Honeywell

Honeywell BACnet, ModBus, and LonWorks Point Maps

CLASS 320, CLASS 340, CLASS 500 AND IDR

SYSTEM ENGINEERING GUIDE

CONTENTS

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HONEYWELL MODBUS POINT MAP: CLASS 320, 340, AND 500 METERS

Table 1.

Address	Registers	Format	Description	Units	CL320	CL340/CL500	Notes
40001	2	Integer	Energy delivered	Wh Pulse	R/W	R/W	1
40003	2	Integer	Energy received	Wh Pulse	R/W	R/W	1
40005	2	Integer	Reactive energy delivered	VARh Pulse	R/W	R/W	1
40007	2	Integer	Reactive energy received	VARh Pulse	R/W	R/W	1
41001	2	Float	Energy delivered	kWh	R/W	R/W	1
41003	2	Float	Energy received	kWh	R/W	R/W	1
41005	2	Float	Reactive energy delivered	kVARh	R/W	R/W	1
41007	2	Float	Reactive energy received	kVARh	R/W	R/W	1
41009	2	Float	Real power	kW	R	R	
41011	2	Float	Reactive power	kVAR	R	R	
41013	2	Float	Apparent power	kVA	R	R	
41015	2	Float	Power factor	% PF	R	R	
41017	2	Float	Peak demand	kW	R	R	
41019	2	Float	Current average	Amps	R	R	
41021	2	Float	Voltage line-neutral	Volts-N	R	R	
41023	2	Float	Voltage line-line	Volts-L	R	R	
41025	2	Float	Frequency	Hz	R	R	
41027	2	Float	Phase angle	Degree	R	R	
41029	2	Float	Real power, phase A	kW	R	R	
41031	2	Float	Real power, phase B	kW	R	R	
41033	2	Float	Real power, phase C	kW	R	R	
41035	2	Float	Reactive power, phase A	kVAR	R	R	
41037	2	Float	Reactive power, phase B	kVAR	R	R	
41039	2	Float	Reactive power, phase C	kVAR	R	R	
41041	2	Float	Apparent power, phase A	kVA	R	R	
41043	2	Float	Apparent power, phase B	kVA	R	R	
41045	2	Float	Apparent power, phase C	kVA	R	R	
41047	2	Float	Power factor, phase A	% PF	R	R	
41049	2	Float	Power factor, phase B	% PF	R	R	
41051	2	Float	Power factor, phase C	% PF	R	R	
41053	2	Float	Current, phase A	Amps	R	R	
41055	2	Float	Current, phase B	Amps	R	R	
41057	2	Float	Current, phase C	Amps	R	R	
41059	2	Float	Voltage, line to neutral, phase A-N	Volts-N	R	R	
41061	2	Float	Voltage, line to neutral, phase B-N	Volts-N	R	R	
41063	2	Float	Voltage, line to neutral, phase C-N	Volts-N	R	R	
41065	2	Float	Voltage, line to line, phase A-B	Volts-L	R	R	
41067	2	Float	Voltage, line to line, phase B-C	Volts-L	R	R	
41069	2	Float	Voltage, line to line, phase C-A	Volts-L	R	R	
41071	2	Float	Phase angle, phase A	Degree	R	R	
41073	2	Float	Phase angle, phase B	Degree	R	R	
41075	2	Float	Phase angle, phase C	Degree	R	R	
41083	2	Float	External Input 1	Pulse		R/W	2

Table 1. (Continued)

Address	Registers	Format	Description	Units	CL320	CL340/CL500	Notes
41085	2	Float	External Input 2	Pulse		R/W	2
44001	6	Custom	Interval Day Block		R/W	R/W	3
44007	1 per interval	Integer	Interval Data	Pulse	R	R	4
45501	2 per day	Custom	Interval Data Headers		R	R	5
46025	8	Custom	RTC Date/Time		R/W	R/W	6
46049	8	Custom	EZ7 ID, ModBus ID, Serial Number		R/W	R/W	7
46057	8	Custom	Recorder Info., Demand Interval		R/W	R/W	
46513	8	Custom	Flags L1: Power Failure, Battery		R	R	
46521	8	Custom	Flags L2: Power Failure Date		R	R	

1. To clear single meter kWh/kVARh, set multiple points at 40001 or 41001 for 8 points with data set to 0000 0000 0000 0000 0000 0000 0000 0000. Jumper J6 must be closed.
2. External inputs are standard on Class 500 meters and optional on Class 340 meters (Part of Expanded Feature Package). To clear external inputs, set multiple points at 41083 or 41085 for 2 points with data set to 0000 0000. Jumper J6 must be closed.
3. To set the interval data day block, set multiple points at 44001 for 6 points with data set to 0C0I 0000 MMDD YYYY 0000 0000. 0C = Channel, 0I = Interval (0F = 15 minute intervals, 05 = 5 minute intervals)
4. Each register represents a 15 or 5 minute kWh pulse value based on the interval day block. 96 registers max with 15 minute intervals. 288 registers max with 5 minute intervals. The first interval data register 44007 represents the pulse count for the first 15 or 5 minute interval beginning at midnight.
5. The interval data headers represent days with available interval data. Each day represents 2 registers. Format: MMDD YYYY.
6. To set the date and time, set multiple points at 46025 for 4 points with data set to HHMM SSDW MMDD YYYY (DW=day of week)
7. To change the ModBus ID, set single point at 46050 with data set to new ModBus ID (e.g. 1 to 247). Jumper J6 must be closed.

HONEYWELL MODBUS POINT MAP: LEGACY CLASS 300 AND 500 METERS

Table 2.

Address	Registers	Format	Description	Units	Legacy CL300 CL500 RTU	Legacy CL300 CL500 TCP/IP	Notes
40001	2	Integer	Energy delivered	Wh Pulse	R/W	R	1
40003	2	Integer	Energy received	Wh Pulse	R/W	R	1
40005	2	Integer	Reactive energy delivered	VARh Pulse	R/W	R	1
40007	2	Integer	Reactive energy received	VARh Pulse	R/W	R	1
41001	2	Float	Energy delivered	kWh	R/W	R	2
41003	2	Float	Energy received	kWh	R/W	R	2
41005	2	Float	Reactive energy delivered	kVARh	R/W	R	2
41007	2	Float	Reactive energy received	kVARh	R/W	R	2
41009	2	Float	Real power	kW	R	R	
41011	2	Float	Reactive power	kVAR	R	R	
41013	2	Float	Apparent power	kVA	R	R	
41015	2	Float	Power factor	% PF	R	R	
41017	2	Float	Current total	Amps	R	R	
41019	2	Float	Current average	Amps	R	R	
41021	2	Float	Voltage line-neutral	Volts-N	R	R	
41023	2	Float	Voltage line-line	Volts-L	R	R	
41025	2	Float	Frequency	Hz	R	R	
41027	2	Float	Phase angle	Degree	R	R	
41029	2	Float	Real power, phase A	kW	R	R	
41031	2	Float	Real power, phase B	kW	R	R	
41033	2	Float	Real power, phase C	kW	R	R	
41035	2	Float	Reactive power, phase A	kVAR	R	R	
41037	2	Float	Reactive power, phase B	kVAR	R	R	
41039	2	Float	Reactive power, phase C	kVAR	R	R	
41041	2	Float	Apparent power, phase A	kVA	R	R	
41043	2	Float	Apparent power, phase B	kVA	R	R	
41045	2	Float	Apparent power, phase C	kVA	R	R	
41047	2	Float	Power factor, phase A	% PF	R	R	
41049	2	Float	Power factor, phase B	% PF	R	R	

Table 2. (Continued)

Address	Registers	Format	Description	Units	Legacy CL300 CL500 RTU	Legacy CL300 CL500 TCP/IP	Notes
41051	2	Float	Power factor, phase C	% PF	R	R	
41053	2	Float	Current, phase A	Amps	R	R	
41055	2	Float	Current, phase B	Amps	R	R	
41057	2	Float	Current, phase C	Amps	R	R	
41059	2	Float	Voltage, line to neutral, phase A-N	Volts-N	R	R	
41061	2	Float	Voltage, line to neutral, phase B-N	Volts-N	R	R	
41063	2	Float	Voltage, line to neutral, phase C-N	Volts-N	R	R	
41065	2	Float	Voltage, line to line, phase A-B	Volts-L	R	R	
41067	2	Float	Voltage, line to line, phase B-C	Volts-L	R	R	
41069	2	Float	Voltage, line to line, phase C-A	Volts-L	R	R	
41071	2	Float	Phase angle, phase A	Degree	R	R	
41073	2	Float	Phase angle, phase B	Degree	R	R	
41075	2	Float	Phase angle, phase C	Degree	R	R	
41077	2	Float	Reserve A	No units	R	R	
41079	2	Float	Reserve B	No units	R	R	
41081	2	Float	Reserve C	No units	R	R	
41083	2	Float	External Input 1	Pulse	R/W	R	3
41085	2	Float	External Input 2	Pulse	R/W	R	3
46025	8	Custom	RTC Date/Time		R/W	R/W	4
46049	8	Custom	EZ7 ID, ModBus ID, Serial Number		R/W	R/W	5
46513	8	Custom	Flags L1: Power Failure, Battery		R	R	
46521	8	Custom	Flags L2: Power Failure Date		R	R	

