

**NEW YORK STATE  
DEPARTMENT OF PUBLIC  
SERVICE**

**APPROVED METER LIST**

Rev. 11/21/2011

# WATTHOUR METERS

## DUNCAN/LANDIS + GYR/SIEMENS

TYPE	CLASS	VOLTS	WIRE	APPROVED	TESTING ENTITY	APPROVAL SUBMITTED	REVIEW
FOCUS/Focus ALF	10,20,100						
FOCUS E130	200,320,480	120/240	3	03-16-05	L+G	05-4-04	
FOCUS/Hunt ERT	10,20,100						
	200,320,480	120/240	3	10-19-05	L+G	09-13-05	
FOCUS AX and SD	10,20,100,200	120/240/277	3-4	07-15-10	N'GRID	11-9-09	
FOCUS E330, E350	320						
MKS	200	240	3	08-04-59	L.I.L.		
MH-IS	60	120	3	12-28-60	Con-Ed	09-28-60	
				(No Test)			
MQAT-MQST	10	120/240/480	2-3	12-28-60	L.I.L.	10-14-60	
MQA-MQS	100	120/240/480	2-3				
MQA-MQS	100	120/240	2-3				
MQA-MQS	200	240/480	3				
ML2S	100	120/240/480	3	03-11-60	Con-Ed		
ML2 1/2 S	100	120/240	4	03-11-60			
ML2S-delta	100	240	4	03-11-60			
MR-IS	60	120	3	01-15-63	Con-Ed		
MS	200	240	3	05-05-70	L.I.L.		
MT	10,20,100,200	120/480	3-4	07-31-73	N.M.P.	04-18-73	
MSII	200	240	3	03-06-79	L.I.L.	01-16-79	
MS-2SE	320	240	3	03-09-82	L.I.L.	06-01-81	
MT-12SE	320	120/240	3	03-09-82	L.I.L.	06-01-81	
MT-16SE	320	120/277	4	09-22-83	N.M.P.	02-04-83	
MTNS12S		120	3	12-13-83	Con-Ed	06-15-83	
SSM	20	120/240/277	3-4	09-20-89	N.M.P.	05-15-89	
SSM-II	Solid State Watthour Meter			10-19-93	L.I.L.		
MX-2S	200	240	2	03-01-95	RG&E	04-27-94	
S4	Solid State Watthour Meter			01-13-97	NMP	08-08-96	
S4e	Solid State Watthour Meter firmware upgrades				N'Grid	06-02-04	
S4/S4e	Metrum Communication Module			09-27-10	N'Grid	09-13-10	
E650							
Altimus AL	Electronic Meter-Network	120/208	3	08-03-99	Con-Ed	05-17-99	

## WATTHOUR METERS

MAXsys 2410	20	120/240/277/480	3-4	06-01-01	NMPC	02-09-01	
MAXsys 2510	20	120/240/277/480	3-4	06-01-01	NMPC	02-09-01	
MAXsys 2510	2, 10	120/240/277/480	3-4	04-07-05	NMPC	03-13-05	
MAXsys Elite	2,10,20	120/240/277/480	3-4	06-23-08	L+G	5-30-08	
<b><i>Electro Industries</i></b>							
Nexus 1260/1262 1270/1272	20	120-480	3-4	11/25/03	Electro Ind.	8/11/03	NMPC-LOI

# WATTHOUR METERS

## GENERAL ELECTRIC

TYPE	CLASS	VOLTS	WIRE	APPROVED	TESTING ENTITY	APPROVAL SUBMITTED	REVIEW
DS-63 Swbd	10	120/240	3				
DS-65 Swbd	10	120/240	4				
DS-66 Swbd	10	240	4				
DS-67	10	120/240/480	3	01-07-75	CHG&E		
EV@	electronic Polyphase Meter with M-90E for demand			05-08-91	N.M.P.	11-30-90	08/26/93
EV	extension of EV line to include EV-7, 3 element form 17S, self-contained, and 9S, transformer rated for 120/240v delta services			10-08-93	N.M.P.		
EV@	extension of EV line to include Class 3 transformer rated and Class 320 self-contained			10-08-93	N.M.P.		
EV/ES	Electronic Single Phase and Polyphase Meter for watthour and Varhours with Phase 3 Registers: KM-901 - Demand KTC-901 - Demand, T.O.U. KRC-901 - Demand, T.O.U., Load Profile			08-22-92	N.M.P.		08/26/93
I63-S	60	208	3	04-28-60	Con-Ed		
I-60S Modified	200	240	3	01-15-63	N.M.P.	12-26-62	
I-70A	200	240	3	10-13-88	LILCO	10-03-88	
I-70S+	200	240	3	03-26-68	N.M.P.		03-10-00
I-70 S/2+	200	240	3	12-04-73	N.M.P.		03-10-00
I-70S	320	240	3	03-09-82	L.I.L.	06-01-81	
I-70S	10	120/240	2/3	08-11-82	N.M.P.		
IR-70	all	120/240	3	10-14-86	NYSEG	04-07-86	
I-210	20,100,200,320	120/240	3	2/9/05	GE	10-19-04	
I-210 Hunt Airpoint	200	240	3	1/5/11	GE	12-15-10	
I-210+(C)(N)	20,100,200,320	120/240	3	6/18/08	GE	12-17-08	
I-210+ (C)(N)	20,100,200,320	120/240	3	5/11/09	Con Ed/GE	4/27/09	5/5/09
I-210/Itron 52ESS	20,100,200,320	120/240	3	6/18/09	CenHud	6/4/09	6/15/09

@Modified current sensor on transformer rated meters only.

+Modified current coil on self contained meters only.

