Submeter Service *Solutions*

Understanding Energy Efficiency
Promotes Conservation

E-Mon Energy™
Energy Monitoring Software

Proton
By Optergy

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Dent Power Scout (PS) or Dent Instruments Series metering (DI)
Submetering / Energy Management System Start-Up Checklist for High Density Metering.

The following items must be COMPLETED AND INITIALED by the appropriate party before a technician can scheduled and perform remote configuration and startup of the metering system. If the following items are not completed/initialed before the final checkout and startup, CHARGES WILL BE ASSESSED based on daily service rates.

	Complete	Initials
1. All Smart Meters (Modbus or BacNET) must be installed and operational.	☐	_____
2. Smart meters must be cabled within 500 feet of any IDR, Edge Controller, PC, Server, Router, Switch, or Optergy Proton WebMon,	☐	_____
3. All RS-485 meter and EMS cabling must be run and installed properly (Verify no more than 50 meters/devices per RS485 Serial network TIA Standards)	☐	_____
4. RS-485 communication cables installed must be straight thru daisy-chain and properly "wrung out" by installer to ensure meter network communication integrity.	☐	_____
5. All RS-485 networks communication cabling shall not exceed 4000 feet	☐	_____
6. The SPECIFIED modem/LAN connections, Static Public IP address, VPN, or any other means of accessing the submeter system remotely must be installed and operating.	☐	_____
6a. As an alternate to 6 above, End-User or Installer may download Teamviewer for remote commissioning, training and support or Wireless Static IP Modem. https://www.teamviewer.com/en-us/download/windows	☐	_____
7. Forms #A-E below must be completed by the owner/installer and sent to TBWC.	☐	_____
8. A copy of the facility utility bill has been sent along with the completed forms. Send to jay@submeterservicesolution.com so appropriate rate schedules or flat rate may be configured. .	☐	_____

NO WORK CAN BE PERFORMED BY NEMG OR ITS REPRESENTATIVES UNTIL ALL OF THE ABOVE ITEMS ARE COMPLETED BY THE OWNERS CONTRACTOR.

THIS SHEET (AND ATTACHED FORMS) MUST BE SIGNED AND RETURNED BY E-MAIL TO JAY AND SERVICE DEPARTMENT REQUIRES TWO WEEKS AFTER RECEIPT OF ALL COMPLETED SIGNED FORMS TO PREPARE FOR FINAL CHECKOUT AND STARTUP OF THE SYSTEM.

Name: (print) _____Signature:_____

To avoid scheduling delays all forms must be returned complete along with utility bill to Attn: Startup Service, email: joconnor@northeastmarketing.com or forward to Metering representative:

Have questions? Contact S.S.. tech support Monday through Friday 8:00AM to 5:00PM PST: (508)326.2708

Submeter / EMS Start-Up Detail   Form #A – Address Information

To be completed by the Electrical Contractor and End User to identify the following:
(a) Name and address of installed equipment (SITE LOCATION)
(b) Name and address of End User (END USER INFORAMTION)
(c) Name and address of the installer (INSTALLER)
(d) Purpose of the system (APPLICATION); for example, tenant billing, load profiling etc.
(e) Distributor Purchase Order Number

A. SITE LOCATION (If multiple site locations, please include a list of each site address.)

Building Name:		
Company Name:		
Address:		
City/State/Zip:		
Contact Name:		Title:
Phone:	Fax:	E-Mail:

B. END USER INFORMATION

Building Name:		
Company Name:		
Address:		
City/State/Zip:		
Contact Name:		Title:
Phone:	Fax:	E-Mail:

C. INSTALLER INFORMATION

Building Name:		
Company Name:		
Address:		
City/State/Zip:		
Contact Name:		Title:
Phone:	Fax:	E-Mail:

D. APPLICATION: _____

JOB SITE CONDITIONS: ☐ Construction   ☐ Finished Office   ☐ Other
Special Notes/Comments: _____

E. Distributor Purchase Order number (if applicable for Day of Service): _____

To avoid scheduling delays these forms must be filled out completely!

Submeter / EMS Start-Up Detail   Form #B – Communications Info

To be completed by the End User
This form should be completed by the end user to ensure our meter reading team can remotely access the metering equipment. This form also allows us to recommend any needed changes before the final startup and software training.

1. Communication Method: Ethernet _____ Service Provider_____

2. Communication Information

   a. For Ethernet (LAN or WAN) connections, specify the following information.
      If multiple locations, list each one separately. **Note: All IP addresses must be static and a TCP port must configured and open to all routers or switches**.

Meter Location	Meter TCP/IP	Mask	Gateway

To avoid scheduling delays these forms must be filled out completely!