1. To clear single register, set single register (ex. 40001) with data set to 0000. Jumper J2 must be closed. Can only clear using ModBus RTU.
2. To clear single register, set single register (ex. 41001) with data set to 0000. Jumper J2 must be closed. Can only clear using ModBus RTU.
3. External inputs are not available on Class 320 meters. To clear external inputs, set single point at register 41083 or 41085 with data set to 0000. Jumper J2 must be closed. Can only clear using ModBus RTU. Protocessor module must be removed to access ModBus RTU.
4. To set the date and time, set multiple points at 46025 for 4 points with data set to HHMM SSDW MMDD YYYY (DW=day of week)
5. To change the ModBus ID, set single point at 46049 with data set to new ModBus ID (e.g. 1 to 247). Jumper J2 must be closed.

HONEYWELL MODBUS POINT MAP: IDR8 AND IDR16

Table 3.

Integer Address	Float Address	Registers	Description	Integer Units	Float Units	IDR	Notes
40001	41001	2	Usage Channel 1	Pulse	Pulse * Pulse Value	R/W	1
40003	41003	2	Usage Channel 2	Pulse	Pulse * Pulse Value	R/W	1
40005	41005	2	Usage Channel 3	Pulse	Pulse * Pulse Value	R/W	1
40007	41007	2	Usage Channel 4	Pulse	Pulse * Pulse Value	R/W	1
40009	41009	2	Usage Channel 5	Pulse	Pulse * Pulse Value	R/W	1
40011	41011	2	Usage Channel 6	Pulse	Pulse * Pulse Value	R/W	1
40013	41013	2	Usage Channel 7	Pulse	Pulse * Pulse Value	R/W	1
40015	41015	2	Usage Channel 8	Pulse	Pulse * Pulse Value	R/W	1
40017	41017	2	Usage Channel 9	Pulse	Pulse * Pulse Value	R/W	1
40019	41019	2	Usage Channel 10	Pulse	Pulse * Pulse Value	R/W	1
40021	41021	2	Usage Channel 11	Pulse	Pulse * Pulse Value	R/W	1
40023	41023	2	Usage Channel 12	Pulse	Pulse * Pulse Value	R/W	1
40025	41025	2	Usage Channel 13	Pulse	Pulse * Pulse Value	R/W	1
40027	41027	2	Usage Channel 14	Pulse	Pulse * Pulse Value	R/W	1
40029	41029	2	Usage Channel 15	Pulse	Pulse * Pulse Value	R/W	1
40031	41031	2	Usage Channel 16	Pulse	Pulse * Pulse Value	R/W	1
40065	41065	2	Demand Channel 1	Demand	Demand * Pulse Value	R	
40067	41067	2	Demand Channel 2	Demand	Demand * Pulse Value	R	
40069	41069	2	Demand Channel 3	Demand	Demand * Pulse Value	R	
40071	41071	2	Demand Channel 4	Demand	Demand * Pulse Value	R	
40073	41073	2	Demand Channel 5	Demand	Demand * Pulse Value	R	
40075	41075	2	Demand Channel 6	Demand	Demand * Pulse Value	R	
40077	41077	2	Demand Channel 7	Demand	Demand * Pulse Value	R	
40079	41079	2	Demand Channel 8	Demand	Demand * Pulse Value	R	
40081	41081	2	Demand Channel 9	Demand	Demand * Pulse Value	R	
40083	41083	2	Demand Channel 10	Demand	Demand * Pulse Value	R	
40085	41085	2	Demand Channel 11	Demand	Demand * Pulse Value	R	
40087	41087	2	Demand Channel 12	Demand	Demand * Pulse Value	R	
40089	41089	2	Demand Channel 13	Demand	Demand * Pulse Value	R	
40091	41091	2	Demand Channel 14	Demand	Demand * Pulse Value	R	
40093	41093	2	Demand Channel 15	Demand	Demand * Pulse Value	R	
40095	41095	2	Demand Channel 16	Demand	Demand * Pulse Value	R	

1. To clear a single channel register, set multiple points at desired register (ex. 40001 or 41001) for 2 points with data set to 0000 0000. Jumper J6 must be closed.

Table 4.

Address	Registers	Format	Description	IDR	Notes
44001	6	Custom	Interval Day Block	R/W	1
44007	1 per interval	Integer	Interval Data	R	2
45501	2 per day	Custom	Interval Data Headers	R	3
46025	8	Custom	RTC Date/Time	R/W	4
46049	8	Custom	EZ7 ID, ModBus ID, Serial Number	R/W	5
46057	8	Custom	Recorder Info., Demand Interval	R/W	
46513	8	Custom	Flags L1: Power Failure, Battery	R	
46521	8	Custom	Flags L2: Power Failure Date	R	

1. To set the interval data day block, set multiple points at 44001 for 6 points with data set to 0C0I 0000 MMDD YYYY 0000 0000. 0C = Channel, 0I = Interval (0F = 15 minute intervals, 05 = 5 minute intervals)
2. Each register represents a 15 or 5 minute pulse value based on the interval day block. 96 registers max with 15 minute intervals. 288 registers max with 5 minute intervals. The first interval data register 44007 represents the pulse count for the first 15 or 5 minute interval beginning at midnight.
3. The interval data headers represent days with available interval data. Each day represents 2 registers. Format: MMDD YYYY.
4. To set the date and time, set multiple points at 46025 for 4 points with data set to HHMM SSDW MMDD YYYY (DW=day of week)
5. To change the ModBus ID, set single point at 46050 with data set to new ModBus ID (e.g. 1 to 247). Jumper J6 must be closed.

With an IDR16 each channel 1 through 16 represents the IDR16 meter jack inputs 1 through 16.
With an IDR8 each channel 1 through 8 represents the IDR8 meter jack inputs 1 through 8.

Units are pulse counts. The pulse value guide in Table 5 below represents the kilowatt-hour value of the meter size (amperage) plugged into the IDR meter jack. To calculate kWh Usage and kW Demand take the number of pulses multiplied by the meter pulse value to determine total kWh and kW. Set the EMS/BMS front end to multiply the pulse values by the pulse counts. See Table 5 below for the different meter sizes (Amperage) Watt Hour pulse values.

Table 5. Honeywell Class 1000 & 2000 Meter Size Pulse Value Guide.

25 Amp	50 Amp	100 Amp	200 Amp	400 Amp	800 Amp	1600 Amp	320 Amp
Base Watt Hour Value per Pulse for legacy Honeywell meters* (serial numbers starting with 1203XXXX and earlier)							
7.8125	**15.625**	**31.25**	**62.50**	**125.00**	**250.00**	**500.00**	**1000.00**
Base Watt Hour Value per Pulse* (serial numbers above 1203XXXX)							
0.48828	**0.97656**	**1.95313**	**3.90625**	**7.8125**	**15.625**	**31.25**	**62.50**

*Honeywell meters support paralleling of 3 sets of up to current sensors; the Multipliers listed in Table 1 are based on 1 set of current sensors. When multiple sets of current sensors are installed in parallel, the final multiplier will be the product of the base multiplier listed in Table 1 times the number of sets of current sensors in parallel. If the meter is using more than 1 set of current sensors, be sure to also factor the number of sets into the Pulse Value.

Formula for calculating Multiplier = Base Multiplier multiplied by the number of sets of Current Sensors in Parallel.

Example: Calculate the Multiplier for a meter of 120/208 Volt, 3-Phase, 200 Amp, 3 sets of Current Sensors in parallel for a legacy meter.

The final Multiplier is 187.50 which is the result of 62.50 multiplied by 3. The final Pulse Value is 187.50 Watt Hours per pulse.

Example: Calculate the Multiplier for a meter of 120/208 Volt, 3-Phase, 200 Amp, 3 sets of Current Sensors in parallel for a non legacy meter.

