:	0.7 kg

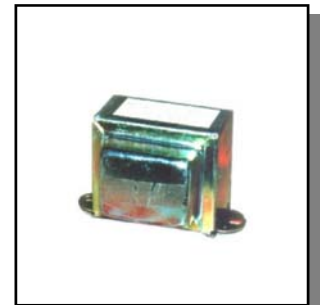
WFS-MB	Water Flow Switch
--------	-------------------



The ST Series transformers are designed for use on controllers, motor actuators and miscellaneous low-voltage control circuits. These transformers provide rated secondary output at rated load for proper operation of system components.

Ambient Temp.:	-40... 50 °C
Input Voltage:	220 V 50/60 Hz
Output Voltage:	24 V 50/60 Hz Full load 26.5 ± 1 V 50/60 No load
Rating:	40 VA
Weight:	1.2 kg

ST-5724-40W	40VA, 220 to 24 VAC Transformer
-------------	---------------------------------



OTHERS

The P series zone valves are specially designed for two-position (on/off) control of fluid flow in a wide variety of heating and cooling applications.



Operating Pressure: 300 psi
Pipe Connection: Female Thread
Seat Leakage: 0%
Fluid limits: 94°C of water up to 50% Glycol
Shipping Weight: 1.3 kg (3.0 lb)

P Series	15mm...25mm Motorized Zone Valves
----------	-----------------------------------

The MPSU10-2 multiple-FCU power supply units (MPSUs) are designed for use with the display control units (DCUs) of the ET10 and ET40 Series digital thermostats, and, when wired in cascade connections, are capable of driving multiple fan coil units with one single DCU mounted on the wall.



Supply Voltage: 220 VAC +/- 15%, 50/60 Hz
Output relays: 20 VAC, 5A (resistive)
Ambient Limitations: 0...50 °C, 90% RH
Housing Material: Molded ABS
Shipping Weight: 480 g

MPSU10-2	220 VAC
----------	---------

The logo for Cyrus Valves and Controls Company, featuring the word "Cyrus" in a bold, italicized, orange sans-serif font.

Cyrus Valves and Controls Company

Flat H, 3/F., Yue Cheung Center
1-3 Wong Chuk Yeung Street
Fotan, N.T., Hong Kong
Tel: + 852-3124-1112
Fax: + 852-3124-1114
www.cyruscontrols.com
E-mail: clee@cyruscontrols.com

Distributor: _____