

Honeywell A3 and Landis+Gyr S4x Commercial Meter: Q&A

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Supported Commercial/Polyphase Meters

- **Honeywell A3**

- Use [Metercat](#) to generate EER file with program changes
- Meter firmware v5.1+ required
- Four components are available for remote programming:
 - Load Profile – Per phase voltage interval length
 - Instrumentation Profiling
 - Special Dates – Demand reset, holidays, season changes, DST
 - Rates – TOU day types, TOU times



- **Landis+Gyr S4x**

- Use [1132Prog](#) to generate script file with program changes
- Meter firmware v8.2+ required
- Meter program adjustments and full meter programs are available for remote programming



Honeywell A3

Honeywell A3 – Cost Effective Meter

A3T

Measures and Calculates:

- kWh on a time-of-use (TOU) basis

For the A3T meter, the following base meter and additional functionalities are available:							
Meter type	kWh	TOU	Load Profile (2 Channels)	Instrumentation Profile (32 Channels)	PQM	Quantities	LP Channels
A3T	•	•				1	0
A3TQ	•	•			•	1	0
A3TL	•	•	•			1	2
A3TLQ	•	•	•		•	1	2
A3TLN	•	•	•	•		1	2
A3TLNQ	•	•	•	•	•	1	2

A3K

Measures and Calculates:

- kWh on a TOU basis
- Volt-ampere-hours (kVAh) and kVA on a TOU basis
- kVAh is measured and calculated arithmetically
- Volt-ampere-reactive-hours (kVARh) and kVAR on a TOU basis

For the A3K meter, the following base meter and additional functionalities are available:								
Type	kWh	kVARh	kVAh	TOU	Instrumentation Profile (32 Channels)	PQM	Quantities	Load Profile Channels
A3K	•	•	•	•			2	0
A3KQ	•	•	•	•		•	2	0
A3KL	•	•	•	•			2	8
A3KLQ	•	•	•	•		•	2	8
A3KLN	•	•	•	•	•		2	8
A3KLNQ	•	•	•	•	•	•	2	8
A3KA	•	•	•	•			6	0
A3KAQ	•	•	•	•		•	6	0
A3KAL	•	•	•	•			6	8
A3KALQ	•	•	•	•		•	6	8
A3KALN	•	•	•	•	•		6	8
A3KALNQ	•	•	•	•	•	•	6	8

A3R

Measures and Calculates:

- kWh on a TOU basis
- kVAh and kVA on a TOU basis
- kVAh is measured by vectorial calculation using Wh and VARh on a continuous integration basis
- kVARh and kVAR on a TOU basis

For the A3R meter, the following base meter and additional functionalities are available:

Type	kWh	kVARh	kVAh	TOU	Transformer Loss Compensation	PQM	Instrumentation Profile (32)	Quantities	Load Profile Channels
A3R	*	*	*	*				2	0
A3RQ	*	*	*	*		*		2	0
A3RC	*	*	*	*	*			2	0
A3RCQ	*	*	*	*	*	*		2	0
A3RL	*	*	*	*				2	8
A3RLQ	*	*	*	*		*		2	8
A3RLC	*	*	*	*	*			2	8
A3RLCQ	*	*	*	*	*	*		2	8
A3RLN	*	*	*	*			*	2	8
A3RLNQ	*	*	*	*		*	*	2	8
A3RLNC	*	*	*	*	*		*	2	8
A3RLNCQ	*	*	*	*	*	*	*	2	8
A3RA	*	*	*	*				6	0
A3RAQ	*	*	*	*		*		6	0
A3RAC	*	*	*	*	*			6	0
A3RACQ	*	*	*	*	*	*		6	0
A3RAL	*	*	*	*				6	8
A3RALQ	*	*	*	*		*		6	8
A3RALC	*	*	*	*	*			6	8
A3RALCQ	*	*	*	*	*	*		6	8
A3RALN	*	*	*	*			*	6	8
A3RALNQ	*	*	*	*		*	*	6	8
A3RALNC	*	*	*	*	*		*	6	8
A3RALNC	*	*	*	*	*	*	*	6	8