Submeter / EMS Start-Up Detail   Form #C – Utility Rate Structure

To be completed by the End User
If multiple rate structures apply, complete one form for each structure.
This form should be completed by the end user to specify the parameters in which the system will calculate demand and the manner in which meter data will be stored. Refer to your utility bill to complete this form.

If you are not familiar with how your utility bill is structured, please check the box at the bottom of this page and attach a copy of your latest utility bill.

The setup on this form applies to: _____ Optergy Proton: All Meters on system
_____ Optergy Enterprise: Meters & PC/Server Specified

1. Peak demand calculation (choose one for each)

    a. Peak demand interval: _____ 15 Min (default)   _____ 30 Min   _____ 60 Min
    b. Demand sliding window: _____ 5 Min   _____ 15 Min (default)   _____ Reset
    c. Demand window sync: _____ Internal (default)   _____ External

2. Profile Information (choose one for each)

    a. Profiling sample rate: _____ 5 Minutes (36 days of data storage)
    _____ 15 Minutes (72 days of storage) (default)

    b. Collection mode: _____ Flip (keep most recent data) (default)
    _____ Fixed (stop when storage is full)

☐   Don't know (copy of utility bill is attached)

☐   Duplicate utility bill – set up system to replicate utility bill, i.e. periods, rates, etc. Check all that apply below.
    _____ Include tax
    _____ Include service fee
    _____ Include other _____

☐   Use flat rate: _____

Other Notes/Comments: _____

This form should be completed by the installer (with input by the end user) to supply the necessary meter information REQUIRED to complete the final checkout and startup. Your metering database is created from the information on these for meters/. Forms are available in Excel / CSV file format upon request

DI-MMU16: CT Meter Schedule

LOAD / CKT ID

Ref. DI-HD #: _____   DI-HD HIGH DENSITY SMART METER

Meter Name: _____   Job Name: _____
Model Number: DI-MMU16-_____
Serial Number: _____
Physical Location: _____   Date Commissioned:
IP/Slave Address: _____   08/26/22

Meter ID: A		Ref:	
Voltage Input: 1		V =	
Channel	Amps	Phase	Circuit
CH1	CT 1		
CH2	CT 2		
CH3	CT 3		

Meter ID: B		Ref:	
Voltage Input: 1		V =	
Channel	Amps	Phase	Circuit
CH1	CT 13		
CH2	CT 14		
CH3	CT 15		

Meter ID: C		Ref:	
Voltage Input: 1		V =	
Channel	Amps	Phase	Circuit
CH1	CT 25		
CH2	CT 26		
CH3	CT 27		

Meter ID: D		Ref:	
Voltage Input: 1		V =	
Channel	Amps	Phase	Circuit
CH1	CT 37		
CH2	CT 38		
CH3	CT 39		

Meter ID: E		Ref:	
Voltage Input: 1		V =	
Channel	Amps	Phase	Circuit
CH1	CT 4		
CH2	CT 5		
CH3	CT 6		

Meter ID: F		Ref:	
Voltage Input: 1		V =	
Channel	Amps	Phase	Circuit
CH1	CT 16		
CH2	CT 17		
CH3	CT 18		

Meter ID: G		Ref:	
Voltage Input: 1		V =	
Channel	Amps	Phase	Circuit
CH1	CT 28		
CH2	CT 29		
CH3	CT 30		

Meter ID: H		Ref:	
Voltage Input: 1		V =	
Channel	Amps	Phase	Circuit
CH1	CT 40		
CH2	CT 41		
CH3	CT 42		

Meter ID: I		Ref:	
Voltage Input: 1		V =	
Channel	Amps	Phase	Circuit
CH1	CT 7		
CH2	CT 8		
CH3	CT 9		

Meter ID: J		Ref:	
Voltage Input: 1		V =	
Channel	Amps	Phase	Circuit
CH1	CT 19		
CH2	CT 20		
CH1	CT 21		

Meter ID: K		Ref:	
Voltage Input: 1		V =	
Channel	Amps	Phase	Circuit
CH1	CT 31		
CH2	CT 32		
CH3	CT 33		

Meter ID: L		Ref:	
Voltage Input: 1		V =	
Channel	Amps	Phase	Circuit
CH1	CT 43		
CH2	CT 44		
CH3	CT 45		

Meter ID: M		Ref:	
Voltage Input: 1		V =	
Channel	Amps	Phase	Circuit
CH1	CT 10		
CH2	CT 11		
CH3	CT 12		

Meter ID: N		Ref:	
Voltage Input: 1		V =	
Channel	Amps	Phase	Circuit
CH1	CT 22		
CH2	CT 23		
CH3	CT 24		

Meter ID: O		Ref:	
Voltage Input: 1		V =	
Channel	Amps	Phase	Circuit
CH1	CT 34		
CH2	CT 35		
CH3	CT 36		

Meter ID: P		Ref:	
Voltage Input: 1		V =	
Channel	Amps	Phase	Circuit
CH1	CT 46		
CH2	CT 47		
CH3	CT 48		