# WATTHOUR METERS

## GENERAL ELECTRIC

TYPE	CLASS	VOLTS	WIRE	APPROVED	TESTING ENTITY	APPROVAL SUBMITTED	REVIEW
KM-901 KTC-901 KRC-901	Enhanced application for KQh/KQ, varhour calibration check LED, HV4 form C and A output option board and communications option board			10-08-93	N.M.P.		
V-61-S	60	120	3	02-14-61	Con-Ed		
V-611S	60	120	3	05-26-64	Con-Ed	04-20-64	
V-612S+	100	120	3	05-11-66	N.M.P.	04-14-66	08-27-93
V-612S+	200	120	3	09-15-70	Con-Ed	02-17-70	08-27-93
V-62+	100	120/240/480	3	04-12-60	N.M.P.		08-27-93
V-62+	200	120/240/480	3	04-12-60	N.M.P.		08-27-93
V-63#	10	120/240	3				07-08-91
V-63+	100	120/240	3	04-12-60	N.M.P.		08-27-93
V-63+	200	120/240	3	04-12-60	N.M.P.		08-27-93
V-63-2A#	10-20	120/240	3	01-21-69	N.M.P.	11-13-68	07-08-91
V-63#	20	120/480	3	03-12-74	N.M.P.		07-08-91
V-64*	10	120/240	4	03-19-65	N.M.P.		08-27-90
V-64*	20	120/240	4	03-19-65	N.M.P.		08-27-90
V-64+	100	120/240	4	03-19-65	N.M.P.		08-27-93
V-64+	200	120/240	4	03-19-65	N.M.P.		08-27-93
V-64-2A*	10-20	120/240	4	01-21-69	N.M.P.	11-13-68	08-27-90
V-64*	17	120/240	4	Not approved-modified to class 20 capability			08-27-90
V-64*	20	120/240	4	08-31-79	RG&E		08-27-90
V-65-2A#	10-20	120/240	4	01-21-69	N.M.P.	11-13-68	07-08-91
V-65#	10	120/240	4				07-08-91
V-65+	100	120/240	4	04-12-60	N.M.P.		08-27-93
V-65+	200	120/240	4	04-12-60	N.M.P.		08-27-93

+Modified current coil on self contained meters only.  
 #Replacement with Metal Oxide Varistor surge protection.  
 \*Addition of a tertiary winding on the voltage coil.

# WATTHOUR METERS

## GENERAL ELECTRIC

TYPE	CLASS	VOLTS	WIRE	APPROVED	TESTING ENTITY	APPROVAL SUBMITTED	REVIEW
V-65#	20	120/240	4Y	03-12-74	N.M.P.		07-08-91
V-65S+ Modified	200	120/240	4		N.M.P.	08-15-80	08-27-93
V-66#	10	240	4				07-08-91
V-66+	100	240	4	04-12-60	N.M.P.		08-27-93
V-66#	20	240	4D	03-12-74	N.M.P.		07-08-91
V-66S+ Modified	200	240	4		N.M.P.	08-15-80	08-27-93
V-66S-A+	200	240	4	09-27-60	N.M.P.	05-19-60	08-27-93
					(No Test)		
V-67#	10	240	4	03-19-65	N.M.P.		07-08-91
KV@	20, 200, 320	120-480	3-4	08-07-97	N.M.P.	02-04-97	01-29-98
kVs (Single-Phase)	200	120/240	3	09-20-99	N.M.P.		
kVe (Energy Only)	20, 200, 320	120-480	3-4	09-20-99	N.M.P.		
kV2	20, 200, 320	120-480	3-4	11/22/01	GE	08-09-01	CHGE-LOI
kV2c(Encompass)	20, 200, 320	120-480	3-4	11/25/03	GE	08/12/03	CHGE-LOI
KV2c Silver Spring	20, 200, 320	120-480	3-4	5/11/09	Con Ed/GE	04/27/09	5/5/09
kV2c Silver Spring 311, 314 -25S				6/17/11	GE	11/20/11	

## INVENSYS

iCon iSO1,iSA1 iNO1,iNA1	200	240,120/208	3	09/17/03	INVENSYS	06/09/03	NG- LOI
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## POWER MEASUREMENT

ION 8300,8400,8500	20	57-277 120-480	4	12/18/02	POWER MEASUREMENT	08/15/02	eBid-LOI
ION 8600 Modified	2, 20	120-480	4	10/12/05	POWER MEASUREMENT	9/10/05	
ION 7550/7650 Modified	2,10,20	120-480	4	4/8/05	POWER MEASUREMENT	02/10/05	

- + Modified current coil on self contained meters only.
- # Replacement with Metal Oxide Varistor surge protection.
- \* Addition of a tertiary winding on the voltage coil.

# WATTHOUR METERS

@ Includes A-base Configuration

## *PROCESS SYSTEMS*

Quad 4 Plus	20	69-277	4	04-17-96	NYSEG	07-13-95
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## *SANGAMO/SCHLUMBERGER*

TYPE	CLASS	VOLTS	WIRE	APPROVED	TESTING ENTITY	APPROVAL SUBMITTED	REVIEW
P2	60	120/240/480	3	05-24-60	RG&E	04-27-60	
P2	100	120/240/480	3				
P2	200	120/240/480	3				
P2P	10	120/240/480	3				
P2P	100	120/240/480	3				
P2P	200	120/240/480	3				
P2 Delta	10	240	4				
P2 Delta	100	240	4				
P2 Delta	200	240	4				
P2 Wye	10	120/240	4				
P2 Wye	100	120/240	4				
P2 Wye	200	120/240	4				
P20S-P20A	100	120/240/480	3	12-13-60	RG&E (No Test)	11-18-60	
P20SP-P20AP	100	120/240/480	3				
P20S-P20A	200	120/240/480	3				
P20SP-P20AP	200	120/240/480	3				
P20SP-P20AP	10	120/240/480	3				
P20S-P20A Delta	100	240	4				
P20S-P20A Delta	200	240	4				
P20S-P20A Delta	10	240	4				
P20S-P20A Wye	10	120/240	4				
P20S-P20A Wye	100	120/240	4				
P20S-P20A Wye	200	120/240	4				
J3S-J3A	10,100	120	2	12-28-60	RG&E	11-16-60	
J3S-J3A	10	240	2				

## WATTHOUR METERS

J3S-J3A	10,100,200	240	3
J3S-J3A	10,100,200	480	2
J3F-Switchboard	10,100,200	120/240/480	2-3
J3V-Two Rate	100,200	240	2-3

### *SANGAMO/SCHLUMBERGER/Itron*

TYPE	CLASS	VOLTS	WIRE	APPROVED	TESTING ENTITY	APPROVAL SUBMITTED	REVIEW
P20S	60	120	3	06-13-62	Con-Ed		
JNS-1	60	120	3	07-17-62	Con-Ed		
P20S Urban	100	120	3	06-09-66	Con-Ed	04-04-66	
Ed Transmitter and Transformer		120/240		07-16-68	Con-Ed		
ED Receiver	12			07-16-68	Con-Ed		
J4S	200	240	3	06-02-71	N.M.P.		
S2S, S2A	100,200		3	03-14-72	RG&E		
S3S, S3A	10,20,100,200		3	03-14-72	RG&E		
S11S	60		3	03-14-72	RG&E		
S12S	100/200 Urban		3	03-14-72	RG&E		
S5S, S5A	10,20,100,200		4 Wye	03-14-72	RG&E		
S6S, S6A	10,20,100,200		4 Delta	03-14-72	RG&E		
S4S, S4A	10,20,100,200		4 Wye	03-14-72	RG&E		
S5 (changed)	2.5 Stator		4 Wye	05-18-84	RG&E	05-03-84	
S3F	10		3	03-14-72	RG&E		
S5F	10		4 Wye	03-14-72	RG&E		
S6F	10		4 Wye	03-14-72	RG&E		
S4F	10		4 Wye	03-14-72	RG&E		
J11S Network	60	120	3		O & R	03-29-77	
J12S Network	100	120	3		O & R	03-29-77	
J12S2 Network	100	120	3	02-17-93	O & R	10-23-93	
J4SMT	200	240	3	09-24-80	O & R		
J5S	100,200	240	3	09-05-85	NMP	12-06-82	
J5S1	200	240	3	03-12-93	NMP	01-21-93	
J5S2	200	240	3	03-12-93	NMP	01-21-93	
SL				03-28-89	L.I.L.	11-29-88	
FULCRUM	Multi-Function Solid State	Watt-hour Meter		08-29-95	NMP	08-01-94	
VECTRON	Multi-Function Solid State	Watt-hour Meter		04-17-96	NYSEG	07-13-95	
QUANTUM	Multi-Function Solid State	Watt-hour Meter		05-17-96	L.I.L.	06-06-95	