A3 Quantities

Quantity	A3TL	A3KL	A3QL	A3RL
kWh delivered	•	•	•	•
kWh received	•	•	•	•
kWh sum	•	•	•	•
kWh net	•	•	•	•
kVAh delivered		•		•
kVAh received		•		•
kVAh sum		•		•
kVAh net		•		
kVAh Q1				•
kVAh Q2				•
kVAh Q3				•
kVAh Q4				•
kQh delivered			•	
kQh received			•	
kQh sum			•	
kVARh delivered				•
kVARh received				•
kVARh sum				•
kVARh net				•
kVARh Q1				•
kVARh Q2				•
kVARh Q3				•
kVARh Q4				•
kVARh (Q1 + Q4)		•		•
kVARh (Q2 + Q3)		•		•

Alpha Key – Upgrade

Alpha Keys

Alpha Keys software and hardware allows the A3 ALPHA meter to be upgraded so they provide additional functionality. Upgrading with Alpha Keys means that the meter does not have to be returned to the factory and new meters do not have to be purchased to gain functionality.

Table 2-12 shows the type of upgrades that can be performed with Alpha Keys.

Table 2-12. Meter type upgrades

Current meter type	Can be upgraded to
	A3T
A3D	A3K
	A3R
A3T	A3K
	A3R
A3K	A3R
A3R	A3K

Honeywell – MeterCat Software

Metercat Overview

8.6.0.0



Metercat™
Meter Configuration and
Analysis Tool

Honeywell

Licensed to Eaton

- A3T | A3K | A3R
- All are programmed with Metercat
- Basic Configuration
- Billing
- Solar | Net Metering
- TOU Metering

A3T Available Channels

Program: A3T - 010 - CANNO010

- Properties
- Constants
- Demand
- Load Profile
- Logs
- Metering Quantities
- Display
- Switch Times
- Day Types
- Remote
- Service Test
- Special Dates
- Special Features

Metering: CANNO010

Metering Quantities	Apply Load Control & Overload Thresholds
1. kWh-Del	<input type="checkbox"/>

Dropdown menu options: kWh-Del, kWh-Rec, kWh-Sum, kWh-Net

A3K & A3R Channels

Program: A3R - 011 - CANN0010(R)

Properties
Constants
Demand
Load Profile
Logs
Metering Quantities
Display
Switch Times
Day Types
Remote
Service Test
Special Dates
Special Features

Metering: CANN0010(R)

Metering Quantities	Apply Load Control & Overload Thresholds
1. kWh-Del	<input type="checkbox"/>
2. kVAh-Del	<input type="checkbox"/>

Configure for the 'Advanced Metering' option

Power Factor

1. Average Power Factor calculated from kWh-Del and kVAh-Del

Coincident

1. kVA-Del at the time of maximum kW-Del

2. kW-Del at the time of maximum kVA-Del

A3K & A3R Advance Channels

Program: A3R - 011 - CANN0010(R)

Properties
Constants
Demand
Load Profile
Logs
Metering Quantities
Display
Switch Times
Day Types
Remote
Service Test
Special Dates
Special Features

Metering: CANN0010(R)

Metering Quantities	Apply Load Control & Overload Thresholds
1. kWh-Del	<input type="checkbox"/>
2. kVAh-Del	<input type="checkbox"/>
3. kWh-Rec	<input type="checkbox"/>
4. kWh-Net	<input type="checkbox"/>
5. kWh-Sum	<input type="checkbox"/>
6. none	<input type="checkbox"/>

