Appendix B: Device Objects

Overview

This appendix contains information for each device about data, control options, and setpoints that are available directly through PowerNet Software clients, through DDE protocol, or through Modbus protocol. You can use this information in programming DDE applications or in mapping Modbus registers.

For more information about monitoring and controlling devices directly with PowerNet Software, see *Chapter 9: Configuring the System* and *Chapter 10: Configuring Device Setpoints*.

For more information about programming DDE applications, see *Appendix A: PowerNet Software and DDE* in the *IMPACC DDE Server User's Guide.*

For more information on mapping Modbus registers, see the *IMPACC Modbus Configurator/Monitor User's Guide*.

The information is organized by device. Within each device section, the information is grouped into tables. The Device Data table contains information about each device data item that is available from the device. For each item, the table provides a description, the tag name, DDE type, and the number of Modbus registers.

Important
Not every data item or control command is available for both DDE and Modbus. The availability of each item or command is indicated by whether there is a DDE type and number of Modbus registers given. If a DDE type is given, the item is available for DDE programming. If a number is given for Modbus Registers, the item is available for Modbus. If "NA" appears in the DDE or Modbus columns, the item or command is not available to the respective protocol.

Information is provided for the following devices:

Accutrol 400

Addressable Relay

Addressable Relay Inverted

Advantage

Advantage Control

Advantage Control Module (ACM)

AEM II

AF97

BIM

Breaker Controller

CMU

Digitrip 800

Digitrip 810

Digitrip 910

Digitrip MV

Digitrip 3000

Digitrip Optim 1050

Digitrip Optim 550

Digitrip Optim 750

IQ 1000

IQ 1000 II

IQ 1000 II Goldstar

IQ 200

IQ 500

IQ Analyzer

IQ CED

IQ Data

IQ Data Plus

IQ Data Plus II

IQ Data Plus II Goldstar

IQ Data Plus II HV

IQ DP 4000

IQ Generator

IQ Power Sentinel

IQ Sentinel

IQ Sentinel Universal Multiple Well Head

IQ Sentinel Universal Single Well Head

IQ Sentinel Universal With External CT's

IQ Transfer Switch

MMCO Relay

MPCV Relay

Power Manager

Power Manager w/ Transducer

- Transducer Branch Circuit
- Transducer w/ Load Control Branch Circuit
- Load Controller Branch Circuit

Universal RTD Module

Format of the Information

Each device collects various types of data and recognizes certain commands. Because different devices perform different functions and have varying degrees of sophistication, the data and commands differ per device.

To successfully map input and holding registers, you need information that is specific to the device. To present the information as simply as possible, the following tables are provided for each device:

- The *Device Data* table describes information that can be collected from the device. This data is accessed via IMPACC, a DDE application, or by mapping these data elements to input registers.
- The *Device Control* table describes *device commands*. These commands are sent to the device via IMPACC, DDE applications, or holding registers.
- The *Setpoints* table lists all the setpoints available for the device.
- The *Frame Descriptions* table is provided only for devices that support this feature.
- The *ACM Code* table is provided for the ACM device.

Note
A Microsoft Excel spreadsheet that details device object changes between IMPACC Series III and PowerNet Software is located on the PowerNet Software CD ROM.

Accutrol 400

Accutrol 400 Device Data

Description	# of Modbus Registers	Tag Name	DDE Type	Invalid	Scale Factor
Device status	1	STATN	R#	FFFF	x1.
		STATT	M	NA	NA
Device status reason	1	RSONN	R#	FFFF	x1.
		RSONT	M	NA	NA
Raw status	2	RAW_STATUS	I	FFFFFFFF	x1.
Flag 1 2	1	FLAGS_2_1	R#	FFFF	x1.
Flag 3 4	1	FLAGS_3_4	R#	FFFF	x1.
Flag 5	1	FLAGS_5	R#	FFFF	x1.
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Latest frequency command	1	FREQCMD	R#.##	FFFF	x100
Output current	1	LOADI	R#	FFFF	x1.
Output voltage	1	LOADV	R#	FFFF	x1.
Link voltage	1	LINKV	R#	FFFF	x1.
Isolated input 1	1	PROCINP	R#.##	FFFF	x100
Preset motor speed 1	1	PRESET1	I	FFFF	x1.
Preset motor speed 2	1	PRESET2	I	FFFF	x1.
Preset motor speed 3	1	PRESET3	I	FFFF	x1.
Process signal minimum level	1	MINLEVEL	R#.##	FFFF	x100
Run time	2	RT	R#.#	FFFFFFFF	x10
Motor speed (rpm)	1	SPEED	R#	FFFF	x1.
Motor Direction	1	DIRECTION	I	FFFF	x1
Output frequency	1	FREQ	R #.##	FFFF	x100
AC apparent power	2	WATTS	R#	7FFFFFFF	x1.
Mode (status/direction)	1	STATBUF	R#	FFFF	x1.
Relay 4	1	RELAY_4	I	FFFF	x1.
Jog	1	JOG	I	FFFF	x1.
Time of Trips	NA	TIME_OF_LAST_EVENT	TIME	NA	NA

Accutrol 400 Device Control

Descriptionn	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Stop Motor	020003	STOP	I	0x652
Reset Unit	000002	RESET_UNIT	I	0x603
Reset Run Time	000103	RESET_RUN_TIME	I	0x60F
Start Forward	020001	START_FWD_FAST	I	0x651
Start Reverse	020002	START_REV_FAST	I	0x611
3F8	NA	DOWNLOAD_FREQUNCY_SP	I	Not available

Accutrol 400 Setpoints

Setpoint	Description
Firmware Version	Version number of the firmware in the device.
Communication Version	Version number of the communication software in the device.
Critical Frequency Avoidance	Critical Frequency avoidance: on/off. When on, causes an Overfrequency trip when system frequency reaches maximum frequency for the device.
Multiple Attempt Restart	Continue restart attempt after restart failure.
Process Signal Input	VDC, mA, or psi
Process Signal Type	Process signal: PSIG Normal/PSIG Inverted
Process Signal Output	VAC, AMP, or KW
Process Signal Loss Action	Stop Process or switch to Preset Speed on loss of signal.
Electronic POT EPOT	On or Off
Relay 4 status	Status of Relay 4. Can be one of the following: -Up to speed -Overload warning -Overcurrent trip -Overvoltage trip -Undervoltage trip -Phaseloss trip -External trip -Permissive trip -Overtemperature trip -Overfrequency trip -Process Signal Loss -Ground fault trip -Overload trip -Remote Speed Command -Remote Run Command -MARS lockout
Speed Download	The downloadable speed setting for the motor: 1-12,000 in 1/100 % units (rpms?).

Addressable Relay

Addressable Relay I & II

Addressable Relay Device Data

Description	# of Modbus Registers	Tag Name	DDE Type	Invalid	Scale Factor
Device status	1	STATN	R#	FFFF	x1.
		STATT	M	NA	NA
Device status reason	1	RSONN	R#	FFFF	x1.
		RSONT	M	NA	NA
Raw status ( )	2	RAW_STATUS	I	FFFFFFFF	x1.
Device IN1 status	1	STAT1N	R#	FFFF	x1.
Device IN2 status	1	STAT2N	R#	FFFF	x1.
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA

Addressable Relay Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Open Breaker	000000	OPEN_DEVICE	I	0x600
Close Breaker	000000	CLOSE_DEVICE	I	0x601

Addressable Relay Setpoints

None.

Addressable Relay Inverted

Addressable Relay I & II (Inverted)

Addressable Relay Inverted Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Device status	1	STATN	R#	FFFF	x1.
		STATT	M	NA	NA
Device status reason	1	RSONN	R#	FFFF	x1.
		RSONT	M	NA	NA
Device IN1 status	1	STAT1N	R#	FFFF	x1.
Device IN2 status	1	STAT2N	R#	FFFF	x1.

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Raw status ( )	2	RAW_STATUS	I	FFFFFFFF	x1.
Com version	NA	COM_VERSION	M	NA	NA
Product id	NA	PRODUCT_ID	M	NA	NA
Division code	NA	DIV_CODE	M	NA	NA
Device type	NA	TYPEN	R	NA	NA

Addressable Relay Inverted Device Control

Descriptionn	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Open Breaker	000000	OPEN_DEVICE	I	0x600
Close Breaker	000000	CLOSE_DEVICE	I	0x601

Addressable Relay Inverted Setpoints

None.

Advantage

Advantage (with Advantage PONI)

Advantage Device Data

				Subnetwork Support			
Description	# ofModbus Registers	Tag Name	DDE Type	Direct	CMU	Invalid	Scale Factor
Device status	1	STATN	R#	√	√	FFFF	x1.
		STATT	M	√	√	NA	NA
Device status reason	1	RSONN	R#	√	√	FFFF	x1.
		RSONT	M	√	√	NA	NA
Raw status	2	RAW_STATUS	I	√	√	FFFFFFFF	x1.
Flag 1 2	1	FLAG_2_1	R#	√	√	FFFF	x1.
Flag 3	1	FLAG_3	R#	√	√	FFFF	x1.
Com version	NA	COM_VERSION	I	√	√	NA	NA
Product id	NA	PRODUCT_ID	I	√	√	NA	NA
Division code	NA	DIV_CODE	I	√	√	NA	NA
Device type	NA	TYPEN	I	√	√	NA	NA
Phase A current	1	IA	R#.##	√	√	FFFF	x1.
Phase B current	1	IB	R#.##	√	√	FFFF	x1.

Description	# ofModbus Registers	Tag Name	DDE Type	Subnetwork Support: Direct	CMU	Invalid	Scale Factor
Phase C current	1	IC	R#.##	√	√	FFFF	x1.
Coil Voltage	1	VCOIL	R#	√	√	FFFF	x1.
Operations count ( )	2	OCNT	R#		√	FFFFFFFF	x1.
Run time (C)	1	RT	R#		√	FFFF	x1.
Time of Trips	NA	TIME_OF_LAST_EVENT	TIME	√	√	NA	NA

Advantage Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value	Subnetwork Support: Direct	CMU
Stop	020003	STOP	I	0x652	√	√
Start	020001	START_FWD_FAST	I	0x651	√	√
Reset Unit	000002	RESET_UNIT	I	0x603	√	√
Reset OpCount	000102	RESET_OP_COUNT	I	0x60b		√
Reset RunTime	000103	RESET_RUN_TIME	I	0x60f		√

Advantage Setpoints

Setpoint	Description
Firmware Version Number	Version number of the firmware in the device.
Firmware Revision Number	Revision number of the firmware in the device.
Reset Type	Specifies the type of reset allowed for the device. Automatic Manual (Not programmable from IMPACC.)
Overload Class	Overload class protection can be one of the following: Class 10 Overload Class 20 Overload Class 30 Overload No Protection
Trip Rating	Trip Rating
Unit Type	The Unit Type can be one of the following: Overload (for WMETER connection only) Contactor/Starter (for any connection)
Thermal Overload Protection Indicator	Indicates whether thermal overload protection is enabled.
Phase Fault Protection Indicator	Indicates whether phase fault protection is enabled.
Ground Fault Protection Indicator	Indicates whether ground fault protection is enabled.
System Frequency	Frequency of the voltage in the system.

Advantage Control

Advantage with Control PONI

Advantage Control Device Data

Description	# of Modbus Registers	Tag Name	DDE Type	Subnetwork Support: DIRECT	Subnetwork Support: CMU	Invalid	Scale Factor
Device status	1	STATN	R#	√	√	FFFF	x1
		STATT	M	√	√	NA	NA
Device status reason	1	RSONN	R#	√	√	FFFF	x1
		RSONT	M	√	√	NA	NA
Raw Status	2	RAW_STATUS	I	√	√	FFFFFFFF	x1
Com version	NA	COM_VERSION	I	√	√	NA	NA
Product id	NA	PRODUCT_ID	I	√	√	NA	NA
Division code	NA	DIV_CODE	I	√	√	NA	NA
Device type	NA	TYPEN	I	√	√	NA	NA
Operation Count	2	OCNT	R#		√	FFFFFFFF	x1
Run Time	1	RT	R#		√	FFFF	x1
Time of Trips	NA	TIME_OF_LAST_EVENT	TIME		√	NA	NA

Advantage Control Device Control

Commmand Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value	Subnetwork Support: Direct	Subnetwork Support: CMU
Reset Op Count	000102	RESET_OP_COUNT	I	0x60b		√
Reset Run Time	000103	RESET_RUN_TIME	I	0x60f		√
Start	000000	START	I	0x65c	√	√
Stop	000000	STOP	I	0x652	√	√

Advantage Control Setpoints

None.

Advantage Control Module (ACM)

ACM Device Data

				Subnetwork Support			
Description	**# of Modbus Registers**	**Tag Name**	**DDE Type**	**DIRECT**	**CMU**	**Invalid**	**Scale Factor**
Device status	1	STATN	R#	√	√	FFFF	x1.
		STATT	M	√	√	NA	NA
Device status reason	1	RSONN	R#	√	√	FFFF	x1.
		RSONT	M	√	√	NA	NA
Raw status	2	RAW_STATUS	I	√	√	FFFFFFFF	x1.
Flag 1 2	1	FLAGS_2_1	R#	√	√	FFFF	x1.
Flag 3	1	FLAGS_3	R#	√	√	FFFF	x1.
Com version	NA	COM_VERSION	I	√	√	NA	NA
Product id	NA	PRODUCT_ID	I	√	√	NA	NA
Division code	NA	DIV_CODE	I	√	√	NA	NA
Device type	NA	TYPEN	I	√	√	NA	NA
Phase A current	1	IA	R#	√	√	FFFF	x1.
Phase B current	1	IB	R#	√	√	FFFF	x1.
Phase C current	1	IC	R#	√	√	FFFF	x1.
Coil voltage control	1	VCOIL	R#	√	√	FFFF	x1.
Operations count	2	OCNT	R#		√	FFFFFFFF	x1.
Run time	1	RT	R#		√	FFFF	x1.
Motor speed and direction	1	MOTION	M	√	√	NA	NA
Motor speed type	1	SPEED_TYPE	R#	√	√	FFFF	x1.
Motion	1	MOTION_TYPE	R#	√	√	FFFF	x1.
Motor Direction	1	DIRECTION	R#	√	√	FFFF	x1.
ACM Mode	1	MODE	M		√	NA	NA
Mode type	1	MODE_TYPE	R#	√	√	FFFF	x1.
Starter	1	STARTER	R#	√	√	FFFF	x1.
ACM status bytes 1 and 2	NA	STATBUF	R#	√	√	FFFF	x1.
Time of Trips	NA	TIME_OF_LAST_EVENT	TIME	√	√	NA	NA

ACM Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value	Subnetwork Support: Direct	Subnetwork Support: CMU
Stop	020003	STOP	I	0x652	√	√
Reset Trip	000002	RESET_UNIT	I	0x603	√	√
Reset Operation Count	000102	RESET_OP_COUNT	I	0x60b		√
Reset Run Time	000103	RESET RUN TIME	I	0x60f		√
Start Forward Fast	020001	START_FWD_FAST	I	0x651	√	√
Start Reverse Fast	020002	START_REV_FAST	I	0x611	√	√
Start Forward Slow	020005	START_FWD_SLOW	I	0x612	√	√

ACM Setpoints

Setpoint	Description
ACM Type	The ACM can be one of the following: Full voltage, nonreversing Forward/Reverse Fast/Slow - 2 winding Fast/Slow -constant horsepower Fast/Slow - constant torque Reduced voltage -primary resistance Reduced voltage - part winding Reduced voltage - auto transformer Reduced voltage Wye-Delta open transition Reduced voltage Wye Delta closed transition Metering
Mandatory Timed Stop	Mandatory timed stop.
Timer Setting	Fast/Slow Timer Time between changes in motor speed for the compelled acceleration and compelled deceleration functions. For the compelled stop function, it is the minimum off-time for the compelled stop function. Fwd/Rev Timer The minimum time between changes in motor direction for the compelled stop function. Reduced Voltage Timer The time between start and transition on.
Number of Contactors	Contactor configuration of the device. This can be one of the following: Two contactor Three contactor
Firmware Version	Version number of the firmware in the device.
Firmware Revision	Revision number of the firmware in the device.
Reset Type	Specifies the type of reset allowed for the device. Automatic Manual (Not programmable from IMPACC.)
Overload Class	Overload class protection can be one of the following: Class 10 Overload Class 20 Overload Class 30 Overload No Protection
Unit Type	The Unit Type can be one of the following:

Setpoint	Description
	Overload (for WMETER connection only) Contactor/Starter (for any connection)
Thermal Overload Protection Indicator	Indicates whether thermal overload protection is enabled.
Phase Fault Protection Indicator	Indicates whether phase fault protection is enabled.
Ground Fault Protection Indicator	Indicates whether ground fault protection is enabled.
System Frequency	Frequency of the voltage in the system.
Advantage Size Data	Advantage size type.

ACM Code

Status	Meaning
0	Unknown
1	Hand
2	Off
3	Auto
4	Forward
5	Reverse
6	Fast
7	Unknown
8	Stop
9	Remote Auto
10	IMPACC Auto
11	Run

AEM II

AEM II Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid
Status	1	STATN	R#	FFFF
Reason	1	RSONN	R#	FFFF
Raw Status	2	RAW_STATUS	I	FFFFFFFF

AEM II Device Control

Control Tags	INCOM CTRL COMMAND	Tag Name	Modbus Value
Reset Device	000010	RESET_DEVICE	0x655
Reset Alarm	000001	RESET_ALARM	0x656

AEM II Setpoints

None.

AF97

AF97 Device Data

Description	# of Modbus Registers	Tag Name	DDE Type	Invalid	Scale Factor
Device status	1	STATN	R#	FFFF	x1.
		STATT	M	NA	NA
Device status reason	1	RSONN	R#	FFFF	x1.
		RSONT	M	NA	NA
Raw status	2	RAW_STATUS	I	FFFFFFFF	x1.
Flag 1 2	1	FLAGS_2_1	R#	FFFF	x1.
Flag 3 4	1	FLAGS_3_4	R#	FFFF	x1.
Flag 5	1	FLAGS_5	R#	FFFF	x1.
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Load frequency	1	FREQ	R#.##	FFFF	x100
Line Current Phase A	1	LINE_I_A	R#	FFFF	x1.
Line Current Phase B	1	LINE_I_B	R#	FFFF	x1.
Line Current Phase C	1	LINE_I_C	R#	FFFF	x1.
Line Voltage Phase A	1	LINE_V_A	R#	FFFF	x1.
Line Voltage Phase B	1	LINE_V_B	R#	FFFF	x1.
Line Voltage Phase C	1	LINE_V_C	R#	FFFF	x1.
Load current Phase A	1	LOAD_I_A	R#	FFFF	x1.
Load current Phase B	1	LOAD_I_B	R#	FFFF	x1.
Load current Phase C	1	LOAD_I_C	R#	FFFF	x1.
Load voltage Phase A	1	LOAD_V_A	R#	FFFF	x1.
Load voltage Phase B	1	LOAD_V_B	R#	FFFF	x1.
Load voltage Phase C	1	LOAD_V_C	R#	FFFF	x1.
Isolated input 1	1	ISOLINPUT1	R#.##	FFFF	x100
Isolated input 2	1	ISOLINPUT2	R#.##	FFFF	x100
Air pressure command	1	AIRPRESSCMD	R#.##	FFFF	x100
Recent Freq Command	1	RECENTFREQCMD	R#.##	FFFF	x100
Run time	2	RT	R#.#	FFFFFFFF	x10
Motor speed (rpm)	1	SPEED	R#	FFFF	x1.
Forward speed command pot	1	FWDSPEEDCMD	R#.##	FFFF	x100

Description	# of Modbus Registers	Tag Name	DDE Type	Invalid	Scale Factor
DC apparent power	2	DC_WATTS	R#	7FFFFFFF	x1.
Relay 1 Active	1	RELAY1	I	FFFF	x1.
Relay 2 Active	1	RELAY2	I	FFFF	x1.
Relay 3 Active	1	RELAY3	I	FFFF	x1.
Relay 4 Active	1	RELAY4	I	FFFF	x1.
Relay 5 Active	1	RELAY5	I	FFFF	x1.
DI1 to DI14	1	DI1 -> DI14	I	FFFF	x1.
Input PH	1	INPUT_PH_ROT	I	FFFF	x1.
Direction	1	DIRECTION	R#	FFFF	x1.
Deceleration Limit Alarm	1	DECEL_LIM_ALARM	I	FFFF	x1.
Torque Limit Alarm	1	TORQUE_LIM_ALARM	I	FFFF	x1.
Phase A loss	1	PHASE_A_LOSS	I	FFFF	x1.
Phase B loss	1	PHASE_B_LOSS	I	FFFF	x1.
Phase C loss	1	PHASE_C_LOSS	I	FFFF	x1.
Inv. Enable	1	INV_ENABLE	I	FFFF	x1.
Conv. Enable	1	CONV_ENABLE	I	FFFF	x1.

AF97 Device Control

Descriptionn	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Stop Motor	020003	STOP	I	0x652
Reset Unit	000002	RESET_UNIT	I	0x603
Reset Run Time	000103	RESET_RUN_TIME	I	0x60F
Set Direction Forward	020007	SET_REV_DIRECTION	I	0x614
Set Direction Reverse	020008	SET_FWD_DIRECTION	I	0x615
Start Motor	020004	START	I	0x65C
3F8	NA	DOWNLOAD_FREQUNCY_SP	I	NA

AF97 Setpoints

Setpoint	Description
Firmware Version Number	Version number of the firmware in the device.
Communication Software Version Number	Version number of the communication software in the device.

BIM

BIM Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid
Status	1	STATN	R#	FFFF

Description	# of Modbus registers	Tag Name	DDE Type	Invalid
		STATT	M	NA
Reason	1	RSONN	R#	FFFF
		RSONT	M	NA
Raw Status	2	RAW_STATUS	I	FFFFFFFF

BIM Device Control

Descriptionn	INCOM CTRL COMMAND	Tag Name	Modbus Value
Reset Device	000010		
Reset Alarm	000001	RESET_ALARM	0x656

Breaker Controller

Breaker Controller Device Data

Description	# of Modubs registers	Tag Name	DDE Type	Invalid	Scale Factor
Device status	1 / 1	STATN	R#	FFFF	x1.
		STATT	M	NA	NA
Device status reason	1 / 1	RSONN	R#	FFFF	x1.
		RSONT	M	NA	NA
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Raw Status	2	RAW_STATUS	I	FFFFFFFF	x1.

Breaker Controller Device Control

Descriptionn	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Open Breaker	090F0F	OPEN_DEVICE	I	0x600
Close Breaker	090F0F	CLOSE_DEVICE	I	0x601

Breaker Controller Setpoints

None.

CED

CED Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid
Status	1	STATN	R#	FFFF
		STATT	M	NA
Reason	1	RSONN	R#	FFFF
		RSONT	M	NA
Raw Status	2	RAW_STATUS	I	FFFFFFFF

CED Device Control

Descriptionn	INCOM CTRL COMMAND	Tag Name	Modbus Value
Reset Device	000010	RESET_DEVICE	0x655

CED Device Setpoints

Use the setpoints that are launch from help

Central Monitoring Unit (CMU)

CMU Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid
Status	1	STATN	R#	FFFF
Reason	1	RSONN	R#	FFFF
Raw Status	2	RAW_STATUS	I	FFFFFFFF

CMU Device Control

Description	INCOM CTRL COMMAND	Tag Name	Modbus Value
Reset Device	000010	RESET_DEVICE	0x655
Reset Alarm	000001	RESET_ALARM	0x656

CMU Setpoints

None.