The final Multiplier is 11.71875 which is the result of 3.90625 multiplied by 3. The final Pulse Value is 11.71875 Watt Hours per pulse.

HONEYWELL MODBUS POINT MAP: LEGACY IDR

Table 6.

Integer Address	Float Address	Integer Registers	Float Registers	Description	Units	RTU	TCP/IP	Notes
40001	41001	2	2	Usage Channel 1	Pulse	R/W	R	1
40003	41003	2	2	Usage Channel 2	Pulse	R/W	R	1
40005	41005	2	2	Usage Channel 3	Pulse	R/W	R	1
40007	41007	2	2	Usage Channel 4	Pulse	R/W	R	1
40009	41009	2	2	Usage Channel 5	Pulse	R/W	R	1
40011	41011	2	2	Usage Channel 6	Pulse	R/W	R	1
40013	41013	2	2	Usage Channel 7	Pulse	R/W	R	1
40015	41015	2	2	Usage Channel 8	Pulse	R/W	R	1
40017	41017	2	2	Usage Channel 9	Pulse	R/W	R	1
40019	41019	2	2	Usage Channel 10	Pulse	R/W	R	1
40021	41021	2	2	Usage Channel 11	Pulse	R/W	R	1
40023	41023	2	2	Usage Channel 12	Pulse	R/W	R	1
40025	41025	2	2	Usage Channel 13	Pulse	R/W	R	1
40027	41027	2	2	Usage Channel 14	Pulse	R/W	R	1
40029	41029	2	2	Usage Channel 15	Pulse	R/W	R	1
40031	41031	2	2	Usage Channel 16	Pulse	R/W	R	1
40065	41065	1	2	Demand Channel 1	Peak Demand	R/W	R/W	2
40066	41067	1	2	Demand Channel 2	Peak Demand	R/W	R/W	2
40067	41069	1	2	Demand Channel 3	Peak Demand	R/W	R/W	2
40068	41071	1	2	Demand Channel 4	Peak Demand	R/W	R/W	2
40069	41073	1	2	Demand Channel 5	Peak Demand	R/W	R/W	2
40070	41075	1	2	Demand Channel 6	Peak Demand	R/W	R/W	2
40071	41077	1	2	Demand Channel 7	Peak Demand	R/W	R/W	2
40072	41079	1	2	Demand Channel 8	Peak Demand	R/W	R/W	2
40073	41081	1	2	Demand Channel 9	Peak Demand	R/W	R/W	2
40074	41083	1	2	Demand Channel 10	Peak Demand	R/W	R/W	2
40075	41085	1	2	Demand Channel 11	Peak Demand	R/W	R/W	2
40076	41087	1	2	Demand Channel 12	Peak Demand	R/W	R/W	2
40077	41089	1	2	Demand Channel 13	Peak Demand	R/W	R/W	2
40078	41091	1	2	Demand Channel 14	Peak Demand	R/W	R/W	2
40079	41093	1	2	Demand Channel 15	Peak Demand	R/W	R/W	2
40080	41095	1	2	Demand Channel 16	Peak Demand	R/W	R/W	2
46001	8	Custom	Custom	Firmware: Version, Date		R	R	
46009	8	Custom	Custom	Device Description		R	R	
46025	8	Custom	Custom	RTC Date/Time		R/W	R/W	3
46041	8	Custom	Custom	Group, Location		R/W	R/W	
46049	8	Custom	Custom	EZ7 ID, ModBus ID		R/W	R	4

1. To clear a single integer or float usage channel register, set single point at desired register (ex. 40001 or 41001) with data set to 0000. Jumper J7 must be closed. Can only reset using ModBus RTU.
2. To clear a single integer or float demand channel register, set single point at desired register (ex. 40065) with data set to 0000. Jumper J7 must be closed.
3. To set the date and time, set multiple points at 46025 for 4 points with data set to HHMM SSDW MMDD YYYY (DW=day of week).
4. To change the ModBus ID, set single point at 46049 with data set to new ModBus ID (e.g. 1 to 247). Can only change ModBus ID using ModBus RTU. Jumper J7 must be closed.

HONEYWELL BACNET OBJECT DESCRIPTORS: CLASS 320, 340, AND 500 METERS

Table 7.

Instance ID	BACnet Object	Description	Units	BACnet Property	CL320	CL340 CL500	Notes
1	Analog Input	Energy delivered	kWh	Present Value	R	R	1
2	Analog Input	Energy received	kWh	Present Value	R	R	1
3	Analog Input	Reactive energy delivered	kVARh	Present Value	R	R	1
4	Analog Input	Reactive energy received	kVARh	Present Value	R	R	1
5	Analog Input	Real power	kW	Present Value	R	R	
6	Analog Input	Reactive power	kVAR	Present Value	R	R	
7	Analog Input	Apparent power	kVA	Present Value	R	R	
8	Analog Input	Power factor	% PF	Present Value	R	R	
9	Analog Input	Peak demand	kW	Present Value	R	R	
10	Analog Input	Current average	Amps	Present Value	R	R	
11	Analog Input	Voltage line-neutral	Volts-N	Present Value	R	R	
12	Analog Input	Voltage line-line	Volts-L	Present Value	R	R	
13	Analog Input	Frequency	Hz	Present Value	R	R	
14	Analog Input	Phase angle	Degree	Present Value	R	R	
15	Analog Input	Real power phase A	kW	Present Value	R	R	
16	Analog Input	Real power phase B	kW	Present Value	R	R	
17	Analog Input	Real power phase C	kW	Present Value	R	R	
18	Analog Input	Reactive power phase A	kVAR	Present Value	R	R	
19	Analog Input	Reactive power phase B	kVAR	Present Value	R	R	
20	Analog Input	Reactive power phase C	kVAR	Present Value	R	R	
21	Analog Input	Apparent power phase A	kVA	Present Value	R	R	
22	Analog Input	Apparent power phase B	kVA	Present Value	R	R	
23	Analog Input	Apparent power phase C	kVA	Present Value	R	R	
24	Analog Input	Power factor phase A	% PF	Present Value	R	R	
25	Analog Input	Power factor phase B	% PF	Present Value	R	R	
26	Analog Input	Power factor phase C	% PF	Present Value	R	R	
27	Analog Input	Current phase A	Amps	Present Value	R	R	
28	Analog Input	Current phase B	Amps	Present Value	R	R	
29	Analog Input	Current phase C	Amps	Present Value	R	R	
30	Analog Input	Voltage line-neutral phase A-N	Volts-N	Present Value	R	R	
31	Analog Input	Voltage line-neutral phase B-N	Volts-N	Present Value	R	R	
32	Analog Input	Voltage line-neutral phase C-N	Volts-N	Present Value	R	R	
33	Analog Input	Voltage line-line phase A-B	Volts-L	Present Value	R	R	
34	Analog Input	Voltage line-line phase B-C	Volts-L	Present Value	R	R	
35	Analog Input	Voltage line-line phase C-A	Volts-L	Present Value	R	R	
36	Analog Input	Phase angle phase A	Degree	Present Value	R	R	
37	Analog Input	Phase angle phase B	Degree	Present Value	R	R	
38	Analog Input	Phase angle phase C	Degree	Present Value	R	R	
39	Analog Input	Reserve A	No units	Present Value	R	R	

Table 7. (Continued)

Instance ID	BACnet Object	Description	Units	BACnet Property	CL320	CL340 CL500	Notes
40	Analog Input	Reserve B	No units	Present Value	R	R	
41	Analog Input	Reserve C	No units	Present Value	R	R	
42	Analog Input	External Input 1	Pulse	Present Value		R	2
43	Analog Input	External Input 2	Pulse	Present Value		R	2

1. To clear single meter kWh/kVARh, select reset kW/kWh on the display menu of the meter. This function will also reset external inputs. Jumper J6 must be closed.
2. External inputs are standard on Class 500 meters and optional on Class 340 meters (Part of Expanded Feature Package). To clear external inputs, select reset kW/kWh on the display menu of the meter. This function will also reset kW/kVARh. Jumper J6 must be closed.

Table 8.