Configure for the 'Advanced Metering' option

Power Factor

1. Average Power Factor calculated from kWh-Del and kVAh-Del

2. Average Power Factor calculated from none

Coincident

1. kVA-Del at the time of maximum kW-Del

2. kW-Del at the time of maximum kVA-Del

3. none at the time of maximum

4. none at the time of maximum

ALL A3 TOU Capabilities

Program: A3R - 999 - Sample A3R - TOU, LP

Properties
 Constants
 Demand
 Load Profile
 Logs
 Metering Quantities
 Display
 Switch Times
 Day Types
 Relay Options
 Remote
 Service Test
 Special Dates
 Special Features

Rates: Sample Rates

Component maintains compatibility between A3 ALPHA, A1800 ALPHA, IP AxisLink and REXUniversal meter families

Number of Seasons: 4 Default Rate: Rate C

Automatically Generate Midnight Switches

Season	Day Type	Start Time	Rate	Switch Type
Winter	Weekday	08:00	Rate A	Energy and Demand
Winter	Weekday	17:00	Rate C	Energy and Demand

Add
Remove

Program: A3R - 999 - Sample A3R - TOU, LP

Properties
 Constants
 Demand
 Load Profile
 Logs
 Metering Quantities
 Display
 Switch Times
 Day Types
 Relay Options
 Remote
 Service Test
 Special Dates
 Special Features

