



Modbus Register Map: InRow RD

990-3576

02/2009

Absolute Starting Register Number, (Hexadecimal)	Absolute Starting Register Number, (Decimal)	Data Point	R/W	Length	Units	Valid Response					
// Group											
0000	0	NUMBER_OF_COOLING_UNITS	R/W	2	LONG						
0002	2	COOL_SETPOINT	R/W	2	LONG	(Tenths Deg) F					
0004	4	SUPPLY_AIR_SETPOINT	R/W	2	LONG	(Tenths Deg) F					
0006	6	CONFIGURATION_TYPE	R/W	1	ENUM	0 = RACS	1 = Spot	2 = In-Row	3 = HACS		
0007	7	FAN_SPEED_PREFERENCE	R/W	1	ENUM	0 = Low	1 = Med-Low	2 = Med	3 = Med-High	4 = High	
0008	8	CAPACITY_CTRL	R/W	1	ENUM	0 = Discrete (Disc)	1 = Proportional (Prop)				
0009	9	FAN_SPEED_CTRL	R/W	1	ENUM	0 = Automatic	1 = Manual				
000A	10	COOL_DEADBAND	R/W	2	LONG	(Tenths Deg) F					
000C	12	RACK_INLET_MAX_TEMP	R	2	LONG	(Tenths Deg) F					
000E	14	RACK_INLET_MIN_TEMP	R	2	LONG	(Tenths Deg) F					
0010	16	RETURN_AIR_MAX_TEMP	R	2	LONG	(Tenths Deg) F					
0012	18	RETURN_AIR_MIN_TEMP	R	2	LONG	(Tenths Deg) F					
0014	20	COOLING_DEMAND	R	2	LONG	(Tenths) kW					
0016	22	COOLING_ACTUAL	R	2	LONG	(Tenths) kW					
0018	24	AIRFLOW_DEMAND	R	2	LONG	CFM					
001A	26	COOL_PID_P	R/W	2	LONG	(Hundredths) Unitless					
001C	28	COOL_PID_I	R/W	2	LONG	(Hundredths) Unitless					
001E	30	COOL_PID_D	R/W	2	LONG	(Hundredths) Unitless					
0020	32	NUMBER_OF_BACKUP_UNITS	R/W	2	LONG						
0022	34	RUNTIME_BALANCING_ENABLE	R/W	1	ENUM	0 = Disable	1 = Enable				
0023	35	LOAD_ASSIST_ENABLE	R/W	1	ENUM	0 = Disable	1 = Enable				
// Unit											
0040	64	OVERALL_STATUS	R	1	ENUM	0 = No Alarm	2 = Informational	4 = Warning	8 = Critical		
0041	65	UNIT_NAME	R/W	21	ASCII	N/A					
0056	86	UNIT_LOCATION	R/W	21	ASCII	N/A					
006B	107	MODEL_NUM	R	10	ASCII	N/A					
0075	117	SERIAL_NUM	R	10	ASCII	N/A					
007F	127	FIRMWARE_REV	R	4	ASCII	N/A					
0083	131	HARDWARE_REV	R	4	ASCII	N/A					
0087	135	DATE_OF_MANUFACTURE	R	6	ASCII	mm/dd/yyyy					
008D	141	OPERATE_MODE	R	1	ENUM	0 = Standby	1 = On	2 = Idle	4 = Service	5 = Backup	6 = Assist
008E	142	UNIT_TYPE	R	1	ENUM	0 = Not Configured	1 = Fluid Cooled	2 = Air Cooled			
008F	143	UNIT_COOL_OUTPUT	R	2	LONG	(Tenths) kW					
0091	145	UNIT_COOL_DEMAND	R	2	LONG	(Tenths) kW					
0093	147	RACK_INLET_TEMP	R	2	LONG	(Tenths Deg) F					
0095	149	SUPPLY_TEMP	R	2	LONG	(Tenths Deg) F					
0097	151	RETURN_TEMP	R	2	LONG	(Tenths Deg) F					
0099	153	UNIT_AIR_FLOW	R	2	LONG	CFM					
009B	155	FAN_SPEED	R	2	LONG	(Tenths) %					