## WATTHOUR METERS

VECTRON SVX*	Solid State Meter				09-04-97	L. I. L.	02-20-97	06-10-98
CENTRON (C1S)	20,100,200,320	120/240	3		05-26-00	RG&E		
CENTRON (C12/25S)	20,100,200,320	120/208	3		02-01-01	Con-Ed		
CENTRON (C1S)	20,100,200,320	120/240	3		08-30-02	RGE	04-29-02	
CENTRON (C1SR)	20,100,200,320	120/208/240	3		05-17-05	Itron Inc	03-29-05	
CENTRON (C1BR)	20,100,200,320	120/208/240	2/3		11/21/07	Itron Inc	11-09-07	
SENTINEL	Multimeasurement Electricity Meter Line				11-04-02	Schlumberger	07-22-02	
SENTINEL	Metrum UtiliWise ECM-SC				11-20-11	Itron Inc	9/23/11	
SENTINEL	Trilliant CRDR -1010-SENT-c				11-20-11	Itron Inc	9/23/11	
CENTRON	POLY-PHASE Meter Line C & I platform (CP1S, CP1SR, C1SR, CP1ST, CP1SL)		3		07-19-06	Itron Inc	04-07-06	
*Revision 11PCB (Vectron)								
CENTRON - Open Way	20,100,200,320	120/208/240	2/3		10-14-10	Itron Inc	12-22-09	
CENTRON Open Way HW 3.0 100, 200		120/240	2/3		12-5-10	Itron Inc	12-15-10	
CENTRON - Polyphase A-based with KYZ		120/240	3		12-10-10	Itron Inc	1-10-11	

### SENSUS

APX	20, 200	120/240/277/480	4		06-20-07	N'GRID	11-21-06	
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### WESTINGHOUSE/ABB/ELSTER

TYPE	CLASS	VOLTS	WIRE	APPROVED	TESTING ENTITY	APPROVAL SUBMITTED	REVIEW
D2A-D2S	10,100	120/240/480	2-3	06-14-60	Con-Ed	05-19-60	
D2A-D2S	100	120/240	2-3	06-14-60			
D2S	200	120/240	2-3	06-14-60			
D2A & D2S	All	All	3-4	03-26-63	Con-Ed		
D2B-8F	10	120/240	4 Wye	02-06-68	Long Island		
D2S 5U	200	120	3	12-01-70	Con-Ed		
D3S	10,100,200	120/240	2-3	03-26-63	Con-Ed	02-26-63	
D3SN	60	120	3	06-27-68	Con-Ed		
D4S	200	120/240	2-3	07-16-68	RG&E	05-24-68	
D4 Polyphase	All	All	3-4	02-06-73	RG&E	11-28-72	
D4S 5U	60,100,200	120	3	03-12-74	Con-Ed	12-11-73	
D4S Modified	200	120/240	2-3	07-31-80	RG&E	07-24-80	
D4S Modified Polyphase	All	All	3-4	03-22-83	RG&E	10-13-81	

## WATTHOUR METERS

D4S	320	240	3	03-09-82	L. I. L.	06-01-81	
D5S Single Phase	200	120/240	3	06-15-83	O & R	12-14-82	
D5S-5N					Con-Ed	03-20-88	
AB1R/D5	200	240	3	4/11/05	Elster	01-26-05	
RK-2	2.5,5	120	3	12-28-60	O & R	09-27-60	
RK-3	2.5,5	120	4	12-28-60			
CBF	10	120/240/480	2-3-4-6-8	07-18-61	NYSEG		
D5	All	All	3-4	11-05-87	RG&E	07-29-87	07-09-90
D5S/1*	200	120/240	3	12-20-88	O & R	08-29-88	05-11-90
D5S/2	200	120/240	3	09-11-92	O & R	08-31-92	
Alpha	20,200,320	96 - 528	3-4	06-30-95	Con-Ed	07-07-94	
Alpha Plus #	20,200,320	96-528	3-4	03-30-98	Con-Ed	02-06-98	
Alpha Plus #	20,200,320	96-528	3-4	03-30-98	Con-Ed		
Alpha	20,200,320	96-528	3-4	07-16-98	NYSEG	12-02-97	
Alpha Plus modified	20,200,320	ALL	3-4	02-16-05	Elster	02-04-05	
ABB/ION 8300,8400,8500	20	57-277	4	12-18-02	POWER	8-15-02	eBid-LOI
		120-480			MEASUREMENT		
A3 Alpha #	20,200,320	120 480	3-4	02-12-03	ELSTER	12-9-02	
A3 Alpha #	(with Itron 50ESS ERT)						
• Approved on the basis of similarity (elimination of an aluminum shield)							
# Approved on the basis of similarity							

### WESTINGHOUSE/ABB/ELSTER

TYPE	CLASS	VOLTS	WIRE	APPROVED	TESTING ENTITY	APPROVAL SUBMITTED	REVIEW
REX	Electronic	120/240	3	6-20-05	Elster	12-27-05	

### SCIENTIFIC COLUMBUS INC./ AMETEK

JEM-I				06-30-82	N. M. P.		
6406	Electronic	DC		06-26-85	Con-Ed	10-16-84	
	Solid State						
202P-D	Electronic	25HZ		04-10-86	Con-Ed	09-09-85	
JEM-II	Electronic			04-05-88	Con-Ed	12-01-88	
JEMStar	Electronic	55-530VAC	3-4	11-22-01	Con-Ed	08-13-01	
Ci20	Electronic	55-530	3-4	11/21/05	AMETEK	11-07-05	

# WATTHOUR METERS

## *ROBINTON PRODUCTS*

K&L Intellimeter	Solid State	06-13-86	Con-Ed	02-04-86
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## *TEMPO*

36DD007	Electronic DC Watthour Meter	05-14-93	Con-Ed	
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## *TRANSDATA*

Mark V	Multifunction Solid State Watthour Meter	10-01-96	N.M.P.	10-01-95
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# CONTACT DEVICES

## *GENERAL ELECTRIC*

<b>TYPE</b>	<b>WIRE</b>	<b>DATE</b>	<b>TESTING ENTITY</b>
D-41 Impulse Generator	3	02-26-63	N.M.P.
D-51 Impulse Generator	3	02-17-70	L.I.L.
D-52 Impulse Generator	3	07-17-73	N.M.P.
D-53 Impulse Generator	3	12-22-75	Con-Ed
D-72 Pulse Initiator	3	09-26-83	N.M.P.
D-73 Pulse Initiator	3	09-26-83	N.M.P.
MR-3 Isolation Relay	3W in, 2-3W out	07-17-73	N.M.P.