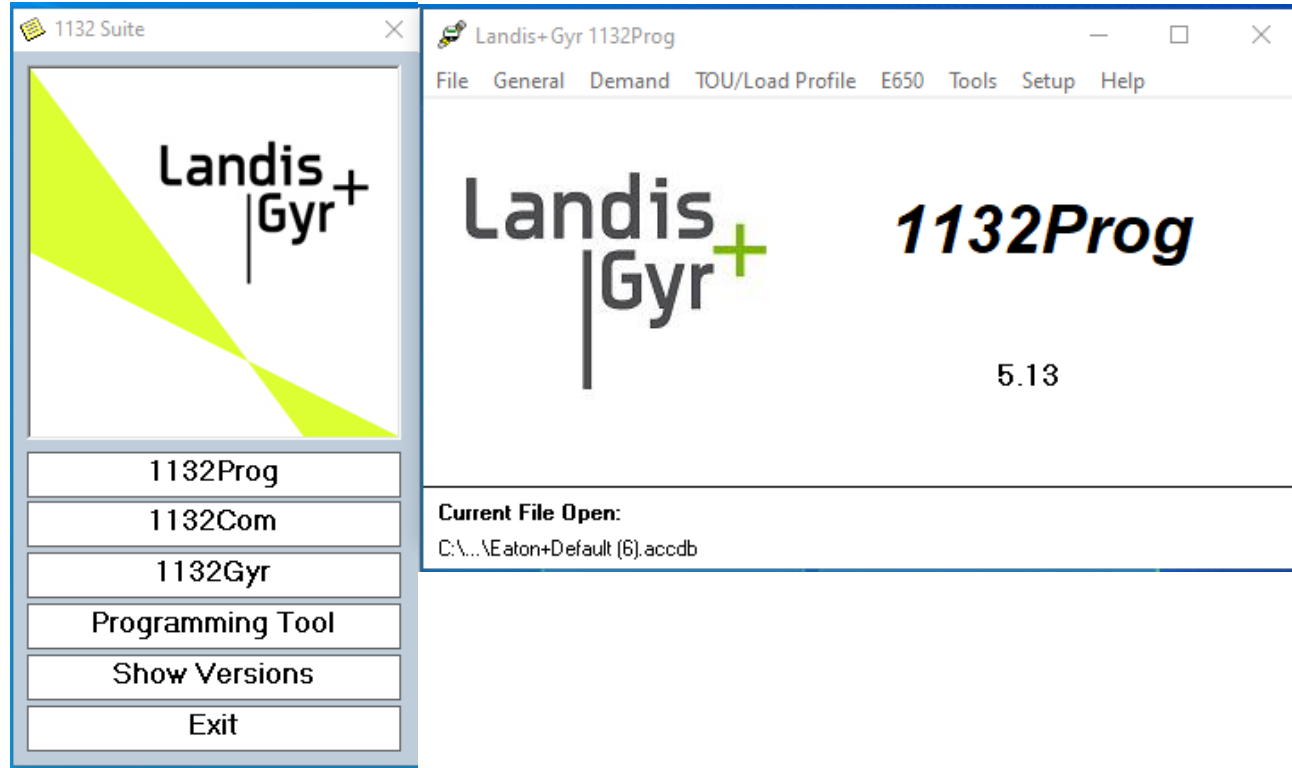
Rates: Sample Rates

Season	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Holiday
Winter	Weekend	Weekday	Weekday	Weekday	Weekday	Weekday	Weekend	Holiday
Spring	Weekend	Weekday	Weekday	Weekday	Weekday	Weekday	Weekend	Holiday
Summer	Weekend	Weekday	Weekday	Weekday	Weekday	Weekday	Weekend	Holiday
Fall	Weekend	Weekday	Weekday	Weekday	Weekday	Weekday	Weekend	Holiday