Digitrip 3000

Digitrip 3000 Device Data

Description	# of Modubs Registers	Tag Name	DDE Type	Invalid	Scale Factor
Device status	1	STATN	R#	FFFF	x1
		STATT	M	NA	NA
Device status reason	1	RSONN	R#	FFFF	x1
		RSONT	M	NA	NA
Raw Status	2	RAW_STATUS	I	FFFFFFFF	x1.
Flag 1 2	1	FLAGS_2_1	R#	FFFF	x1.
Flag 3 4	1	FLAGS_3_4	R#	FFFF	x1.
Flag 5 6	1	FLAGS_5_6	R#	FFFF	x1.
Flag 7 8	1	FLAGS_7_8	R#	FFFF	x1.
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Phase A current	1	IA	R#	FFFF	x1.
Phase B current	1	IB	R#	FFFF	x1.
Phase C current	1	IC	R#	FFFF	x1.
Ground current	1	IG	R#	FFFF	x1.
Peak Phase A current	1	PKIA	R#	FFFF	x1.
Peak Phase B current	1	PKIB	R#	FFFF	x1.
Peak Phase C current	1	PKIC	R#	FFFF	x1.
Peak Ground current	1	PKIG	R#	FFFF	x1.
High load	1	HLOAD	I	FFFF	x1.
Time of Trips	NA	TIME_OF_LAST_EVENT	TIME	NA	NA

Digitrip 3000 Device Control

Descriptionn	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Open Breaker	010000	OPEN_DEVICE	I	0x600
Close Breaker	010001	CLOSE_DEVICE	I	0x601
Reset Unit	000002	RESET_UNIT	I	0x603
Reset Pk Dmd Current	000101	RESET_DEMAND_I	I	0x609
Reset Alarm	000001	RESET_ALARM	I	0x656

Digitrip 3000 Setpoints

Setpoint	Description
Firmware Version Number	Version number of the firmware in the device.
Communication Version	Version number of the communication software in the device.
Phase Discriminator Flag	Indicates whether the Phase Discriminator is on or off.
System Frequency	Frequency of the voltage in the system.
Highload Time	Highload Time can be one of the following: 0 sec 5 sec 10 sec 30 sec 1 minute 2 minute 5 minute
Remote Open/Close Enable Flag	Enables or disables the ability to open and close the breaker via IMPACC Series III.
Program with Breaker Flag	Indicates the state of the breaker required during programming of the device (not programmable from IMPACC).
Trip Output Relay Configuration	Indicates the selected Trip Output Configuration: Separate Phase/Ground tripping Separate Overcurrent/Inst. Tripping (Not programmable from IMPACC.)
Reset Type	Specifies the type of reset allowed for the device. Automatic Manual (Not programmable from IMPACC.)
Phase Curve Family	The type of phase curve used.
Phase Long Delay Pickup Curve Shape	Shape of inverse-time-over-current pickup curve.
Phase CT Ratio	Phase Current Transformer Turns Ratio.
Phase Overcurrent Pickup Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Phase Overcurrent Pickup Time Multiplier Setting	Defines the time aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Phase Short Delay Pickup Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Phase Short Delay Pickup Time Multiplier Setting	Defines the time aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Phase Instantaneous Pickup Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches the level of the pickup setting, the device trips.
Ground Current Pickup Curve Family	Shape type of ground current curve used by the device.
Ground Current Pickup Curve Shape	Shape of inverse-time-over-current pickup curve.
Ground CT Ratio	Ground CT Turns Ratio.

Setpoint	Description
Ground Overcurrent Pickup Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Ground Overcurrent Pickup Time Multiplier Setting	Defines the time aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Ground Short Delay Pickup Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Ground Short Delay Pickup Time Multiplier Setting	Defines the time aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Ground Instantaneous Pickup Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches the level of the pickup setting, the device trips.

Digitrip MV

Digitrip MV Device Data

Description	# of Modbus Registers	Tag Name	DDE Type	Invalid	Scale Factor
Device status	1	STATN	R#	FFFF	x1.
		STATT	M	NA	NA
Device status reason	1	RSONN	R#	FFFF	x1.
		RSONT	M	NA	NA
Raw status	2	RAW_STATUS	I	FFFFFFFF	x1.
Flag 1 2	1	FLAGS_2_1	R#	FFFF	x1.
Flag 3 4	1	FLAGS_3_4	R#	FFFF	x1.
Flag 5 6	1	FLAGS_5_6	R#	FFFF	x1.
Flag 7 8	1	FLAGS_7_8	R#	FFFF	x1.
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Phase A current	1	IA	R#	FFFF	x1.
Phase B current	1	IB	R#	FFFF	x1.
Phase C current	1	IC	R#	FFFF	x1.
Ground current	1	IG	R#	FFFF	x1.
Peak Phase A current	1	PKIA	R#	FFFF	x1.

Description	# of Modbus Registers	Tag Name	DDE Type	Invalid	Scale Factor
Peak Phase B current	1	PKIB	R#	FFFF	x1.
Peak Phase C current	1	PKIC	R#	FFFF	x1.
Peak Ground current	1	PKIG	R#	FFFF	x1.
High load	1	HLOAD	I	FFFF	x1.
Time of Trips	NA	TIME_OF_LAST_EVENT	TIME	NA	NA

Digitrip MV Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Open Breaker	010000	OPEN_DEVICE	I	0x600
Close Breaker	010001	CLOSE_DEVICE	I	0x601
Reset Unit	000002	RESET_UNIT	I	0x603
Reset Pk Dmd Current	000101	RESET_DEMAND_I	I	0x609
Reset Alarm	000001	RESET_ALARM	I	0x656

Digitrip MV Setpoints

Setpoint	Description
Firmware Version	Version number of the firmware in the device.
Communication Version	Version number of the communication software in the device.
Phase Discriminator	Indicates whether the Phase Discriminator is on or off.
System Frequency	Frequency of the voltage in the system.
Highload Time	Highload Time can be one of the following: 0 sec 5 sec 10 sec 30 sec 1 minute 2 minute 5 minute
Remote Open/Close Enable Flag	Enables or disables the ability to open and close the breaker via IMPACC Series III.
Program with Breaker Flag	Indicates the state of the breaker required during programming of the device (not programmable from IMPACC).
Trip Output Relay Configuration	Indicates the selected Trip Output Configuration: Separate Phase/Ground tripping Separate Overcurrent/Inst. Tripping (Not programmable from IMPACC.)
Reset Type	Specifies the type of reset allowed for the device. Automatic Manual (Not programmable from IMPACC.)
Phase Current Curve Family	The type of phase curve used: Thermal IEC ANSI
Phase Current Pickup Curve Shape	Shape of inverse-time-over-current pickup curve.

Setpoint	Description
Phase CT Ratio	Phase Current Transformer Turns Ratio.
Phase Current Short Delay Pickup Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Phase Current Short Delay Pickup Time Multiplier Setting	Defines the time aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Phase Current Instantaneous Pickup Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches the level of the pickup setting, the device trips.
Ground Current Pickup Curve Family	Shape type of ground current curve used by the device.
Ground Current Pickup Curve Shape	Shape of inverse-time-over-current pickup curve.
Ground CT Ratio	Ground CT Turns Ratio.
Ground Short Delay Pickup Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Ground Short Delay Pickup Time	Defines the time aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Ground Instantaneous Pickup Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches the level of the pickup setting, the device trips.

Digitrip Optim

Digitrip Optim 550, 750, 1050

Digitrip Optim 550 Device Data

				Subnetwork Support			
Description	**# of Modbus Registers**	**Tag Name**	**DDE Type**	**DIRECT**	**BIM**	**Invalid**	**Scale Factor**
Device status	1	STATN	R#	√	√	FFFF	x1
		STATT	M	√	√	NA	NA
Device status reason	1	RSONN	R#	√	√	FFFF	x1
		RSONT	M	√	√	NA	NA
Raw Status	2	RAW_STATUS	I	√	√	FFFFFFFF	x1
Flag 1 2	1	FLAGS_2_1	R#	√	√	FFFF	x1.
Flag 3	1	FLAGS_3	R#	√	√	FFFF	x1.
Com version	NA	COM_VERSION	I	√	√	NA	NA
Product id	NA	PRODUCT_ID	I	√	√	NA	NA
Division code	NA	DIV_CODE	I	√	√	NA	NA

				Subnetwork Support			
Description	**# of Modbus Registers**	**Tag Name**	**DDE Type**	**DIRECT**	**BIM**	**Invalid**	**Scale Factor**
Device type	NA	TYPEN	I	√	√	NA	NA
Demand Current Changes	1	DEMAND_CURRENT_CHANGES	R#	√	√	FFFF	x1
Demand I(A)	1	IADEMAND	R#	√	√	FFFF	x1
Demand I(B)	1	IBDEMAND	R#	√	√	FFFF	x1
Demand I(C)	1	ICDEMAND	R#	√	√	FFFF	x1
Demand I(G)	1	IGDEMAND	R#	√	√	FFFF	X1
Demand I(N)	1	INDEMAND	R#	√	√	FFFF	X1
Event Count	1	EVENTCOUNT	R#	√	√	FFFF	X1
Frame	1	FRAME	R#	√	√	FFFF	X1
Highload	1	HLOAD	I	√	√	FFFF	X1
I(A)	1	IA	R#	√	√	FFFF	X1
I(B)	1	IB	R#	√	√	FFFF	X1
I(C)	1	IC	R#	√	√	FFFF	X1
I(G)	1	IG	R#	√	√	FFFF	X1
I(N)	1	IN	R#	√	√	FFFF	X1
Max IA	1	MAX_IA	R#	√	√	FFFF	X1
Max IB	1	MAX_IB	R#	√	√	FFFF	X1
Max IC	1	MAX_IC	R#	√	√	FFFF	X1
Max IG	1	MAX_IG	R#	√	√	FFFF	X1
Max IN	1	MAX_IN	R#	√	√	FFFF	X1
Min IA	1	MIN_IA	R#	√	√	FFFF	X1
Min IB	1	MIN_IB	R#	√	√	FFFF	X1
Min IC	1	MIN_IC	R#	√	√	FFFF	X1
Min IG	1	MIN_IG	R#	√	√	FFFF	X1
Min IN	1	MIN_IN	R#	√	√	FFFF	X1
Min Max Current Changes	1	MIN_MAX_I_CHANGES	R#	√	√	FFFF	X1
Peak Demand I(A)	1	IAPEAK	R#	√	√	FFFF	X1
Peak Demand I(B)	1	IBPEAK	R#	√	√	FFFF	X1
Peak Demand I(C)	1	ICPEAK	R#	√	√	FFFF	X1
Peak Demand I(G)	1	IGPEAK	R#	√	√	FFFF	x1
Peak Demand I(N)	1	INPEAK	R#	√	√	FFFF	x1
Plug	1	PLUG	R#	√	√	FFFF	x1
Trip Time	0	TIME_OF_LAST_EVENT	TIME	√	√	NA	NA

Digitrip Optim 550 Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value	Subnetwork Support DIRECT	Subnetwork Support BIM
Close Breaker	010001	CLOSE_DEVICE	I	0x601	√	√
Open Breaker	010000	OPEN_DEVICE	I	0x600	√	√
Reset Min Max I	00010D	RESET_MIN_MAX_I	I	0x620	√	√
Reset Trip	000002	RESET_UNIT	I	0x603	√	√
Reset Pk Dmd Currents	000101	RESET_DEMAND_I	I	0x609	√	√

Digitrip Optim 750 Device Data

Description	# of Modbus Registers	Tag Name	DDE Type	Subnetwork Support DIRECT	Subnetwork Support BIM	Invalid	Scale Factor
Device status	1	STATN	R#	√	√	FFFF	x1
		STATT	M	√	√	NA	NA
Device status reason	1	RSONN	R#	√	√	FFFF	x1
		RSONT	M	√	√	NA	NA
Raw Status	2	RAW_STATUS	I	√	√	FFFFFFFF	x1
Flag 1 2	1	FLAGS_2_1	R#	√	√	FFFF	x1.
Flag 3	1	FLAGS_3	R#	√	√	FFFF	x1.
Com version	NA	COM_VERSION	I	√	√	NA	NA
Product id	NA	PRODUCT_ID	I	√	√	NA	NA
Division code	NA	DIV_CODE	I	√	√	NA	NA
Device type	NA	TYPEN	I	√	√	NA	NA
Demand Current Changes	1	DEMAND_CURRENT_CHANGES	R#	√	√	FFFF	x1
Demand I(A)	1	IADEMAND	R#	√	√	FFFF	x1
Demand I(B)	1	IBDEMAND	R#	√	√	FFFF	x1
Demand I(C)	1	ICDEMAND	R#	√	√	FFFF	x1
Demand I(G)	1	IGDEMAND	R#	√	√	FFFF	X1
Demand I(N)	1	INDEMAND	R#	√	√	FFFF	X1
Event Count	1	EVENTCOUNT	R#	√	√	FFFF	X1
Frame	1	FRAME	R#	√	√	FFFF	X1
Highload	1	HLOAD	I	√	√	FFFF	X1
I(A)	1	IA	R#	√	√	FFFF	X1
I(B)	1	IB	R#	√	√	FFFF	X1
I(C)	1	IC	R#	√	√	FFFF	X1
I(G)	1	IG	R#	√	√	FFFF	X1

				Subnetwork Support			
Description	**# of Modbus Registers**	**Tag Name**	**DDE Type**	**DIRECT**	**BIM**	**Invalid**	**Scale Factor**
I(N)	1	IN	R#	√	√	FFFF	X1
Max IA	1	MAX_IA	R#	√	√	FFFF	X1
Max IB	1	MAX_IB	R#	√	√	FFFF	X1
Max IC	1	MAX_IC	R#	√	√	FFFF	X1
Max IG	1	MAX_IG	R#	√	√	FFFF	X1
Max IN	1	MAX_IN	R#	√	√	FFFF	X1
Min IA	1	MIN_IA	R#	√	√	FFFF	X1
Min IB	1	MIN_IB	R#	√	√	FFFF	X1
Min IC	1	MIN_IC	R#	√	√	FFFF	X1
Min IG	1	MIN_IG	R#	√	√	FFFF	X1
Min IN	1	MIN_IN	R#	√	√	FFFF	X1
Min Max Current Changes	1	MIN_MAX_I_CHANGES	R#	√	√	FFFF	X1
Peak Demand I(A)	1	IAPEAK	R#	√	√	FFFF	X1
Peak Demand I(B)	1	IBPEAK	R#	√	√	FFFF	X1
Peak Demand I(C)	1	ICPEAK	R#	√	√	FFFF	X1
Peak Demand I(G)	1	IGPEAK	R#	√	√	FFFF	x1
Peak Demand I(N)	1	INPEAK	R#	√	√	FFFF	x1
Plug	1	PLUG	R#	√	√	FFFF	x1
Trip Time	0	TIME_OF_LAST_EVENT	TIME	√	√	NA	NA

Digitrip Optim 750 Device Control

					Subnetwork Support	
Description	**INCOM CTRL COMMAND**	**Tag Name**	**DDE Type**	**Modbus Value**	**DIRECT**	**BIM**
Close Breaker	010001	CLOSE_DEVICE	I	0x601	√	√
Open Breaker	010000	OPEN_DEVICE	I	0x600	√	√
Reset Min Max I	00010D	RESET_MIN_MAX_I	I	0x620	√	√
Reset Trip	000002	RESET_UNIT	I	0x603	√	√
Reset Pk Dmd Currents	000101	RESET_DEMAND_I	I	0x609	√	√

Digitrip Optim 1050 Device Data

				Subnetwork Support			
Description	**# of Modbus Registers**	**Tag Name**	**DDE Type**	**DIRECT**	**BIM**	**Invalid**	**Scale Factor**
Device status	1	STATN	R#	√	√	FFFF	x1
		STATT	M	√	√	NA	NA
Device status reason	1	RSONN	R#	√	√	FFFF	x1

				Subnetwork Support			
Description	**# of Modbus Registers**	**Tag Name**	**DDE Type**	**DIRECT**	**BIM**	**Invalid**	**Scale Factor**
		RSONT	M	√	√	NA	NA
Raw Status	2	RAW_STATUS	I	√	√	FFFFFFFF	x1
Flag 1 2	1	FLAGS_2_1	R#	√	√	FFFF	x1.
Flag 3	1	FLAGS_3	R#	√	√	FFFF	x1.
Com version	NA	COM_VERSION	I	√	√	NA	NA
Product id	NA	PRODUCT_ID	I	√	√	NA	NA
Division code	NA	DIV_CODE	I	√	√	NA	NA
Device type	NA	TYPEN	I	√	√	NA	NA
High Load	1	HLOAD	I	√	√	FFFF	x1.
Phase A current	1	IA	R#	√	√	FFFF	x1.
Phase B current	1	IB	R#	√	√	FFFF	x1.
Phase C current	1	IC	R#	√	√	FFFF	x1.
Neutral current	1	IG	R#	√	√	FFFF	x1.
Ground current	1	IN	R#	√	√	FFFF	x1.
Phase A Avg current	1	IADEMAND	R#	√	√	FFFF	x1.
Phase B Avg current	1	IBDEMAND	R#	√	√	FFFF	x1.
Phase C Avg current	1	ICDEMAND	R#	√	√	FFFF	x1.
Neutral Avg current	1	IGDEMAND	R#	√	√	FFFF	x1.
Ground Avg current	1	INDEMAND	R#	√	√	FFFF	x1.
Peak Phase A current	1	IAPEAK	R#	√	√	FFFF	x1.
Peak Phase B current	1	IBPEAK	R#	√	√	FFFF	x1.
Peak Phase C current	1	ICPEAK	R#	√	√	FFFF	x1.
Neutral Peak current	1	INPEAK	R#	√	√	FFFF	x1.
Ground Peak current	1	IGPEAK	R#	√	√	FFFF	x1.
Phase A % THD	1	THDIA	R#	√	√	FFFF	x1.
Phase B % THD	1	THDIB	R#	√	√	FFFF	x1.
Phase C % THD	1	THDIC	R#	√	√	FFFF	x1.
Neutral % THD	1	THDIN	R#	√	√	FFFF	x1.
Ground % THD	1	THDIG	R#	√	√	FFFF	x1.
Frame	1	FRAME	R#	√	√	FFFF	x1.
Plug	1	PLUG	R#	√	√	FFFF	x1.
Average Power	2	WATTS	R#	√	√	7FFFFFFF	x1.
Demand Power	2	WATTSDEMAND	R#		√	7FFFFFFF	x1.
Pos Peak Demand Pwr	2	WATTSDEMANDPEAK	R#		√	7FFFFFFF	x1.
5-minute power average	2	POWER_AVG_5MIN	R#	√	√	7FFFFFFF	x1.

Description	# of Modbus Registers	Tag Name	DDE Type	Subnetwork Support DIRECT	BIM	Invalid	Scale Factor
Total energy	2	ENERGY	R#	√	√	7FFFFFFF	x1.
Forward energy	2	POSENERGY	R#	√	√	FFFFFFFF	x1.
Reverse energy	2	NEGENERGY	R#	√	√	FFFFFFFF	x1.
Power factor X 100	1	PFACT	R#.##	√	√	7FFF	x100
Event Count	1	EVENTCOUNT	R#	√	√	FFFF	x1.
Max phase A current	1	MAX_IA	R#	√	√	FFFF	x1.
Max phase B current	1	MAX_IB	R#	√	√	FFFF	x1.
Max phase C current	1	MAX_IC	R#	√	√	FFFF	x1.
Max phase G current	1	MAX_IG	R#	√	√	FFFF	x1.
Max phase N current	1	MAX_IN	R#	√	√	FFFF	x1.
Min phase A current	1	MIN_IA	R#	√	√	FFFF	x1.
Min phase B current	1	MIN_IB	R#	√	√	FFFF	x1.
Min phase C current	1	MIN_IC	R#	√	√	FFFF	x1.
Min phase G current	1	MIN_IG	R#	√	√	FFFF	x1.
Min Phase N current	1	MIN_IN	R#	√	√	FFFF	x1.
Demand current counter	1	DEMAND_CURRENT_CHANGES	R#	√	√	FFFF	x1.
Min max current changes	1	MIN_MAX_I_CHANGES	R#	√	√	FFFF	x1.
Demand Pwr Update Counter	1	DEMAND_POWER_UPDATE_COUNTER	R#	√	√	FFFF	x1.
Peak Dmd Watts Time	NA	TIME_PEAK_DEMAND_WATTS	TIME		√	NA	NA
system negative peak demand watts	2	SYS_NEG_PEAK_DEMAND_WATTS	R#	√	√	FFFFFFFF	x1
system negative peak demand watts time	NA	SYS_NEG_PEAK_DEMAND_WATTS_TIME	TIME	√	√	NA	NA
system peak demand watts	2	SYS_DEMAND_WATTS	R#	√	√	7FFFFFFF	x1
system positive peak demand watts	2	SYS_POS_PEAK_DEMAND_WATTS	R#	√	√	FFFFFFFF	x1
system positive peak demand watts time	NA	SYS_POS_PEAK_DEMAND_WATTS_TIME	TIME	√	√	NA	NA
system time last reset demand watts	NA	SYS_TIME_LAST_RESET_DEMAND_WATTS	TIME	√	√	NA	NA
Time of Trips	NA	TIME_OF_LAST_EVENT	TIME	√	√	NA	NA

Digitrip Optim 1050 Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value	Subnetwork Support DIRECT	BIM
Open Breaker	010000	OPEN_DEVICE	I	0x600	√	√
Close Breaker	010001	CLOSE_DEVICE	I	0x601	√	√
Reset Pk Dmd Power	000004	RESET_DMD_WATTS	I	0x602	√	√

					Subnetwork Support	
Description	**INCOM CTRL COMMAND**	**Tag Name**	**DDE Type**	**Modbus Value**	**DIRECT**	**BIM**
Reset Trip	000002	RESET_UNIT	I	0x603	√	√
Reset Energy	000008	RESET_ENERGY	I	0x606	√	√
Reset Demand Window	000040	RESET_DEMAND_WATTS_WND	I	0x607	√	√
Reset Pk Dmd Currents	000101	RESET_DEMAND_I	I	0x609	√	√
Reset Min Max I	00010D	RESET_MIN_MAX_I	I	0x620	√	√
Reset system demand	ELOG	RESET_SYSTEM_DEMAND	I	0x658	√	√

Digitrip OPTIM Setpoints

Setpoint	Description
Firmware Revision Number	Revision number of the firmware in the device.
Communication Version Number	Version number of the communication software in the device.
Frame Type	Type of frame used in the device.
Rating Plug Value	Plug rating for the device (amps).
Waveform Autocapture Interval	Autocapture interval used by the device during autocapture of waveform data.
Current Rating (Ir)	Current Rating (Ir) for the device in amps.
Phase Long Delay Pickup Curve	Shape of inverse-time-over-current pickup curve.
Phase Long Delay Pickup Time	The device waits the duration of the Pickup Time before tripping.
Phase Long Delay Pickup Action	Action of device after delay when a Long Delay Time event occurs.
Phase Short Delay Pickup Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Phase Short Delay Pickup Time	Defines the time aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Phase Short Delay Pickup Curve	Shape of Phase Short Delay Pickup curve.
Phase Short Delay Pickup Action	Action of device after delay when a Short Delay Time event occurs.
Phase Instantaneous Pickup Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches the level of the pickup setting, the device trips.
Phase Instantaneous Pickup Action	Action of device when value of Instantaneous Setting is reached.
Ground Short Delay Pickup Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Ground Short Delay Pickup Action	Action of device after ground short delay when the Ground Short Delay Setting is reached.
Ground Short Delay PickupTime	Defines the time aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Ground Short Delay Pickup Curve	Shape of the Ground Short Pickup curve.

Setpoint	Description
Phase Discriminator Flag	Indicates whether the Phase Discriminator is on or off.
Fourth Pole Protection	Fourth Pole Protection selected flag (On, Off).
System Frequency	Frequency of the voltage in the system.
Powered Thermal Memory Indicator	Indicates whether powered thermal memory is enabled: Enabled Disabled
Unpowered Thermal Memory Indicator	Indicates whether unpowered thermal memory is enabled: Enabled Disabled
High Load Pickup Setting	When the current reaches the setting, the device trips.
Neutral Ratio	Neutral ratio.
Phase A Pole Identifier	Identifies Phase A pole: Terminal #1 Terminal #5
Percent Threshold Calculation Period	The time that the device allows for calculating total harmonic distortion values.

Digitrip OPTIM Frame Descriptions

Status	Meaning
0	Bad frame
1	Factory
2	SPB3
3	SPB5
4	Reserved
5	Retrofit
6	DS
7	Hundt Weber
8	Reserved
9	Reserved
10	R-frame 1600 amp
11	R-frame 2000 amp
12	R-frame 2500 amp
13	Reserved
14	Reserved
15	Bad frame
16	125 amp, L-frame
17	250 amp, L-frame
18	400 amp, L-frame
19	600 amp, L-frame
20	800 amp, N-frame
21	1000 amp, N-frame
22	1200 amp, N-frame
23	Reserved

Status	Meaning
24	125 amp, K-frame
25	250 amp, K-frame
26	400 amp, K-frame

Digitrip RMS

Digitrip models T700, T800, 810, and 910

Digitrip RMS Device Data (T700, T800)

				Subnetwork Support			
Description	**# of Modbus Registers**	**Tag Name**	**DDE Type**	**Direct**	**AEMII**	**Invalid**	**Scale Factor**
Device status	1	STATN	R#	√	√	FFFF	x1.
		STATT	M	√	√	NA	NA
Device status reason	1	RSONN	R#	√	√	FFFF	x1.
		RSONT	M	√	√	NA	NA
Raw status	2	RAW_STATUS	I	√	√	FFFFFFFF	x1.
Com version	NA	COM_VERSION	I	√	√	NA	NA
Product id	NA	PRODUCT_ID	I	√	√	NA	NA
Division code	NA	DIV_CODE	I	√	√	NA	NA
Device type	NA	TYPEN	I	√	√	NA	NA
Phase A current	1	IA	R#	√	√	FFFF	x1.
Phase B current	1	IB	R#	√	√	FFFF	x1.
Phase C current	1	IC	R#	√	√	FFFF	x1.
Ground current	1	IG	R#	√	√	FFFF	x1.
Frame	1	FRAME	R#	√	√	FFFF	x1.
Plug	1	PLUG	R#	√	√	FFFF	x1.
Average power	2	WATTS	R#	√	√	7FFFFFFF	x1.
Peak demand power	2	WATTSDEMAND	R#	√	√	7FFFFFFF	x1.
Total energy	2	ENERGY	R#	√	√	FFFFFFFF	x1.
High load	1	HLOAD	I	√	√	FFFF	x1.
system negative peak demand watts	2	SYS_NEG_PEAK_DEMAND_WATTS	R#		√	FFFFFFFF	x1.
system negative peak demand watts time	NA	SYS_NEG_PEAK_DEMAND_WATTS_TIME	TIME		√	NA	NA
system peak demand watts	2	SYS_DEMAND_WATTS	R#		√	7FFFFFFF	x1.
system positive peak	2	SYS_POS_PEAK_DEMAND_WATTS	R#		√	FFFFFFFF	x1.