## *SANGAMO/SCHLUMBERGER*

MPS Pulse Generator	3	10-19-71	RG&E
SPI Pulse Initiator	3	01-24-80	RG&E
EPI Pulse Initiator		03-28-89	L.I.L.

## *WESTINGHOUSE/ABB*

CD-11 Photo Pulse Initiator	3	03-07-69	Con-Ed
CD-21 Photo Pulse Initiator	3		
CDI-12 Photoelectric Pulse Initiator 12 A & B	3	03-18-75	RG&E
CDI-22 AR, 22 A & B	3	03-18-75	RG&E

## *DUNCAN/LANDIS & GYR*

PG-6MT, PG-6 MTL	3	07-17-73	N.M.P.
PG-6MS, PG-6 MSL	3	07-17-73	N.M.P.
SPG-8 Electronic Pulse Generator		04-06-82	O & R

## *PROCESS SYSTEMS, INC*

Sentry 30 Isolation Relay	3	07-14-82	RG&E
Sentry Isolation Relays Models 30-E, 50, 70		08-30-06	RG&E

# PHASE-SHIFTING TRANSFORMERS

## *GENERAL ELECTRIC*

<b>TYPE</b>	<b>VOLTAGE</b>	<b>CIRCUIT</b>	<b>DATE</b>	<b>TESTING ENTITY</b>
MC-63	120/240	30-3W	02-28-60	L. I. L.
	240/240	30-3W		
MC-65	120/120	30-4W Wye		
	240/277:240/277	30-4W Wye		
MC-67	240/240	30-4W Delta		

## *SUPERIOR SWITCHBOARD AND DEVICES*

1391	120/240	30-3W Delta	10-21-59	NYSE&G
1397	240	30-4W Delta		
1415	120	30-4W Wye		
1392	240	30-4W Delta	08-01-72	NYSE&G
1395	120	30-4W Wye		

# REGISTERS

## GENERAL ELECTRIC

TYPE	SCALE	VOLTAGE	DATE	TESTING ENTITY	REVIEW
M-51	1, 2, and 6	120,240,480	09-01-70	N.M.P.	
T-76	TOU		02-20-79	L.I.L.	
TM-80	TOU, Demand		12-16-80	O & R	
TM-80P	TOU		06-09-82	N.M.P.	
TM80/1	TOU, Demand		01-00-85	N.M.P.	
TM80/P/1	TOU, Demand		01-00-85	N.M.P.	
M51/1(T)	1, 2, and 6	Con-Ed Pat. Pend.	05-23-83	Con-Ed	
TM-81	TOU, Demand		09-14-84	RG&E	
M-90	Demand		04-24-85	NYSEG	
TMR-82	TOU, Demand, Load Profile		09-15-85	O & R	
T-90*	TOU		09-24-86	L.I.L.	5/14/93
TM-91	TOU, Demand		02-24-88	RG&E	
M-90-P	Demand		07-08-88	N.M.P.	
TM-91-P	TOU, Demand		11-14-88	N.M.P.	
TMR-92	TOU, Demand, Load Profile		03-28-89	O & R	
TM-900	TOU		09-19-90	L.I.L.	
TMR-900	TOU, Demand, Load Profile		06-13-91	L.I.L.	
M-90E	Demand (EV Polyphase Meter)		05-08-91	N.M.P.	
KM-901	Demand (EV 1P & 3P watt-hours, var-hours)		08-22-92	N.M.P.	
KTC-901**	Demand, TOU (EV 1P & 3P watt-hours, varhours)		08-22-92	N.M.P.	06/10/94
KRC-901**	Demand, TOU, Load Profile (EV 1P & 3P Watt-hours, varhours)		08-22-92	N.M.P.	06/10/94
M-90AE***	Electronic demand register for EV line		10-08-93	N.M.P.	07/12/95
TM-900E	T.O.U. register for EV line		10-08-93	N.M.P.	
TMR900E	T.O.U. recording register for EV line		10-08-93	N.M.P.	

- \* Logic board modification
- \*\* Internal telephone modem
- \*\*\* Programming enhancement

# REGISTERS

## *SANGAMO/SCHLUMBERGER*

<b>TYPE</b>	<b>SCALE</b>	<b>VOLTAGE</b>	<b>DATE</b>	<b>TESTING ENTITY</b>	<b>REVIEW</b>
CD	1, 2, and 6	120/240	09-01-70	Con Ed	
MCD-6,7&8	Cumulative Demand		11-14-79	Con Ed	
ED5	Meter Dial Extension System		05-15-85	Con Ed	
MTR-20			09-24-80	O & R	
MTR-30			09-24-80	O & R	
MTR-21C			09-24-80	O & R	
ST-D101	Demand		01-13-88	RG&E	03-05-90
ST-MT100	TOU, Demand		05-23-88	RG&E	03-05-90
ST-D101R	TOU, Demand		12-06-88	RG&E	03-05-90
ST-MT100R	TOU, Demand		12-06-88	RG&E	03-05-90
ST-DS120	TOU, Demand, Load Profile				
I200	Encoded Register		11-13-91	N.M.P.	
T200*	Encoded Register		08-25-93	N.M.P.	12-07-95
T300*	Encoded Register w/ Modem		08-25-93	N.M.P.	12-07-95
R200	Itron ERT Encoder		05-17-95	Con Ed	
D200**	Electronic Register, Demand		10-20-95	RG&E	06/25/96
MT200**	Electronic Register, TOU w/Demand		10-20-95	RG&E	06/25/96
MTR200**	Electronic Register, mass memory, TOU w/Demand		10-20-95	RG&E	06/25/96