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009D	157	SUCTION_TEMP	R	2	LONG	(Tenths Deg) F				
009F	159	SUPERHEAT	R	2	LONG	(Tenths Deg) F				
00A1	161	FILTER_DP	R	2	LONG	(Hundredths) in W.C.				
00A3	163	FLUID_VALVE_POSITION	R	2	LONG	%				
00A5	165	SUCTION_PRESSURE	R	2	LONG	Psi				
00A7	167	DISCHARGE_PRESSURE	R	2	LONG	Psi				
00A9	169	AIR_FILTER_RUNHOUR	R	2	LONG	Hours				
00AB	171	FAN_1_RUNHOUR	R	2	LONG	Hours				
00AD	173	FAN_2_RUNHOUR	R	2	LONG	Hours				
00AF	175	FAN_3_RUNHOUR	R	2	LONG	Hours				
00B1	177	FAN_4_RUNHOUR	R	2	LONG	Hours				
00B3	179	FAN_5_RUNHOUR	R	2	LONG	Hours				
00B5	181	FAN_6_RUNHOUR	R	2	LONG	Hours				
00B7	183	COMPRESSOR_RUNHOUR	R	2	LONG	Hours				
00B9	185	FAN_TOP_PWRSP_RUNHOUR	R	2	LONG	Hours				
00BB	187	FAN_BOTTOM_PWRSP_RUNHOUR	R	2	LONG	Hours				
00BD	189	CONDS_PUMP_RUNHOUR	R	2	LONG	Hours				
00BF	191	AIR_FILTER_SERV_INT	R/W	2	LONG	Weeks				
00C1	193	AIR_FILTER_SERV_INT_ALARM	R/W	1	ENUM	0 = Disable	1 = Enable			
00C2	194	RACK_TEMP_HIGH_THRESH	R/W	2	LONG	(Tenths Deg) F				
00C4	196	SPLY_AIR_TEMP_HIGH_THRESH	R/W	2	LONG	(Tenths Deg) F				
00C6	198	RTN_AIR_TEMP_HIGH_THRESH	R/W	2	LONG	(Tenths Deg) F				
00C8	200	STARTUP_DELAY	R/W	2	LONG	Seconds				
00CA	202	IDLE_ON_LEAK	R/W	1	ENUM	0 = No	1 = Yes			
00CB	203	INPUT_NORMAL	R/W	1	ENUM	0 = Open	1 = Closed			
00CC	204	INPUT_STATE	R	1	ENUM	0 = Open	1 = Closed			
00CD	205	OUTPUT_NORMAL	R/W	1	ENUM	0 = Open	1 = Closed			
00CE	206	OUTPUT_STATE	R	1	ENUM	0 = Open	1 = Closed			
00CF	207	OUTPUT_SOURCE	R/W	1	ENUM	0 = Any Alarm	1 = Only Critical Alarms			
00D0	208	OHE_INPUT_NORMAL	R/W	1	ENUM	0 = Open	1 = Closed			
00D1	209	OHE_INPUT_STATE	R	1	ENUM	0 = Open	1 = Closed			
00D2	210	OHE_OUTPUT_STATE	R	1	ENUM	0 = Open	1 = Closed			
00D3	211	COMPRESSOR_STATE	R	1	ENUM	0 = Off	1 = On			
00D4	212	HOT_GAS_BYPASS_VALVE_POSITION	R	2	LONG	(Hundredths) %				
00D6	214	UNIT_RUNHOUR	R	2	LONG	Hours				
00D8	216	UNIT_ROLE_OVERRIDE	R/W	1	ENUM	0 = Automatic	1 = Forced On			
00D9	217	IDLE_ON_COOL_FAIL	R/W	1	ENUM	0 = No	1 = Yes			
// Alarms										
0100	256	INTERNAL_COMM_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
0101	257	ALINK_ISOLATION_RELAY_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			