Description	# of Modbus Registers	Tag Name	DDE Type	Subnetwork Support: Direct	AEMII	Invalid	Scale Factor
demand watts							
system positive peak demand watts time	NA	SYS_POS_PEAK_DEMAND_WATTS_TIME	TIME		√	NA	NA
system time last reset demand watts	2	SYS_TIME_LAST_RESET_DEMAND_WATTS	R#		√	NA	NA
Time of Trips	NA	TIME_OF_LAST_EVENT	TIME		√	NA	NA

Digitrip RMS Device Control (T700, T800)

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value	Subnetwork Support: Direct	AEMII
Open Circuit Breaker	010000	OPEN_DEVICE	I	0x600	√	√
Close Circuit Breaker	010001	CLOSE_DEVICE	I	0x601	√	√
Reset Peak Demand Power	000004	RESET_DMD_WATTS	I	0x602	√	√
Reset Energy Value	000008	RESET_ENERGY	I	0x606	√	√
Reset system demand	ELOG	RESET_SYSTEM_DEMAND	I	0x658		√

Digitrip RMS Device Data (810)

Description	# of Modbus Registers	Tag Name	DDE Type	Subnetwork Support: DIRECT	AEMII	BIM	Invalid	Scale Factor
Device status	1	STATN	R#	√	√	√	FFFF	x1.
		STATT	M	√	√	√	NA	NA
Device status reason	1	RSONN	R#	√	√	√	FFFF	x1.
		RSONT	M	√	√	√	NA	NA
Raw status	2	RAW_STATUS	I	√	√	√	FFFFFFFF	x1.
Flag 1 2	1	FLAGS_2_1	R#	√	√	√	FFFF	x1.
Flag 3	1	FLAGS_3	R#	√	√	√	FFFF	x1.
Com version	NA	COM_VERSION	I	√	√	√	NA	NA
Product id	NA	PRODUCT_ID	I	√	√	√	NA	NA
Division code	NA	DIV_CODE	I	√	√	√	NA	NA
Device type	NA	TYPEN	I	√	√	√	NA	NA
Phase A current	1	IA	R#	√	√	√	FFFF	x1.
Phase B current	1	IB	R#	√	√	√	FFFF	x1.
Phase C current	1	IC	R#	√	√	√	FFFF	x1.
Ground current	1	IG	R#	√	√	√	FFFF	x1.

Description	# of Modbus Registers	Tag Name	DDE Type	Subnetwork Support DIRECT	AEMII	BIM	Invalid	Scale Factor
Neutral current	1	IN	R#	√	√	√	FFFF	x1.
Frame	1	FRAME	R#	√	√	√	FFFF	x1.
Plug	1	PLUG	R#	√	√	√	FFFF	x1.
Average power	2	WATTS	R#	√	√	√	7FFFFFFF	x1.
Peak demand power	2	WATTSDEMANDPEAK	R#	√	√	√	7FFFFFFF	x1.
Total energy	2	NETENERGY	R#	√	√	√	FFFFFFFF	x1.
High load	1	HLOAD	I	√	√	√	FFFF	x1.
Forward energy	2	POSENERGY	R#	√	√	√	FFFFFFFF	x1.
Reverse energy	2	NEGENERGY	R#	√	√	√	FFFFFFFF	x1.
Power factor	1	PFACT	R#.##	√	√	√	7FFF	x100
Event count (G)	1	EVENTCOUNT	R#	√	√	√	FFFF	x1.
system negative peak demand watts	2	SYS_NEG_PEAK_DEMAND_WATTS	R#		√	√	FFFFFFFF	x1.
system negative peak demand watts time	NA	SYS_NEG_PEAK_DEMAND_WATTS_TIME	TIME		√	√	NA	NA
system peak demand watts	2	SYS_DEMAND_WATTS	R#		√	√	7FFFFFF	x1
System positive peak demand watts	2	SYS_POS_PEAK_DEMAND_WATTS	R#		√	√	FFFFFFFF	x1.
system positive peak demand watts time	NA	SYS_POS_PEAK_DEMAND_WATTS_TIME	TIME		√	√	NA	NA
system time last reset demand watts	NA	SYS_TIME_LAST_RESET_DEMAND_WATTS	TIME		√	√	NA	NA
Time of Trips	NA	TIME_OF_LAST_EVENT	TIME	√	√	√	NA	NA

Digitrip RMS Device Control (810)

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value	Subnetwork Support Direct	AEMII	BIM
Open Circuit Breaker	010000	OPEN_DEVICE	I	0x600	√	√	√
Close Circuit Breaker	010001	CLOSE_DEVICE	I	0x601	√	√	√
Reset Peak Demand	000004	RESET_DMD_WATTS	I	0x602	√	√	√
Reset Trip	000002	RESET_UNIT	I	0x603	√	√	√
Reset Energy Value	000008	RESET_ENERGY	I	0x606	√	√	√
Reset system demand	ELOG	RESET_SYSTEM_DEMAND	I	0x658		√	√

Digitrip RMS Device Data (910)

				Subnetwork Support				
Description	**# of Modbus Registers**	**Tag Name**	**DDE Type**	**DIRECT**	**AEMII**	**BIM**	**Invalid**	**Scale Factor**
Device status	1	STATN	R#	√	√	√	FFFF	x1.
		STATT	M	√	√	√	NA	NA
Device status reason	1	RSONN	R#	√	√	√	FFFF	x1.
		RSONT	M	√	√	√	NA	NA
Raw status	2	RAW_STATUS	I	√	√	√	FFFFFFFF	x1.
Flag 1 2	1	FLAGS_2_1	R#	√	√	√	FFFF	x1.
Flag 3	1	FLAGS_3	R#	√	√	√	FFFF	x1.
Com version	NA	COM_VERSION	I	√	√	√	NA	NA
Product id	NA	PRODUCT_ID	I	√	√	√	NA	NA
Division code	NA	DIV_CODE	I	√	√	√	NA	NA
Device type	NA	TYPEN	I	√	√	√	NA	NA
Phase A current	1	IA	R#	√	√	√	FFFF	x1.
Phase B current	1	IB	R#	√	√	√	FFFF	x1.
Phase C current	1	IC	R#	√	√	√	FFFF	x1.
Ground current	1	IG	R#	√	√	√	FFFF	x1.
Neutral current	1	IN	R#	√	√	√	FFFF	x1.
Frame	1	FRAME	R#	√	√	√	FFFF	x1.
Plug	1	PLUG	R#	√	√	√	FFFF	x1.
Average power	2	WATTS	R#	√	√	√	7FFFFFFF	x1.
Peak demand power	2	WATTSDEMANDPEAK	R#	√	√	√	7FFFFFFF	x1.
Total energy	2	NETENERGY	R#	√	√	√	FFFFFFFF	x1.
High load	1	HLOAD	I	√	√	√	FFFF	x1.
Energy	2	NETENERGY	R#		√		FFFFFFFF	x1.
Forward energy	2	POSENERGY	R#	√	√	√	FFFFFFFF	x1.
Reverse energy	2	NEGENERGY	R#	√	√	√	FFFFFFFF	x1.
Power factor x 100	1	PFACT	R#.##	√	√	√	7FFF	x100
Voltage A-B ( )	1	VAB	R#	√	√	√	FFFF	x1.
Voltage B-C (I)	1	VBC	R#	√	√	√	FFFF	x1.
Voltage C-A (I)	1	VCA	R#	√	√	√	FFFF	x1.
Event count (G)	1	EVENTCOUNT	R#	√	√	√	FFFF	x1.
system negative peak demand watts	2	SYS_NEG_PEAK_DEMAND_WATTS	R#		√	√	FFFFFFFF	x1.
system negative peak demand watts time	NA	SYS_NEG_PEAK_DEMAND_WATTS_TIME	TIME		√	√	NA	NA
system peak demand	2	SYS_DEMAND_WATTS	R#		√	√	7FFFFF	x1

Description	# of Modbus Registers	Tag Name	DDE Type	Subnetwork Support: DIRECT	AEMII	BIM	Invalid	Scale Factor
watts								
system positive peak demand watts	2	SYS_POS_PEAK_DEMAND_WATTS	R#		√	√	FFFFFFFF	x1.
system positive peak demand watts time	NA	SYS_POS_PEAK_DEMAND_WATTS_TIME	TIME		√	√	NA	NA
system time last reset demand watts	NA	SYS_TIME_LAST_RESET_DEMAND_WATTS	TIME		√	√	NA	NA
910 WF Capture Index	NA	WAVEFORM_UPDATE_COUNTER	R#	√	√	√	NA	NA
Time of Trips	NA	TIME_OF_LAST_EVENT	TIME	√	√	√	NA	NA

Digitrip RMS Device Control (910)

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value	Subnetwork Support: Direct	AEMII	BIM
Open Circuit Breaker	010000	OPEN_DEVICE	I	0x600	√	√	√
Close Circuit Breaker	010001	CLOSE_DEVICE	I	0x601	√	√	√
Reset Peak Demand	000004	RESET_DMD_WATTS	I	0x602	√	√	√
Reset Trip	000002	RESET_UNIT	I	0x603	√	√	√
Reset Energy Value	000008	RESET_ENERGY	I	0x606	√	√	√
Reset system demand	ELOG	RESET_SYSTEM_DEMAND	I	0x658		√	√

Digitrip RMS Setpoints

Setpoint	Description
Firmware Version Number	Version number of the firmware in the device.
Communication Version Number	Version number of the communication software in the device.
Frame Type	Type of frame used in the device.
Current Rating (Ir)	Current Rating (Ir) for the device in amps.
Phase Long Delay Pickup Time	The device waits the duration of the Pickup Time before tripping.
Phase Long Delay Pickup Curve	Shape of inverse-time-over-current pickup curve.
Phase Long Delay Pickup Action	Action of device after delay when a Long Delay Time event occurs.
Phase Short Delay Pickup Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Phase Short Delay Pickup Time	Defines the time aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Phase Short Delay Pickup Response	Shape of Phase Short Delay Pickup curve.
Phase Short Delay Pickup Action	Action of device after delay when a Long Delay Time event occurs.
Phase Discriminator Flag	Indicates whether the Phase Discriminator is on or off.

Setpoint	Description
Phase Instantaneous Pickup Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches the level of the pickup setting, the device trips.
Phase Instantaneous Pickup Action	Action of device when value of Instantaneous Setting is reached
Ground Short Delay Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Ground Short Delay Pickup Time	Defines the time aspect of the associated segment of the trip curve of the device. When the current reaches and sustains the level of the pickup setting for the period defined by the time multiplier setting, the device trips.
Ground Short Delay Pickup Curve	Shape of the Ground Short Pickup curve.
Ground Short Delay Pickup Action	Action of device after ground short delay when the Ground Short Delay Setting is reached.
System Frequency	Frequency of the voltage in the system.
Fourth Pole Protection	Fourth Pole Protection selected flag (On, Off).
INCOM Address	INCOM Address of the device.

Digitrip RMS Frame Descriptions

Status	Meaning
0	Frame is Unknown
1	Frame is Bad
2	Frame is SPB
3	Frame is DS
4	Frame is SC (Series C breaker)
5	Reserved
6	Frame is LH (Hundt Weber or Power Breaker)
7	Frame is DTR (retrofit)

IQ 200

IQ 200 Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Device status	1	STATN	R#	FFFF	x1
		STATT	M	NA	NA
Device status reason	1	RSONN	R#	FFFF	x1
		RSONT	M	NA	NA
Raw Status	2	RAW_STATUS	I	FFFFFFFF	x1
Flag 1	1	FLAG_1	R#	FFFF	x1
Com version	NA	COM_VERSION	I	NA	NA

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Phase A current	2	IA	R#.##	FFFFFFFF	x100
Phase B current	2	IB	R#.##	FFFFFFFF	x100
Phase C current	2	IC	R#.##	FFFFFFFF	x100
Voltage A-B	2	VAB	R#.#	FFFFFFFF	x10
Voltage B-C	2	VBC	R#.#	FFFFFFFF	x10
Voltage C-A	2	VCA	R#.#	FFFFFFFF	x10
Voltage A-N	2	VAN	R#.#	FFFFFFFF	x10
Voltage B-N	2	VBN	R#.#	FFFFFFFF	x10
Voltage C-N	2	VCN	R#.#	FFFFFFFF	x10
Real power 3 phase	2	WATTS	R#	7FFFFFFF	x1.
Reactive power	2	VARS	R#	7FFFFFFF	x1.
Volt-amps	2	VA	R#	FFFFFFFF	x1.
Power factor disp	1	PFDISP	R#.##	7FFF	x100
Power factor app	1	PFAPP	R#.##	7FFF	x100
Frequency x 100	1	FREQ	R#.##	FFFF	x100
Forward energy	2	POSENERGY	R#	FFFFFFFF	x1.
Reverse energy	2	NEGENERGY	R#	FFFFFFFF	x1.
Net energy	2	NETENERGY	R#	7FFFFFFF	x1.
Forward var hours	2	POSVARHRS	R#	FFFFFFFF	x1.
Reverse var hours	2	NEGVARHRS	R#	FFFFFFFF	x1.
Net var hours	2	NETVARHRS	R#	7FFFFFFF	x1.
VA hours	2	VAHRS	R#	FFFFFFFF	x1.
Avg phase a current	2	IADEMAND	R#.##	FFFFFFFF	x100.
Avg phase b current	2	IBDEMAND	R#.##	FFFFFFFF	x100.
Avg phase c current	2	ICDEMAND	R#.##	FFFFFFFF	x100.
peak phase a current	2	IAPEAK	R#.##	FFFFFFFF	x100.
peak phase b current	2	IBPEAK	R#.##	FFFFFFFF	x100.
peak phase c current	2	ICPEAK	R#.##	FFFFFFFF	x100.
Average real power	2	WATTSDEMAND	R#	7FFFFFFF	x1.
Average reactive power	2	VARSDEMAND	R#	7FFFFFFF	x1.
Average volt amps	2	VADEMAND	R#	FFFFFFFF	x1.
Peak real power	2	WATTSPEAK	R#	7FFFFFFF	x1.
Peak reactive power	2	VARSPEAK	R#	7FFFFFFF	x1.
Peak volt amps	2	VAPEAK	R#	FFFFFFFF	x1.
max frequency	1	MAX_FREQEUNCY	R#.##	FFFF	x100.

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
max phase a current	2	MAX_IA	R#.##	FFFFFFFF	x100.
max phase b current	2	MAX_IB	R#.##	FFFFFFFF	x100.
max phase c current	2	MAX_IC	R#.##	FFFFFFFF	x100.
max phase a L-L voltage	2	MAX_PHA_LLV	R#.#	FFFFFFFF	x10
max phase a L-N voltage	2	MAX_PHA_LNN	R#.#	FFFFFFFF	x10
max phase b L-L voltage	2	MAX_PHB_LLV	R#.#	FFFFFFFF	x10
max phase b L-N voltage	2	MAX_PHB_LNV	R#.#	FFFFFFFF	x10
max phase c L-L voltage	2	MAX_PHC_LLV	R#.#	FFFFFFFF	x10
max phase c L-N voltage	2	MAX_PHC_LNV	R#.#	FFFFFFFF	x10
max reactive power	2	MAX_REACTIVE_POWER	R#	7FFFFFFF	x1.
max watts	2	MAX_REAL_POWER	R#	7FFFFFFF	x1.
max system pf apparent	1	MAX_SYSTEM_PF_APP	R#.##	7FFF	x100.
max system pf displacement	1	MAX_SYSTEM_PF_DISP	R#.##	7FFF	x100.
max VA	2	MAX_VA	R#	FFFFFFFF	x1.
min frequency	1	MIN_FREQEUNCY	R#.##	FFFF	x100.
min phase a current	2	MIN_IA	R#.##	FFFFFFFF	x100.
min phase b current	2	MIN_IB	R#.##	FFFFFFFF	x100.
min phase c current	2	MIN_IC	R#.##	FFFFFFFF	x100.
min phase a L-L voltage	2	MIN_PHA_LLV	R#.#	FFFFFFFF	x10
min phase a L-N voltage	2	MIN_PHA_LNN	R#.#	FFFFFFFF	x10
min phase b L-L voltage	2	MIN_PHB_LLV	R#.#	FFFFFFFF	x10
min phase b L-N voltage	2	MIN_PHB_LNV	R#.#	FFFFFFFF	x10
min phase c L-L voltage	2	MIN_PHC_LLV	R#.#	FFFFFFFF	x10
min phase c L-N voltage	2	MIN_PHC_LNV	R#.#	FFFFFFFF	x10
min reactive power	2	MIN_REACTIVE_POWER	R#	7FFFFFFF	x1.
min watts	2	MIN_REAL_POWER	R#	7FFFFFFF	x1.
min system pf apparent	1	MIN_SYSTEM_PF_APP	R#.##	7FFF	x100.
min system pf displacement	1	MIN_SYSTEM_PF_DISP	R#.##	7FFF	x100.
min VA	2	MIN_VA	R#	FFFFFFFF	x1.
Current demand window period	1	CURRENT_DEMAND_WINDOW_PERIOD	R#	FFFF	x1.
Update Counter N = 26	1	DEMAND_CURRENT_UPDATE_COUNTER	R#	FFFF	x1.
Update counter N = 27	1	DEMAND_POWER_UPDATE_COUNTER	R#	FFFF	x1.
Power demand window period	1	POWER_DEMAND_WINDOW_PERIOD	R#	FFFF	x1.
Real power phase a	2	WATTSA	R#	7FFFFFFF	x1.
Real power phase b	2	WATTSB	R#	7FFFFFFF	x1.
Real power phase c	2	WATTSC	R#	7FFFFFFF	x1.
Reactive power phase a	2	VARSA	R#	7FFFFFFF	x1.
Reactive power phase b	2	VARSB	R#	7FFFFFFF	x1.
Reactive power phase c	2	VARSC	R#	7FFFFFFF	x1.

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Volt amps phase a	2	VAMPA	R#	FFFFFFFF	x1.
Volt amps phase b	2	VAMPB	R#	FFFFFFFF	x1.
Volt amps phase c	2	VAMPC	R#	FFFFFFFF	x1.
pf displacement phase a	1	PFDISPA	R#.##	7FFF	x100.
pf displacement phase b	1	PFDISPB	R#.##	7FFF	x100.
pf displacement phase c	1	PFDISPC	R#.##	7FFF	x100.
pf apparent phase a x 100	1	PFAPPA	R#.##	7FFF	x100.
pf apparent phase b x 100	1	PFAPPB	R#.##	7FFF	x100.
pf apparent phase c x 100	1	PFAPPC	R#.##	7FFF	x100.
system negative peak demand watts	2	SYS_NEG_PEAK_DEMAND_WATTS	R#	FFFFFFFF	x1.
system negative peak demand watts time	NA	SYS_NEG_PEAK_DEMAND_WATTS_TIME	TIME	NA	NA
system peak demand watts	2	SYS_DEMAND_WATTS	R#	7FFFFFFF	x1.
system positive peak demand watts	2	SYS_POS_PEAK_DEMAND_WATTS	R#	FFFFFFFF	x1.
system positive peak demand watts time	NA	SYS_POS_PEAK_DEMAND_WATTS_TIME	TIME	NA	NA
system time last reset demand watts	NA	SYS_TIME_LAST_RESET_DEMAND_WATTS	TIME	NA	NA

IQ 200 Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Reset peak demand watts	000004	RESET_DMD_WATTS	I	0x602
Reset demand window	000040	RESET_DEMAND_WATTS_WND	I	0x607
Reset energy value	000008	RESET_ENERGY	I	0x606
Reset peak demand currents	000101	RESET_DEMAND_I	I	0x609
Reset all min max values	000104	RESET_ALL_MIN_MAX	I	0x61f
Reset min max currents	00010D	RESET_MIN_MAX_I	I	0x620
Reset min max L_L voltage	00010E	RESET_MIN_MAX_LL_VOLTS	I	0x621
Reset min max L-N voltage	00010F	RESET_MIN_MAX_LN_VOLTS	I	0x622
Reset min max pf displacement	000111	RESET_MIN_MAX_PF_DISP	I	0x623
Reset min max pf apparent	000110	RESET_MIN_MAX_PF_APP	I	0x624
Reset min max power	000112	RESET_MIN_MAX_POWER	I	0x625
Reset system demand	ELOG	RESET_SYSTEM_DEMAND	I	0x658

IQ 200 Setpoints

Setpoint	Description
Firmware Version Number	Version number of the firmware in the device.
Communication Version Number	Version number of the communication software in the device.

Setpoint	Description
CT Ratio	Current Transformer Turns Ratio.
PT Ratio	PT Turns Ratio.
Frequency	Frequency of the voltage in the system.
Lagging vars/PF Sign Convention	Specifies whether to use +vars for lagging power factor and -vars for leading power factor, or -vars for lagging power factor and +vars for leading power factor.
Wiring Configuration	Indicates whether the device is configured for a 3-wire system or a 4-wire system. In a 3-wire system, the device measures line-to-line voltage. In a 4-wire system, the device measures line-to-neutral voltage.
Demand Window	The size of the time interval that the device uses as the consumption sampling for current-related demand calculations.
KYZ Selection	Selects what energy is going to be pulsed at the relay.
KYZ Rate	Selects how much energy at the secondary needs to be used before the relay changes state.

IQ 500

IQ 500 Device Data

				Subnetwork Support			
Description	**# of Modbus registers**	**Tag Name**	**DDE Type**	**DIRECT**	**CMU**	**Invalid**	**Scale Factor**
Device status	1	STATN	R#	√	√	FFFF	x1.
		STATT	M	√	√	NA	NA
Device status reason	1	RSONN	R#	√	√	FFFF	x1.
		RSONT	M	√	√	NA	NA
Raw status	2	RAW_STATUS	I	√	√	FFFFFFFF	x1.
Flag 1	1	FLAG_1	R#	√	√	FFFF	x1.
Com version	NA	COM_VERSION	I	√	√	NA	NA
Product id	NA	PRODUCT_ID	I	√	√	NA	NA
Division code	NA	DIV_CODE	I	√	√	NA	NA
Device type	NA	TYPEN	I	√	√	NA	NA
Phase A current	1	IA	R#	√	√	FFFF	x1.
Phase B current	1	IB	R#	√	√	FFFF	x1.
Phase C current	1	IC	R#	√	√	FFFF	x1.
Ground current	1	IG	R#	√	√	FFFF	x1.
Operations count ( )	2	OCNT	R#		√	FFFFFFFF	x1.
Run time (C)	1	RT	R#		√	FFFF	x1.
Time of Trips	NA	TIME_OF_LAST_EVENT	TIME	√	√	NA	NA

IQ 500 Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value	DIRECT	CMU
Open	010000	OPEN_DEVICE	I	0x600	√	√
Reset Unit	000002	RESET_UNIT	I	0x603	√	√
Reset Operations Count	000102	RESET_OP_COUNT	I	0x60b		√
Reset Run time	000103	RESET_RUN_TIME	I	0x60f		√

IQ 500 Setpoints

Setpoint	Description
Version Number	Version number of the firmware in the device.
Communication Version Number	Version number of the communication software in the device.
Trip Rating	Trip Rating.
Overload Class	Overload class of the device.
Reset Mode	The method allowed to reset the device following a device trip.
Ground Fault Pickup Setting	When ground current reaches setting, the device trips.
Ground Fault Trip Delay	Period of delay following ground fault during which the device will wait before initiating a device trip.
Phase Unbalance Alarm Level	When the phase unbalance detected by the device exceeds the Phase Unbalance Alarm Level, the device generates a Phase Unbalance Alarm.
Aux Trip Reset Time	Period of delay following Auxiliary trip before device can be reset
System Frequency	Frequency of the voltage in the system.
Load Control Flag	Indicates whether Load Control is in effect for the device.
Underload Trip Level	When the current detected by the device falls below the Underload Trip Level, the device trips.
Underload Start Delay	Period of delay following a device start during which the underload trip function will be disabled.
Underload Run Delay	Period of delay following detection of an underload condition after the Underload Start Delay has expired, during which the device will wait before initiating an Underload Trip.
Long Acceleration Time	Time allowed for acceleration of the motor by modify9ing the Overload class during the motor acceleration period.
Jam Trip Level	When the motor current detected by the device reaches the Jam Trip Level, the device trips.
Jam Start Delay	Period of delay following a device start during which the Jam Trip function will be disabled.
Jamp Run Delay	Period of delay following detection of a Jam Trip condition following a device start during which the device will wait before initiating a Jam Trip.
Device Mode	Mode of the device.
Load Resume Level	Level of demand at which the device will resume load following load shedding.
Load Shed Level	Level of demand at which the device initiate a load shedding event.
Load Shed Delay	Period of delay after load shed level is reached during which the device waits before beginning load shedding.
Load Resume Delay	Period of delay after load shed resume level is reached during which the device waits before resuming load.