Instance ID	BACnet Object	BACnet Property	CL320	CL340 CL500	Notes
BACnet Device ID	Device	Object identifier	R	R	
BACnet Device ID	Device	Object name	R	R	
BACnet Device ID	Device	Object type	R	R	
BACnet Device ID	Device	System status	R/W	R/W	
BACnet Device ID	Device	Vendor name	R	R	
BACnet Device ID	Device	Vendor Identifier	R	R	
BACnet Device ID	Device	Model name	R	R	
BACnet Device ID	Device	Firmware revision	R	R	
BACnet Device ID	Device	Application software version	R	R	
BACnet Device ID	Device	Location	R/W	R/W	
BACnet Device ID	Device	Description	R/W	R/W	
BACnet Device ID	Device	Protocol version	R	R	
BACnet Device ID	Device	Protocol services supported	R	R	
BACnet Device ID	Device	Protocol object types supported	R	R	
BACnet Device ID	Device	Protocol revision	R	R	
BACnet Device ID	Device	Object list	R	R	
BACnet Device ID	Device	Max APDU length supported	R	R	
BACnet Device ID	Device	Segmentation supported	R	R	
BACnet Device ID	Device	Local time	R	R	
BACnet Device ID	Device	Local date	R	R	
BACnet Device ID	Device	APDU timeout	R/W	R/W	
BACnet Device ID	Device	Number of APDU retries	R/W	R/W	
BACnet Device ID	Device	Device address binding	R	R	

HONEYWELL BACNET OBJECT DESCRIPTORS: LEGACY CLASS 300 AND 500 METERS

Table 9.

Instance ID	BACnet Object	Description	Units	BACnet Property	Legacy CL300	Legacy CL500	Notes
1	Analog Input	Energy delivered	kWh	Present Value	R	R	1
2	Analog Input	Energy received	kWh	Present Value	R	R	1
3	Analog Input	Reactive energy delivered	kVARh	Present Value	R	R	1
4	Analog Input	Reactive energy received	kVARh	Present Value	R	R	1
5	Analog Input	Real power	kW	Present Value	R	R	
6	Analog Input	Reactive power	kVARh	Present Value	R	R	
7	Analog Input	Apparent power	kVARh	Present Value	R	R	
8	Analog Input	Power factor	% PF	Present Value	R	R	
9	Analog Input	Current total	Amps	Present Value	R	R	
10	Analog Input	Current average	Amps	Present Value	R	R	
11	Analog Input	Voltage line-neutral	Volts-N	Present Value	R	R	
12	Analog Input	Voltage line-line	Volts-L	Present Value	R	R	
13	Analog Input	Frequency	Hz	Present Value	R	R	
14	Analog Input	Phase angle	Degree	Present Value	R	R	
15	Analog Input	Real power phase A	kW	Present Value	R	R	
16	Analog Input	Real power phase B	kW	Present Value	R	R	
17	Analog Input	Real power phase C	kW	Present Value	R	R	
18	Analog Input	Reactive power phase A	kVAR	Present Value	R	R	
19	Analog Input	Reactive power phase B	kVAR	Present Value	R	R	
20	Analog Input	Reactive power phase C	kVAR	Present Value	R	R	
21	Analog Input	Apparent power phase A	kVA	Present Value	R	R	
22	Analog Input	Apparent power phase B	kVA	Present Value	R	R	
23	Analog Input	Apparent power phase C	kVA	Present Value	R	R	
24	Analog Input	Power factor phase A	% PF	Present Value	R	R	
25	Analog Input	Power factor phase B	% PF	Present Value	R	R	
26	Analog Input	Power factor phase C	% PF	Present Value	R	R	
27	Analog Input	Current phase A	Amps	Present Value	R	R	
28	Analog Input	Current phase B	Amps	Present Value	R	R	
29	Analog Input	Current phase C	Amps	Present Value	R	R	
30	Analog Input	Voltage line-neutral phase A-N	Volts-N	Present Value	R	R	
31	Analog Input	Voltage line-neutral phase B-N	Volts-N	Present Value	R	R	
32	Analog Input	Voltage line-neutral phase C-N	Volts-N	Present Value	R	R	
33	Analog Input	Voltage line-line phase A-B	Volts-L	Present Value	R	R	
34	Analog Input	Voltage line-line phase B-C	Volts-L	Present Value	R	R	
35	Analog Input	Voltage line-line phase C-A	Volts-L	Present Value	R	R	
36	Analog Input	Phase angle phase A	Degree	Present Value	R	R	
37	Analog Input	Phase angle phase B	Degree	Present Value	R	R	
38	Analog Input	Phase angle phase C	Degree	Present Value	R	R	
39	Analog Input	Reserve A	No units	Present Value	R	R	

Table 9. (Continued)

Instance ID	BACnet Object	Description	Units	BACnet Property	Legacy CL300	Legacy CL500	Notes
40	Analog Input	Reserve B	No units	Present Value	R	R	
41	Analog Input	Reserve C	No units	Present Value	R	R	
42	Analog Input	External Input 1	Pulse	Present Value	R	R	2
43	Analog Input	External Input 2	Pulse	Present Value	R	R	2

1. Can only clear using ModBus RTU. Jumper J2 must be closed. BACnet IP Ethernet module must be removed to access ModBus RTU.

2. Can only clear using ModBus RTU. Jumper J2 must be closed. BACnet IP Ethernet module must be removed to access ModBus RTU.

HONEYWELL BACNET OBJECT DESCRIPTORS: IDR8 AND IDR16

Table 10.

Instance ID	BACnet Object	Description	Units	BACnet Property	IDR	Notes
1	Analog Input	Usage Channel 1	Pulse * Pulse Value	Present Value	R	1
2	Analog Input	Usage Channel 2	Pulse * Pulse Value	Present Value	R	1
3	Analog Input	Usage Channel 3	Pulse * Pulse Value	Present Value	R	1
4	Analog Input	Usage Channel 4	Pulse * Pulse Value	Present Value	R	1
5	Analog Input	Usage Channel 5	Pulse * Pulse Value	Present Value	R	1
6	Analog Input	Usage Channel 6	Pulse * Pulse Value	Present Value	R	1
7	Analog Input	Usage Channel 7	Pulse * Pulse Value	Present Value	R	1
8	Analog Input	Usage Channel 8	Pulse * Pulse Value	Present Value	R	1
9	Analog Input	Usage Channel 9	Pulse * Pulse Value	Present Value	R	1
10	Analog Input	Usage Channel 10	Pulse * Pulse Value	Present Value	R	1
11	Analog Input	Usage Channel 11	Pulse * Pulse Value	Present Value	R	1
12	Analog Input	Usage Channel 12	Pulse * Pulse Value	Present Value	R	1
13	Analog Input	Usage Channel 13	Pulse * Pulse Value	Present Value	R	1
14	Analog Input	Usage Channel 14	Pulse * Pulse Value	Present Value	R	1
15	Analog Input	Usage Channel 15	Pulse * Pulse Value	Present Value	R	1
16	Analog Input	Usage Channel 16	Pulse * Pulse Value	Present Value	R	1
17	Analog Input	Demand Channel 1	Demand * Pulse Value	Present Value	R	
18	Analog Input	Demand Channel 2	Demand * Pulse Value	Present Value	R	
19	Analog Input	Demand Channel 3	Demand * Pulse Value	Present Value	R	
20	Analog Input	Demand Channel 4	Demand * Pulse Value	Present Value	R	
21	Analog Input	Demand Channel 5	Demand * Pulse Value	Present Value	R	
22	Analog Input	Demand Channel 6	Demand * Pulse Value	Present Value	R	
23	Analog Input	Demand Channel 7	Demand * Pulse Value	Present Value	R	
24	Analog Input	Demand Channel 8	Demand * Pulse Value	Present Value	R	
25	Analog Input	Demand Channel 9	Demand * Pulse Value	Present Value	R	
26	Analog Input	Demand Channel 10	Demand * Pulse Value	Present Value	R	
27	Analog Input	Demand Channel 11	Demand * Pulse Value	Present Value	R	
28	Analog Input	Demand Channel 12	Demand * Pulse Value	Present Value	R	
29	Analog Input	Demand Channel 13	Demand * Pulse Value	Present Value	R	
30	Analog Input	Demand Channel 14	Demand * Pulse Value	Present Value	R	
31	Analog Input	Demand Channel 15	Demand * Pulse Value	Present Value	R	
32	Analog Input	Demand Channel 16	Demand * Pulse Value	Present Value	R	

1. To clear usage channels, select reset kW/kWh on the display menu of the IDR. Jumper J6 must be closed.

Table 11.