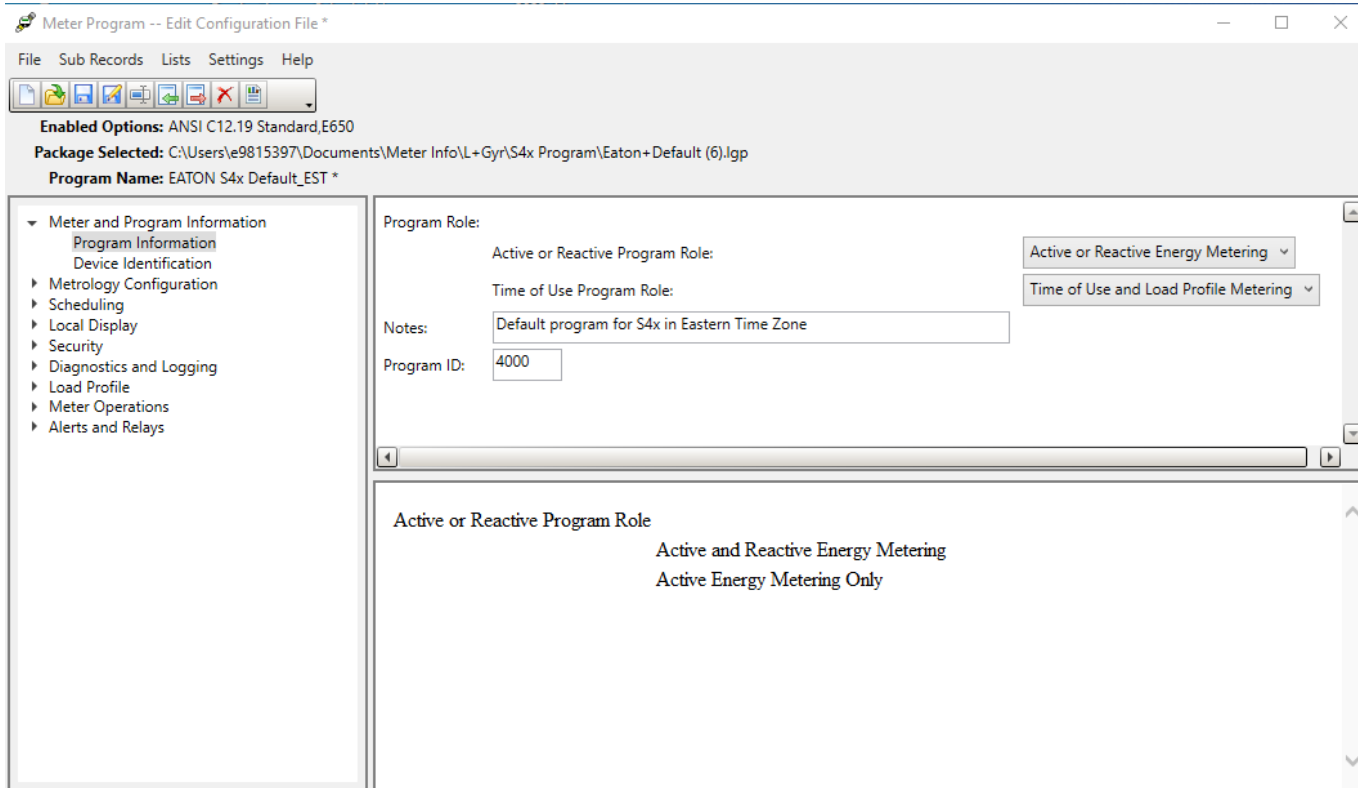
Landis+Gyr – S4x

Landis+Gyr S4x: 1132 Software

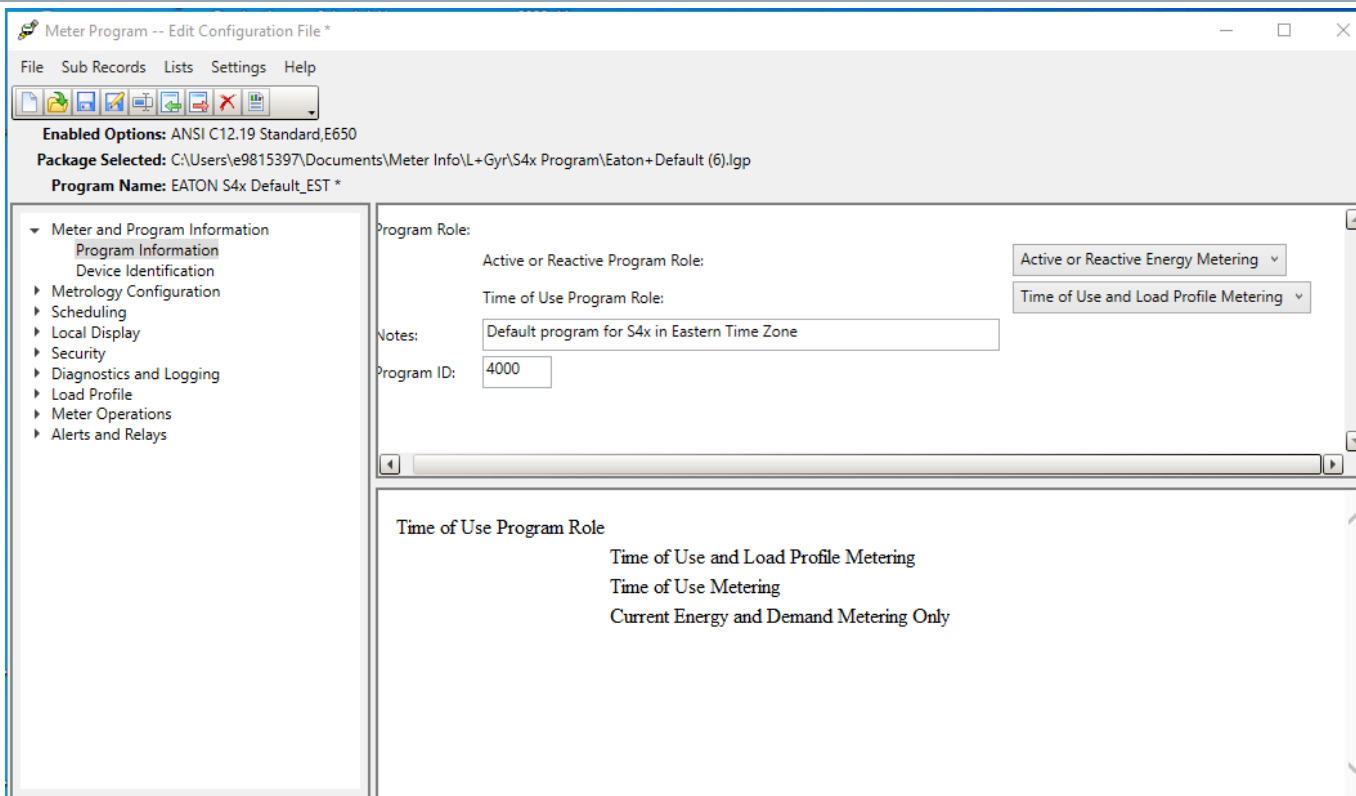