IQ 1000

IQ 1000 I and II

IQ 1000 I Device Data

Description	# of Modbus Registers	Tag Name	DDE Type	Invalid	Scale Factor
Device status	1	STATN	R#	FFFF	x1.
		STATT	M	NA	NA
Device status reason	1	RSONN	R#	FFFF	x1.
		RSONT	M	NA	NA
Raw status	2	RAW_STATUS	I	FFFFFFFF	x1.
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Phase A current	1	IA	R#	FFFF	x1.
Phase B current	1	IB	R#	FFFF	x1.
Phase C current	1	IC	R#	FFFF	x1.
% full-load Phase A current	1	PFLA	R#	FFFF	x1.
% full-load Phase B current	1	PFLB	R#	FFFF	x1.
% full-load Phase C current	1	PFLC	R#	FFFF	x1.
Operations count	1	OCNT	R#	FFFF	x1.
Run time	1	RT	R#	FFFF	x1.
Remaining starts	1	RMST	R#	FFFF	x1.
Oldest start time	1	OST	R#	FFFF	x1.
Winding temperature A1 (wt1) ( )	1	WT1	R#	FFFF	x1.
Winding temperature A2 (wt2) (C)	1	WT2	R#	FFFF	x1.
Winding temperature B1 (wt3) (C)	1	WT3	R#	FFFF	x1.
Winding temperature B2 (wt4) (C)	1	WT4	R#	FFFF	x1.
Winding temperature C1 (wt5) (C)	1	WT5	R#	FFFF	x1.
Winding temperature C2 (wt6) (C)	1	WT6	R#	FFFF	x1.
Motor bearing temperature 1	1	MBT1	R#	FFFF	x1.
Motor bearing temperature 2	1	MBT2	R#	FFFF	x1.
Load bearing temperature 1	1	LBT1	R#	FFFF	x1.
Load bearing temperature 2	1	LBT2	R#	FFFF	x1.

IQ 1000 I Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Trip	000000	TRIP_BREAKER	I	0x654
Reset Trip	000000	RESET_UNIT	I	0x603

IQ 1000 II Device Data / IQ 1000 I+ / IQ 1000II GOLDSTAR

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Device status	1	STATN	R#	FFFF	x1.
		STATT	M	NA	NA
Device status reason	1	RSONN	R#	FFFF	x1.
		RSONT	M	NA	NA
Raw status	2	RAW_STATUS	I	FFFFFFFF	x1.
Flag 1 2	1	FLAGS_2_1	R#	FFFF	x1.
Flag 3 4	1	FLAGS_3_4	R#	FFFF	x1.
Flag 5 6	1	FLAGS_5_6	R#	FFFF	x1.
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Phase A current	1	IA	R#	FFFF	x1.
Phase B current	1	IB	R#	FFFF	x1.
Phase C current	1	IC	R#	FFFF	x1.
Operations count	1	OCNT	R#	FFFF	x1.
Run time	1	RT	R#	FFFF	x1.
Remaining starts	1	RMST	R#	FFFF	x1.
Oldest start time	1	OST	R#	FFFF	x1.
Winding temperature A1 (wt1) ( )	1	WT1	R#	FFFF	x1.
Winding temperature A2 (wt2) (C)	1	WT2	R#	FFFF	x1.
Winding temperature B1 (wt3) (C)	1	WT3	R#	FFFF	x1.
Winding temperature B2 (wt4) (C)	1	WT4	R#	FFFF	x1.
Winding temperature C1 (wt5) (C)	1	WT5	R#	FFFF	x1.
Winding temperature C2 (wt6) (C)	1	WT6	R#	FFFF	x1.
Validity bit for WT1	1	VALIDITY_WT1	I	FFFF	x1.
Validity bit for WT2	1	VALIDITY_WT2	I	FFFF	x1.
Validity bit for WT3	1	VALIDITY_WT3	I	FFFF	x1.
Validity bit for WT4	1	VALIDITY_WT4	I	FFFF	x1.

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Validity bit for WT5	1	VALIDITY_WT5	I	FFFF	x1.
Validity bit for WT6	1	VALIDITY_WT6	I	FFFF	x1.
Motor bearing temperature 1	1	MBT1	R#	FFFF	x1.
Motor bearing temperature 2	1	MBT2	R#	FFFF	x1.
Validity bit for MBT1	1	VALIDITY_MB1	I	FFFF	x1.
Validity bit for MBT2	1	VALIDITY_MB2	I	FFFF	x1.
Load bearing temperature 1	1	LBT1	R#	FFFF	x1.
Load bearing temperature 2	1	LBT2	R#	FFFF	x1.
Validity bit for LBT1	1	VALIDITY_LB1	I	FFFF	x1.
Validity bit for LBT2	1	VALIDITY_LB2	I	FFFF	x1.
Ambient temperature	1	AUX	R#	FFFF	x1.
Validity bit for AUX	1	VALIDITY_AUX	I	FFFF	x1.
Validity bit for DEV	1	VALIDITY_DEV	I	FFFF	x1.
Percent I2T	1	12T	R#	FFFF	x1.
30F N =1 Validity 1	1	TEMPVAL1	R#	FFFF	x1.
30F N =1 Validity 2	1	TEMPVAL2	R#	FFFF	x1.
Peak demand current	1	PK_DEMAND_I	R#	FFFF	x1.
Peak RTD temperature	1	PK_RTD_TEMP	R#	FFFF	x1.
Number of I2T trips	1	I2T_TRIPS	R#	FFFF	x1.
Number of IOC trips	1	IOC_TRIPS	R#	FFFF	x1.
Number of under-load trips	1	UNDERLOAD_TRIPS	R#	FFFF	x1.
Number of Jam trips	1	JAM_TRIPS	R#	FFFF	x1.
Number of ground fault trips	1	GND_FAULT_TRIPS	R#	FFFF	x1.
Number of RTD trips	1	RTD_TRIPS	R#	FFFF	x1.
Time of Trips	NA	TIME_OF_LAST_EVENT	TIME	NA	NA

IQ 1000 II / IQ 1000 I+ / IQ 1000II GOLDSTAR Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Trip	020003	STOP	I	0x652
Reset Trip	000002	RESET_UNIT	I	0x603
Reset Peak Demand Current	000101	RESET_DEMAND_I	I	0x609

IQ 1000 Setpoints

Setpoint	Description
Firmware Version Number	Version number of the firmware in the device.
Communication Version Number	Version number of the communication software in the device.

Setpoint	Description
Ground Fault Pickup Setting	When ground current reaches setting, the device trips.
Ground Fault Start Delay	Period of delay following a device start during which the ground fault function will be disabled.
Ground Fault Run Delay	Period of delay at the beginning of the transition from start to run during which the ground fault function will be disabled.
Instantaneous Overcurrent Protection Flag	Indicates whether instantaneous overcurrent protection is enabled.
Instantaneous Overcurrent Trip Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches the level of the pickup setting, the device trips.
Instant Overcurrent Start Delay	Period of delay following a device start during which the overcurrent trip function will be disabled.
Jam Alarm Level	When the motor current detected by the device exceeds the Jam Alarm Level, the device will generate a Jam Alarm.
Jam Trip Level	When the motor current detected by the device reaches the Jam Trip Level, the device trips.
Jam Start Delay	Period of delay following a device start during which the Jam Trip function will be disabled.
Jam Run Delay	Period of delay following detection of a Jam Trip condition following a device start during which the device will wait before initiating a Jam Trip.
Underload Alarm Level	When the current detected by the device reaches the Underload Alarm Level, the device will generate an Underload Alarm.
Underload Trip Level	When the current detected by the device falls below the Underload Trip Level, the device trips.
Underload Start Delay	Period of delay following a device start during which the underload trip function will be disabled.
Underload Run Delay	Period of delay following detection of an underload condition after the Underload Start Delay has expired, during which the device will wait before initiating an Underload Trip.
Full-Load Amps	Full-load current setting for the device.
Phase CT Turns Ratio	Phase Current Transformer Turns Ratio.
System Frequency	Frequency of the voltage in the system.
Locked Rotor Current	Maximum current allowed when motor rotor is locked.
Locked Rotor (Stall) Time	Maximum stall time allowed while motor rotor is locked before device trip.
Ultimate Trip Current Level	Level of current above which the device will eventually trip. (Typically service factor.)
I^2T Alarm Level	When the accumulated I^2T level calculated by the device reaches the I^2T Alarm Level, the device will generate an I^2T Alarm.
I^2T Reset Type	The method allowed to reset the device following an I^2T trip.
Starts Per Time Allowed	The number of starts allowed per time period.
Time Allowed for Starts	Period of time allowed for the maximum number of starts may occur.
Motor Start Transition Level	The level of current below which the device transitions from Start to Run and energizes the transition relay.
Motor Start Transition Time	Maximum duration, in seconds, of the motor start cycle time.
Trip/Transition On Timeout	Set to trip unit or transition to Run and energize transition relay if Motor Start Transition Time expires and the motor current has not dropped below the Motor Start Transition Level.
Incomplete Sequence Report	Maximum time between energizing the transition relay and getting 120Vac on the Incomplete Sequence input terminals. If time expires, the unit trips on Incomplete Sequence.
Anti-Backspin Delay Time	Delay period, following a device stop, during which the Start function is disabled.
Reversing Starter Indicator	Indicates if reversing starter is enabled or Phase Reversal Trip function is enabled.
Action on Remote Input	Action the device will take upon receiving remote input (i.e., Reset, Trip, Differential Trip, or Motor Stop).
Trip Mode	Trip mode of device: MODE 1 - Trip relay energized during a trip condition.

Setpoint	Description
	MODE2 - Trip relay de-energized during a trip condition.
Phase Unbalance Alarm Level	When the phase unbalance detected by the device exceeds the Phase Unbalance Alarm Level, the device generates a Phase Unbalance Alarm.
Phase Unbalance Alarm Run Delay	Period of delay at the beginning of a start-to-run transition during which the Phase Unbalance Alarm feature is disabled.
Trip Mode (Phase Unbalance)	Trip mode of device when the phase unbalance trip level is exceeded. Trip in 2 seconds Wait for anI2T trip
Winding Alarm Temperature	When the temperature measured by the device for any winding reaches the Winding Alarm Temperature, the device generates a Winding Temperature Alarm.
Winding Trip Temperature	When the temperature measured by the device for any winding reaches the Winding Trip Temperature, the device trips.
Motor Bearing Alarm Temperature	When the temperature measured by the device for any motor bearing reaches the Motor Bearing Alarm Temperature, the device generates a Motor Bearing Temperature Alarm.
Motor Bearing Trip Temperature	When the temperature measured by the device for any motor bearing reaches the Motor Bearing Trip Temperature, the device trips.
Load Bearing Alarm Temperature	When the temperature measured by the device for any load bearing reaches the Load Bearing Alarm Temperature, the device generates a Load Bearing Temperature Alarm.
Load Bearing Trip Temperature	When the temperature measured by the device for any load bearing reaches the Load Bearing Trip Temperature, the device trips.
Auxiliary/RTD Alarm Temperature	When the temperature measured by the device for the Auxiliary or RTD reaches the Auxiliary/RTD Alarm Temperature, the device generates an Auxiliary/RTD Temperature Alarm.
Auxiliary/RTD Trip Temperature	When the temperature measured by the device for the Auxiliary or RTD reaches the Auxiliary/RTD Trip Temperature, the device trips.
Local RTD Display Units	Units of local RTD temperature display (i.e., Celsius or Fahrenheit).
Protection Mode Type	Type of protection mode being used in the device: 3-phase 1-phase
Current Loop Output Activate	Scales 4-20 milliamp output signal to 100% FLA, 125% FLA, % I2T Trip Level, or % RTD Trip Temperature.
Auxiliary Trip Relay Output	The condition under which the Auxiliary Trip relay is energized. All Trips Instantaneous Overcurrent Trip I2T Trip Ground Fault Trip Jam Trip Underload Trip Motor Bearing Trip Load Bearing Trip Winding Trip Reversal Trip
Programmable State	The state of the device in which the setpoints can be changed. Stopped Running and Stopped

IQ Analyzer

IQ Analyzer Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Device status	1	STATN	R#	FFFF	x1
		STATT	M	NA	NA
Device status reason	1	RSONN	R#	FFFF	x1
		RSONT	M	NA	NA
Raw Status	2	RAW_STATUS	I	FFFFFFFF	x1
Flag 1_2	1	FLAG_2_1	R#	FFFF	x1
Flag 3_4	1	FLAG_3_4	R#	FFFF	x1
Flag 5_6	1	FLAG_5_6	R#	FFFF	x1
Flag 7_8	1	FLAG_7_8	R#	FFFF	x1
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Phase A current	2	IA	R#.##	FFFFFFFF	x100.
Phase B current	2	IB	R#.##	FFFFFFFF	x100.
Phase C current	2	IC	R#.##	FFFFFFFF	x100.
Ground current	2	IG	R#.##	FFFFFFFF	x100.
Neutral current	2	IN	R#.##	FFFFFFFF	x100.
Average current	2	IAVG	R#.##	FFFFFFFF	x100.
Voltage A-B	2	VAB	R#.#	FFFFFFFF	x10.
Voltage B-C	2	VBC	R#.#	FFFFFFFF	x10.
Voltage C-A	2	VCA	R#.#	FFFFFFFF	x10.
Voltage L-L avg	2	VLLAVG	R#.#	FFFFFFFF	x10.
Voltage A-N	2	VAN	R#.#	FFFFFFFF	x10.
Voltage B-N	2	VBN	R#.#	FFFFFFFF	x10.
Voltage C-N	2	VCN	R#.#	FFFFFFFF	x10.
Voltage L-N Avg	2	VLNAVG	R#.#	FFFFFFFF	x10.
Voltage N-G	2	VGN	R#.#	FFFFFFFF	x10.
Real power 3 phase	2	WATTS	R#	7FFFFFFF	x1
Reactive power	2	VARS	R#	7FFFFFFF	x1
Volt-amps	2	VA	R#	FFFFFFFF	x1
Power factor disp	1	PFDISP	R#.##	7FFF	x100.
Power factor app	1	PFAPP	R#.##	7FFF	x100.
Frequency	1	FREQ	R#.##	FFFF	x100.

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
K factor	1	KFACTOR	R#	FFFF	x1
CBEMA factor	1	CBEMAFACTOR	R#	FFFF	x1
Real power phase a	2	WATTSA	R#	7FFFFFFF	x1
Real power phase b	2	WATTSB	R#	7FFFFFFF	x1
Real power phase c	2	WATTSC	R#	7FFFFFFF	x1
Reactive power phase a	2	VARSA	R#	7FFFFFFF	x1
Reactive power phase b	2	VARSB	R#	7FFFFFFF	x1
Reactive power phase c	2	VARSC	R#	7FFFFFFF	x1
Volt amps phase a	2	VAMPA	R#	FFFFFFFF	x1
Volt amps phase b	2	VAMPB	R#	FFFFFFFF	x1
Volt amps phase c	2	VAMPC	R#	FFFFFFFF	x1
pf displacement phase a	2	PFDISPA	R#.##	7FFF	x100.
pf displacement phase b	2	PFDISPB	R#.##	7FFF	x100.
pf displacement phase c	2	PFDISPC	R#.##	7FFF	x100.
pf apparent phase a	2	PFAPPA	R#.##	7FFF	x100.
pf apparent phase b	2	PFAPPB	R#.##	7FFF	x100.
pf apparent phase c	2	PFAPPC	R#.##	7FFF	x100.
Forward energy	2	POSENERGY	R#	FFFFFFFF	x1
Reverse energy	2	NEGENERGY	R#	FFFFFFFF	x1
Net energy	2	NETENERGY	R#	7FFFFFFF	x1
Forward var hours	2	POSVARHRS	R#	FFFFFFFF	x1
Reverse var hours	2	NEGVARHRS	R#	FFFFFFFF	x1
Net var hours	2	NETVARHRS	R#	7FFFFFFF	x1
VA hours	2	VAHRS	R#	FFFFFFFF	x1
% THD phase a current	1	THDIA	R#	FFFF	x1
% THD phase b current	1	THDIB	R#	FFFF	x1
% THD phase c current	1	THDIC	R#	FFFF	x1
% THD neutral current	1	THDIN	R#	FFFF	x1
% THD phase A-B voltage	1	THDVAB	R#	FFFF	x1
% THD phase B-C voltage	1	THDVBC	R#	FFFF	x1
% THD phase C-A voltage	1	THDVCA	R#	FFFF	x1
% THD phase A-N voltage	1	THDVAN	R#	FFFF	x1
% THD phase B-N voltage	1	THDVBN	R#	FFFF	x1
% THD phase C-N voltage	1	THDVCN	R#	FFFF	x1
Avg 3 phase current	2	I3DEMAND	R#.##	FFFFFFFF	x100.
Peak 3 phase current	2	I3PEAK	R#.##	FFFFFFFF	x100.
Avg phase a current	2	IADEMAND	R#.##	FFFFFFFF	x100.
Avg phase b current	2	IBDEMAND	R#.##	FFFFFFFF	x100.
Avg phase c current	2	ICDEMAND	R#.##	FFFFFFFF	x100.

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
peak phase a current	2	IAPEAK	R#.##	FFFFFFFF	x100.
peak phase b current	2	IBPEAK	R#.##	FFFFFFFF	x100.
peak phase c current	2	ICPEAK	R#.##	FFFFFFFF	x100.
Average real power	2	WATTSDEMAND	R#	7FFFFFFF	x1
Average reactive power	2	VARSDEMAND	R#	7FFFFFFF	x1
Average volt amps	2	VADEMAND	R#	FFFFFFFF	x1
Peak real power	2	WATTSPEAK	R#	7FFFFFFF	x1
Peak reactive power	2	VARSPEAK	R#	7FFFFFFF	x1
Peak volt amps	2	VAPEAK	R#	FFFFFFFF	x1
Crest Factor IA	1	CFIA	R#.###	FFFF	x256.
Crest Factor IB	1	CFIB	R#.###	FFFF	x256.
Crest Factor IC	1	CFIC	R#.###	FFFF	x256.
Crest Factor IG	1	CFIG	R#.###	FFFF	x256.
Crest Factor IN	1	CFIN	R#.###	FFFF	x256.
Crest Factor VAB	1	CFVAB	R#.###	FFFF	x256.
Crest Factor VBC	1	CFVBC	R#.###	FFFF	x256.
Crest Factor VCA	1	CFVCA	R#.###	FFFF	x256.
Crest Factor VAN	1	CFVAN	R#.###	FFFF	x256.
Crest Factor VBN	1	CFVBN	R#.###	FFFF	x256.
Crest Factor VCN	1	CFVCN	R#.###	FFFF	x256.
Analog Input	1	AI	R#	FFFF	x1
Digital Input 1	1	DI1	I	FFFF	x1
Digital Input 2	1	DI2	I	FFFF	x1
Digital Input 3	1	DI3	I	FFFF	x1
Input Counter 1	1	INPUT_COUNTER1	R#	FFFF	x1
Input Counter 2	1	INPUT_COUNTER2	R#	FFFF	x1
Input Counter 3	1	INPUT_COUNTER3	R#	FFFF	x1
Digital Output 1	1	DO1	I	FFFF	x1
Digital Output 2	1	DO2	I	FFFF	x1
Digital Output 3	1	DO3	I	FFFF	x1
Digital Output 4	1	DO4	I	FFFF	x1
max frequency	1	MAX_FREQUENCY	R#.##	FFFF	x1
max phase a current	2	MAX_IA	R#.##	FFFFFFFF	x100.
max phase b current	2	MAX_IB	R#.##	FFFFFFFF	x100.
max phase c current	2	MAX_IC	R#.##	FFFFFFFF	x100.
max phase g current	2	MAX_IG	R#.,##	FFFFFFFF	x100.
max phase n current	2	MAX_IN	R#.##	FFFFFFFF	x100.
max vg-n voltage	2	MAX_NGV	R#.#	FFFFFFFF	x10.
max % THD phase a current	1	MAX_PER_THD_IA	R#	FFFF	x1

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
max % THD phase b current	1	MAX_PER_THD_IB	R#	FFFF	x1
max % THD phase c current	1	MAX_PER_THD_IC	R#	FFFF	x1
max % THD neutral current	1	MAX_PER_THD_IN	R#	FFFF	x1
max % THD VAB	1	MAX_PER_THD_VAB	R#	FFFF	x1
max % THD VBC	1	MAX_PER_THD_VBC	R#	FFFF	x1
max % THD VCA	1	MAX_PER_THD_VCA	R#	FFFF	x1
max % THD VAN	1	MAX_PER_THD_VAN	R#	FFFF	x1
max % THD VBN	1	MAX_PER_THD_VBN	R#	FFFF	x1
max % THD VCN	1	MAX_PER_THD_VCN	R#	FFFF	x1
max phase a L-L voltage	2	MAX_PHA_LLV	R#.#	FFFFFFFF	x10.
max phase a L-N voltage	2	MAX_PHA_LNN	R#.#	FFFFFFFF	x10.
max phase a PF apparent	1	MAX_PHA_PF_APP	R#.##	7FFF	x100.
max phase a PF displacement	1	MAX_PHA_PF_DISP	R#.##	7FFF	x100.
max phase b L-L voltage	2	MAX_PHB_LLV	R#.#	FFFFFFFF	x10.
max phase b L-N voltage	2	MAX_PHB_LNV	R#.#	FFFFFFFF	x10.
max phase b PF apparent	1	MAX_PHB_PF_APP	R#.##	7FFF	x100.
max phase b PF displacement	1	MAX_PHB_PF_DISP	R#.##	7FFF	x100.
max phase c L-L voltage	2	MAX_PHC_LLV	R#.#	FFFFFFFF	x10.
max phase c L-N voltage	2	MAX_PHC_LNV	R#.#	FFFFFFFF	x10.
max phase c PF apparent	1	MAX_PHC_PF_APP	R#.##	7FFF	x100.
max phase c PF DISPLACEMENT	1	MAX_PHC_PF_DISP	R#.##	7FFF	x100.
max reactive power	2	MAX_REACTIVE_POWER	R#	7FFFFFFF	x1
max reactive power phase a	2	MAX_REACTIVE_POWER_PHA	R#	7FFFFFFF	x1
max reactive power phase b	2	MAX_REACTIVE_POWER_PHB	R#	7FFFFFFF	x1
max reactive power phase c	2	MAX_REACTIVE_POWER_PHC	R#	7FFFFFFF	x1
max watts	2	MAX_REAL_POWER	R#	7FFFFFFF	x1
max watts phase a	2	MAX_REAL_POWER_PHA	R#	7FFFFFFF	x1
max watts phase b	2	MAX_REAL_POWER_PHB	R#	7FFFFFFF	x1
max watts phase c	2	MAX_REAL_POWER_PHC	R#	7FFFFFFF	x1
max system pf apparent	1	MAX_SYSTEM_PF_APP	R#.##	7FFF	x100.
max system pf displacement	1	MAX_SYSTEM_PF_DISP	R#.##	7FFF	x100.
max THD ia	2	MAX_THD_IA	R#.##	FFFFFFFF	x100.
max THD ib	2	MAX_THD_IB	R#.##	FFFFFFFF	x100.
max THD ic	2	MAX_THD_IC	R#.##	FFFFFFFF	x100.
max THD in	2	MAX_THD_IN	R#.##	FFFFFFFF	x100.
max THD vab	2	MAX_THD_VAB	R#.#	FFFFFFFF	x10.
max THD vbc	2	MAX_THD_VBC	R#.#	FFFFFFFF	x10.
max THD vca	2	MAX_THD_VCA	R#.#	FFFFFFFF	x10.
max THD van	2	MAX_THD_VAN	R#.#	FFFFFFFF	x10.