Instance ID	BACnet Object	BACnet Property	IDR	Notes
BACnet Device ID	Device	Object identifier	R	
BACnet Device ID	Device	Object name	R	
BACnet Device ID	Device	Object type	R	
BACnet Device ID	Device	System status	R/W	
BACnet Device ID	Device	Vendor name	R	
BACnet Device ID	Device	Vendor Identifier	R	
BACnet Device ID	Device	Model name	R	

Table 11. (Continued)

Instance ID	BACnet Object	BACnet Property	IDR	Notes
BACnet Device ID	Device	Firmware revision	R	
BACnet Device ID	Device	Application software version	R	
BACnet Device ID	Device	Location	R/W	
BACnet Device ID	Device	Description	R/W	
BACnet Device ID	Device	Protocol version	R	
BACnet Device ID	Device	Protocol services supported	R	
BACnet Device ID	Device	Protocol object types supported	R	
BACnet Device ID	Device	Protocol revision	R	
BACnet Device ID	Device	Object list	R	
BACnet Device ID	Device	Max APDU length supported	R	
BACnet Device ID	Device	Segmentation supported	R	
BACnet Device ID	Device	Local time	R	
BACnet Device ID	Device	Local date	R	
BACnet Device ID	Device	APDU timeout	R/W	
BACnet Device ID	Device	Number of APDU retries	R/W	
BACnet Device ID	Device	Device address binding	R	

With an IDR16 each channel 1 through 16 represents the IDR16 meter jack inputs 1 through 16.

With an IDR8 each channel 1 through 8 represents the IDR8 meter jack inputs 1 through 8.

Units are pulse counts. The pulse value guide in Table 12 below represents the kilowatt-hour value of the meter size (amperage) plugged into the IDR meter jack. To calculate kWh Usage and kW Demand take the number of pulses multiplied by the meter pulse value to determine total kWh and kW. Set the EMS/BMS front end to multiply the pulse values by the pulse counts. See Table 12 below for the different meter sizes (Amperage) Watt Hour pulse values.

Table 12. Honeywell Class 1000 & 2000 Meter Size Pulse Value Guide.

25 Amp	50 Amp	100 Amp	200 Amp	400 Amp	800 Amp	1600 Amp	3200 Amp
Base Watt Hour Value per Pulse for legacy Honeywell meters* (serial numbers starting with 1203XXXX and earlier)							
7.8125	**15.625**	**31.25**	**62.50**	**125.00**	**250.00**	**500.00**	**1000.00**
Base Watt Hour Value per Pulse* (serial numbers above 1203XXXX)							
0.48828	**0.97656**	**1.95313**	**3.90625**	**7.8125**	**15.625**	**31.25**	**62.50**

*Honeywell meters support paralleling of 3 sets of up to current sensors; the Multipliers listed in Table 1 are based on 1 set of current sensors. When multiple sets of current sensors are installed in parallel, the final multiplier will be the product of the base multiplier listed in Table 1 times the number of sets of current sensors in parallel. If the meter is using more than 1 set of current sensors, be sure to also factor the number of sets into the Pulse Value.

Formula for calculating Multiplier = Base Multiplier multiplied by the number of sets of Current Sensors in Parallel.

Example: Calculate the Multiplier for a meter of 120/208 Volt, 3-Phase, 200 Amp, 3 sets of Current Sensors in parallel for a legacy meter.

The final Multiplier is 187.50 which is the result of 62.50 multiplied by 3. The final Pulse Value is 187.50 Watt Hours per pulse.

Example: Calculate the Multiplier for a meter of 120/208 Volt, 3-Phase, 200 Amp, 3 sets of Current Sensors in parallel for a non legacy meter.

The final Multiplier is 11.71875 which is the result of 3.90625 multiplied by 3. The final Pulse Value is 11.71875 Watt Hours per pulse.

HONEYWELL BACNET OBJECT DESCRIPTORS: LEGACY IDR

Table 13.

Instance ID	BACnet Object	Description	Units	BACnet Property	Legacy IDR	Notes
1	Analog Input	Usage Channel 1	Pulse	Present Value	R	1
2	Analog Input	Usage Channel 2	Pulse	Present Value	R	1
3	Analog Input	Usage Channel 3	Pulse	Present Value	R	1
4	Analog Input	Usage Channel 4	Pulse	Present Value	R	1
5	Analog Input	Usage Channel 5	Pulse	Present Value	R	1
6	Analog Input	Usage Channel 6	Pulse	Present Value	R	1
7	Analog Input	Usage Channel 7	Pulse	Present Value	R	1
8	Analog Input	Usage Channel 8	Pulse	Present Value	R	1
9	Analog Input	Usage Channel 9	Pulse	Present Value	R	1
10	Analog Input	Usage Channel 10	Pulse	Present Value	R	1
11	Analog Input	Usage Channel 11	Pulse	Present Value	R	1
12	Analog Input	Usage Channel 12	Pulse	Present Value	R	1
13	Analog Input	Usage Channel 13	Pulse	Present Value	R	1
14	Analog Input	Usage Channel 14	Pulse	Present Value	R	1
15	Analog Input	Usage Channel 15	Pulse	Present Value	R	1
16	Analog Input	Usage Channel 16	Pulse	Present Value	R	1
33	Analog Input	Demand Channel 1	Peak Demand	Present Value	R	
34	Analog Input	Demand Channel 2	Peak Demand	Present Value	R	
35	Analog Input	Demand Channel 3	Peak Demand	Present Value	R	
36	Analog Input	Demand Channel 4	Peak Demand	Present Value	R	
37	Analog Input	Demand Channel 5	Peak Demand	Present Value	R	
38	Analog Input	Demand Channel 6	Peak Demand	Present Value	R	
39	Analog Input	Demand Channel 7	Peak Demand	Present Value	R	
40	Analog Input	Demand Channel 8	Peak Demand	Present Value	R	
41	Analog Input	Demand Channel 9	Peak Demand	Present Value	R	
42	Analog Input	Demand Channel 10	Peak Demand	Present Value	R	
43	Analog Input	Demand Channel 11	Peak Demand	Present Value	R	
44	Analog Input	Demand Channel 12	Peak Demand	Present Value	R	
45	Analog Input	Demand Channel 13	Peak Demand	Present Value	R	
46	Analog Input	Demand Channel 14	Peak Demand	Present Value	R	
47	Analog Input	Demand Channel 15	Peak Demand	Present Value	R	
48	Analog Input	Demand Channel 16	Peak Demand	Present Value	R	

1. Can only clear using ModBus RTU. Jumper J7 must be closed. BACnet IP Ethernet module must be removed to access ModBus RTU.
2. Can only clear using ModBus RTU. Jumper J7 must be closed. BACnet IP Ethernet module must be removed to access ModBus RTU.

HONEYWELL LONWORKS POINT MAP: CLASS 340 AND 500 METERS

Table 14.

Network Variable Name	SNVT Type	Description	Units	CL340 CL500	Notes
nvoKWh_Del	SNVT_count_inc_f	Energy delivered	kWh	R	1
nvoKWh_Rec	SNVT_count_inc_f	Energy received	kWh	R	1
nvoKVarh_Del	SNVT_count_inc_f	Reactive energy delivered	kVARh	R	1
nvoKVarh_Rec	SNVT_count_inc_f	Reactive energy received	kVARh	R	1
nvoReal_Pwr	SNVT_count_inc_f	Real power	kW	R	
nvoReact_Pwr	SNVT_count_inc_f	Reactive power	kVAR	R	
nvoAppar_Pwr	SNVT_count_inc_f	Apparent power	kVA	R	
nvoPwr_Fact	SNVT_pwr_fact_f	Power factor	% PF	R	
nvoPeak_Dem	SNVT_count_inc_f	Peak demand	kW	R	
nvoCurrent_Avg	SNVT_amp_f	Current average	Amps	R	
nvoVolt_LN	SNVT_volt_f	Voltage line-neutral	Volts-N	R	
nvoVolt_LL	SNVT_volt_f	Voltage line-line	Volts-L	R	
nvoFrequency	SNVT_freq_f	Frequency	Hz	R	
nvoPhase_Angle	SNVT_count_inc_f	Phase angle	Degree	R	
nvoReal_Pwr_PhA	SNVT_count_inc_f	Real power, phase A	kW	R	
nvoReal_Pwr_PhB	SNVT_count_inc_f	Real power, phase B	kW	R	
nvoReal_Pwr_PhC	SNVT_count_inc_f	Real power, phase C	kW	R	
nvoReact_Pwr_PhA	SNVT_count_inc_f	Reactive power, phase A	kVAR	R	
nvoReact_Pwr_PhB	SNVT_count_inc_f	Reactive power, phase B	kVAR	R	
nvoReact_Pwr_PhC	SNVT_count_inc_f	Reactive power, phase C	kVAR	R	
nvoAppar_Pwr_PhA	SNVT_count_inc_f	Apparent power, phase A	kVA	R	
nvoAppar_Pwr_PhB	SNVT_count_inc_f	Apparent power, phase B	kVA	R	
nvoAppar_Pwr_PhC	SNVT_count_inc_f	Apparent power, phase C	kVA	R	
nvoPwr_Fact_PhA	SNVT_pwr_fact_f	Power factor, phase A	% PF	R	
nvoPwr_Fact_PhB	SNVT_pwr_fact_f	Power factor, phase B	% PF	R	
nvoPwr_Fact_PhC	SNVT_pwr_fact_f	Power factor, phase C	% PF	R	
nvoCurrent_PhA	SNVT_amp_f	Current, phase A	Amps	R	
nvoCurrent_PhB	SNVT_amp_f	Current, phase B	Amps	R	
nvoCurrent_PhC	SNVT_amp_f	Current, phase C	Amps	R	
nvoVolt_LN_PhA_N	SNVT_volt_f	Voltage, line to neutral, phase A-N	Volts-N	R	
nvoVolt_LN_PhB_N	SNVT_volt_f	Voltage, line to neutral, phase B-N	Volts-N	R	
nvoVolt_LN_PhC_N	SNVT_volt_f	Voltage, line to neutral, phase C-N	Volts-N	R	
nvoVolt_LL_PhA_B	SNVT_volt_f	Voltage, line to line, phase A-B	Volts-L	R	
nvoVolt_LL_PhB_C	SNVT_volt_f	Voltage, line to line, phase B-C	Volts-L	R	
nvoVolt_LL_PhC_A	SNVT_volt_f	Voltage, line to line, phase C-A	Volts-L	R	
nvoPhase_AngleA	SNVT_count_inc_f	Phase angle, phase A	Degree	R	
nvoPhase_AngleB	SNVT_count_inc_f	Phase angle, phase B	Degree	R	
nvoPhase_AngleC	SNVT_count_inc_f	Phase angle, phase C	Degree	R	
nvoReserve_A	SNVT_count_f	Reserve A	No units	R	