Landis+Gyr 1132 Overview



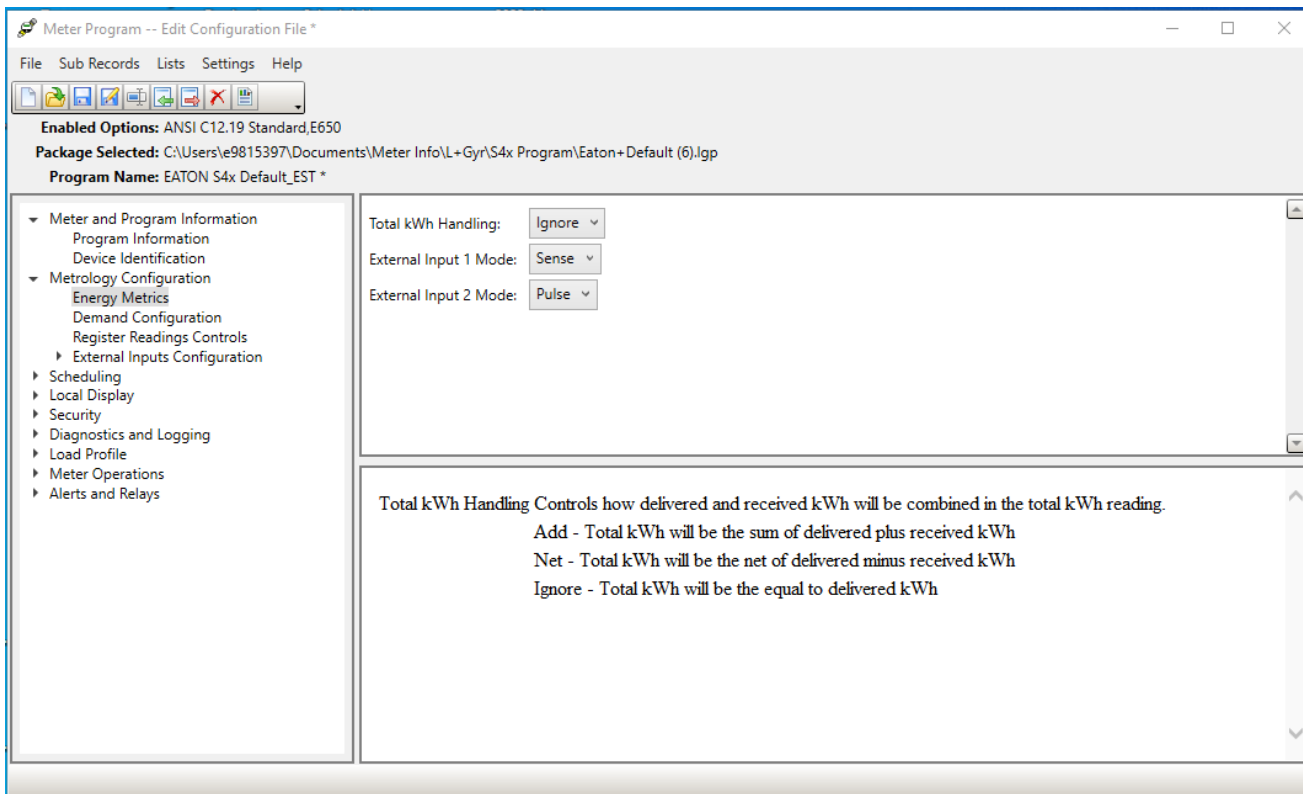
E650- All Features Enabled Out of the Box