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
max THD vbn	2	MAX_THD_VBN	R#.#	FFFFFFFF	x10.
max THD vcn	2	MAX_THD_VCN	R#.#	FFFFFFFF	x10.
max VA	2	MAX_VA	R#	FFFFFFFF	x1
max VA phase a	2	MAX_VA_POWER_PHA	R#	FFFFFFFF	x1
max VA phase b	2	MAX_VA_POWER_PHB	R#	FFFFFFFF	x1
max VA phase c	2	MAX_VA_POWER_PHC	R#	FFFFFFFF	x1
min frequency	1	MIN_FREQUENCY	R#.##	FFFF	x100.
min phase a current	2	MIN_IA	R#.##	FFFFFFFF	x100.
min phase b current	2	MIN_IB	R#.##	FFFFFFFF	x100.
min phase c current	2	MIN_IC	R#.##	FFFFFFFF	x100.
min phase g current	2	MIN_IG	R#.##	FFFFFFFF	x100.
min phase n current	2	MIN_IN	R#.##	FFFFFFFF	x100.
min vg-n voltage	2	MIN_NGV	R#.#	FFFFFFFF	x10.
min % THD phase a current	1	MIN_PER_THD_IA	R#	FFFF	x1
min % THD phase b current	1	MIN_PER_THD_IB	R#	FFFF	x1
min % THD phase c current	1	MIN_PER_THD_IC	R#	FFFF	x1
min % THD neutral current	1	MIN_PER_THD_IN	R#	FFFF	x1
min % THD VAB	1	MIN_PER_THD_VAB	R#	FFFF	x1
min % THD VBC	1	MIN_PER_THD_VBC	R#	FFFF	x1
min % THD VCA	1	MIN_PER_THD_VCA	R#	FFFF	x1
min % THD VAN	1	MIN_PER_THD_VAN	R#	FFFF	x1
min % THD VBN	1	MIN_PER_THD_VBN	R#	FFFF	x1
min % THD VCN	1	MIN_PER_THD_VCN	R#	FFFF	x1
min phase a L-L voltage	2	MIN_PHA_LLV	R#.#	FFFFFFFF	x10.
min phase a L-N voltage	2	MIN_PHA_LNV	R#.#	FFFFFFFF	x10.
min phase a PF apparent	1	MIN_PHA_PF_APP	R#.##	7FFF	x100.
min phase a PF displacement	1	MIN_PHA_PF_DISP	R#.##	7FFF	x100.
min phase b L-L voltage	2	MIN_PHB_LLV	R#.#	FFFFFFFF	x10.
min phase b L-N voltage	2	MIN_PHB_LNV	R#.#	FFFFFFFF	x10.
min phase b PF apparent	1	MIN_PHB_PF_APP	R#.##	7FFF	x100.
min phase b PF displacement	1	MIN_PHB_PF_DISP	R#.##	7FFF	x100.
min phase c L-L voltage	2	MIN_PHC_LLV	R#.#	FFFFFFFF	x10.
min phase c L-N voltage	2	MIN_PHC_LNV	R#.#	FFFFFFFF	x10.
min phase c PF apparent	1	MIN_PHC_PF_APP	R#.##	7FFF	x100.
min phase c PF DISPLACEMENT	1	MIN_PHC_PF_DISP	R#.##	7FFF	x100.
min reactive power	2	MIN_REACTIVE_POWER	R#	7FFFFFFF	x1
min reactive power phase a	2	MIN_REACTIVE_POWER_PHA	R#	7FFFFFFF	x1
min reactive power phase b	2	MIN_REACTIVE_POWER_PHB	R#	7FFFFFFF	x1
min reactive power phase c	2	MIN_REACTIVE_POWER_PHC	R#	7FFFFFFF	x1

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
min watts	2	MIN_REAL_POWER	R#	7FFFFFFF	x1
min watts phase a	2	MIN_REAL_POWER_PHA	R#	7FFFFFFF	x1
min watts phase b	2	MIN_REAL_POWER_PHB	R#	7FFFFFFF	x1
min watts phase c	2	MIN_REAL_POWER_PHC	R#	7FFFFFFF	x1
min system pf apparent	1	MIN_SYSTEM_PF_APP	R#.##	7FFF	x100.
min system pf displacement	1	MIN_SYSTEM_PF_DISP	R#.##	7FFF	x100.
min THD ia	2	MIN_THD_IA	R#.##	FFFFFFFF	x100.
min THD ib	2	MIN_THD_IB	R#.##	FFFFFFFF	x100.
min THD ic	2	MIN_THD_IC	R#.##	FFFFFFFF	x100.
min THD in	2	MIN_THD_IN	R#.##	FFFFFFFF	x100.
min THD vab	2	MIN_THD_VAB	R#.#	FFFFFFFF	x10.
min THD vbc	2	MIN_THD_VBC	R#.#	FFFFFFFF	x10.
min THD vca	2	MIN_THD_VCA	R#.#	FFFFFFFF	x10.
min THD van	2	MIN_THD_VAN	R#.#	FFFFFFFF	x10.
min THD vbn	2	MIN_THD_VBN	R#.#	FFFFFFFF	x10.
min THD vcn	2	MIN_THD_VCN	R#.#	FFFFFFFF	x10.
min VA	2	MIN_VA	R#	FFFFFFFF	x1
min VA phase a	2	MIN_VA_POWER_PHA	R#	FFFFFFFF	x1
min VA phase b	2	MIN_VA_POWER_PHB	R#	FFFFFFFF	x1
min VA phase c	2	MIN_VA_POWER_PHC	R#	FFFFFFFF	x1
min max current changes	1	MIN_MAX_I_CHANGES	R#	FFFF	x1
min max mag THD I changes	1	MIN_MAX_MAG_THD_I_CHANGES	R#	FFFF	x1
min max mag THD V changes	1	MIN_MAX_MAG_THD_V_CHANGES	R #	FFFF	x1
min max % THD V changes	1	MIN_MAX_PER_THD_V_CHANGES	R#	FFFF	x1
min max pf apparent	1	MIN_MAX_PF_APP_CHANGES	R#	FFFF	x1
min max pf displacement	1	MIN_MAX_PF_DISP_CHANGES	R#	FFFF	x1
min max phase power changes	1	MIN_MAX_PHASE_POWER_CHANGES	R#	FFFF	x1
min max power changes	1	MIN_MAX_POWER_CHANGES	R#	FFFF	x1
min max VLL changes	1	MIN_MAX_VLL_CHANGES	R#	FFFF	x1
min max VLN changes	1	MIN_MAX_VLN_CHANGES	R#	FFFF	x1
Time of reset N = 11	NA	TIME_1_PHASE_DEMAND_I_RESET	TIME	NA	NA
Time of reset N = 10	NA	TIME_3_PHASE_DEMAND_I_RESET	TIME	NA	NA
End time of last demand N = 11	NA	TIME_LAST_1_PHASE_I_DEMAND	TIME	NA	NA
Last demand time N = 10	NA	TIME_LAST_3_PHASE_I_DEMAND	TIME	NA	NA
Last reset N = 13	NA	TIME_LAST_MM_I_RESET	TIME	NA	NA
Last reset N = 14	NA	TIME_LAST_MM_LLV_RESET	TIME	NA	NA
Last reset N = 15	NA	TIME_LAST_MM_LNV_RESET	TIME	NA	NA
Last reset N = 19	NA	TIME_LAST_MM_PER_THD_I_RESET	TIME	NA	NA
Last reset N = 20	NA	TIME_LAST_MM_PER_THD_V_RESET	TIME	NA	NA

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Last reset N = 17	NA	TIME_LAST_MM_PF_APP_RESET	TIME	NA	NA
Last reset N = 16	NA	TIME_LAST_MM_PF_DISP_RESET	TIME	NA	NA
Last reset N = 18	NA	TIME_LAST_MM_POWER_RESET	TIME	NA	NA
Last reset N = 32	NA	TIME_LAST_MM_THD_I_RESET	TIME	NA	NA
Last reset N = 33	NA	TIME_LAST_MM_THD_V_RESET	TIME	NA	NA
Last reset N = 23	NA	TIME_LAST_MM_PH_REACTIVE_POWER_RESET	TIME	NA	NA
Last reset N = 22	NA	TIME_LAST_PH_REAL_POWER_RESET	TIME	NA	NA
Last reset N = 24	NA	TIME_LAST_PH_VA_POWER_RESET	TIME	NA	NA
Time of max frequency	NA	TIME_MAX_FREQUENCY	TIME	NA	NA
Time of max IA	NA	TIME_MAX_IA	TIME	NA	NA
Time of max IB	NA	TIME_MAX_IB	TIME	NA	NA
Time of max IC	NA	TIME_MAX_IC	TIME	NA	NA
Time of max IG	NA	TIME_MAX_IG	TIME	NA	NA
Time of max IN	NA	TIME_MAX_IN	TIME	NA	NA
Time of max nuetral-ground V	NA	TIME_MAX_NGV	TIME	NA	NA
Time of max % THD IA	NA	TIME_MAX_PER_THD_IA	TIME	NA	NA
Time of max % THD IB	NA	TIME_MAX_PER_THD_IB	TIME	NA	NA
Time of max % THD IC	NA	TIME_MAX_PER_THD_IC	TIME	NA	NA
Time of max % THD IN	NA	TIME_MAX_PER_THD_IN	TIME	NA	NA
Time of max % THD VAB	NA	TIME_MAX_PER_THD_VAB	TIME	NA	NA
Time of max % THD VBC	NA	TIME_MAX_PER_THD_VBC	TIME	NA	NA
Time of max % THD VCA	NA	TIME_MAX_PER_THD_VCA	TIME	NA	NA
Time of max % THD VAN	NA	TIME_MAX_PER_THD_VAN	TIME	NA	NA
Time of max % THD VBN	NA	TIME_MAX_PER_THD_VBN	TIME	NA	NA
Time of max % THD VCN	NA	TIME_MAX_PER_THD_VCN	TIME	NA	NA
Time of max phase a L-L voltage	NA	TIME_MAX_PHA_LLV	TIME	NA	NA
Time of max phase a L-N voltage	NA	TIME_MAX_PHA_LNV	TIME	NA	NA
Time of max phase a pf apparent	NA	TIME_MAX_PHA_PF_APP	TIME	NA	NA
Time of max phase a pf displacement	NA	TIME_MAX_PHA_PF_DISP	TIME	NA	NA
Time of max phase b L-L voltage	NA	TIME_MAX_PHB_LLV	TIME	NA	NA
Time of max phase b L-N voltage	NA	TIME_MAX_PHB_LNV	TIME	NA	NA
Time of max phase b pf apparent	NA	TIME_MAX_PHB_PF_APP	TIME	NA	NA
Time of max phase b pf displacement	NA	TIME_MAX_PHB_PF_DISP	TIME	NA	NA
Time of max phase c L-L	NA	TIME_MAX_PHC_LLV	TIME	NA	NA

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
voltage					
Time of max phase c L-N voltage	NA	TIME_MAX_PHC_LNV	TIME	NA	NA
Time of max phase c pf apparent	NA	TIME_MAX_PHC_PF_APP	TIME	NA	NA
Time of max phase c pf displacement	NA	TIME_MAX_PHC_PF_DISP	TIME	NA	NA
Time of max reactive power	NA	TIME_MAX_REACTIVE_POWER	TIME	NA	NA
Time of max reactive power phase a	NA	TIME_MAX_REACTIVE_POWER_PHA	TIME	NA	NA
Time of max reactive power phase b	NA	TIME_MAX_REACTIVE_POWER_PHB	TIME	NA	NA
Time of max reactive power phase c	NA	TIME_MAX_REACTIVE_POWER_PHC	TIME	NA	NA
Time of max real power	NA	TIME_MAX_REAL_POWER	TIME	NA	NA
Time of max real power phase a	NA	TIME_MAX_REAL_POWER_PHA	TIME	NA	NA
Time of max real power phase b	NA	TIME_MAX_REAL_POWER_PHB	TIME	NA	NA
Time of max real power phase c	NA	TIME_MAX_REAL_POWER_PHC	TIME	NA	NA
Time max system pf app	NA	TIME_MAX_SYSTEM_PF_APP	TIME	NA	NA
Time max system pf disp	NA	TIME_MAX_SYSTEM_PF_DISP	TIME	NA	NA
Time max THD ia	NA	TIME_MAX_THD_IA	TIME	NA	NA
Time max THD ib	NA	TIME_MAX_THD_IB	TIME	NA	NA
Time max THD ic	NA	TIME_MAX_THD_IC	TIME	NA	NA
Time max THD in	NA	TIME_MAX_THD_IN	TIME	NA	NA
Time max THD vab	NA	TIME_MAX_THD_VAB	TIME	NA	NA
Time max THD vbc	NA	TIME_MAX_THD_VBC	TIME	NA	NA
Time max THD vca	NA	TIME_MAX_THD_VCA	TIME	NA	NA
Time max THD van	NA	TIME_MAX_THD_VAN	TIME	NA	NA
Time max THD vbn	NA	TIME_MAX_THD_VBN	TIME	NA	NA
Time max THD vcn	NA	TIME_MAX_THD_VCN	TIME	NA	NA
Time max VA	NA	TIME_MAX_VA	TIME	NA	NA
Time max VA phase a	NA	TIME_MAX_VA_POWER_PHA	TIME	NA	NA
Time max VA phase b	NA	TIME_MAX_VA_POWER_PHB	TIME	NA	NA
Time max VA phase c	NA	TIME_MAX_VA__POWER_PHC	TIME	NA	NA
Time of min frequency	NA	TIME_MIN_FREQUENCY	TIME	NA	NA
Time of min IA	NA	TIME_MIN_IA	TIME	NA	NA
Time of min IB	NA	TIME_MIN_IB	TIME	NA	NA
Time of min IC	NA	TIME_MIN_IC	TIME	NA	NA
Time of min IG	NA	TIME_MIN_IG	TIME	NA	NA
Time of min IN	NA	TIME_MIN_IN	TIME	NA	NA
Time of min nuetral-ground V	NA	TIME_MIN_NGV	TIME	NA	NA

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Time of min % THD IA	NA	TIME_MIN_PER_THD_IA	TIME	NA	NA
Time of min % THD IB	NA	TIME_MIN_PER_THD_IB	TIME	NA	NA
Time of min % THD IC	NA	TIME_MIN_PER_THD_IC	TIME	NA	NA
Time of min % THD IN	NA	TIME_MIN_PER_THD_IN	TIME	NA	NA
Time of min % THD VAB	NA	TIME_MIN_PER_THD_VAB	TIME	NA	NA
Time of min % THD VBC	NA	TIME_MIN_PER_THD_VBC	TIME	NA	NA
Time of min % THD VCA	NA	TIME_MIN_PER_THD_VCA	TIME	NA	NA
Time of min % THD VAN	NA	TIME_MIN_PER_THD_VAN	TIME	NA	NA
Time of min % THD VBN	NA	TIME_MIN_PER_THD_VBN	TIME	NA	NA
Time of min % THD VCN	NA	TIME_MIN_PER_THD_VCN	TIME	NA	NA
Time of min phase a L-L voltage	NA	TIME_MIN_PHA_LLV	TIME	NA	NA
Time of min phase a L-N voltage	NA	TIME_MIN_PHA_LNV	TIME	NA	NA
Time of min phase a pf apparent	NA	TIME_MIN_PHA_PF_APP	TIME	NA	NA
Time of min phase a pf displacement	NA	TIME_MIN_PHA_PF_DISP	TIME	NA	NA
Time of min phase b L-L voltage	NA	TIME_MIN_PHB_LLV	TIME	NA	NA
Time of min phase b L-N voltage	NA	TIME_MIN_PHB_LNV	TIME	NA	NA
Time of min phase b pf apparent	NA	TIME_MIN_PHB_PF_APP	TIME	NA	NA
Time of min phase b pf displacement	NA	TIME_MIN_PHB_PF_DISP	TIME	NA	NA
Time of min phase c L-L voltage	NA	TIME_MIN_PHC_LLV	TIME	NA	NA
Time of min phase c L-N voltage	NA	TIME_MIN_PHC_LNV	TIME	NA	NA
Time of min phase c pf apparent	NA	TIME_MIN_PHC_PF_APP	TIME	NA	NA
Time of min phase c pf displacement	NA	TIME_MIN_PHC_PF_DISP	TIME	NA	NA
Time of min reactive power	NA	TIME_MIN_REACTIVE_POWER	TIME	NA	NA
Time of min reactive power phase a	NA	TIME_MIN_REACTIVE_POWER_PHA	TIME	NA	NA
Time of min reactive power phase b	NA	TIME_MIN_REACTIVE_POWER_PHB	TIME	NA	NA
Time of min reactive power phase c	NA	TIME_MIN_REACTIVE_POWER_PHC	TIME	NA	NA
Time of min real power	NA	TIME_MIN_REAL_POWER	TIME	NA	NA
Time of min real power phase a	NA	TIME_MIN_REAL_POWER_PHA	TIME	NA	NA
Time of min real power phase b	NA	TIME_MIN_REAL_POWER_PHB	TIME	NA	NA
Time of min real power phase c	NA	TIME_MIN_REAL_POWER_PHC	TIME	NA	NA
Time min system pf app	NA	TIME_MIN_SYSTEM_PF_APP	TIME	NA	NA
Time min system pf disp	NA	TIME_MIN_SYSTEM_PF_DISP	TIME	NA	NA

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Time min THD ia	NA	TIME_MIN_THD_IA	TIME	NA	NA
Time min THD ib	NA	TIME_MIN_THD_IB	TIME	NA	NA
Time min THD ic	NA	TIME_MIN_THD_IC	TIME	NA	NA
Time min THD in	NA	TIME_MIN_THD_IN	TIME	NA	NA
Time min THD vab	NA	TIME_MIN_THD_VAB	TIME	NA	NA
Time min THD vbc	NA	TIME_MIN_THD_VBC	TIME	NA	NA
Time min THD vca	NA	TIME_MIN_THD_VCA	TIME	NA	NA
Time min THD van	NA	TIME_MIN_THD_VAN	TIME	NA	NA
Time min THD vbn	NA	TIME_MIN_THD_VBN	TIME	NA	NA
Time min THD vcn	NA	TIME_MIN_THD_VCN	TIME	NA	NA
Time min VA	NA	TIME_MIN_VA	TIME	NA	NA
Time min VA phase a	NA	TIME_MIN_VA_POWER_PHA	TIME	NA	NA
Time min VA phase b	NA	TIME_MIN_VA_POWER_PHB	TIME	NA	NA
Time min VA phase c	NA	TIME_MIN_VA_POWER_PHC	TIME	NA	NA
Time energy reset	NA	TIME_OF_ENERGY_RESET	TIME	NA	NA
Time last power demand window	NA	TIME_OF_LAST_POWER_DEMAND_WINDOW	TIME	NA	NA
Time last power reset	NA	TIME_OF_LAST_POWER_RESET	TIME	NA	NA
Time peak 3 phase demand I	NA	TIME_PEAK_3_DEMAND_I	TIME	NA	NA
Inactive trigger state changes	1	TRIGGER_STATE_CHANGES	R#	FFFF	x1
Per phase current demand window N = 10	1	PER_PHASE_I_DEMAND_WINDOW	R#	FFFF	x1
Power demand Window N = 12	1	POWER_DEMAND_WINDOW	R#	FFFF	x1
Relay event Counter	1	RELAY_EVENT_COUNTER	R#	FFFF	x1
3 phase current demand window N = 10	1	THREE_PH_I_DEMAND_WINDOW	R#	FFFF	x1
system negative peak demand watts	2	SYS_NEG_PEAK_DEMAND_WATTS	R#	FFFFFFFF	x1
system negative peak demand watts time	NA	SYS_NEG_PEAK_DEMAND_WATTS_TIME	TIME	NA	NA
system peak demand watts	2	SYS_DEMAND_WATTS	R#	7FFFFFFF	x1
system positive peak demand watts	2	SYS_POS_PEAK_DEMAND_WATTS	R#	FFFFFFFF	x1
system positive peak demand watts time	NA	SYS_POS_PEAK_DEMAND_WATTS_TIME	TIME	NA	NA
system time last reset demand watts	NA	SYS_TIME_LAST_RESET_DEMAND_WATTS	TIME	NA	NA

IQ Analyzer Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Reset peak demand power	000004	RESET_DMD_WATTS	I	0x602
Reset energy value	000008	RESET_ENERGY	I	0x606
Reset demand window	000040	RESET_DEMAND_WATTS_WND	I	0x607
Reset peak demand currents	000101	RESET_DEMAND_I	I	0x609
Reset all min max values	000104	RESET_ALL_MIN_MAX	I	0x61f
Reset min max currents	00010D	RESET_MIN_MAX_I	I	0x620
Reset min max L_L voltage	00010E	RESET_MIN_MAX_LL_VOLTS	I	0x621
Reset min max L-N voltage	00010F	RESET_MIN_MAX_LN_VOLTS	I	0x622
Reset min max pf displacement	000110	RESET_MIN_MAX_PF_DISP	I	0x623
Reset min max pf apparent	000111	RESET_MIN_MAX_PF_APP	I	0x624
Reset min max power	000112	RESET_MIN_MAX_POWER	I	0x625
Reset min max current % THD	000113	RESET_MIN_MAX_I_THD	I	0x626
Reset min max voltage % THD	000114	RESET_MIN_MAX_V_THD	I	0x627
Reset min max per phase power	000116	RESET_MIN_MAX_PH_POWER	I	0x628
Reset Counters	00106	RESET_INPUT_COUNTER	I	0x641
Activate Relay 1	040101	ACTIVATE_RELAY_1	I	0x63b
Activate Relay 2	040102	ACTIVATE_RELAY_2	I	0x63c
Activate Relay 3	040103	ACTIVATE_RELAY_3	I	0x64d
Activate Relay 4	040104	ACTIVATE_RELAY_4	I	0x64e
Deactivate Relay 1	040201	DEACTIVATE_RELAY_1	I	0x63d
Deactivate Relay 2	040202	DEACTIVATE_RELAY_2	I	0x63e
Deactivate Relay 3	040203	DEACTIVATE_RELAY_3	I	0x64f
Deactivate Relay 4	040204	DEACTIVATE_RELAY_4	I	0x650
Reset system demand watts	NA	RESET_SYSTEM_DEMAND	I	0x658

IQ Analyzer Setpoints

Setpoint	Description
Firmware Version Number	Version number of the firmware in the device.
Communication Version Number	Version number of the communication software in the device.
System Frequency	Frequency of the voltage in the system.
Type of Assembly	Phase-neutral configuration of the device. 3 PH - Neutral 3 PH - No neutral 2 PH - neutral 2 PH - neutral
Phase Sequence	The phase rotation in the system. In an ABC system, Phase A leads Phase B by 120 degrees. In a CBA system, Phase C leads Phase B by 120 degrees.
VLN Rating	Secondary voltage line-to-neutral rating.
VLL Rating	Secondary voltage line-to-line rating at terminals of device.
PT Turns Ratio	PT Turns Ratio.

Setpoint	Description
Phase CT Turns Ratio	Phase Current Transformer Turns Ratio.
Ground CT Turns Ratio	Ground CT Turns Ratio.
Demand Window	The size of the time interval that the device uses as the consumption sampling for current-related demand calculations.
Sub Demand Interval	Sub Demand Interva.l
Number of Intervals to Average	The number of demand window intervals to average in computing demand.
Demand Window Type	The type of demand window (fixed or sliding).
Sub Demand Interval	Sub Demand Interval.
Last Setpoint Change Time	The most recent time at which any setpoints were changed.
Last Setpoint Change Date	The most recent date at which any setpoints were changed.
Front Panel Display Timeout	Number of minutes for front-panel display to timeout.
Front Panel Energy Display Units	Units used to display energy values on the front panel.
Event Alarm Screens Mode	Mode of event alarm screens.
Lagging var/PF Sign Convention	Indicates the sign convention that will be displayed to represent vars and PF.
Number of Pre-Trigger Cycles	The number of cycles following a trigger event before a trigger action is initiated.
Trigger Type	The type of condition that activates the trigger. This can be one of the following: No Trigger Magnitude THD (Total Harmonic Distortion) Percent THD (Total Harmonic Distortion) Min Value Max Value Max Demand Disturbance Frequency Deviation Current Unbal Voltage Unbal Remote Input Manual Exceed Min/Max
Trigger Data	The type of data that the device will monitor for the trigger condition (monitored parameter). This can be one of the following: Phase A Current Phase B Current Phase C Current Neutral Current VAN VBN VCN VAB VBC VCA IA, IB, IC VAN, VBN, VCN VAB, VBC, VCA
Trigger Activate Threshold	The value of the monitored parameter at which the device will activate the trigger. The units and range will vary depending on the trigger type.
Trigger Reset Threshold	The value of the monitored parameter at which the device will reset the trigger. The units and range will vary depending on the trigger type.
Trigger Time Delay	A delay period following the detection of a trigger condition during which the device will delay before activating the trigger.
Trigger Lock	Locks the specification of the trigger in the memory of the device.

Setpoint	Description
Analog Output Data	The type of data sent to the analog output.
Analog Output Scale	Range and scale of the data values sent to the analog output.
Analog Input Offset	Defines the range of the Analog Input.
Digital Input 1	Defines meaning of digital input 1 to the device: Reset a single relay output (1-4) Trigger Waveform Capture Reset Demands Reset Min/Max Reset All Triggers Resets a single trigger (1-7) Sync Pulse Output
Digital Input 2	Defines meaning of Digital Input 2 to the device: Reset a single relay output (1-4) Trigger Waveform Capture Reset Demands Reset Min/Max Reset All Triggers Resets a single trigger (1-7) Sync Pulse Output
Digital Input 3	Defines meaning of Digital Input 3 to the device: Reset a single relay output (1-4) Trigger Waveform Capture Reset Demands Reset Min/Max Reset All Triggers Resets a single trigger (1-7) Sync Pulse Output
Relay Energize on Active Toggle	Enables the Energize on Active Feature. If enabled, the device will energize the relay according to one of the following schemes: Pulse Initiator Output OR
Pulse Initiator	If the scheme set for the Energize on Active feature is Pulse Initiator, the relay will be energized when a pulse signal of the specified type is detected.
Output OR Setting	If the scheme set for the Energize on Active feature is Output Setting, the relay will be energized when the specified combination of triggers, IMPACC control, and Auto Reset occurs.
IMPACC Cmd Flag	If the IMPACC Command Flag is set then the device will energize the relay on receiving the command from IMPACC.
Auto Reset Condition Flag	If the Auto Reset condition flag is set, then the occurrence of an auto reset will be used as one of the criteria in determining whether to energize the relay.
Off Delay	Off Delay.
Pulse Initiator Scale Factor	Scaling factor of the pulse initiator.

