

DDC FUNCTION BLOCK LOGIC SYMBOLS			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	OUTPUT POINT - TRANSMITS A VALUE FROM THE FB TO A PHYSICAL OUTPUT CHANNEL ON THE CONTROLLER. DESCRIPTOR - CONTROLLER ADDRESS, POINTNAME AND POINT TYPE AO - ANALOG OUTPUT DO - DIGITAL OUTPUT		PID CONTROLLER - PROPORTIONAL, INTEGRAL, DERIVATIVE LOOPS USE STANDARD ALGORITHMS TO CALCULATE AN OUTPUT BASED ON A VARIABLE INPUT. PROPORTIONAL IS BASED ON THE DIFFERENCE BETWEEN THE INPUT AND THE SETPOINT. INTEGRAL IS BASED ON THE THE TIME THE INPUT DEVIATES FROM THE SETPOINT. DERIVATIVE IS BASED ON THE THE RATE THE INPUT IS APPROACHING THE SETPOINT. THE PID CAN BE EITHER DIRECT ACTING (DA) OR REVERSE ACTING (RA). IN A DA PID WHEN THE INPUT INCREASES THE OUTPUT INCREASES. IN A RA PID WHEN THE INPUT INCREASES THE OUTPUT DECREASES.
	INPUT POINT - READS A VALUE FROM A PHYSICAL INPUT ON THE CONTROLLER AND CONVERTS FOR USE INSIDE THE FB. DESCRIPTOR - CONTROLLER ADDRESS, POINTNAME AND POINT TYPE AI - ANALOG INPUT DI - DIGITAL INPUT		RESET CONTROLLER - USER DEFINED OUTPUT VALUE WILL RESET IN A LINEAR RELATIONSHIP BASED ON USER DEFINED INPUT VALUE.
	VIRTUAL POINT - ANALOG OR DIGITAL VALUE USED WITHIN A FB OR BROADCAST ACROSS THE LAN.		SWITCHING RELAY - SWITCHES OUTPUT BETWEEN TWO INPUTS WHEN DIGITAL PILOT INPUT IS ON. SWITCH SHOWN IN NORMAL POSITION
	DIGITAL WIRE - DIGITAL LOGIC CONNECTION BETWEEN FB'S		DEADBAND SWITCHING RELAY - DIGITAL OUTPUT CHANGES WHEN INPUT VALUE RISES/FALLS ABOVE/BELOW SETPOINT 1 (SP1). DIGITAL OUTPUT RESTORES TO NORMAL WHEN INPUT RISES/FALLS ABOVE/BELOW SETPOINT 2 (SP2). SWITCH SHOWN IN NORMAL POSITION
	ANALOG WIRE - ANALOG LOGIC CONNECTION BETWEEN FB'S		LOGICAL IF EXPRESSION - THE OUTPUT IS ON IF THE INPUT MEETS THE CONDITION OF THE SETPOINT.
	CONSTANT - CONSTANT VALUE INPUTS		RAMP CONTROLLER - LIMITS THE RATE OF CHANGE OF AN OUTPUT ON AN INCREASE IN VALUE OR A DECREASE IN VALUE. CHNG% - % OF TOTAL MAXIMUM OUTPUT VALUE ALLOWED FOR OUTPUT CHANGE * = TIME IN SECONDS MAX = MAXIMUM OUTPUT VALUE MIN = MINIMUM OUTPUT VALUE
	GRAPHIC INTERFACE - VALUE APPEARS ON GRAPHIC SCREEN		OPTIMUM START/STOP TIME SCHEDULER - INCLUDES SCHEDULES ENTERED INTO CONTROLLER FOR 7 DAY SCHEDULING WITH HOLIDAYS AND OVERRIDE SCHEDULES. INCLUDES OPTIMUM START STOP ROUTINE. OUTPUTS REFERENCE FLAGS CAN INCLUDE : WARM-UP, COOL-DOWN, HEATING SETBACK, COOLING SETBACK, AND UNOCCUPIED. INCLUDES OVERRIDE INPUT (OVR) FOR UNSCHEDULED OVERRIDE
	ALARM & PRIORITY - TRANSMITS AN ALARM AND ALARM PRIORITY TO APPROPRIATE DEVICES.		CALCULATION BLOCK - OUTPUT IS EQUAL TO CALCULATION USING INPUT(S). EQUATION CAN BE MATHEMATICAL OR A PREDEFINED INDUSTRY STANDARD ALGORITHM (ie. CFM, VELOCITY, PRESSURE, ENTHALPY, DEW POINT ETC.)
	MESSAGE AND NUMBER - TRANSMITS A MESSAGE AND MESSAGE NUMBER TO APPROPRIATE DEVICES.		HIGH SELECTOR - SELECTS HIGHER OF INPUT VALUES
			LOW SELECTOR - SELECTS LOWER OF INPUT VALUES
	RUN TIME MONITOR - ACCUMULATES RUNTIME FOR DIGITAL OUTPUT AND CONVERTS TIME TO HOURS.		AVERAGING BLOCK - MATHEMATICALLY AVERAGES INPUT VALUES.
	REFERENCE FLAG - USED AS CONNECTION TO FB'S BY REFERENCE INSTEAD OF WIRES.		PROOFING MODULE - GENERATES VALUES BASED ON A COMPARISON OF COMMAND AND MONITORING INPUTS. DLY - PROOFING DELAY PERIOD MTR - MONITOR (INPUT FOR PROOF) COM - COMMAND (INPUT FOR PROOF) RST - RESET (IF LATCHING IS USED) ALM - (ON WHEN MONITOR INPUT IS NOT EQUAL TO COMMAND INPUT) NML - OUTPUT IS ON WHEN MONITOR AND COMMAND INPUTS ARE ON AND NORMAL CONDITIONS ARE MET
	DIGITAL AND GATE- OUTPUT IS ON IF ALL INPUTS ARE TRUE		LATCH OFF- OUTPUT IS OFF WHENEVER INPUT IS ON. OUTPUT REMAINS OFF UNTIL RESET CHANGES FROM OFF TO ON.
	DIGITAL OR GATE - OUTPUT IS ON IF ANY INPUT IS TRUE.		LATCH ON- OUTPUT IS ON WHENEVER INPUT IS ON. OUTPUT REMAINS ON UNTIL RESET CHANGES FROM OFF TO ON.
	DIGITAL EXCLUSIVE OR GATE - OUTPUT IS ON IF ONLY ONE INPUT IS TRUE.		ON/OFF DELAY TIMER- AFTER INPUT IS ON, OUTPUT IS ON/OFF AFTER A PREDETERMINED TIME (*) HAS ELAPSED.
	INVERSE (NOT)- IF INPUT = ON, OUTPUT = OFF; CONVERSELY IF INPUT =OFF, OUTPUT =ON		
	POWER FLAG - ON WHEN CONTROLLER IS INITIALLY POWERED ON AND NO PHASE LOSS IS DETECTED		