CT QTY
100A-CT = _____
200A-CT = _____
400A-CT = _____

LEFT SIDE

Voltage Reference	
Input 1	Input 2

Single-φ: 120/240/208V
3-φ: 208/240/277/480V

RIGHT SIDE

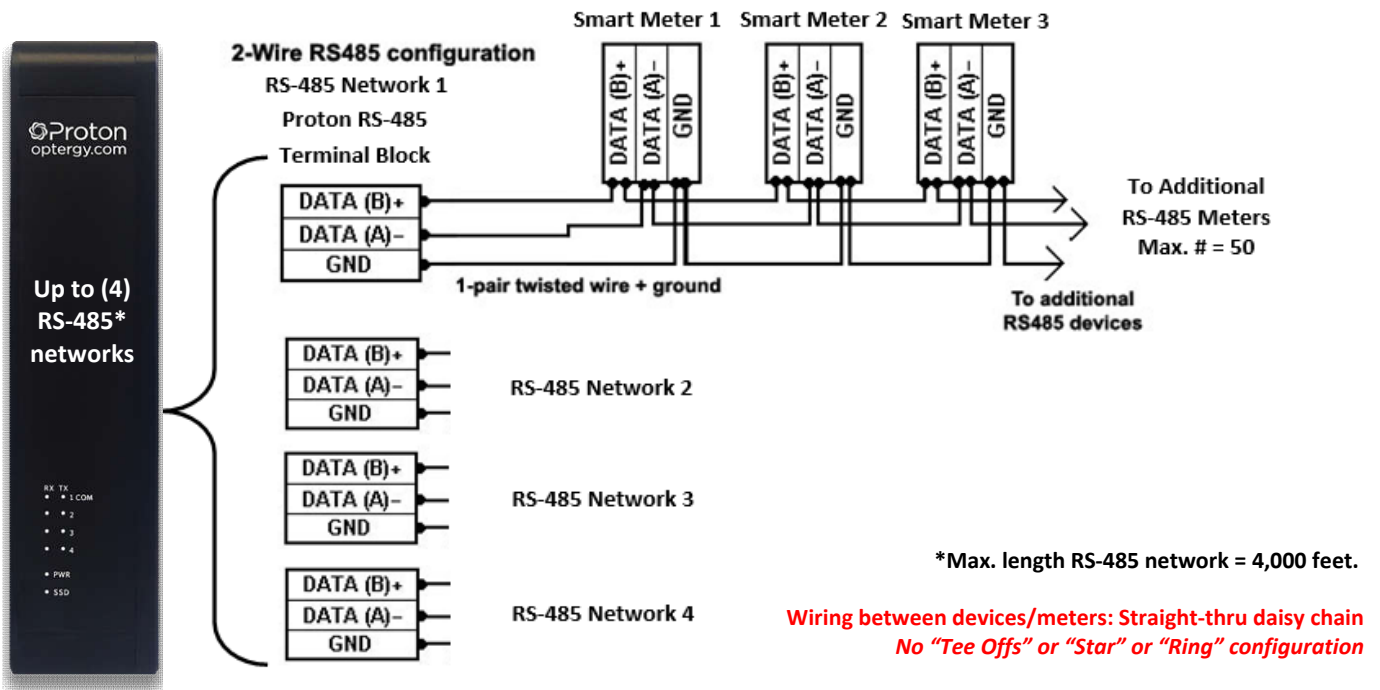**CT QTY**
800A-CT = _____
1200A-CT = _____
5000A-FRCT = _____

To be completed by the Installer or End-User
If multiple RS-485 networks apply, complete one form for each structure.
This form should be completed by either the installer or end user to specify the pathway of the RS-485 daisy-chain communications network. Example of Optergy Proton RS-485 networks shown belw:

Smart Meter 1   Smart Meter 2   Smart Meter 3

2-Wire RS485 configuration
RS-485 Network 1
Proton RS-485
Terminal Block

| DATA (B)+ |
| DATA (A)– |
| GND |

1-pair twisted wire + ground

To Additional RS-485 Meters Max. # = 50

To additional RS485 devices

| DATA (B)+ |
| DATA (A)– |
| GND |
RS-485 Network 2

| DATA (B)+ |
| DATA (A)– |
| GND |
RS-485 Network 3

| DATA (B)+ |
| DATA (A)– |
| GND |
RS-485 Network 4

Up to (4) RS-485* networks

***Max. length RS-485 network = 4,000 feet.**

Wiring between devices/meters: Straight-thru daisy chain
No "Tee Offs" or "Star" or "Ring" configuration

RS   -485 Meter Network Layout (Sketch)
(Include Static IP Detail for Customer supplied Router / Switch)
Also please please incluse any 864 Edge controllers as well.