IQ Data / IQ Generator

IQ Data and IQ Generator

IQ Data/IQ Generator Device Data

				Subnetwork Support			
Description	**# of Modbus registers**	**Tag Name**	**DDE Type**	**DIRECT**	**AEM II**	**Invalid**	**Scale Factor**
Device status	1	STATN	R#	√	√	FFFF	x1.
		STATT	M	√	√	NA	NA
Device status reason	1	RSONN	R#	√	√	FFFF	x1.
		RSONT	M	√	√	NA	NA
Raw status	2	RAW_STATUS	I	√	√	FFFFFFFF	x1.
Flag 1	1	FLAG_1	R#	√	√	FFFF	x1.
Com version	NA	COM_VERSION	I	√	√	NA	NA
Product id	NA	PRODUCT_ID	I	√	√	NA	NA
Division code	NA	DIV_CODE	I	√	√	NA	NA
Device type	NA	TYPEN	I	√	√	NA	NA
Phase A current	1	IA	R#	√	√	FFFF	x1.
Phase B current	1	IB	R#	√	√	FFFF	x1.
Phase C current	1	IC	R#	√	√	FFFF	x1.
Voltage A-B	1	VAB	R#	√	√	FFFF	x1.
Voltage B-C	1	VBC	R#	√	√	FFFF	x1.
Voltage C-A	1	VCA	R#	√	√	FFFF	x1.
Voltage A-N	1	VAN	R#	√	√	FFFF	x1.
Voltage B-N	1	VBN	R#	√	√	FFFF	x1.
Voltage C-N	1	VCN	R#	√	√	FFFF	x1.
Frequency	1	FREQ	R#.##	√	√	FFFF	x100

IQ Data Device Control

				Subnetwork Support	
Description	**INCOM CTRL COMMAND**	**Tag Name**	**DDE Type**	**Direct**	**AEMII**

No device control commands are available for the IQ Generator.

IQ Data Setpoints / IQ Generator

Setpoint	Description
Firmware Version	Version number of the firmware in the device.
Communication Version Number	Version number of the communication software in the device.
Phase CT Turns Ratio	Phase Current Transformer Turns Ratio.
PT Turns Ratio	PT Turns Ratio.
System Configuration	Indicates whether the device is configured for a 3-wire system or a 4-wire system. In a 3-wire system, the device measures line-to-line voltage. In a 4-wire system, the device measures line-to-neutral voltage.
System Frequency	Frequency of the voltage in the system.

IQ Data Plus

IQ Data Plus and IQ Data Plus II

IQ Data Plus Device Data

				Subnetwork Support			
Description	**# of Modbus registers**	**Tag Name**	**DDE Type**	**DIRECT**	**AEMI**	**Invalid**	**Scale Factor**
Device status	1	STATN	R#	√		FFFF	x1.
		STATT	M	√		NA	NA
Device status reason	1	RSONN	R#	√		FFFF	x1.
		RSONT	M	√		NA	NA
Raw status	2	RAW_STATUS	I	√		FFFFFFFF	x1.
Com version	NA	COM_VERSION	I	√		NA	NA
Product id	NA	PRODUCT_ID	I	√		NA	NA
Division code	NA	DIV_CODE	I	√		NA	NA
Device type	NA	TYPEN	I	√		NA	NA
Phase A current	1	IA	R#	√		FFFF	x1.
Phase B current	1	IB	R#	√		FFFF	x1.
Phase C current	1	IC	R#	√		FFFF	x1.
Voltage A-B	1	VAB	R#	√		FFFF	x1.
Voltage B-C	1	VBC	R#	√		FFFF	x1.
Voltage B-A	1	VCA	R#	√		FFFF	x1.
Voltage A-N	1	VAN	R#	√		FFFF	x1.
Voltage B-N	1	VBN	R#	√		FFFF	x1.
Voltage C-N	1	VCN	R#	√		FFFF	x1.
Power factor	1	PFACT	R#.##	√		7FFF	x100
Frequency	1	FREQ	R#.##	√		FFFF	x100.

Description	# of Modbus registers	Tag Name	DDE Type	Subnetwork Support: DIRECT	AEMI	Invalid	Scale Factor
Real power	2	WATTS	R#	√		7FFFFFFF	x1.
Reactive power	2	VARS	R#	√		7FFFFFFF	x1.
Peak demand power	2	WATTSDEMANDPEAK	R#	√		7FFFFFFF	x1.
Energy	2	ENERGY	R#	√		FFFFFFFF	x1.

To display power factor and frequency in the correct units, you must divide their values by 100. Power Factor (PFACT) and Frequency (FREQ) are :

Function Format	**Display Format**
D[device number]PFACT/100	#.##
D[device number]FREQ/100	##.##

In Enhanced Graphics, function formats are defined in the tag name and display formats are entered on the window that is being created.

IQ Data Plus Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value	Subnetwork Support: Direct	AEMI
Open Device	010000	OPEN_DEVICE	I	0x600	√	
Close device	010001	CLOSE_DEVICE	I	0x601	√	
Reset unit	000002	RESET_UNIT	I	0x603	√	

IQ Data Plus II Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Subnetwork Support: DIRECT	AEMII	CED	Invalid	Scale Factor
Device status	1	STATN	R#	√	√	√	FFFF	x1.
		STATT	M	√	√	√	NA	NA
Device status reason	1	RSONN	R#	√	√	√	FFFF	x1.
		RSONT	M	√	√	√	NA	NA
Raw status	2	RAW_STATUS	I	√	√	√	FFFFFFFF	x1.
Flag 2_1	1	FLAG_2_1	R#	√	√	√	FFFF	x1
Flag 3	1	FLAG_3	R#	√	√	√	FFFF	x1
Com version	NA	COM_VERSION	I	√	√	√	NA	NA
Product id	NA	PRODUCT_ID	I	√	√	√	NA	NA
Division code	NA	DIV_CODE	I	√	√	√	NA	NA
Device type	NA	TYPEN	I	√	√	√	NA	NA

Description	# of Modbus registers	Tag Name	DDE Type	Subnetwork Support: DIRECT	AEMII	CED	Invalid	Scale Factor
Phase A current	1	IA	R#	√	√	√	FFFF	x1.
Phase B current	1	IB	R#	√	√	√	FFFF	x1.
Phase C current	1	IC	R#	√	√	√	FFFF	x1.
Voltage A-B	1	VAB	R#	√	√	√	FFFF	x1.
Voltage B-C	1	VBC	R#	√	√	√	FFFF	x1.
Voltage B-A	1	VCA	R#	√	√	√	FFFF	x1.
Voltage A-N	1	VAN	R#	√	√	√	FFFF	x1.
Voltage B-N	1	VBN	R#	√	√	√	FFFF	x1.
Voltage C-N	1	VCN	R#	√	√	√	FFFF	x1.
Frequency	1	FREQ	R#.##	√	√	√	FFFF	x100
Power factor	1	PFACT	R#.##	√	√	√	7FFF	x100
Real power	2	WATTS	R#	√	√	√	7FFFFFFF	x1.
Reactive power	2	VARS	R#	√	√	√	7FFFFFFF	x1.
Peak demand power	2	WATTSDEMANDPEAK	R#	√	√	√	7FFFFFFF	x1.
Energy	2	ENERGY	R#	√	√	√	FFFFFFFF	x1.
system negative peak demand watts	2	SYS_NEG_PEAK_DEMAND_WATTS	R#	√			FFFFFFFF	x1.
system negative peak demand watts time	NA	SYS_NEG_PEAK_DEMAND_WATTS_TIME	TIME	√			NA	NA
system peak demand watts	2	SYS_DEMAND_WATTS	R#	√			7FFFFF	x1
system positive peak demand watts	2	SYS_POS_PEAK_DEMAND_WATTS	R#	√			FFFFFFFF	x1.
system positive peak demand watts time	NA	SYS_POS_PEAK_DEMAND_WATTS_TIME	TIME	√			NA	NA
system time last reset demand watts	NA	SYS_TIME_LAST_RESET_DEMAND_WATTS	TIME	√			NA	NA

IQ Data Plus II Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value	Subnetwork Support: Direct	AEMII	CED
Open Relay	010000	OPEN_DEVICE	I	0x600	√	√	√
Close Relay	010001	CLOSE_DEVICE	I	0x601	√	√	√
Reset Demand	000004	RESET_DMD_WATTS	I	0x602	√	√	√
Reset Unit	000002	RESET_UNIT	I	0x603	√	√	√
Reset Energy	000008	RESET_ENERGY	I	0x606	√	√	√
Reset system demand	ELOG	RESET_SYSTEM_DEMAND	I	0x658	√		

IQ Data Plus and IQ Data Plus II Setpoints

Setpoint	Description
Firmware Version Number	Version number of the firmware in the device.
Communication Version Number	Version number of the communication software in the device.
Device Mode	Mode of the device.
System Frequency	Frequency of the voltage in the system.
Phase CT Turns Ratio	Phase Current Transformer Turns Ratio.
PT Turns Ratio	PT Turns Ratio.
Current Display Unit	Units in which current will be displayed on the device.
Voltage Display Unit	Units in which voltage will be displayed on the device.
System Configuration	Indicates whether the device is configured for a 3-wire system or a 4-wire system. In a 3-wire system, the device measures line-to-line voltage. In a 4-wire system, the device measures line-to-neutral voltage.
Nominal Line-to-Line Voltage	Nominal line-to-line voltage that will be applied to the device terminals.
Nominal Line-to-Neutral Voltage	Nominal line-to-neutral voltage measured by the device.
Power Factor Calculation	The calculation method the device used to determine power factor.
Synchronization Type	The type of clock synchronization being used by the device.
Demand Window	The size of the time interval that the device uses as the consumption sampling for current-related demand calculations.
Watt-hours Per Pulse	The number of watthours per sync pulse.
kWh Reset Flag	Indicates whether kWh Reset is enabled.
Protection Functions Flag	Indicates whether Protection Functions are enabled.
Trip Reset Mode	Trip Reset mode for the device.
Protection Delay Time	Period of delay after the device enters a protection condition during which the device waits before initiating protection functions.
Overvoltage Response	The action that the device will take if an overvoltage condition occurs.
Undervoltage Response	The action that the device will take if an undervoltage condition occurs.
Phase Loss/Reversal Response	The action that the device will take if a Phase Loss or Phase Reversal occurs.
Phase Unbalance Response	The action that the device will take if a Phase Unbalance occurs.
OverVoltage Detection Level	The percentage of overcurrent required for the device to detect an overcurrent condition.
UnderVoltage Detection Level	The percentage of undervoltage required for the device to detect an undervoltage condition.
Phase Unbalance Detection Level	The percentage of phase unbalance required for the device to detect a phase unbalance condition.

IQ Data Plus II HV

IQ Data Plus II HV Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Device status	1	STATN	R#	FFFF	x1.
		STATT	M	NA	NA
Device status reason	1	RSONN	R#	FFFF	x1.
		RSONT	M	NA	NA
Raw status	2	RAW_STATUS	I	FFFFFFFF	x1.
Flag 2_1	1	FLAGS_2_1	R#	FFFF	x1.
Flags 3	1	FLAGS_3	R#	FFFF	x1.
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Phase A current	1	IA	R#	FFFF	x1.
Phase B current	1	IB	R#	FFFF	x1.
Phase C current	1	IC	R#	FFFF	x1.
Voltage A-B	2	VAB	R#	FFFFFFFF	x1.
Voltage B-C	2	VBC	R#	FFFFFFFF	x1.
Voltage C-A	2	VCA	R#	FFFFFFFF	x1.
Voltage A-N	2	VAN	R#	FFFFFFFF	x1.
Voltage B-N	2	VBN	R#	FFFFFFFF	x1.
Voltage C-N	2	VCN	R#	FFFFFFFF	x1.
Frequency	1	FREQ	R#.##	FFFF	x100.
Power factor	1	PFACT	R#.##	7FFF	x100.
Real power	2	WATTS	R#	7FFFFFFF	x1.
Reactive power	2	VARS	R#	7FFFFFFF	x1.
Peak demand power	2	WATTSDEMANDPEAK	R#	7FFFFFFF	x1.
Energy	2	ENERGY	R#	FFFFFFFF	x1.
system negative peak demand watts	2	SYS_NEG_PEAK_DEMAND_WATTS	R#	FFFFFFFF	x1.
system negative peak demand watts time	NA	SYS_NEG_PEAK_DEMAND_WATTS_TIME	TIME	NA	NA
system peak demand watts	2	SYS_DEMAND_WATTS	R#	7FFFFFFF	x1.
system positive peak demand watts	2	SYS_POS_PEAK_DEMAND_WATTS	R#	FFFFFFFF	x1.
system positive peak demand watts time	NA	SYS_POS_PEAK_DEMAND_WATTS_TIME	TIME	NA	NA
system time last reset demand watts	NA	SYS_TIME_LAST_RESET_DEMAND_WATTS	TIME	NA	NA

IQ Data Plus II HV Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Open Relay	010000	OPEN_DEVICE	I	0x600
Close Relay	010001	CLOSE_DEVICE	I	0x601
Reset Demand	000004	RESET_DMD_WATTS	I	0x602
Reset Unit	000002	RESET_UNIT	I	0x603
Reset Energy	000008	RESET_ENERGY	I	0x606
Reset system demand	ELOG	RESET_SYSTEM_DEMAND	I	0x658

IQ Data Plus II HV Setpoints

Setpoint	Description
Firmware Version Number	Version number of the firmware in the device.
Communication Version Number	Version number of the communication software in the device.
Device Mode	Mode of the device.
System Frequency	Frequency of the voltage in the system.
Phase CT Turns Ratio	Phase Current Transformer Turns Ratio.
PT Turns Ratio	PT Turns Ratio.
Current Display Unit	Units in which current will be displayed on the device.
Voltage Display Unit	Units in which voltage will be displayed on the device.
System Configuration	Indicates whether the device is configured for a 3-wire system or a 4-wire system. In a 3-wire system, the device measures line-to-line voltage. In a 4-wire system, the device measures line-to-neutral voltage.
Nominal Line-to-Line Voltage	Nominal line-to-line voltage that will be applied to the device terminals.
Nominal Line-to-Neutral Voltage	Nominal line-to-neutral voltage measured by the device.
Power Factor Calculation	The calculation method the device used to determine power factor.
Synchronization Type	The type of clock synchronization being used by the device.
Demand Window	The size of the time interval that the device uses as the consumption sampling for current-related demand calculations.
Watt-hours Per Pulse	The number of watthours per sync pulse.
kWh Reset Flag	Indicates whether kWh Reset is enabled.
Protection Functions Flag	Indicates whether Protection Functions are enabled.
Trip Reset Mode	Trip Reset mode for the device.
Protection Delay Time	Period of delay after the device enters a protection condition during which the device waits before initiating protection functions.
Overvoltage Response	The action that the device will take if an overvoltage condition occurs.
Undervoltage Response	The action that the device will take if an undervoltage condition occurs.
Phase Loss/Reversal Response	The action that the device will take if a Phase Loss or Phase Reversal occurs.
Phase Unbalance Response	The action that the device will take if a Phase Unbalance occurs.
OverVoltage Detection Level	The percentage of overcurrent required for the device to detect an overcurrent condition.
UnderVoltage Detection Level	The percentage of undervoltage required for the device to detect an undervoltage condition.
Phase Unbalance Detection Level	The percentage of phase unbalance required for the device to detect a phase unbalance condition.

IQ DP 4000

IQ DP 4000 Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Device status	1	STATN	R#	FFFF	x1
		STATT	M	NA	NA
Device status reason	1	RSONN	R#	FFFF	x1
		RSONT	M	NA	NA
Raw Status	2	RAW_STATUS	R#	FFFFFFFF	x1
Flag 1 2	1	FLAG_2_1	R#	FFFF	x1.
Flag 3 4	1	FLAG_3_4	R#	FFFF	x1.
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Phase A current	2	IA	R#.##	FFFFFFFF	x100.
Phase B current	2	IB	R#.##	FFFFFFFF	x100.
Phase C current	2	IC	R#.##	FFFFFFFF	x100.
Voltage A-B	2	VAB	R#.#	FFFFFFFF	x10.
Voltage B-C	2	VBC	R#.#	FFFFFFFF	x10.
Voltage C-A	2	VCA	R#.#	FFFFFFFF	x10.
Voltage A-N	2	VAN	R#.#	FFFFFFFF	x10.
Voltage B-N	2	VBN	R#.#	FFFFFFFF	x10.
Voltage C-N	2	VCN	R#.#	FFFFFFFF	x10.
Real power 3 phase	2	WATTS	R#	7FFFFFFF	x1
Reactive power	2	VARS	R#	7FFFFFFF	x1
Volt-amps	2	VA	R#	FFFFFFFF	x1
Power factor disp	1	PFDISP	R#.##	7FFF	x100.
Power factor app	1	PFAPP	R#.##	7FFF	x100.
Frequency	1	FREQ	R#.##	FFFF	x100.
Energy units	1	SYSENERGYEXP	R#	FFFF	x1
Forward energy	2	POSENERGY	R#	FFFFFFFF	x1
Forward energy base value	2	POSENERGY_BASE	R#	FFFFFFFF	x1
Reverse energy	2	NEGENERGY	R#	FFFFFFFF	x1
Reverse energy base value	2	NEGENERGY_BASE	R#	FFFFFFFF	x1
Net energy	2	NETENERGY	R#	7FFFFFFF	x1
Net energy base value	2	NETENERGY_BASE	R#	7FFFFFFF	x1
Forward var hours	2	POSVARHRS	R#	FFFFFFFF	x1
Forward var hours base value	2	POSVARHRS_BASE	R#	FFFFFFFF	x1

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Reverse var hours	2	NEGVARHRS	R#	FFFFFFFF	x1
Reverse var hours base value	2	NEGVARHRS_BASE	R#	FFFFFFFF	x1
Net var hours	2	NETVARHRS	R#	7FFFFFFF	x1
Net var hours base value	2	NETVARHRS_BASE	R#	7FFFFFFF	x1
VA hours	2	VAHRS	R#	FFFFFFFF	x1
VA hours base value	2	VAHRS_BASE	R#	FFFFFFFF	x1
% THD phase a current	1	THDIA	R#	FFFF	x1
% THD phase b current	1	THDIB	R#	FFFF	x1
% THD phase c current	1	THDIC	R#	FFFF	x1
% THD phase A-B voltage	1	THDVAB	R#	FFFF	x1
% THD phase B-C voltage	1	THDVBC	R#	FFFF	x1
% THD phase C-A voltage	1	THDVCA	R#	FFFF	x1
% THD phase A-N voltage	1	THDVAN	R#	FFFF	x1
% THD phase B-N voltage	1	THDVBN	R#	FFFF	x1
% THD phase C-N voltage	1	THDVCN	R#	FFFF	x1
Avg phase a current	2	IADEMAND	R#.##	FFFFFFFF	x100.
Avg phase b current	2	IBDEMAND	R#.##	FFFFFFFF	x100.
Avg phase c current	2	ICDEMAND	R#.##	FFFFFFFF	x100.
peak phase a current	2	IAPEAK	R#.##	FFFFFFFF	x100.
peak phase b current	2	IBPEAK	R#.##	FFFFFFFF	x100.
peak phase c current	2	ICPEAK	R#.##	FFFFFFFF	x100.
Average real power	2	WATTSDEMAND	R#	7FFFFFFF	x1
Average reactive power	2	VARSDEMAND	R#	7FFFFFFF	x1
Average volt amps	2	VADEMAND	R#	FFFFFFFF	x1
Peak real power	2	WATTSPEAK	R#	7FFFFFFF	x1
Peak reactive power	2	VARSPEAK	R#	7FFFFFFF	x1
Peak volt amps	2	VAPEAK	R#	FFFFFFFF	x1
Alarm 1 loss current	1	ALARM1_LOSS_CURRENT	I	FFFF	x1
Alarm 1 reversal	1	ALARM1_REVERSAL	I	FFFF	x1
Alarm 1 unbalance	1	ALARM1_UNBALANCE	I	FFFF	x1
Alarm 1 loss voltage	1	ALARM1_LOSS_VOLTAGE	I	FFFF	x1
Alarm 1 undervoltage	1	ALARM1_UNDERVOLTAGE	I	FFFF	x1
Alarm 1 overvoltage	1	ALARM1_OVERVOLTAGE	I	FFFF	x1
Alarm 1 Impacc	1	ALARM1_IMPACC	I	FFFF	x1
Alarm 1 active	1	ALARM1_ACTIVE	I	FFFF	x1
Alarm 2 loss current	1	ALARM2_LOSS_CURRENT	I	FFFF	x1
Alarm 2 reversal	1	ALARM2_REVERSAL	I	FFFF	x1
Alarm 2 unbalance	1	ALARM2_UNBALANCE	I	FFFF	x1
Alarm 2 loss voltage	1	ALARM2_LOSS_VOLTAGE	I	FFFF	x1

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Alarm 2 undervoltage	1	ALARM2_UNDERVOLTAGE	I	FFFF	x1
Alarm 2 overvoltage	1	ALARM2_OVERVOLTAGE	I	FFFF	x1
Alarm 2 Impacc	1	ALARM2_IMPACC	I	FFFF	x1
Alarm 2 active	1	ALARM2_REVERSAL	I	FFFF	x1
max frequency	1	MAX_FREQUENCY	R#.##	FFFF	x100.
max phase a current	2	MAX_IA	R#.##	FFFFFFFF	x100.
max phase b current	2	MAX_IB	R#.##	FFFFFFFF	x100.
max phase c current	2	MAX_IC	R#.##	FFFFFFFF	x100.
max phase a L-L voltage	2	MAX_PHA_LLV	R#.#	FFFFFFFF	x10.
max phase a L-N voltage	2	MAX_PHA_LNV	R#.#	FFFFFFFF	x10.
max phase b L-L voltage	2	MAX_PHB_LLV	R#.#	FFFFFFFF	x10.
max phase b L-N voltage	2	MAX_PHB_LNV	R#.#	FFFFFFFF	x10.
max phase c L-L voltage	2	MAX_PHC_LLV	R#.#	FFFFFFFF	x10.
max phase c L-N voltage	2	MAX_PHC_LNV	R#.#	FFFFFFFF	x10.
max % THD phase a current	1	MAX_PER_THD_IA	R#	FFFF	x1
max % THD phase b current	1	MAX_PER_THD_IB	R#	FFFF	x1
max % THD phase c current	1	MAX_PER_THD_IC	R#	FFFF	x1
max % THD VAB	1	MAX_PER_THD_VAB	R#	FFFF	x1
max % THD VBC	1	MAX_PER_THD_VBC	R#	FFFF	x1
max % THD VCA	1	MAX_PER_THD_VCA	R#	FFFF	x1
max % THD VAN	1	MAX_PER_THD_VAN	R#	FFFF	x1
max % THD VBN	1	MAX_PER_THD_VBN	R#	FFFF	x1
max % THD VCN	1	MAX_PER_THD_VCN	R#	FFFF	x1
max reactive power	1	MAX_REACTIVE_POWER	R#	7FFFFFFF	x1
max watts	1	MAX_REAL_POWER	R#	7FFFFFFF	x1
max system pf apparent	1	MAX_SYSTEM_PF_APP	R#.##	7FFF	x100.
max system pf displacement	1	MAX_SYSTEM_PF_DISP	R#.##	7FFF	x100.
max VA	2	MAX_VA	R#	FFFFFFFF	x1
min frequency	1	MIN_FREQEUNCY	R#.##	FFFF	x100.
min phase a current	2	MIN_IA	R#.##	FFFFFFFF	x100.
min phase b current	2	MIN_IB	R#.##	FFFFFFFF	x100.
min phase c current	2	MIN_IC	R#.##	FFFFFFFF	x100.
min % THD phase a current	1	MIN_PER_THD_IA	R#	FFFF	x1
min % THD phase b current	1	MIN_PER_THD_IB	R#	FFFF	x1
min % THD phase c current	1	MIN_PER_THD_IC	R#	FFFF	x1
min % THD VAB	1	MIN_PER_THD_VAB	R#	FFFF	x1
min % THD VBC	1	MIN_PER_THD_VBC	R#	FFFF	x1
min % THD VCA	1	MIN_PER_THD_VCA	R#	FFFF	x1
min % THD VAN	1	MIN_PER_THD_VAN	R#	FFFF	x1