E650- All Features Enabled Out of the Box



E650- All Features Enabled Out of the Box



E650- All Features Enabled Out of the Box

Meter Program -- Edit Configuration File *

File Sub Records Lists Settings Help

Enabled Options: ANSI C12.19 Standard,E650
Package Selected: C:\Users\le9815397\Documents\Meter Info\L+Gyr\S4x Program\Eaton+Default (6).lgp
Program Name: EATON S4x Default_EST *

- ▼ Meter and Program Information
 - Program Information
 - Device Identification
- ▼ Metrology Configuration
 - Energy Metrics
 - ▶ Demand Configuration
 - Register Readings Controls
 - ▶ External Inputs Configuration
 - ▶ Scheduling
 - ▶ Local Display
 - ▶ Security
 - ▶ Diagnostics and Logging
 - ▶ Load Profile
 - ▶ Meter Operations
 - ▶ Alerts and Relays

Total kWh Handling: Ignore ▼

Delivered kVARh Quadrants: Q1 + Q2 ▼

Total kVARh Handling: Ignore ▼

Delivered kVAh Quadrants: Q1 + Q4 ▼

Total kVAh Handling: Ignore ▼

External Input 1 Mode: Sense ▼

External Input 2 Mode: Pulse ▼

Total kWh Handling Controls how delivered and received kWh will be combined in the total kWh reading.

- Add - Total kWh will be the sum of delivered plus received kWh
- Net - Total kWh will be the net of delivered minus received kWh
- Ignore - Total kWh will be the equal to delivered kWh

E650- All Features Enabled Out of the Box

The screenshot displays the 'Meter Program -- Edit Configuration File *' window. The menu bar includes 'File', 'Sub Records', 'Lists', 'Settings', and 'Help'. The toolbar contains icons for file operations. The status bar shows 'Enabled Options: ANSI C12.19 Standard, E650', 'Package Selected: C:\Users\ve9815397\Documents\Meter Info\L+Gyr\S4x Program\Eaton+Default (6).lgp', and 'Program Name: EATON S4x Default_EST *'.

The left sidebar lists the following categories:

- ▼ Meter and Program Information
 - Program Information
 - Device Identification
- ▼ Metrology Configuration
 - Energy Metrics
 - ▶ Demand Configuration
 - Register Readings Controls
 - ▶ External Inputs Configuration
 - ▶ Scheduling
- ▼ Local Display
 - Primary Display List
 - Power Down Displays
 - Primary Display Sources
 - User Defined Displays
 - ▼ LCD Configuration
 - Standard Error Masks
 - ▶ Manufacturer Error Masks
 - ▶ Security
 - ▶ Diagnostics and Logging
 - ▶ Load Profile
 - ▶ Meter Operations
 - ▶ Alerts and Relays

The main configuration area on the right contains the following settings:

- Total kWh Handling: Ignore
- Delivered kVARh Quadrants: Q1 + Q2
- Total kVARh Handling: Ignore
- Delivered kVAh Quadrants: Q1 + Q4
- Total kVAh Handling: Ignore
- External Input 1 Mode: Sense
- External Input 2 Mode: Pulse

The 'Delivered kVARh Quadrants' section provides a detailed explanation:

Delivered kVARh Quadrants Controls which quadrants delivered and received kVARh will be metered in.

- Q1 + Q2 - Delivered kVARh will be recorded in quadrants 1 and 2. Received kVARh will be recorded in quadrants 3 and 4.
- Q1 + Q4 - Delivered kVARh will be recorded in quadrants 1 and 4. Received kVARh will be recorded in quadrants 2 and 3.
- Q1 + Q3 - Delivered kVARh will be recorded in quadrants 1 and 3. Received kVARh will be recorded in quadrants 2 and 4.