CONTROL SYMBOLS			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	DDC POINT DESCRIPTOR WITH NAME AI - ANALOG INPUT DI - DIGITAL INPUT AO - ANALOG OUTPUT DO - DIGITAL OUTPUT		DISCONNECT SWITCH
	TEMPERATURE SENSOR WITH AVERAGING ELEMENT		CONTROL TRANSFORMER
	TEMPERATURE SENSOR WITH SINGLE POINT ELEMENT		RELAY COILS
	TEMPERATURE SENSOR WITH PIPE WELL		FUSE
	HUMIDITY SENSOR		THERMAL OVERLOAD
	DAMPER ACTUATOR		NORMALLY OPEN AND NORMALLY CLOSED CONTACTS
	HIGH TEMPERATURE SWITCH (FIRESTAT)		HAND-OFF-AUTO SELECTOR SWITCH
	SMOKE DETECTOR		WIRING DESIGNATION. (NO. OF HATCHES INDICATES NO. OF CONDUCTORS)
	DIFFERENTIAL PRESSURE SWITCH		WIRING CONNECTION
	WATER FLOW SWITCH		ON-OFF SELECTOR SWITCH
	CURRENT SENSOR		ROOM TEMPERATURE SENSOR AS SHOWN ON FLOOR PLANS
	CURRENT TO PNEUMATIC TRANSDUCER		ROOM HUMIDITY SENSOR AS SHOWN ON FLOOR PLANS
	TWO WAY CONTROL VALVE		DIGITAL CONTROL STATION
	THREE WAY CONTROL VALVE		LAN INTERFACE
			FIRE ALARM RELAY BY DIV. 16

LEGEND	
WIRING DESIGNATIONS	
	NEW WIRING
	WIRING BY OTHERS