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
min % THD VBN	1	MIN_PER_THD_VBN	R#	FFFF	x1
min % THD VCN	1	MIN_PER_THD_VCN	R#	FFFF	x1
min phase a L-L voltage	2	MIN_PHA_LLV	R#.#	FFFFFFFF	x10
min phase a L-N voltage	2	MIN_PHA_LNN	R#.#	FFFFFFFF	x10
min phase b L-L voltage	2	MIN_PHB_LLV	R#.#	FFFFFFFF	x10
min phase b L-N voltage	2	MIN_PHB_LNV	R#.#	FFFFFFFF	x10
min phase c L-L voltage	2	MIN_PHC_LLV	R#.#	FFFFFFFF	x10
min phase c L-N voltage	2	MIN_PHC_LNV	R#.#	FFFFFFFF	x10
min reactive power	2	MIN_REACTIVE_POWER	R#	7FFFFFFF	x1
min watts	2	MIN_REAL_POWER	R#	7FFFFFFF	x1
min system pf apparent	1	MIN_SYSTEM_PF_APP	R#.##	7FFF	x100.
min system pf displacement	1	MIN_SYSTEM_PF_DISP	R#.##	7FFF	x100.
min VA	2	MIN_VA	R#	FFFFFFFF	x1
Update Counter N = 26	1	DEMAND_CURRENT_UPDATE_COUNTER	R#	FFFF	x1
Update counter N = 27	1	DEMAND_POWER_UPDATE_COUNTER	R#	FFFF	x1
min max current changes	1	MIN_MAX_I_CHANGES	R#	FFFF	x1
min max power changes	NA	MIN_MAX_POWER_CHANGES	R#	FFFF	x1
min max per thd I changes	NA	MIN_MAX_PER_THD_I_CHANGES	R#	FFFF	x1
min max per thd v changes	NA	MIN_MAXPER_THD_V_CHANGES	R#	FFFF	x1
min max v changes	NA	MIN_MAX_V_CHANGES	R#	FFFF	x1
System negative peak demand watts	2	SYS_NEG_PEAK_DEMAND_WATTS	R#	FFFFFFFF	x1
system negative peak demand watts time	NA	SYS_NEG_PEAK_DEMAND_WATTS_TIME	TIME	NA	NA
system peak demand watts	2	SYS_DEMAND_WATTS	R#	7FFFFFFF	x1
system positive peak demand watts	2	SYS_POS_PEAK_DEMAND_WATTS	R#	FFFFFFFF	x1
system positive peak demand watts time	NA	SYS_POS_PEAK_DEMAND_WATTS_TIME	TIME	NA	NA
system time last reset demand watts	NA	SYS_TIME_LAST_RESET_DEMAND_WATTS	TIME	NA	NA
Time of Trips	NA	TIME_OF_LAST_EVENT	TIME	NA	NA

IQ DP 4000 Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Open device	010000	OPEN_DEVICE	I	0x600
Close device	010001	CLOSE_DEVICE	I	0x601
Reset peak demand watts	000004	RESET_DMD_WATTS	I	0x602
Reset demand window	000040	RESET_DEMAND_WATTS_WND	I	0x607
Reset alarm 2	000001	RESET_ALARM	I	0x656
Reset alarm 1	000002	RESET_UNIT	I	0x603
Activate relay 1	040101	ACTIVATE_RELAY_1	I	0x63b

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Activate relay 2	040102	ACTIVATE_RELAY_2	I	0x63c
Deactivate relay 1	040201	DEACTIVATE_RELAY_1	I	0x63d
Deactivate relay 2	040202	DEACTIVATE_RELAY_2	I	0x63e
Reset energy	000008	RESET_ENERGY	I	0x606
Reset demand current	000101	RESET_DEMAND_I	I	0x609
Reset product stats	030003	RESET_PRODUCT_SP_STATS	I	0x64a
Reset all min max	000104	RESET_ALL_MIN_MAX	I	0x620
Reset min max current	00010D	RESET_MIN_MAX_I	I	0x621
Reset min max volts	00010E	RESET_MIN_MAX_LL_VOLTS	I	0x625
Reset min max power	000112	RESET_MIN_MAX_POWER	I	0x626
Reset min max I THD	000113	RESET_MIN_MAX_I_THD	I	0x627
Reset min max V THD	000114	RESET_MIN_MAX_V_THD	I	0x649
Trip Device	010002	TRIP_BREAKER	I	0x655
Reset Device	000010	RESET_DEVICE	I	0x658
Reset system demand	00000	RESET_SYSTEM_DEMAND	I	0x658
Reset all min max values	000104	RESET_ALL_MIN_MAX	I	0x61f

IQ DP 4000 Setpoints

Setpoint	Description
Firmware Version Number	Version number of the firmware in the device.
Communication Version Number	Version number of the communication software in the device.
System Configuration	Indicates whether the device is configured for a 3-wire system or a 4-wire system. In a 3-wire system, the device measures line-to-line voltage. In a 4-wire system, the device measures line-to-neutral voltage.
System Frequency	Frequency of the voltage in the system.
Nominal Line-to-Line Voltage	Nominal line-to-line voltage that will be applied to the device terminals.
PT Turns Ratio	PT Turns Ratio.
PhaseCT Turns Ratio	Phase Current Transformer Turns Ratio.
Phase Sequence	The phase rotation in the system. In an ABC system, Phase A leads Phase B by 120 degrees. In a CBA system, Phase C leads Phase B by 120 degrees.
Reset Energy (from Faceplate)	Enables or disables the ability to reset energy values (watthours varhours, VA-hours) from the faceplate.
VARS and PF Sign Convention	Indicates the sign convention that will be displayed to represent vars and PF.
INCOM Programmable Indicator	Indicates whether the device is programmable from IMPACC Series III via the INCOM chip.
I/O Module Installed Indicator	Indicates whether the optional I/O Module is installed.
Relay Programmed	Indicates the type of relay that is programmed.
Pulse Initiator Energy Parameter	Energy parameter used by pulse initiator.
Energy Per Pulse	Energy Per Pulse.
Demand Window	The size of the time interval that the device uses as the consumption sampling for current-related demand calculations.
Synchronization Type	The type of clock synchronization being used by the device.

Setpoint	Description
Descrete Input	Descrete Input.
Demand Window Type	The type of demand window (fixed or sliding).
Power Demand Interval	The size of the time interval that the device uses as the consumption sampling for power-related demand calculations.
Alarm 1 Enabled Setpoint	Enables or disables the Alarm setpoint.
Alarm 2 Enabled Setpoint	Enables or disables the Alarm setpoint.
Alarm Reset Latch/Unlatch Setpoint	Sets the locking mechanism on the alarm.
Trip Delay	Delay period following a trip before the device resets.
Reset Threshold	The value at which the alarm clears.
Reset Delay	Delay period following a reset event before the device resets.
Alarm Mode	Specifies the mode of the Alarm. Mode 1 Mode 2
Voltage Phase Reversal Alarm Setpoint	Enables or disables the voltage phase reversal alarm.
Voltage Phase Loss Alarm Setpoint	Enables or disables the voltage phase loss alarm.
Current Phase Loss Alarm Setpoint	Enables or disables the current phase loss alarm.
Overvoltage Alarm Setpoint	Enables or disables overvoltage alarm.
Overvoltage Alarm Detection Level	Defines the percentage of the overvoltage threshold upon which the device generates an alarm.
Undervoltage Alarm Setpoint	Enables or disables undervoltage alarm.
Undervoltage Alarm Detection Level	Defines the percentage of the overvoltage threshold upon which the device generates an alarm.
Voltage Phase Unbalance Alarm Toggle	Enables or disables the voltage phase unbalance alarm.
Voltage Phase Unbalance Alarm Detection Level	Defines the percentage of the overvoltage threshold upon which the device generates an alarm.

IQ Energy Sentinel (Include the IQ Sentinel Universal Multiple Well Head, IQ Sentinel Universal Single Well Head, and IQ Sentinel Universal With External CT's)

IQ Sentinel Device Data

				Subnetwork Support				
Description	**# of Modbus registers**	**Tag Name**	**DDE Type**	**DIRECT**	**BIM**	**CED**	**Invalid**	**Scale Factor**
Device status	1	STATN	R#	√	√	√	FFFF	x1.
		STATT	M	√	√	√	NA	NA
Device status reason	1	RSONN	R#	√	√	√	FFFF	x1.
		RSONT	M	√	√	√	NA	NA
Raw status	2	RAW_STATUS	I	√	√	√	FFFFFFFF	x1.
Flag 1 2	1	FLAG_2_1	R#	√	√	√	FFFF	x1.
Flag 3	1	FLAG_3	R#	√	√	√	FFFF	x1.

Description	# of Modbus registers	Tag Name	DDE Type	Subnetwork Support DIRECT	BIM	CED	Invalid	Scale Factor
Com version	NA	COM_VERSION	I	√	√	√	NA	NA
Product id	NA	PRODUCT_ID	I	√	√	√	NA	NA
Division code	NA	DIV_CODE	I	√	√	√	NA	NA
Device type	NA	TYPEN	I	√	√	√	NA	NA
Real power	2	WATTS	R#	√	√	√	7FFFFFFF	x1.
Demand power	2	WATTSDEMAND	R#		√	√	7FFFFFFF	x1.
Peak demand power	2	WATTSDEMANDPEAK	R#		√	√	7FFFFFFF	x1.
Energy	2	ENERGY	R#	√	√	√	FFFFFFFF	x1.
5-minute power average	2	POWER_AVG_5MIN	R	√			7FFFFFFF	x1.
5-minute Avdg Pwr Counter	2	DEMAND_POWER_UPDATE_COUNTER	R	√			FFFF	x1.
Peak demand Watts Time	NA	TIME_PEAK_DEMAND_WATTS	TIME		√	√	NA	NA
system negative peak demand watts	2	SYS_NEG_PEAK_DEMAND_WATTS	R#	√	√	√	FFFFFFFF	x1.
system negative peak demand watts time	NA	SYS_NEG_PEAK_DEMAND_WATTS_TIME	TIME	√	√	√	NA	NA
system peak demand watts	2	SYS_PEAK_DEMAND_WATTS	R#	√	√	√	7FFFFFFF	x1.
system positive peak demand watts	2	SYS_POS_PEAK_DEMAND_WATTS	R#	√	√	√	FFFFFFFF	x1.
system positive peak demand watts time	NA	SYS_POS_PEAK_DEMAND_WATTS_TIME	TIME	√	√	√	NA	NA
system time last reset demand watts	NA	SYS_TIME_LAST_RESET_DEMAND_WATTS	TIME	√	√	√	NA	NA

The IQ Energy Sentinel always calculates power demand over five-minute demand windows. Series III calculates Present Demand over a user-specified demand window (10, 15, 30, or 60 minutes) by averaging the appropriate five-minute demand values read from the IQ Energy Sentinel. If Series III fails to receive any of the five minute samples for example, because of loss of power on the Sentinel, then the missing samples are not included in the calculation. The value of sample is a percentage equal to the number of five-minute samples actually used to calculate Present Demand divide by the ideal number of samples that should be used.

IQ Energy Sentinel Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value	Subnetwork Support DIRECT	BIM	CED
Reset Demand Window	000040	RESET_DEMAND_WATTS_WND	I	0x607	√	√	√
Reset Demand Watts	000004	RESET_DMD_WATTS	I	0x602		√	√
Reset system demand	ELOG	RESET_SYSTEM_DEMAND	I	0x658	√	√	√

IQ Sentinel Setpoints

Setpoint	Description
Device Number	The device number assigned to the device from the IMPACC device list.
Device Description	User-defined device description associated with the device taken from the IMPACC device list.
Firmware Version Number	Version number of the firmware in the device.
Communication Version	Version number of the communication software in the device.
Synchronization Type	The type of clock synchronization being used by the device.
Demand Window	The size of the time interval that the device uses as the consumption sampling for current-related demand calculations.
Watt-hour Output Group	Watthour Output Group can be Group 1 to Group 8.
Watt-hour Pulse Setting	Watthour setting.
Demand Alarm Threshold	Demand Alarm Threshold.
CT Turns Ratio	External Current Transformer Turns Ratio.

IQ Power Sentinel

IQ Power Sentinel Device Data

				Subnetwork Support				
Description	**# of Modbus registers**	**Tag Name**	**DDE Type**	**DIRECT**	**BIM**	**CED**	**Invalid**	**Scale Factor**
Device status	1	STATN	R#	√	√	√	FFFF	x1.
		STATT	M	√	√	√	NA	NA
Device status reason	1	RSONN	R#	√	√	√	FFFF	x1.
		RSONT	M	√	√	√	NA	NA
Raw status	2	RAW_STATUS	I	√	√	√	FFFFFFFF	x1.
Flag 2-1	1	FLAG_2_1	R#	√	√	√	FFFF	x1
Flag 3	1	FLAG_3	R#	√	√	√	FFFF	x1
Com version	NA	COM_VERSION	I	√	√	√	NA	NA
Product id	NA	PRODUCT_ID	I	√	√	√	NA	NA
Division code	NA	DIV_CODE	I	√	√	√	NA	NA
Device type	NA	TYPEN	I	√	√	√	NA	NA
Phase A current	2	IA	R#.##	√	√	√	FFFFFFFF	x100
Phase B current	2	IB	R#.##	√	√	√	FFFFFFFF	x100
Phase C current	2	IC	R#.##	√	√	√	FFFFFFFF	x100
Voltage A-B	2	VAB	R#.#	√	√	√	FFFFFFFF	x10
Voltage B-C	2	VBC	R#.#	√	√	√	FFFFFFFF	x10
Voltage C-A	2	VCA	R#.#	√	√	√	FFFFFFFF	x10

				Subnetwork Support				
Description	**# of Modbus registers**	**Tag Name**	**DDE Type**	**DIRECT**	**BIM**	**CED**	**Invalid**	**Scale Factor**
Voltage A-N	2	VAN	R#.#	√	√	√	FFFFFFFF	x10
Voltage B-N	2	VBN	R#.#	√	√	√	FFFFFFFF	x10
Voltage C-N	2	VCN	R#.#	√	√	√	FFFFFFFF	x10
Real Power	2	WATTS	R#	√			7FFFFFFF	x1.
Real power (Bim Com = 0)	2	SYSTEM_WATTS	R#		√	√	7FFFFFFF	x1.
Reactive power	2	VARS	R#	√			7FFFFFFF	x1.
Reactive power (Bim Com = 0)	2	SYSTEM_VARS	R#		√	√	7FFFFFFF	x1.
Volt-amps	2	VA	R#	√	√	√	FFFFFFFF	x1.
Real power, Phase A	2	WATTSA	R#	√	√	√	7FFFFFFF	x1.
Real power, Phase B	2	WATTSB	R#	√	√	√	7FFFFFFF	x1.
Real power, Phase C	2	WATTSC	R#	√	√	√	7FFFFFFF	x1.
Reactive power, Phase A	2	VARSA	R#	√	√	√	7FFFFFFF	x1.
Reactive power, Phase B	2	VARSB	R#	√	√	√	7FFFFFFF	x1.
Reactive power, Phase C	2	VARSC	R#	√	√	√	7FFFFFFF	x1.
Volt-amps, Phase A	2	VAMPA	R#	√	√	√	FFFFFFFF	x1.
Volt-amps, Phase B	2	VAMPB	R#	√	√	√	FFFFFFFF	x1.
Volt-amps, Phase C	2	VAMPC	R#	√	√	√	FFFFFFFF	x1.
Output frequency pf displacement, Phase	1	FREQ	R#.##	√	√	√	FFFF	x100.
Power factor (Bim Com = 0)	1	PFACT	R#		√		7FFF	x100
A pf displacement, Phase	1	PFDISPA	R#.##	√	√	√	7FFF	x100.
B pf displacement, Phase	1	PFDISPB	R#.##	√	√	√	7FFF	x100.
C pf apparent, Phase A	1	PFDISPC	R#.##	√	√	√	7FFF	x100.
pf apparent, Phase A	1	PFAPPA	R#.##	√	√	√	7FFF	x100.
pf apparent, Phase B	1	PFAPPB	R#.##	√	√	√	7FFF	x100.
pf apparent, Phase C	1	PFAPPC	R#.##	√	√	√	7FFF	x100.
power factor displac.	1	PFDISP	R#.##	√	√	√	7FFF	x100.
power factor apparent	1	PFAPP	R#.##	√	√	√	7FFF	x100.
Demand power	2	WATTSDEMAND	R#		√	√	7FFFFFFF	x1.
Peak demand power	2	WATTSDEMANDPEAK	R#		√	√	7FFFFFFF	x1.
Energy	2	ENERGY	R#	√	√	√	FFFFFFFF	x1.
5-minute power average	2	POWER_AVG_5MIN	R#	√			7FFFFFFF	x1.
5-minute Avdg Pwr Counter	1	DEMAND_POWER_UPDATE_COUNTER	R	√			FFFF	x1.
system negative peak demand watts	2	SYS_NEG_PEAK_DEMAND_WATTS	R#	√	√	√	FFFFFFFF	x1.
system negative peak demand watts time	NA	SYS_NEG_PEAK_DEMAND_WATTS_TIME	TIME	√	√	√	NA	NA
system peak demand watts	2	SYS_DEMAND_WATTS	R#	√	√	√	7FFFFFFF	x1.

Description	# of Modbus registers	Tag Name	DDE Type	Subnetwork Support: DIRECT	BIM	CED	Invalid	Scale Factor
system positive peak demand watts	2	SYS_POS_PEAK_DEMAND_WATTS	R#	√	√	√	FFFFFFFF	x1.
system positive peak demand watts time	NA	SYS_POS_PEAK_DEMAND_WATTS_TIME	TIME	√	√	√	NA	NA
system time last reset demand watts	NA	SYS_TIME_LAST_RESET_DEMAND_WATTS	TIME	√	√	√	NA	NA

The IQ Power Sentinel always calculates power demand over five-minute demand windows. Series III calculates Present Demand over a user-specified demand window (10, 15, 30, or 60 minutes) by averaging the appropriate five-minute demand values read from the IQ Power Sentinel. If Series III fails to receive any of the five minute samples for example, because of loss of power on the Sentinel, then the missing samples are not included in the calculation. The value of sample is a percentage equal to the number of five-minute samples actually used to calculate Present Demand divide by the ideal number of samples that should be used.

IQ Power Sentinel Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value	Subnetwork Support: DIRECT	BIM	CED
Reset Demand Window	000040	RESET_DEMAND_WATTS_WND	I	0x607	√	√	√
Reset Demand Watts	000004	RESET_DMD_WATTS	I	0x602		√	√
Reset system demand	ELOG	RESET_SYSTEM_DEMAND	I	NA	√	√	√

IQ Power Sentinel Setpoints

Setpoint	Description
Device Number	The device number assigned to the device from the IMPACC device list.
Device Description	User-defined device description associated with the device taken from the IMPACC device list.
Firmware Version Number	Version number of the firmware in the device.
Communication Version Number	Version number of the communication software in the device.
System Frequency	Frequency of the voltage in the system.
System Configuration	Indicates whether the device is configured for a 3-wire system or a 4-wire system. In a 3-wire system, the device measures line-to-line voltage. In a 4-wire system, the device measures line-to-neutral voltage.
Vars Sign Convention	Specifies whether to use +vars for lagging power factor and -vars for leading power factor, or-vars for lagging power factor and +vars for leading power factor.
Synchronization Type	The type of clock synchronization being used by the device.
Demand Window	The size of the time interval that the device uses as the consumption sampling for current-related demand calculations.
Watt-hour Output Group	Watthour Output Group can be Group 1 to Group 8.
Watt-hour Setting	Watthour setting.
Demand Alarm Limit	Demand Alarm Threshold.

IQ Transfer Switch

IQ Transfer Switch Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Device status	1	STATN	R#	FFFF	x1
		STATT	M	NA	NA
Device status reason	1	RSONN	R#	FFFF	x1
		RSONT	M	NA	NA
Raw Status	2	RAW_STATUS	I	FFFFFFFF	x1
Flag 1 2	1	FLAG_2_1	R#	FFFF	x1.
Flag 3 4	1	FLAG_3_4	R#	FFFF	x1.
Flag 5 6	1	FLAG_5_6	R#	FFFF	x1.
Flag 7 8	1	FLAGS_7_8	R#	FFFF	x1.
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Source 1 available hours	1	SRC1AVALHR	R#	FFFF	x1.
Source 1 available minutes	1	SRC1AVALMIN	R#	FFFF	x1.
Source 1 connect hours	1	SRC1CONNECTHR	R#	FFFF	x1.
Source 1 connect minutes	1	SRC1CONNECTMIN	R#	FFFF	x1.
Source 1 runtime hours	1	SRC1RUNTIMEHR	R#	FFFF	x1.
Source 1 runtime minutes	1	SRC1RUNTIMEMIN	R#	FFFF	x1.
Source 1 freq	1	SRC1FREQ	R#.##	FFFF	x100
Source 1 voltage a-b	1	SRC1VAB	R#	FFFF	x1.
Source 1 voltage b-c	1	SRC1VBC	R#	FFFF	x1.
Source 1 voltage c-a	1	SRC1VCA	R#	FFFF	x1.
Source 2 available hours	1	SRC2AVALHR	R#	FFFF	x1.
Source 2 available minutes	1	SRC2AVALMIN	R#	FFFF	x1.
Source 2 connect hours	1	SRC2CONNECTHR	R#	FFFF	x1.
Source 2 connect minutes	1	SRC2CONNECTMIN	R#	FFFF	x1.
Source 2 runtime hours	1	SRC2RUNTIMEHR	R#	FFFF	x1.
Source 2 runtime minutes	1	SRC2RUNTIMEMIN	R#	FFFF	x1.
Source 2 freq	1	SRC2FREQ	R#.##	FFFF	x100
Source 2 voltage a-b	1	SRC2VAB	R#	FFFF	x1.
Source 2 voltage b-c	1	SRC2VBC	R#	FFFF	x1.
Source 2 voltage c-a	1	SRC2VCA	R#	FFFF	x1.
Number of transfers	1	NUMBEROFTRANSFERS	R#	FFFF	x1.