E650- All Features Enabled Out of the Box

Meter Program -- Edit Configuration File *

File Sub Records Lists Settings Help

Enabled Options: ANSI C12.19 Standard,E650

Package Selected: C:\Users\9815397\Documents\Meter Info\L+Gyr\S4x Program\Eaton+Default (6).lgp

Program Name: EATON S4x Default_EST *

- ▼ Meter and Program Information
 - Program Information
 - Device Identification
- ▼ Metrology Configuration
 - Energy Metrics
 - ▶ Demand Configuration
 - Register Readings Controls
 - ▶ External Inputs Configuration
 - ▶ Scheduling
 - ▼ Local Display
 - Primary Display List
 - Power Down Displays
 - Primary Display Sources
 - User Defined Displays
 - ▼ LCD Configuration
 - Standard Error Masks
 - ▶ Manufacturer Error Masks
 - ▶ Security
 - ▶ Diagnostics and Logging
 - ▶ Load Profile
 - ▶ Meter Operations
 - ▶ Alerts and Relays

Total kWh Handling: Ignore ▼

Delivered kVARh Quadrants: Q1 + Q2 ▼

Total kVARh Handling: Ignore ▼

Delivered kVAh Quadrants: Q1 + Q4 ▼

Total kVAh Handling: Ignore ▼

External Input 1 Mode: Sense ▼

External Input 2 Mode: Pulse ▼

Delivered kVAh Quadrants

Controls which quadrants delivered and received kVAh will be metered in.

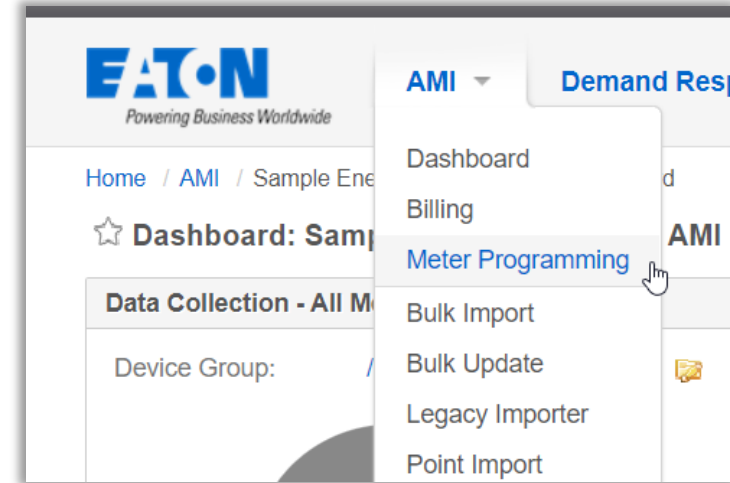
Q1 + Q2 - Delivered kVAh will be recorded in quadrants 1 and 2. Received kVARh will be recorded in quadrants 3 and 4.

Q1 + Q4 - Delivered kVAh will be recorded in quadrants 1 and 4. Received kVARh will be recorded in quadrants 3 and 4.

Q1 + Q3 - Delivered kVAh will be recorded in quadrants 1 and 3. Received kVARh will be recorded in quadrants 2 and 4.

Remote/OTA Commercial Meter Programming

- Further reduce the need to visit meters in the field!
- Configure commercial AMI meters over the Eaton RF AMI communication network
- Useful for:
 - Time of Use (TOU) rate times and schedules, seasons, and holidays
 - The method of calculation for a metric, such as demand
 - Meter display behavior, including timing and registers to display
 - DST/Time Zone
 - (varies some by meter manufacturer)



Commercial Meters Under Evaluation

- **Itron CP3**

- Replaces the Itron Sentinel polyphase meter, which was end-of-life'd December 2021



- **Honeywell A4**

- Honeywell's next generation polyphase meter
- No soft keys – All features enabled “out of the box”
- Honeywell will continue to support the A3 and the A4 meter





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