## *WESTINGHOUSE/ABB*

Mark II	1, 2, and 6	120	05-26-64	Con-Ed	
Mark II	8	120	05-07-74	RG&E	
EMF 2110	Demand		09-06-88	Con-Ed	01-03-90
EMF 2410	TOU Register		09-05-90	Con-Ed	
EMF 3410	TOU Register (single phase only)		12-03-92		

\* Telephone Modem Interface

\*\* LCD Modification

# REGISTERS

## *DUNCAN/LANDIS & GYR*

<b>TYPE</b>	<b>SCALE</b>	<b>VOLTAGE</b>	<b>DATE</b>	<b>TESTING ENTITY</b>	<b>REVIEW</b>
Type B	1, 2, and 6	120/240/277/480	07-17-73	N.M.P.	
RTD	TOD		04-06-82	O & R	
PDR	Demand		06-26-85	N.M.P.	
PDR-J	Demand		01-13-88	Con-Ed	
PDR-A	Demand		01-27-88	N.M.P.	
DT	TOU		11-14-90	L.I.L.	
DC	TOU, Demand		11-14-90	L.I.L.	
DCR	TOU, Demand, Load Profile		11-14-90	L.I.L.	
DX	TOU, Demand		09-16-93	N.M.P.	

## *DOMESTIC AUTOMATION*

SM101		Electronic Register	02-27-89	NYSEG	
SM-3200		Solid State Multi-Function	12-03-92	RG&E	



# DEMAND RECORDERS/TOTALIZERS

## *GENERAL ELECTRIC*

TYPE	CHANNELS	COUNTS	VOLTAGE	DATE	TESTING ENTITY	REVIEW
PD55F	1	999/Interval	120	02-26-63	N.M.P.	
PD57F	1	999/Interval	120			
PDM-70	4	6000/Hour	120	02-17-70	L.I.L.	
SST-3	20	18/Second	120	12-10-74	N.M.P.	
	Solid State					
PDM-75	2 or 4	7200/Hour	120/240/277	12-22-75	Con-Ed	
PDM-76	2 or 4	7200/Hour	120/240/277	12-22-75	Con-Ed	
DR-87	1 to 4	electronic	120/240/277	09-06-88	NYSEG	
DR-87/2	1 to 4	electronic	120/240/277	09-06-95	NYSEG	

## *SANGAMO/SCHLUMBERGER*

DPR 215,230,260	2	4095/Interval	120	02-01-72	RG&E	
DPR 415,430,460	4	4095/Interval				
SR1	2	1800/our	120/240	02-19-75	RG&E	
MBR-90	Solid State Recorder			07-11-84	RG&E	
ST-DS 101	Solid State Recorder			11-24-87	O & R	
ST-DS 111	Solid State Recorder			11-24-87	O & R	

## *FERRANTI ELECTRIC, INC.*

CE MK II	Impulse Totalizer		120	06-16-70	Con-Ed	
CE MK II	(Model R/C)					

# DEMAND RECORDERS/TOTALIZERS

## *WESTINGHOUSE/ABB*

TYPE	CHANNELS	COUNTS	VOLTAGE	DATE	TESTING ENTITY	REVIEW
WR-2	2	4000/Hour	120/240	03-07-69	Con-Ed	
WR-4	4	4000/Hour	120/240			
WR-2C	1	6000/Hour	120	02-03-70	N.M.P.	
WR-4C	3	6000/Hour	120			
Dem Pulse Relay and Master and Slave Pulse Syn. Circuit for WR-2C and WR-4C				02-03-70	N.M.P.	
W-3 Isolation Relay		3 wire in, 2-3 wire out				03-07-69
	Con-Ed					
W-2 Interval Tripping Relay		2 wire in, 2-2 wire out				03-07-69
	Con-Ed					
W-4 Polarized Relay		2 wire in, 3 wire out		03-07-69	Con-Ed	
W-5 Power Supply	2 wire in, 3 wire out			03-07-69	Con-Ed	
WR-31	1, 2 or 4	6000/Hour	120/240/277/480	06-21-77	O & R	

## *DUNCAN/LANDIS & GYR*

BTR	2,4	6000/Hour		08-17-72	Con-Ed	
STR	2,4	7200/Hour	120/240	01-06-77	NYSEG	

## *PROCESS SYSTEM, INC.*

Sentry 1540				03-05-80	Con-Ed	
Sentry 1545A Demand Pulse Totalizer				03-03-81	Con-Ed	
Sentry 100 Solid State Recorder				08-10-82	Con-Ed	
Sentry 210 Solid State Pulse Totalizer				01-12-83	L.I.L.	
Sentry 1545B Totalizer				06-01-85	Con-Ed	
Sentry S1610 Totalizer				05-03-88	Con-Ed	
S200-EXP (DSUII) Demand Recorder with on site display and Totalized output				03-04-94	Con-Ed	

# DEMAND RECORDERS/TOTALIZERS

## *FAIRCHILD SPACE AND ELECTRONICS CO.*

TYPE	CHANNELS	COUNTS	VOLTAGE	DATE	TESTING ENTITY	REVIEW
PDSU	Solid State			12-16-80	Con-Ed	

## *EMAX INCORPORATED*

EMAX Solid State				06-30-82	NYSEG	
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## *ROBINTON PRODUCTS, INC.*

LPR Solid State Recorder	4	1500/15 min. int.	120/240	02-14-83	Con-Ed	
LPR-II Solid State Recorder				07-01-88		

## *CONTROL DEVICES*

System 10	Pulse Recording Transponder	Solid State		07-24-85	RG&E	
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## *TELOG INSTRUMENTS*

8506	Pulse Recording Transponder (3 Channel System 10)			09-09-87	RG&E	10-25-89
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## *APPALACHIAN TECHNOLOGY*

SST-2430	Electronic Totalizer			01-13-89	Con-Ed	
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## *DUNCAN/LANDIS & GYR*

DG-100	2 or 4	Solid State Demand Recorder		06-09-92	RG&E	
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## 16 NYCRR, PART 93, PSC APPROVAL DEMAND RECORDERS/TOTALIZERS

### *DOMESTIC AUTOMATION*

TYPE	CHANNELS	COUNTS	VOLTAGE	DATE	TESTING ENTITY	REVIEW
Linc	4	Electronic Recorder		6/9/92	RG&E	
<b><i>METRETEK</i></b>						
SIP AC-II	2	Solid State		12/04/92	RG&E	
SIP AC-IV	4	Solid State		12/04/92	RG&E	
<b><i>SUMATRON</i></b>						
Model 600		Solid-State Totalizing Relay		4/30/93	LILCO	
<b><i>TRANSDATA</i></b>						
SSR-6000	12	Solid State		6/18/09	Con Ed	