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
load energized hours	1	LOADENERGIZEDHR	R#	FFFF	x1.
load energized minutes	1	LOADENERGIZEDMIN	R#	FFFF	x1.
Load energized	1	LOAD_ENERGIZED	I	FFFF	x1.
Src 1 preferred	1	SRC1PREFERRED	I	FFFF	x1.
Src 2 preferred	1	SRC2PREFERRED	I	FFFF	x1.
Src 1 connected	1	SRC1CONNECTED	I	FFFF	x1.
Src 2 connected	1	SRC2CONNECTED	I	FFFF	x1.
Src 1 available	1	SRC1AVAILABLE	I	FFFF	x1.
Src 2 available	1	SRC2AVAILABLE	I	FFFF	x1.
Frequency difference	1	FREQUENCY_DIFF	R#.##	7FFF	x100
Voltage difference	1	VOLTAGE_DIFF	R#.##	7FFF	x100
voltage a-b	1	VAB	R#	FFFF	x1.
voltage b-c	1	VBC	R#	FFFF	x1.
voltage c-a	1	VCA	R#	FFFF	x1.
Time of Trips		TIME_OF_LAST_EVENT	TIME	NA	NA

IQ Transfer Switch Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Reset operations count	000102	RESET_OP_COUNT	I	0x60b
Reset source 1 available time	000301	RESET_SRC1_AVAL_TIME	I	0x62a
Reset source 1 connect time	000302	RESET_SRC1_CONN_TIME	I	0x62b
Reset source 1 run time	000303	RESET_SRC1_RUN_TIME	I	0x62c
Reset source 2 available time	000304	RESET_SRC2_AVAL_TIME	I	0x62d
Reset source 2 connect time	000305	RESET_SRC2_CONN_TIME	I	0x62e
Reset source 2 run time	000306	RESET_SRC2_RUN_TIME	I	0x62f
Reset load energized time	000307	RESET_LOAD_ENERGIZED_TIME	I	0x630
Reset transfer status	000308	RESET_TRANSFER_STATUS	I	0x631
Start ATS test	050001	START_TEST	I	0x65B
Bypass timer, transfer now	050002	BYPASS_TIMER_TRANSFER_NOW	I	0x633
Manual transfer	050004	MANUAL_TRANSFER	I	0x635
Stop test	050005	STOP_TEST	I	0x640

IQ Transfer Switch Setpoints

Setpoint	Description
Firmware Revision Number	Revision number of the firmware in the device.
Communication Version	Version number of the communication software in the device.
Engine Start Delay	Period of delay following a transfer before the generator contacts are closed.
Normal to Emergency Transition Delay	Period of delay following transfer to the emergency source before the normal source breaker is

Setpoint	Description
	opened.
Emergency to Normal Transition Delay	Period of delay following transfer to the normal source before the emergency source breaker is opened.
Engine Cooldown Delay	Period of delay following a transfer to the other source to allow cool-down before the breaker is opened.
Nominal Frequency	Nominal frequency of the voltage in the system. 50 Hz 60 Hz
Nominal Voltage	Nominal RMS line-to-line voltage of the system.
Number of Phases	The number of phases in the system.
Source Undervoltage Dropout Setting	When the voltage from the source falls below the setting, the source becomes unavailable.
Source Undervoltage Pickup Setting	When the voltage from the source rises above the setting, the source becomes available.
Source Undervoltage Dropout Setting	When the voltage from the source falls below the setting, the source becomes unavailable.
Source Undervoltage Pickup Setting	When the voltage from the source rises above the setting, the source becomes available.
Source Overvoltage Dropout Setting	When the voltage from the source rises above the setting, the source becomes unavailable.
Source Overvoltage Pickup Setting	When the voltage from the source rises above the setting, the source becomes available.
Source Overvoltage Dropout Setting	When the voltage from the source rises above the setting, the source becomes unavailable.
Source Overvoltage Pickup Setting	When the voltage from the source rises above the setting, the source becomes available.
Source Underfrequency Dropout Setting	When the frequency of the voltage from the source falls below the setting, the source becomes unavailable.
Source Underfrequency Pickup Setting	When the frequency of the voltage from the source rises above the setting, the source becomes available.
Source Underfrequency Dropout Setting	When the frequency of the voltage from the source falls below the setting, the source becomes unavailable.
Source Underfrequency Pickup Setting	When the frequency of the voltage from the source rises above the setting, the source becomes available.
Source 1 Dropout	When the frequency of the voltage from the source rises above the setting, the source becomes unavailable.
Source 1 Pickup	When the frequency of the voltage from the source falls below the setting, the source becomes available.
Source 2 Dropout	When the frequency of the voltage from the source rises above the setting, the source becomes unavailable.
Source 2 Pickup	When the frequency of the voltage from the source falls below the setting, the source becomes available.
Load Sensing Setpoint	Enables load sensing for the device. While enabled the device will hold the transfer switch in the neutral position for a specified delay to wait for the load voltage to fall below the Load Voltage Decay Threshold.
Time Delay Neutral Timer	Period of delay that the device will hold the transfer switch in the neutral position waiting for the load voltage to fall below the Load Voltage Decay Threshold.
Load Voltage Decay Threshold	If Load Sensing is enabled, this is the target load voltage level at which the device will continue the transfer. If the load does not fall to this level during the Time Delay Neutral period, the transfer is canceled. 3-35 volts
Commit to Transfer in Time Delay Normal-Emergency Setpoint	Specifies whether a transfer to the emergency source will continue if the normal source becomes available during Time Delay Normal-Emergency period.
Preferred Transfer Source	The source to which, if available, the load will be connected. Source 1 Source 2

Setpoint	Description
	No preference
Manual Re-transfer Mode	The source to which, if available, the load will be connected. Source 1 Source 2 No preference
Subnetwork Pre-transfer Time	Period of delay that prevents retransfer from occurring until the timer times out or a report-back signal is received form a remote relay.
Subnetwork Sequencing Time	Period of delay following a transfer to before closing up to 10 remote relays.
Number of Generators	The number of generators connected to the system: 0 1 2
Test Mode	Specifies the type of engine test. No Load Transfer Load Transfer Disable Test
Engine Run Test Time	Run time for the engine test in minutes. 0-600 minutes
Plant Exerciser Setpoint	Enables automatic weekly test of the generator.
Plant Exerciser Load Transfer Setpoint	Enables load transfer for the automatic weekly generator test.
Plant Exerciser Day of Week	The day of the week at the specified time on which the automatic weekly generator test will be performed.
Plant Exerciser Hour of Day Minute of Hour	The time of day on the specified day of the week at which the automatic weekly generator test will be performed.
Engine Start Delay Setpoint	Factory option for Engine Start Time Delay feature. Factory options are enabled/disabled at the factory.
Normal to Emergency Delay Setpoint	Factory option for Normal to Emergency Time Delay feature. Factory options are enabled/disabled at the factory.
Emergency to Normal Delay Setpoint	Factory option for Emergency to Normal Time Delay feature. Factory options are enabled/disabled at the factory.
Engine Cooldown Delay Setpoint	Factory option for Engine Cooldown Time Delay feature. Factory options are enabled/disabled at the factory.
TDN Bypass Setpoint	Factory option for Time Delay Neutral Bypass feature. Factory options are enabled/disabled at the factory.
Preferred Source Setpoint	Factory option enabling the Available/Preferred Source feature. Factory options are enabled/disabled at the factory.
Plant Exerciser Setpoint	Enables Plant Exerciser.
Manual Retransfer Mode Setpoint	Factory option for specification of Manual Retransfer Mode feature. Factory options are enabled/disabled at the factory.
Time Delay Neutral Setpoint	Factory option for Time Delay Neutral feature. Factory options are enabled/disabled at the factory.
TDN Load Sense Delay Setpoint	Factory option for TDN Load Sense Delay feature. Factory options are enabled/disabled at the factory.
Pre-transfer Signal Setpoint	Factory option for Pre-transfer Signal feature. Factory options are enabled/disabled at the factory.
Remote Sequencing Setpoint	Factory option for Remote Sequencing feature. Factory options are enabled/disabled at the factory.
Service Entrance Setpoint	Factory option for Service Entrance feature. Factory options are enabled/disabled at the factory.
Overcurrent Protection Setpoint	Factory option for Overcurrent Protection feature. Factory options are enabled/disabled at the

Setpoint	Description
	factory.
Switch Type	Factory option the Switch Type feature. The type can be either motor or SPB type.
Under Frequency Protection Setpoint	Factory option for Under Frequency protection feature for the source. Factory options are enabled/disabled at the factory.
Over Frequency Protection Setpoint	Factory option for Over Frequency protection feature for the source. Factory options are enabled/disabled at the factory.
Over Voltage Protection Setpoint	Factory option for Over Voltage protection feature for the source. Factory options are enabled/disabled at the factory.
Under Voltage Protection Setpoint	Factory option for Under Voltage protection feature for the source. Factory options are enabled/disabled at the factory.

MMCO Relay

MMCO Relay Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Device status	1	STATN	R#	FFFF	x1
		STATT	M	NA	NA
Device status reason	1	RSONN	R#	FFFF	x1
		RSONT	M	NA	
Raw Status	2	RAW_STATUS	I	FFFFFFFF	x1.
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Phase A current	1	IA	R#	FFFF	x1.
Phase B current	1	IB	R#	FFFF	x1.
Phase C current	1	IC	R#	FFFF	x1.
Phase G current	1	IG	R#	FFFF	x1.
Time at most recent trip	NA	TIME_OF_LAST_EVENT	TIME	NA	NA
IA value at mosr recent trip	1	IA_TRIP	R#	FFFF	x1.
IB value at mosr recent trip	1	IB_TRIP	R#	FFFF	x1.
IC value at mosr recent trip	1	IC_TRIP	R#	FFFF	x1.
IG value at mosr recent trip	1	IG_TRIP	R#	FFFF	x1.
Raw status	2	RAW_STATUS	R#	FFFFFFFF	x1.

MMCO Relay Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Reset unit	000000	RESET_UNIT	I	0x603

MMCO Relay Setpoints

Setpoint	Description
Firmware Version	Version number of the firmware in the device.
Communication Version Number	Version number of the communication software in the device.
Phase CT Turns Ratio	Phase Current Transformer Turns Ratio.
Ground CT Turns Ratio	Ground CT Turns Ratio.
Phase Inverse Time Pickup	When the current reaches the setting, the device generates a Phase Inverse Time Pickup event.
Phase Instantaneous Pickup Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches the level of the pickup setting, the device trips.
Ground Instantaneous Pickup Setting	Defines the amperage aspect of the associated segment of the trip curve of the device. When the current reaches the level of the pickup setting, the device trips.
Phase Time Dial Setting	Phase Time Dial Setting.
Ground Time Dial Setting	Ground Time Dial Setting..
Phase Time-current Curve	Phase Time-current Curve.
Ground Time-current Curve	Ground Time-current Curve.
Overcurrent Relay Time Curve	Overcurrent Relay Time Curve.
System Frequency	Frequency of the voltage in the system.
CT Secondary Current Rating	CT Secondary Current Rating.
Number of Phases	The number of phases in the system.
Ground Fault Protection Indicator	Indicates whether ground fault protection is enabled.
External Reset	External Reset.
Real Time Clock	Real Time Clock.
Directional Control	Directional Control.

MPCV Relay

MPCV Relay Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Device status	1	STATN	R#	FFFF	x1
		STATT	M	NA	NA
Device status reason	1	RSONN	R#	FFFF	x1
		RSONT	M	NA	NA
Raw Status	2	RAW_STATUS	I	FFFFFFFF	x1

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Flag 1 2	1	FLAG_2_1	R#	FFFF	x1.
Flag 3 4	1	FLAG_3_4	R#	FFFF	x1.
Flag 5 6	1	FLAG_5_6	R#	FFFF	x1.
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Phase A current	2	IA	R#.#	FFFFFFFF	x10.
Phase B current	2	IB	R#.#	FFFFFFFF	x10.
Phase C current	2	IC	R#.#	FFFFFFFF	x10.
Voltage A-N	1	VAN	R#	FFFF	x1.
Voltage B-N	1	VBN	R#	FFFF	x1.
Voltage C-N	1	VCN	R#	FFFF	x1.
Real power	2	WATTS	R#	7FFFFFFF	x1.
Reactive Power	2	VARS	R#	7FFFFFFF	x1.
Power factor	1	PFACT	R#.##	7FFF	x100.
Voltage A-T	1	VAT	R#	FFFF	x1.
Voltage B-T	1	VBT	R#	FFFF	x1.
Voltage C-T	1	VCT	R#	FFFF	x1.
Temperature	1	TEMP	R#	FFFF	x1.
Auxiliary 2	1	AUX2	I	FFFF	x1.
Auxiliary 3	1	AUX3	I	FFFF	x1.
Auxiliary 4	1	AUX4	I	FFFF	x1.
Phasing voltage A	1	PHASE_A_VOLTAGE	R#.#	7FFF	x1.
Phasing voltage B	1	PHASE_B_VOLTAGE	R#.#	7FFF	x1.
Phasing voltage C	1	PHASE_C_VOLTAGE	R#.#	7FFF	x1.
Time of Trips	NA	TIME_OF_LAST_EVENT	TIME	NA	NA

MPCV Relay Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Remote open & block open	010000	CLEAR_OPEN_BLOCK_OPEN	I	0x659
Clear block open	010001	CLEAR_BLOCK_OPEN	I	0x65a
Reset pumping fault	000001	RESET_PUMPING_FAULT	I	0x653
Reset slave stats	030002	RESET_SLAVE_STATS	I	0x649

MPCV Relay Setpoints

Setpoint:	Description
Device Number	The device number assigned to the device from the IMPACC device list.
Device Description	User-defined device description associated with the device taken from the IMPACC device list.
Firmware Version Number	Version number of the firmware in the device.
Communication Version Number	Version number of the communication software in the device.
System Frequency	Frequency of the voltage in the system.
Phase Sequence	The phase rotation in the system. In an ABC system, Phase A leads Phase B by 120 degrees. In a CBA system, Phase C leads Phase B by 120 degrees.
CT Rating	CT Rating.
System Voltage Setting	System voltage setting.
Master Line Voltage	Voltage of master line.
Master Line Type	Type of master line (straight/curved).
Phasing Line (straight)	Number of degrees. This field is enabled only if the Master Line type is “straight.”
Phasing Line (curved)	Number of degrees. This field is enabled only if the Master Line type is “curved.”
Left Hand Master Line	Number of degrees. This field is enabled only if the Master Line type is “curved.”
Reverse Trip Percentage	Reverse Trip (percentage).
Time Delay	If Time Delay type is Time, then you can set the specific number of seconds for the time delay (0 to 300 seconds). If the Time Delay type is Infinite, the system will set this setting to INFINITE automatically.
Nonsensitive Trip Percentage	If the Non-sensitive Trip Type is Non-Zero, you can set the specific percentage.
Watt/Var Toggle	Watt/Var (On/Off).
Anti-Pump Toggle	Enables Anti-Pump feature (On/Off).
Anti-Pump Pumping Cycles	Anti-Pump Pumping Cycles (3-20 cycles). This field is enabled only if Anti-Pump is set to On.
Pumping Time	Pumping Time (30 to 300 seconds). This field is enabled only if Anti-Pump is set to On.
Pump Lockout Reset Time	Pump reset time (15 min. to 60 min.). This field is enabled only if Anti-Pump is set to On.
Lagging var/PF Sign Convention	Indicates the sign convention that will be displayed to represent vars and PF.

Power Manager

Power Manager with Transducer and Power Manager without Transducer

Power Manager with Transducer Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Status	1	STATN	R#	FFFF	x1
		STATT	M	NA	NA
Reason	1	RSONN	R#	FFFF	NA
		RSONT	M	FFFF	x1
Raw Status	2	RAW_STATUS	I	FFFFFFFF	NA

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Energy	2	ENERGY	R#.##	FFFFFFFF	x100
System Demand	2	SYS_DEMAND_WATTS	R#	7FFFFFFF	x1
System Negative Peak Demand	2	SYS_NEG_PEAK_DEMAND_WATTS	R#	FFFFFFFF	x1
System Negative Peak Demand Time	NA	SYS_NEG_PEAK_DEMAND_WATTS_TIME	TIME	NA	NA
System Positive Peak Demand	2	SYS_POS_PEAK_DEMAND_WATTS	R#	FFFFFFFF	x1
System Positive Peak Demand Time	NA	SYS_POS_PEAK_DEMAND_WATTS_TIME	TIME	NA	NA
System Demand Last Reset Time	NA	SYS_TIME_LAST_RESET_DEMAND_WATTS	TIME	NA	NA
V(A-N)	2	VAN	R#.##	FFFFFFFF	x100
V(B-N)	2	VBN	R#.##	FFFFFFFF	x100
V(C-N)	2	VCN	R#.##	FFFFFFFF	x100
Real Power	2	WATTS	R#	7FFFFFFF	x1
Branch Circuit in Alarm	1	BRANCH_CIRCUIT_ALARM	I	FFFF	x1
Branch Circuit Tripped	1	BRANCH_CIRCUIT_TRIPPED	I	FFFF	x1
Tamper Detected	1	TAMPER_FLAG_DETECTED	I	FFFF	x1

Power Manager with Transducer Device Control

Description	INCOM CTRL COMMAND	Tag Name	DDE Type	Modbus Value
Reset Tamper Flag	000009	RESET_TAMPER_FLAG_9	1	0x665
Reset Tamper Flag	000008	RESET_TAMPER_FLAG_8	1	0x664
Reset Tamper Flag	000007	RESET_TAMPER_FLAG_7	1	0x663
Reset Tamper Flag	000006	RESET_TAMPER_FLAG_6	1	0x662
Reset Tamper Flag	000005	RESET_TAMPER_FLAG_5	1	0x661
Reset Tamper Flag	000004	RESET_TAMPER_FLAG_4	1	0x660
Reset Tamper Flag	000003	RESET_TAMPER_FLAG_3	1	0x65F
Reset Tamper Flag	000002	RESET_TAMPER_FLAG_2	1	0x65E
Reset Tamper Flag	000001	RESET_TAMPER_FLAG_1	1	0x65D
Reset System Demand	000000	RESET_SYSTEM_DEMAND	1	0x658
Reset Device	000010	RESET_DEVICE	1	

Power Manager without Transducer Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Status	1	STATN	R#	FFFF	x1
		STATT	M	NA	NA
Reason	1	RSONN	R#	FFFF	x1
		RSONT	M	NA	NA
Raw Status	2	RAW_STATUS	I	FFFFFFFF	
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
System Demand	2	SYS_DEMAND_WATTS	R#	7FFFFFFF	x1
System Negative Peak Demand	2	SYS_NEG_PEAK_DEMAND_WATTS	R#	FFFFFFFF	x1
System Negative Pieak Demand Time	0	SYS_NEG_PEAK_DEMAND_WATTS_TIME	TIME	NA	NA
System Possitive Peak Demand	2	SYS_POS_PEAK_DEMAND_WATTS	R#	FFFFFFFF	x1
System Possitive Peak Demand Time	0	SYS_POS_PEAK_DEMAND_WATTS_TIME	TIME	NA	NA
system Time Demand Last Reset	0	SYS_TIME_LAST_RESET_DEMAND_WATTS	TIME	NA	NA
Watts	2	WATTS	R#	7FFFFFFF	x1
Energy	2	ENERGY	R#.##	FFFFFFFF	x1
Tamper Flag Detected	1	TAMPER_FLAG_DETECTED			x1
V(A-N)	2	VAN	R#.##	FFFFFFFF	x100
V(B-N)	2	VBN	R#.##	FFFFFFFF	x100
V(C-N)	2	VCN	R#.##	FFFFFFFF	x100
Branch Circuit in Alarm	1	BRANCH_CIRCUIT_ALARM	I	FFFF	x1
Branch Circuit Tripped	1	BRANCH_CIRCUIT_TRIPPED	I	FFFF	x1

Power Manager without Transducer Device Control

Description	INCOM CTRL COMMAND	Tag Name
Reset Tamper Flag	000009	RESET_TAMPER_FLAG_9
Reset Tamper Flag	000008	RESET_TAMPER_FLAG_8
Reset Tamper Flag	000007	RESET_TAMPER_FLAG_7
Reset Tamper Flag	000006	RESET_TAMPER_FLAG_6
Reset Tamper Flag	000005	RESET_TAMPER_FLAG_5
Reset Tamper Flag	000004	RESET_TAMPER_FLAG_4
Reset Tamper Flag	000003	RESET_TAMPER_FLAG_3

Description	INCOM CTRL COMMAND	Tag Name
Reset Tamper Flag	000002	RESET_TAMPER_FLAG_2
Reset Tamper Flag	000001	RESET_TAMPER_FLAG_1
Reset System Demand	NA	RESET_SYSTEM_DEMAND
Reset Device	000010	RESET_DEVICE

Power Manager Setpoints

Setpoint	Description
Firmware Version Number	Version number of the firmware in the device.
Communication Version Number	Version number of the communication software in the device.
Branch Circuit Identifier	The unique 12-bit hexadecimal number that identifies the transducer or load controller position in the loadcenter. The most significant two nibbles define the loadcenter breaker position. The following values are permitted: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9. The least significant nibble is used in double breaker applications to distinguish the two branch circuits originating from a single breaker position. The following values are permitted: 0, A, B. 000 is reserved to designate the service entrance. FFF is used to disable a transducer or load controller.
Transducer Class	The 4-bit number that identifies the full-load current rating of the transducer. Reserved 10A 20A 30A 50A 70A 100A 125A Reserved 150A 200A 225A 320A 400A 600A Uninstalled
CT Connection	The 4-bit code that identifies the location and orientation of the current transformer sensor relative to the branch circuit's load connection. Auto L-N N-A N-B N-C A-N Auto L-L A-B A-C B-N B-A Disabled B-C C-N C-A

Setpoint	Description
	C-B Disabled
Tamper Flag	Flag that is set whenever a change is detected in the class of a configured sensor.
INCOM Control Enable Flag	Permits control of the load controller by INCOM communication.
CEBus Control Enable Flag	Permits control of the load controller by CEBus communication.
X-10 Control Enable Flag	Permits control of the load controller by X-10 communication.
Emergency Restore Enable Flag	Permits depression of the Power Manager's "emergency restore pushbutton" to override a shed operation specified for this load controller.

Transducer Branch Circuit Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Status	1	STATN	R#	FFFF	x1
		STATT	M	NA	NA
Reason	1	RSONN	R#	FFFF	x1
		RSONT	M	NA	NA
Raw Status	2	RAW_STATUS	I	FFFFFFFF	x1
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Energy	2	ENERGY	R#.##	FFFFFFFF	x1
Real Power	2	WATTS	R#	7FFFFFFF	x1
Transducer Auto Detect	1	TRANSDUCER_AUTO_DETECTED	I	FFFF	x1
Tamper Flag Detected	1	TAMPER_FLAG_DETECTED	I	FFFF	x1

Transducer Branch Circuit Device Controller

Description	INCOM CTRL COMMAND	Tag Name	Modbus Value
Reset Energy	000008	RESET_ENERGY	0x606
Reset System Demand	NA	RESET_SYSTEM_DEMAND	0x658

Transducer and Load Controller Branch Circuit Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Description	**# of Modbus registers**	**Tag Name**	**DDE Type**	**Invalid**	**Scale Factor**

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Status	1	STATN	R#	FFFF	x1
		STATT	M	NA	NA
Reason	1	RSONN	R#	FFFF	x1
		RSONT	M	NA	NA
Raw Status	2	RAW_STATUS	I	FFFFFFFF	x1
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Energy	2	ENERGY	R#.##	FFFFFFFF	x1
Real Power	2	WATTS	R#	7FFFFFFF	x1
Transducer Auto Detect	1	TRANSDUCER_AUTO_DETECTED	I	FFFF	x1
Tamper Flag Detected	1	TAMPER_FLAG_DETECTED	I	FFFF	x1

Transducer and Load Controller Branch Circuit Device Control

Description	INCOM CTRL COMMAND	Tag Name	Modbus Value
Close Breaker	010001	CLOSE_DEVICE	0x601
Open Breaker	010000	OPEN_DEVICE	0x600
Reset Energy	000008	RESET_ENERGY	0x606
Reset System Demand	NA	RESET_SYSTEM_DEMAND	0x658

Load Controller Branch Circuit Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Description	**# of Modbus registers**	**Tag Name**	**DDE Type**	**Invalid**	**Scale Factor**
Status	1	STATN	R#	FFFF	x1
		STATT	M	NA	NA
Reason	1	RSONN	R#	FFFF	x1
		RSONT	M	NA	NA
Raw Status	2	RAW_STATUS	I	FFFFFFFF	x1

Load Controller Branch Circuit Device Control

Description	INCOM CTRL COMMAND	Tag Name	Modbus Value
Close Breaker	010001	CLOSE_DEVICE	0x601
Open Breaker	010000	OPEN_DEVICE	0x600

Universal RTD

Universal RTD Device Data

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Device status	1	STATN	R#	FFFF	x1.
		STATT	M	NA	NA
Device status reason	1	RSONN	R#	FFFF	x1.
		RSONT	M	NA	NA
Raw status	2	RAW_STATUS	I	FFFFFFFF	x1.
Flag 1	1	FLAGS_1	R#	FFFF	x1.
Com version	NA	COM_VERSION	I	NA	NA
Product id	NA	PRODUCT_ID	I	NA	NA
Division code	NA	DIV_CODE	I	NA	NA
Device type	NA	TYPEN	I	NA	NA
Ambient temperature	1	AUX	R#	FFFF	x1.
Validity bit for AUX	1	VALIDITY_AUX	I	FFFF	x1.
Winding temperature A1 (wt1)	1	WT1	R#	FFFF	x1.
Winding temperature A2 (wt2)	1	WT2	R#	FFFF	x1.
Winding temperature B1 (wt3)	1	WT3	R#	FFFF	x1.
Winding temperature B2 (wt4)	1	WT4	R#	FFFF	x1.
Winding temperature C1 (wt5)	1	WT5	R#	FFFF	x1.
Winding temperature C2 (wt6)	1	WT6	R#	FFFF	x1.
Validity bit for WT1	1	VALIDITY_WT1	I	FFFF	x1.
Validity bit for WT2	1	VALIDITY_WT2	I	FFFF	x1.
Validity bit for WT3	1	VALIDITY_WT3	I	FFFF	x1.
Validity bit for WT4	1	VALIDITY_WT4	I	FFFF	x1.
Validity bit for WT5	1	VALIDITY_WT5	I	FFFF	x1.
Validity bit for WT6	1	VALIDITY_WT6	I	FFFF	x1.
Motor bearing temperature 1	1	MBT1	R#	FFFF	x1.
Motor bearing temperature 2	1	MBT2	R#	FFFF	x1.
Validtity bit for MBT1	1	VALIDITY_MB1	I	FFFF	x1.
Validity bit for MBT2	1	VALIDITY_MB2	I	FFFF	x1.

Description	# of Modbus registers	Tag Name	DDE Type	Invalid	Scale Factor
Load bearing temperature 1	1	LBT1	R#	FFFF	x1.
Load bearing temperature 2	1	LBT2	R#	FFFF	x1.
Validity bit for LBT1	1	VALIDITY_LB1	I	FFFF	x1.
Validity bit for LBT2	1	VALIDITY_LB2	I	FFFF	x1.
30F N=1 Validity 1	1	TEMPVAL1	R#	FFFF	x1.
30F N=1 Validity 2	1	TEMPVAL2	R#	FFFF	x1.
Validity bit for DEV	1	VALIDITY_DEV	I	FFFF	x1.

Universal RTD Device Control

None.

Universal RTD Setpoints

Setpoints	Description
Firmware Version Number	Version number of the firmware in the device.
Firmware Revision Number	Revision number of the firmware in the device.
Motor Winding RTDs	Motor Winding RTDs
Motor Bearing RTDs	Motor Bearing RTDs
Load Bearing RTDs	Load Bearing RTDs
Auxiliary RTD	Auxiliary RTD

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