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0102	258	EXTERNAL_COMMUNICATION_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
0103	259	COOL_FAIL	R	1	ENUM	0 = Clear	1 = Alarm			
0104	260	RACK_TEMP_HIGH_VIOLATION	R	1	ENUM	0 = Clear	1 = Alarm			
0105	261	AIR_FILTER_CLOGGED	R	1	ENUM	0 = Clear	1 = Alarm			
0106	262	UPPER_RTN_AIR_SENSOR_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
0107	263	Reserved		1						
0108	264	LOWER_RTN_AIR_SENSOR_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
0109	265	UPPER_SPLY_AIR_SENSOR_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
010A	266	MIDDLE_SPLY_AIR_SENSOR_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
010B	267	LOWER_SPLY_AIR_SENSOR_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
010C	268	RACK_TEMP_SENSOR_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
010D	269	CONDENSOR_FLUID_ACUATOR_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
010E	270	HIGH_DISCHARGE_PRESSURE	R	1	ENUM	0 = Clear	1 = Alarm			
010F	271	LOW_SUCTION_PRESSURE	R	1	ENUM	0 = Clear	1 = Alarm			
0110	272	EVAPORATOR_FAN_1_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
0111	273	EVAPORATOR_FAN_2_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
0112	274	EVAPORATOR_FAN_3_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
0113	275	EVAPORATOR_FAN_4_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
0114	276	EVAPORATOR_FAN_5_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
0115	277	EVAPORATOR_FAN_6_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
0116	278	WATER_DETECTED	R	1	ENUM	0 = Clear	1 = Alarm			
0117	279	CONDENSATE_PUMP_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
0118	280	CONDENSATE_PAN_FULL	R	1	ENUM	0 = Clear	1 = Alarm			
0119	281	TOP_FAN_PWRSP_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
011A	282	BOTTOM_FAN_PWRSP_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
011B	283	AIR_FILTER_RUNHOUR_VIOLATION	R	1	ENUM	0 = Clear	1 = Alarm			
011C	284	GROUP_COMM_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
011D	285	SUPPLY_HIGH_TEMP_VIOLATION	R	1	ENUM	0 = Clear	1 = Alarm			
011E	286	RETURN_HIGH_TEMP_VIOLATION	R	1	ENUM	0 = Clear	1 = Alarm			
011F	287	FILTER_DP_SENSOR_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
0120	288	SUCTION_TEMP_SENSOR_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
0121	289	SUCTION_PRESSURE_SENSOR_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
0122	290	DISCHARGE_PRESS_SENSOR_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
0123	291	DISCRETE_INPUT_ABNORMAL	R	1	ENUM	0 = Clear	1 = Alarm			
0124	292	HIGH_DISCHARGE_PRESSURE_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
0125	293	LOW_SUCTION_PRESSURE_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
0126	294	Reserved	R	3						
0129	297	OUTSIDE_HEAT_EXCHANGE_FAULT	R	1	ENUM	0 = Clear	1 = Alarm			
012A	298	Reserved	R	1						
012B	299	UNIT_TYPE_CONFLICT	R	1	ENUM	0 = Clear	1 = Alarm			

APC	Modbus Register Map: InRow RD										
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Absolute Starting Register Number, (Hexadecimal)	Absolute Starting Register Number, (Decimal)	Data Point	R/W	Length	Units	Valid Response					
012C	300	LIQUID_REFRIGERANT_SENSOR_FAULT	R	1	ENUM	0 = Clear	1 = Alarm				
012D	301	EXCESSIVE_COMP_CYCLING_ALARM	R	1	ENUM	0 = Clear	1 = Alarm				
012E	302	NO_BACKUP_UNITS_AVAILABLE	R	1	ENUM	0 = Clear	1 = Alarm				
// Logging Registers											
FFEE	65518	APC RX CRC ERRORS	R	2	LONG	RX CRC ERRORS					
FFF0	65520	APC RX PACKET COUNTER	R	2	LONG	RX PACKET COUNTER					
FFF2	65522	APC TX PACKET COUNTER	R	2	LONG	TX PACKET COUNTER					
FFF4	65524	APC SER FRAME ERRORS	R	2	LONG	SER FRAME ERRORS					
FFF6	65526	APC SER OVERRUN ERRORS	R	2	LONG	SER OVERRUN ERRORS					
FFF8	65528	APC SER PARITY ERRORS	R	2	LONG	SER PARITY ERRORS					
FFFA	65530	APC SER RX15 ERRORS	R	2	LONG	SER RX15 ERRORS					
FFFC	65532	APC SER RX35 ERRORS	R	2	LONG	SER RX35 ERRORS					
FFFE	65534	APC SER BAUD RATE	R	1	INTEGER	SER BAUD RATE					
// END OF DATA											
Note 1: ASCII strings include Null terminator.											
Note 2: To prevent Building Management Service and automated script difficulties, accesses to data points on unsupported units will return a value of 0 instead of an error.											
Note 3: Accesses to items before data is available will result in an invalid address error.											