## **DEMAND RECORDERS/TOTALIZERS**

# CURRENT TRANSFORMERS

## GENERAL ELECTRIC

TYPE	PRIMARY AMPS	VOLTS	SEC. AMP.	DATE	TESTING ENTITY	APPROVAL SUBMITTED
JCX-0	200, 400, 600, 800	600	5	06-29-65	L.I.L.	
JCR-0	Indoor and Outdoor 200 and 400	600	5	06-29-65	L.I.L.	
JKM-3C	5 to 800	5000	5	08-20-03	G.E.	12-19-03
JKM-4C	5 to 800	8700	5	08-20-03	G.E.	12-19-03
JKM-5C	5 to 800	15000	5	08-20-03	G.E.	12-19-03
JKM-4	10 to 800	8700	5	04-12-60	N.M.P.	06-22-60
JCD-0	2000-3000-4000-8000 1000/2000-2000/4000	600	5	08-09-60	L.I.L.	06-22-60
JKS-5	40-100-150-200-300 400-600-800 (Approved only where high short circuit duty required. See approval)	15000	5	09-13-60	Con-Ed	06-20-60
JCM-2	1200-1500-2000-3000 4000	2500	5	12-28-60	RG&E	11-11-60
JCB-3	1200-1500-2000-3000-4000	5000	5	06-13-62	N.M.P.	05-17-62
JCB-4	" " " " "	8700	5			
JCB-5	" " " " "	15000	5			
JCB-3a*	" " " " "	5000	5	02-9-04	KEG	02-12-04
JCB-3a	1000	5000	5	06-07-10	GE	06-08-10
JCB-4a*	" " " " "	8700	5	02-9-04	KEG	02-12-04
Jcb-5a*	" " " " "	15000	5	02-9-04	KEG	02-12-04
JCD-3	" " " " "	5000	5	06-13-62	N.M.P.	05-17-62
JCD-4	" " " " "	8700	5			
JCD-5	" " " " "	15000	5			
JCM-3	" " " " "	5000	5			
JCM-4	" " " " "	8700	5			
JCM-5	" " " " "	15000	5			
JCW-3	" " " " "	5000	5			
JCW-4	" " " " "	8700	5			
JCW-5	" " " " "	15000	5			
JCW-0	200-400	600	5	02-13-63	N.M.P.	01-10-63
KG-150	10/20, 25/50, 50/100, 75/150, 100/200, 150/300, 200/400, 300/600, 400/800, 500/1000, 600/1200, 800/1600 1000/2000	25kv 34.5kv 46kv 69kv	5	02-16-65	NYSEG	01-14-65
KG-200	See KG-150					

## **CURRENT TRANSFORMERS**

KG-250      See KG-150  
KG-350      See KG-150

\* Approved on similarity to JCB-3,JCB-4,JCB-5.

# CURRENT TRANSFORMERS

## GENERAL ELECTRIC

TYPE	PRIMARY AMPS	VOLTS	SEC. AMP.	DATE	TESTING ENTITY	APPROVAL SUBMITTED
JCD-0	5000-6000	600	5	08-04-70	N.M.P.	
JCM-0	200-400-600	600	5	06-29-65	N.M.P.	
JCR-0	200-400	600	5	05-29-65	N.M.P.	
KW-450	50/100, 75/150, 100/200 150/300, 200/400, 300/600, 400/800, 600/1200, 800/1600	92kv	5	04-26-66	N.M.P.	03-03-66
KW-550	See KW-450	115kv	5	04-26-66	N.M.P.	03-03-66
KW-550*	1000/2000, 1500/3000	115kV	5	08-19-03	GE	07-01-03
KW-650	See KW-450	138kv	5	04-26-66	N.M.P.	03-03-66
KW-750	See KW-450	161kv	5	04-26-66	N.M.P.	03-03-66
KW-900	See KW-450	230kv	5	04-26-66	N.M.P.	03-03-66
JAD-0	800, 1000, 1200, 1500, 2000, 3000 4000, 1000/2000, 1500/3000, 2000/4000	600	5	06-09-66	Con-Ed	05-16-66
JKW-150	25/50, 50/100, 75/150, 100/200, 150/300, 200/400, 300/600, 400/800, 500/1000, 600/1200, 800/1600, 1000/2000, 1500/3000	25kv	5	06-09-66	N.M.P.	05-05-66
JKW-200	See JKW-150	34.5kv	5	06-09-66	N.M.P.	05-05-66
JKW-250	See JKW-150	46kv	5	06-09-66	N.M.P.	05-05-66
JKW-350	See JKW-150	69kv	5	06-09-66	N.M.P.	05-05-66
JCL-0	1200, 1500, 2000, 3000, 4000	600v	5	11-14-67	RG&E	09-25-67
JAK-0	200, 400, 500, 600, 800, 200/400, 300/600, 400/800	600v	5	06-05-69	RG&E	04-30-69
JCT-0	200, 400, 600, 800	600v	5	08-20-69	N.M.P.	07-30-69
JCD-0	1500	600v	5	08-04-70	N.M.P.	06-30-70
JAB-0	300, 400, 500, 600, 800, 1000, 1200, 1500, 2000, 3000	600v	5	01-26-71	L.I.L.	
JKW-110	5, 10, 15, 20, 25, 50, 75, 100, 150, 200, 300, 400, 600, 800	15kv	5	07-20-71	N.M.P.	

\* Approved on similarity to KW-550 115kV 800/1600



# CURRENT TRANSFORMERS

## GENERAL ELECTRIC

TYPE	PRIMARY AMPS	VOLTS	SEC. AMP.	DATE	TESTING ENTITY	APPROVAL SUBMITTED
JKM-95	5 through 200	15kv	5	03-12-74	N.M.P.	12-26-73
JCK-3**	5 - 800	5kV	5	08-19-03	GE	07-08-03
JCK-4**	5 - 800	8.7kV	5	08-19-03	GE	07-08-03
JCK-5	10 through 800	15kv	5	04-15-75	N.M.P.	02-27-75
KH-450	37.5 x 75 through 300 x 600	92/115kv	5	09-07-78	N.M.P.	05-01-78
KH-550		115/138kv				
KH-650	400/800 through 1000/2000	138/161kv	5			
KH-750		151/196kv				
KH-900		196/230kv				
JKW-7	10/5 through 800/5	34.5kv	5	12-28-78	N.M.P.	
JAB-0	200:5	600	5	03-06-87	N.M.P.	12-15-86
BM	600	34.5kv	5	10-30-87	RG&E	07-27-87
JKW-5	10 through 1200	15kv	5	Note: PSC Case #279		
JKW-5A	All Ratios	15Kv	5	12-04-97	NYSEG	02-13-97
JKW-6A	All Ratios	15Kv	5	12-04-97	NYSEG	02-13-97
JKM-5A	All Ratios	15Kv	5	12-04-97	NYSEG	02-13-97
JAG-0	600:5	600	5	08-19-98	Cen Hud	
JAB-0C#	200:5 through 3000:5	600	5	01-25-02	GE	12-26-01
JCL-0C#	1200:5 through 3000:5	600	5	01-25-02	GE	12-26-01
JCM-0C#	200:5 through 400:5	600	5	01-25-02	GE	12-26-01
JCT-0C#	200:5 through 800:5	600	5	01-25-02	GE	12-26-01
JAD-0C%	200:5 through 4000:5	600	5	04-16-02	GE	03-26-02
JAK-0C%	200:5 through 800:5	600	5	04-16-02	GE	03-26-02
JCD-0C%	1500:5 through 8000:5	600	5	04-16-02	GE	03-26-02
JCP-0C%	600:5 through 4000:5	600	5	04-16-02	GE	03-26-02
JCR-0C%	100:5 through 400:5	600	5	04-16-02	GE	03-26-02
JCW-0C%	200:5 through 400:5	600	5	04-16-02	GE	03-26-02
17-1200-14	3,000	145	5	10-14-09	GE	02-11-10
PT-7	2400:120 to 34500:120	5000	120	8-20-03	GE	12-19-03