Table 14. (Continued)

Network Variable Name	SNVT Type	Description	Units	CL340 CL500	Notes
nvoReserve_B	SNVT_count_f	Reserve B	No units	R	
nvoReserve_C	SNVT_count_f	Reserve C	No units	R	
nvoExt_Input_1	SNVT_count_f	External Input 1	Pulse	R	2
nvoExt_Input_2	SNVT_count_f	External Input 2	Pulse	R	2

1. To clear single meter kWh/kVARh, select reset kW/kWh on the display menu of the meter. This function will also reset external inputs. Jumper J6 must be closed.
2. External inputs are standard on Class 500 meters and optional on Class 340 meters (Part of Expanded Feature Package). To clear external inputs, select reset kW/kWh on the display menu of the meter. This function will also reset kW/kVARh. Jumper J6 must be closed.

HONEYWELL LONWORKS POINT MAP: LEGACY CLASS 300 AND 500 METERS

Table 15.

Network Variable Name	SNVT Type	Description	Units	Legacy CL300	Legacy CL500	Notes
nvoEnergy_Delive	SNVT_count_inc_f	Energy delivered	kWh	R	R	1
nvoEnergy_Receiv	SNVT_count_inc_f	Energy received	kWh	R	R	1
nvoReac_NRG_Del	SNVT_count_inc_f	Reactive energy delivered	kVARh	R	R	1
nvoReac_NRG_Rec	SNVT_count_inc_f	Reactive energy received	kVARh	R	R	1
nvoReal_pwr	SNVT_count_inc_f	Real power	kW	R	R	
nvoReactive_pwr	SNVT_count_inc_f	Reactive power	kVARh	R	R	
nvoApparent_pwr	SNVT_count_inc_f	Apparent power	kVARh	R	R	
nvopwr_factor	SNVT_lev_percent	Power factor	% PF	R	R	
nvoCurrent_total	SNVT_count_inc_f	Current total	Amps	R	R	
nvoCurrent_Avg	SNVT_count_inc_f	Current average	Amps	R	R	
nvoVoltage_L_N	SNVT_count_inc_f	Voltage line-neutral	Volts-N	R	R	
nvoVoltage_L_L	SNVT_count_inc_f	Voltage line-line	Volts-L	R	R	
nvoFrequency	SNVT_freq_hz	Frequency	Hz	R	R	
nvoPhangle	SNVT_angle_deg	Phase angle	Degree	R	R	
nvoReal_pwr_PhA	SNVT_count_inc_f	Real power, phase A	kW	R	R	
nvoReal_pwr_PhB	SNVT_count_inc_f	Real power, phase B	kW	R	R	
nvoReal_pwr_PhC	SNVT_count_inc_f	Real power, phase C	kW	R	R	
nvoReact_pwr_PhA	SNVT_count_inc_f	Reactive power, phase A	kVAR	R	R	
nvoReact_pwr_PhB	SNVT_count_inc_f	Reactive power, phase B	kVAR	R	R	
nvoReact_pwr_PhC	SNVT_count_inc_f	Reactive power, phase C	kVAR	R	R	
nvoAppar_pwr_PhA	SNVT_count_inc_f	Apparent power, phase A	kVA	R	R	
nvoAppar_pwr_PhB	SNVT_count_inc_f	Apparent power, phase B	kVA	R	R	
nvoAppar_pwr_PhC	SNVT_count_inc_f	Apparent power, phase C	kVA	R	R	
nvopwr_factr_PhA	SNVT_lev_percent	Power factor, phase A	% PF	R	R	
nvopwr_factr_PhB	SNVT_lev_percent	Power factor, phase B	% PF	R	R	
nvopwr_factr_PhC	SNVT_lev_percent	Power factor, phase C	% PF	R	R	
nvoCurrent_PhA	SNVT_count_inc_f	Current, phase A	Amps	R	R	
nvoCurrent_PhB	SNVT_count_inc_f	Current, phase B	Amps	R	R	
nvoCurrent_PhC	SNVT_count_inc_f	Current, phase C	Amps	R	R	
nvoVlt_L_N_PhA_N	SNVT_count_inc_f	Voltage, line to neutral, phase A-N	Volts-N	R	R	
nvoVlt_L_N_PhB_N	SNVT_count_inc_f	Voltage, line to neutral, phase B-N	Volts-N	R	R	
nvoVlt_L_N_PhC_N	SNVT_count_inc_f	Voltage, line to neutral, phase C-N	Volts-N	R	R	
nvoVlt_L_L_PhA_B	SNVT_count_inc_f	Voltage, line to line, phase A-B	Volts-L	R	R	
nvoVlt_L_L_PhB_C	SNVT_count_inc_f	Voltage, line to line, phase B-C	Volts-L	R	R	
nvoVlt_L_L_PhC_A	SNVT_count_inc_f	Voltage, line to line, phase C-A	Volts-L	R	R	
nvoPhAngle_PhA	SNVT_angle_deg	Phase angle, phase A	Degree	R	R	
nvoPhAngle_PhB	SNVT_angle_deg	Phase angle, phase B	Degree	R	R	
nvoPhAngle_PhC	SNVT_angle_deg	Phase angle, phase C	Degree	R	R	
nvoReserve_A	SNVT_count_f	Reserve A	No units	R	R	

Table 15. (Continued)

Network Variable Name	SNVT Type	Description	Units	Legacy CL300	Legacy CL500	Notes
nvoReserve_B	SNVT_count_f	Reserve B	No units	R	R	
nvoReserve_C	SNVT_count_f	Reserve C	No units	R	R	
nvoExt_Input_1	SNVT_count_f	External Input 1	Pulse	R	R	2
nvoExt_Input_2	SNVT_count_f	External Input 2	Pulse	R	R	2

1. Can only clear using ModBus RTU. Jumper J2 must be closed. LonWorks module must be removed to access ModBus RTU.
2. Can only clear using ModBus RTU. Jumper J2 must be closed. LonWorks module must be removed to access ModBus RTU.

HONEYWELL LONWORKS POINT MAP: IDR8 AND IDR16

Table 16.