\*\*Approved on similarity to the JCK-5

## CURRENT TRANSFORMERS

# Aprv'd on similarity to JAB-0, JCL-0, JCM-0, JCT-0 respectively; insulation material change; manf'd at GE Clearwater Fl  
 % Aprv'd on similarity to JAD-0, JAK-0, JCD-0, JCP-0, JCR-0, JCW-0 respectively; insulation change; manf'd in Clearwater Fl  
 \* Approved on similarity of the CTM-115, No longer manufactured

### GEC ALSTHOM

TYPE	PRIMARY AMPS	VOLTS	SEC. AMP.	DATE	TESTING ENTITY	APPROVAL SUBMITTED
CTM-069		69kv	5	09-11-95	L.I.L.	10-18-94
CTM-115		115kv	5	09-11-95	L.I.L.	10-18-94
CTM-138		138kv	5	09-11-95	L.I.L.	10-18-94
CTH-115*		115kv	5	03-29-99	CEN-HUD	01-19-99

### GEC DURHAM INDUSTRIES

AD	300,300,400,500,600,800,1000,1200,1500 2000,3000,4000,5000,6000,600/1200,800/1600 1000/2000,1500/3000,2000/4000	600	5	12/18/02	ConEd	07/25/02
ACL	800,1000,1200,1500,2000,3000,4000,1000/2000, 1500/3000,2000/4000	600	5	12/18/02	ConEd	07/25/02
TAB	200,300,400,600,800	600	5	6/13/07	GEC Durham	10/16/07
AB	100,200,300,400,600,600,800,1200,1500,2000, 3000,4000,200/400,300/600,400/800,1000/2000, 1500/3000,2000/4000	600	5	6/13/07	GEC Durham	10/16/07

### HITACHI

UB-R	3000-2500-2000	345kV/63kA switchgear	5	6/20/06	HVB/AE	04/25/06
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### SCHNEIDER ELECTRIC

Current/Voltage Transformer Verification		765kV		9-19-07	N'Grid	7-7-07
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## CURRENT TRANSFORMERS

Current/Voltage Transformer Reclassification	500kV		9-19-07	N'Grid	7-7-07
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### ***NXTPHASE OPTICAL TRANSFORMERS***

NXCT	1 to 3000	69-765kV	5	06/05/04	NGRID	10/20/05
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### ***RITZ INSTRUMENT TRANSFORMERS***

GIFU 15.01	5 to 1200 A	15.5kV	5	2-9-05	RITZ	10-5-04
GIFU 15.01L	5 to 1200 A	15.5kV	5	2-9-05	RITZ	10-5-04
GIFU 25-01	5 to 1200 A	25kV	5	2-9-05	RITZ	10-5-04
GIF 36	5 to 3000 A	36kV	5	2-9-05	RITZ	10-5-04
GIF 48	5 to 3000 A	48kV	5	2-9-05	RITZ	10-5-04
GIF 72	5 to 3000A	72kV	5	2-9-05	RITZ	10-5-05
OSKF	Extended Current Range	123-765kV		2-9-05	RITZ	10-5-04
OTCF	EM Voltage Transformer	72.5-765kV		7-19-06	RITZ	3-21-06
OTCF	IM Voltage Transformer	36.5-550kV		7-19-06	RITZ	3-21-06
OTCF	SM Voltage Transformer	36.5-550kV		7-19-06	RITZ	3-21-06

### ***SANGAMO/SCHLUMBERGER***

BH-6	200, 400, 600, 800, 200/400, 400/800	600	5	08-04-59	N.M.P.	
S-6	200, 400, 600, 800	600	5	02-28-61	N.M.P.	02-20-61
WH-6	800, 1200, 1500, 2000, 3000, 1000/2000	600	5	10-23-62	Con-Ed	10-05-62
SK-6	200	600	5	01-07-64	Con-Ed	11-27-63
S-6A	200, 400, 600	600	5	12-08-65	Con-Ed	11-05-65
WH-6A	800, 1000, 1200, 1500	600	5	11-14-67	L.I.L.	
SMC-150	10, 15, 20, 25, 30, 40, 50, 75, 100, 150, 200, 300, 400, 600, 800	15kV	5	09-23-69	L.I.L.	08-27-69
B6SA,B6S	200 through 2000					
B6BA,B6B	200/400 through 400/800	600	5	12-20-74	Con-Ed	
B6M,B6P						
R6*	All ratios	600	5	12-23-86	Con-Ed	11-19-86
R6M*	100, 200	600	5	01-24-90	Con-Ed	10-16-89
R6/Santoprene	All ratios	600	5	11-09-10	Itron	12-02-10

\* 100:5 and 200:5 thermal rating increased from 3 to 4.