Network Variable Name	Function Block Index	SNVT Type	Description	Units	IDR	Notes
nvoUsageCh01	1	SNVT_count_f	Usage Channel 1	Pulse * Pulse Value	R	1
nvoUsageCh02	2	SNVT_count_f	Usage Channel 2	Pulse * Pulse Value	R	1
nvoUsageCh03	3	SNVT_count_f	Usage Channel 3	Pulse * Pulse Value	R	1
nvoUsageCh04	4	SNVT_count_f	Usage Channel 4	Pulse * Pulse Value	R	1
nvoUsageCh05	5	SNVT_count_f	Usage Channel 5	Pulse * Pulse Value	R	1
nvoUsageCh06	6	SNVT_count_f	Usage Channel 6	Pulse * Pulse Value	R	1
nvoUsageCh07	7	SNVT_count_f	Usage Channel 7	Pulse * Pulse Value	R	1
nvoUsageCh08	8	SNVT_count_f	Usage Channel 8	Pulse * Pulse Value	R	1
nvoUsageCh09	9	SNVT_count_f	Usage Channel 9	Pulse * Pulse Value	R	1
nvoUsageCh10	10	SNVT_count_f	Usage Channel 10	Pulse * Pulse Value	R	1
nvoUsageCh11	11	SNVT_count_f	Usage Channel 11	Pulse * Pulse Value	R	1
nvoUsageCh12	12	SNVT_count_f	Usage Channel 12	Pulse * Pulse Value	R	1
nvoUsageCh13	13	SNVT_count_f	Usage Channel 13	Pulse * Pulse Value	R	1
nvoUsageCh14	14	SNVT_count_f	Usage Channel 14	Pulse * Pulse Value	R	1
nvoUsageCh15	15	SNVT_count_f	Usage Channel 15	Pulse * Pulse Value	R	1
nvoUsageCh16	16	SNVT_count_f	Usage Channel 16	Pulse * Pulse Value	R	1
nvoUsageCh17	17	SNVT_count_f	Usage Channel 17	Pulse * Pulse Value	R	1
nvoUsageCh18	18	SNVT_count_f	Usage Channel 18	Pulse * Pulse Value	R	1
nvoUsageCh19	19	SNVT_count_f	Usage Channel 19	Pulse * Pulse Value	R	1
nvoUsageCh20	20	SNVT_count_f	Usage Channel 20	Pulse * Pulse Value	R	1
nvoUsageCh21	21	SNVT_count_f	Usage Channel 21	Pulse * Pulse Value	R	1
nvoUsageCh22	22	SNVT_count_f	Usage Channel 22	Pulse * Pulse Value	R	1
nvoUsageCh23	23	SNVT_count_f	Usage Channel 23	Pulse * Pulse Value	R	1
nvoUsageCh24	24	SNVT_count_f	Usage Channel 24	Pulse * Pulse Value	R	1
nvoUsageCh25	25	SNVT_count_f	Usage Channel 25	Pulse * Pulse Value	R	1
nvoUsageCh26	26	SNVT_count_f	Usage Channel 26	Pulse * Pulse Value	R	1
nvoUsageCh27	27	SNVT_count_f	Usage Channel 27	Pulse * Pulse Value	R	1
nvoUsageCh28	28	SNVT_count_f	Usage Channel 28	Pulse * Pulse Value	R	1
nvoUsageCh29	29	SNVT_count_f	Usage Channel 29	Pulse * Pulse Value	R	1
nvoUsageCh30	30	SNVT_count_f	Usage Channel 30	Pulse * Pulse Value	R	1
nvoUsageCh31	31	SNVT_count_f	Usage Channel 31	Pulse * Pulse Value	R	1
nvoUsageCh32	32	SNVT_count_f	Usage Channel 32	Pulse * Pulse Value	R	1
nvoDemandCh01	33	SNVT_count_f	Demand Channel 1	Demand * Pulse Value	R	
nvoDemandCh02	34	SNVT_count_f	Demand Channel 2	Demand * Pulse Value	R	
nvoDemandCh03	35	SNVT_count_f	Demand Channel 3	Demand * Pulse Value	R	
nvoDemandCh04	36	SNVT_count_f	Demand Channel 4	Demand * Pulse Value	R	
nvoDemandCh05	37	SNVT_count_f	Demand Channel 5	Demand * Pulse Value	R	
nvoDemandCh06	38	SNVT_count_f	Demand Channel 6	Demand * Pulse Value	R	
nvoDemandCh07	39	SNVT_count_f	Demand Channel 7	Demand * Pulse Value	R	
nvoDemandCh08	40	SNVT_count_f	Demand Channel 8	Demand * Pulse Value	R	
nvoDemandCh09	41	SNVT_count_f	Demand Channel 9	Demand * Pulse Value	R	
nvoDemandCh10	42	SNVT_count_f	Demand Channel 10	Demand * Pulse Value	R	
nvoDemandCh11	43	SNVT_count_f	Demand Channel 11	Demand * Pulse Value	R	

Table 16. (Continued)

Network Variable Name	Function Block Index	SNVT Type	Description	Units	IDR	Notes
nvoDemandCh12	44	SNVT_count_f	Demand Channel 12	Demand * Pulse Value	R	
nvoDemandCh13	45	SNVT_count_f	Demand Channel 13	Demand * Pulse Value	R	
nvoDemandCh14	46	SNVT_count_f	Demand Channel 14	Demand * Pulse Value	R	
nvoDemandCh15	47	SNVT_count_f	Demand Channel 15	Demand * Pulse Value	R	
nvoDemandCh16	48	SNVT_count_f	Demand Channel 16	Demand * Pulse Value	R	
nvoDemandCh17	49	SNVT_count_f	Demand Channel 17	Demand * Pulse Value	R	
nvoDemandCh18	50	SNVT_count_f	Demand Channel 18	Demand * Pulse Value	R	
nvoDemandCh19	51	SNVT_count_f	Demand Channel 19	Demand * Pulse Value	R	
nvoDemandCh20	52	SNVT_count_f	Demand Channel 20	Demand * Pulse Value	R	
nvoDemandCh21	53	SNVT_count_f	Demand Channel 21	Demand * Pulse Value	R	
nvoDemandCh22	54	SNVT_count_f	Demand Channel 22	Demand * Pulse Value	R	
nvoDemandCh23	55	SNVT_count_f	Demand Channel 23	Demand * Pulse Value	R	
nvoDemandCh24	56	SNVT_count_f	Demand Channel 24	Demand * Pulse Value	R	
nvoDemandCh25	57	SNVT_count_f	Demand Channel 25	Demand * Pulse Value	R	
nvoDemandCh26	58	SNVT_count_f	Demand Channel 26	Demand * Pulse Value	R	
nvoDemandCh27	59	SNVT_count_f	Demand Channel 27	Demand * Pulse Value	R	
nvoDemandCh28	60	SNVT_count_f	Demand Channel 28	Demand * Pulse Value	R	
nvoDemandCh29	61	SNVT_count_f	Demand Channel 29	Demand * Pulse Value	R	
nvoDemandCh30	62	SNVT_count_f	Demand Channel 30	Demand * Pulse Value	R	
nvoDemandCh31	63	SNVT_count_f	Demand Channel 31	Demand * Pulse Value	R	
nvoDemandCh32	64	SNVT_count_f	Demand Channel 32	Demand * Pulse Value	R	
nviResetUsageCh	65	SNVT_count	Reset Usage Channel	Integer Channel	R/W	1
nvoRTC_DateTime	66	SNVT_time_stamp	RTC Date, Time Read	Date, Time	R	
nviRTC_DateTime	66	SNVT_time_stamp	RTC Date, Time Set	Date, Time	R/W	2
nvoIntervalData	67	SNVT_reg_val_ts	Interval Data Pulse Read	Integer Pulses, Date, Time	R	3
nviIntDataTime	67	SNVT_time_stamp	Interval Date, Time Set	Date, Time	R/W	3
nviIntDataChan	67	SNVT_count	Interval Data Channel Set	Integer Channel	R/W	3
nviIntDataPeriod	67	SNVT_count	Interval Data Window Set	Minutes	R/W	3
nvoStatus	0	SNVT_obj_status	Function Block Status	Function Block Status	R	4
nviRequest	0	SNVT_obj_request	Function Block Request	Function Block Enable/Disable	R/W	4
nvoFileDirectory	0	SNVT_address	File Directory	Config File Directory	R	

1. To clear all usage channels, select reset kW/kWh on the display menu of the IDR. Jumper J6 must be closed. To clear individual channels, set nviResetUsageCh to the desired channel. For example, set nviResetUsageCh to 1 to reset nvoUsageCh01.
2. To set the real time clock, set nviRTC_DateTime to the desired date and time.
3. NvoIntervalData will display the number of pulses for the selected interval period and channel For example, set nviIntDataTime to 6/1/2012 13:15:00 to read the number of pulses from 13:15:00 to 13:29:59. The second status bit value will be 0 if no error has occurred. The interval data period window can be set to read 15 or 5 minutes using the nviIntDataPeriod. This value will not change the default interval data period value of 15 minutes. NviIntDataChan will select the usage channel. For example, set nviIntDataChan to 1 to read the interval data for nvoUsageCh01.
4. NviRequest commands can disable or enable functional blocks. Any changes will be saved even after powered down. Set nviRequest to 0,RQ_DISABLE to disable all functional blocks. Set nviRequest to 0,RQ_ENABLE to enable all function blocks. Set nviRequest to 1,RQ_DISABLE to disable only functional block 1. The first value of nvoStatus is the functional block, and the 3rd bit in the bit array is 1 when disabled.

   With an IDR16 each channel 1 through 16 represents the IDR16 meter jack inputs 1 through 16.
   With an IDR8 each channel 1 through 8 represents the IDR8 meter jack inputs 1 through 8.

   Units are pulse counts. The pulse value guide in Table 1 below represents the kilowatt-hour value of the meter size (amper-

age) plugged into the IDR meter jack. To calculate kWh Usage and kW Demand take the number of pulses multiplied by the meter pulse value to determine total kWh and kW. Set the EMS/BMS front end to multiply the pulse values by the pulse counts. See Table 17 below for the different meter sizes (Amperage) Watt Hour pulse values.

Table 17.

25 Amp	50 Amp	100 Amp	200 Amp	400 Amp	800 Amp	1600 Amp	3200 Amp
Base Watt Hour Value per Pulse for legacy Honeywell meters* (serial numbers starting with 1203XXXX and earlier)							
7.8125	**15.625**	**31.25**	**62.50**	**125.00**	**250.00**	**500.00**	**1000.00**
Base Watt Hour Value per Pulse* (serial numbers above 1203XXXX)							
0.48828	**0.97656**	**1.95313**	**3.90625**	**7.8125**	**15.625**	**31.25**	**62.50**

*Honeywell meters support paralleling of 3 sets of up to current sensors; the Multipliers listed in Table 1 are based on 1 set of current sensors. When multiple sets of current sensors are installed in parallel, the final multiplier will be the product of the base multiplier listed in Table 1 times the number of sets of current sensors in parallel. If the meter is using more than 1 set of current sensors, be sure to also factor the number of sets into the Pulse Value.

Formula for calculating Multiplier = Base Multiplier multiplied by the number of sets of Current Sensors in Parallel.

Example: Calculate the Multiplier for a meter of 120/208 Volt, 3-Phase, 200 Amp, 3 sets of Current Sensors in parallel for a legacy meter.

The final Multiplier is 187.50 which is the result of 62.50 multiplied by 3. The final Pulse Value is 187.50 Watt Hours per pulse.

Example: Calculate the Multiplier for a meter of 120/208 Volt, 3-Phase, 200 Amp, 3 sets of Current Sensors in parallel for a non legacy meter.

The final Multiplier is 11.71875 which is the result of 3.90625 multiplied by 3. The final Pulse Value is 11.71875 Watt Hours per pulse.

HONEYWELL LONWORKS POINT MAP: LEGACY IDR

Table 18.

Network Variable Name	SNVT Type	Description	Units	Legacy IDR	Notes
nvoPM-F_EnrgCh01	SNVT_count_f	Usage Channel 1	Pulse	R	1
nvoPM-F_EnrgCh02	SNVT_count_f	Usage Channel 2	Pulse	R	1
nvoPM-F_EnrgCh03	SNVT_count_f	Usage Channel 3	Pulse	R	1
nvoPM-F_EnrgCh04	SNVT_count_f	Usage Channel 4	Pulse	R	1
nvoPM-F_EnrgCh05	SNVT_count_f	Usage Channel 5	Pulse	R	1
nvoPM-F_EnrgCh06	SNVT_count_f	Usage Channel 6	Pulse	R	1
nvoPM-F_EnrgCh07	SNVT_count_f	Usage Channel 7	Pulse	R	1
nvoPM-F_EnrgCh08	SNVT_count_f	Usage Channel 8	Pulse	R	1
nvoPM-F_EnrgCh09	SNVT_count_f	Usage Channel 9	Pulse	R	1
nvoPM-F_EnrgCh10	SNVT_count_f	Usage Channel 10	Pulse	R	1
nvoPM-F_EnrgCh11	SNVT_count_f	Usage Channel 11	Pulse	R	1
nvoPM-F_EnrgCh12	SNVT_count_f	Usage Channel 12	Pulse	R	1
nvoPM-F_EnrgCh13	SNVT_count_f	Usage Channel 13	Pulse	R	1
nvoPM-F_EnrgCh14	SNVT_count_f	Usage Channel 14	Pulse	R	1
nvoPM-F_EnrgCh15	SNVT_count_f	Usage Channel 15	Pulse	R	1
nvoPM-F_EnrgCh16	SNVT_count_f	Usage Channel 16	Pulse	R	1
nvoPM-F_DmndCh01	SNVT_count_f	Demand Channel 1	Pulse	R	2
nvoPM-F_DmndCh02	SNVT_count_f	Demand Channel 2	Pulse	R	2
nvoPM-F_DmndCh03	SNVT_count_f	Demand Channel 3	Pulse	R	2
nvoPM-F_DmndCh04	SNVT_count_f	Demand Channel 4	Pulse	R	2
nvoPM-F_DmndCh05	SNVT_count_f	Demand Channel 5	Pulse	R	2
nvoPM-F_DmndCh06	SNVT_count_f	Demand Channel 6	Pulse	R	2
nvoPM-F_DmndCh07	SNVT_count_f	Demand Channel 7	Pulse	R	2
nvoPM-F_DmndCh08	SNVT_count_f	Demand Channel 8	Pulse	R	2
nvoPM-F_DmndCh09	SNVT_count_f	Demand Channel 9	Pulse	R	2
nvoPM-F_DmndCh10	SNVT_count_f	Demand Channel 10	Pulse	R	2
nvoPM-F_DmndCh11	SNVT_count_f	Demand Channel 11	Pulse	R	2
nvoPM-F_DmndCh12	SNVT_count_f	Demand Channel 12	Pulse	R	2
nvoPM-F_DmndCh13	SNVT_count_f	Demand Channel 13	Pulse	R	2
nvoPM-F_DmndCh14	SNVT_count_f	Demand Channel 14	Pulse	R	2
nvoPM-F_DmndCh15	SNVT_count_f	Demand Channel 15	Pulse	R	2
nvoPM-F_DmndCh16	SNVT_count_f	Demand Channel 16	Pulse	R	2
nvoRTC_DateTime	SNVT_time_stamp	Time	Time	R	
nvoRTC_DayofWeek	SNVT_date_day	Date	Date	R	

1. Can only clear using ModBus RTU. Jumper J7 must be closed. LonWorks module must be removed to access ModBus RTU.
2. Can only clear using ModBus RTU. Jumper J7 must be closed. LonWorks module must be removed to access ModBus RTU.

HONEYWELL BACNET PIC STATEMENT FOR CLASS 320, 340, 500 METERS & IDRS

BACNET PROTOCOL IMPLEMENTATION CONFORMANCE STATEMENT

Date: August 2011
Vendor Name: Honeywell
Vendor ID: 482
Product Name: Class 320 Meter, Class 340 Meter, Class 500 Meter, IDR
Product Model Numbers: E32-208100-RBACKIT, E34-480200-R05KIT, E50-480200-R03KIT, EIDR-8-R05RJ
Product Description: This product will provide bi-directional communication between Honeywell BACnet MS/TP meters, BACnet IP meters, and a BACnet system.

BACnet Standarized Device Profile (Annex L):
BACnet Smart Sensor (B-SS)

BACnet Interoperability Building Blocks Supported (Annex K):
K.1.2 BIBB - Data Sharing - ReadProperty-B (DS-RP-B)
K.1.4 BIBB - Data Sharing - ReadPropertyMultiple-B (DS-RPM-B)
K.5.2 BIBB - Device Management - Dynamic Device Binding-B (DM-DDB-B)
K.5.4 BIBB - Device Management - Dynamic Object Binding-B (DM-DOB-B)

Segmentation Capability:
None

Standard Object Types Supported:
Device Object
Analog Input

For all these properties the following apply:
1. Does not support BACnet CreateObject
2. Does not support BACnet DeleteObject
3. No additional writeable properties exist
4. No proprietary properties exist
5. No range restrictions exist

Data Link Layer Options:
MS/TP master (Clause 9), baud rate(s): 9.6k, 19.2k, 38.4k, 76.8k bps
BACnet IP, (Annex J): Class 320 meter does not support BACnet IP

Device Address Binding:
Not supported

Character Sets Supported:
ANSI X3.4

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