# CURRENT TRANSFORMERS

## *MWB MESSWANDLER/HAEFELY TRENCH*

TYPE	PRIMARY AMPS	VOLTS	SEC. AMP.	DATE	TESTING ENTITY	APPROVAL SUBMITTED
SAS	115-765kv	SF6 Gas Insulated		09-18-95	N.M.P.	01-21-94

## *SQUARE "D" COMPANY/HAEFELY TRENCH*

IK	All ratios			08-11-86	N.M.P.	01-24-86
IH	All ratios			08-11-86	N.M.P.	01-24-86

## *NWL TRANSFORMERS*

31422	1200, 1600:5		5	09-26-86	Con-Ed	06-25-86
31426	2400:5		5	03-09-88	Con-Ed	11-04-87

## *WESTINGHOUSE/ABB*

EMC	800, 1200, 1500, 2000, 3000, 4000, 1000/2000, 1500/3000, 2000/4000	600	5	04-25-60	Con-Ed	03-24-61
ACT-550	600/1200	11500	5	12-28-60	N.M.P.	09-21-60
CTOM-15	10, 15, 20, 25, 30, 40, 50, 75, 100, 150, 200, 300, 400, 600, 800	15000	5	05-09-61	L.I.L.	10-27-64
CTOM-5	5, 10, 15, 20, 25, 30, 40, 50, 75, 100, 150, 200, 300, 400, 600, 800	5000	5	10-27-64	L.I.L.	
CTOM-15	To include 5 amp rating	15000	5	03-30-65	Cen-Hud	03-02-65
CLA-10	800	600	5	08-23-67	N.M.P.	08-04-67
CLA-10	1000, 1200, 1500, 2000, 3000, 4000, 1000/2000, 1500/3000, 2000/4000	600	5	05-11-65	Con-Ed	
RTM-10	200, 400, 600, 800	600	5	04-04-67	Con-Ed	03-03-67
CTR	200, 400, 600, 800, 200/400, 300/600, 400/800	600	5	03-15-68	N.M.P.	08-04-67
CT-25	400	25000	5	06-06-68	Con-Ed	
CTR	400/5 4.0 T.F.	600	5	07-21-70	N.M.P.	09-30-70
CRA-10	400, 600, 800, 1000, 1200, 1500, 2000	600	5	09-23-71	RG&E	09-07-71

# CURRENT TRANSFORMERS

## WESTINGHOUSE/ABB

TYPE	PRIMARY AMPS	VOLTS	SEC. AMP.	DATE	TESTING ENTITY	APPROVAL SUBMITTED
CSB-10	200, 400, 600	600	5	09-12-72	Cen-Hud	
ACT-200	100, 200	34500	5	09-12-72	Con-Ed	
ACT-350	10/20 through 1500/3000	69000	5	04-01-75	Cen-Hud	
CMF*	200, 400, 500, 600, 800, 200/400, 300/600, 400/800	600	5	02-06-80	Cen-Hud	
CBT	200, 300, 400, 500, 600, 800	600	5	03-05-80	N.M.P.	
CSF	200, 300, 400, 600	600	5	03-05-80	Cen-Hud	
CMV*	200, 300, 400, 600, 800, 1000, 1200, 1500, 2000, 3000	600	5	03-05-80	N.M.P.	
CLC*	800, 1000, 1200, 1500, 2000, 3000, 4000, 600/1200, 800/1600, 1000/2000, 1500/3000, 2000/4000	600	5	03-05-80	N.M.P.	
KOR-60	5 through 800	4800	5	03-09-82	N.M.P.	03-30-81
KON-11	25 through 800	15000	5	01-12-83	N.M.P.	
KOR-75**	5 - 800	8.32kV	5	09-02-03	ABB	08-19-03
KOR-11**	5 - 800	13800	5	09-02-03	ABB	08-19-03
KOR-15**	10-800	25000	5	09-02-03	ABB	08-19-03
KOR1-15C**	5-1200	25000	5	09-02-03	ABB	08-19-03
KOR-20**	10-1200	34.5kV	5	09-02-03	ABB	08-19-03
KIR-11	25 through 800	13800	5	10-24-83	Cen-Hud	
CBT/1	200 through 800	600	5	10-26-92	N.M.P.	02-21-92
CBT-H	200 through 800	600	5	10-26-92	N.M.P.	02-21-92
BCT	400 through 3000	600	5	10-24-01	RGE	05-04-01
SAB-2	1600:5	600	5	05-08-09	Huntley	06-08-09

\*\*Approved on similarity to the KOR-60 and KON-11

**ITE CIRCUIT BREAKER COMPANY**

## CURRENT TRANSFORMERS

MC15AS	400	15000	5	09-09-64	Con-Ed	08-10-67
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### ALLIS CHALMERS

BKCM	1000/2000 through 2000/4000	600	5	07-17-62	Con-Ed	06-11-62
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\* CMF, CMV, CLC - modification - standardized terminal sizes 01-09-01.

### KUHLMAN ELECTRIC CORP

TYPE	PRIMARY AMPS	VOLTS	SEC. AMP.	DATE	TESTING ENTITY	APPROVAL SUBMITTED	REVIEW
CEH	1000/2000 through 2000/4000	600	5	01-21-64	Con-Ed	12-16-63	
DEH	1000, 2000	600	5	01-23-73	Con-Ed	12-11-72	
COF-200	All		5	03-06-87	Con-Ed	12-29-86	
PS-981	Through 2000:5	600	5	08-03-99	Con-Ed	05-07-99	
POF350-2	69kV		5	11/12/04	Con-Ed	08-18-04	
PH-982	3000	600	5	03/17/05	Con-Ed	11-20-05	
CXM	34.5 - 345 kV			7/25/07	N'Grid	7-25-07	
KA72,123,145,245	69kV-230kV	600	5	5/20/08	Kuhlman	10-15-08	
KXM-350,550,650,1050	69kV - 230kV	600	5	5/20/08	Kuhlman	10-15-08	

### ASTRA CORPORATION

TCB*	200, 400, 600, 800	600	5	03-18-66	Con-Ed	01-17-66	04-14-92
TCW	200, 400, 600, 800	600	5	09-05-68	Cen-Hud	05-31-68	
AP	300, 400, 500, 600, 800, 1000 1200, 1500, 2000, 3000	600	5	08-29-77	RG&E	11-22-78	
APN	200, 300, 400, 500	600	5	06-16-86	RG&E	11-04-85	
APNE	200	600	5	06-16-86	RG&E	11-04-85	
TCB	100	600	5	01-22-87	RG&E	09-05-86	
TCW	100	600	5	01-22-87	RG&E	09-05-86	

\* Molding change due to the use of a superior steel core, added 600:5 ratio on a similarity basis.

# CURRENT TRANSFORMERS

*Meramec*

BCT	5- 8,000	600	5,1	08-08-06	Meramec	11-08-06
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# VOLTAGE TRANSFORMERS

## *GENERAL ELECTRIC*

TYPE	PRIMARY VOLTS	SEC. VOLT	INSULATION LEVEL	APPROVED DATE	TESTING ENTITY	APPROVAL SUBMITTED
JVW-3	2400, 4200, 4800	120	5000	08-04-59	L.I.L.	
JVW-4	2400, 4200, 4800, 7200 Modification	120	8700		N.M.P.	05-03-71
JVW-5	7200, 8400, 12000, 14400	120	15000			
JVM-3	2400, 4200, 4800	120	5000	12-22-59	L.I.L.	
JVM-4	4200, 4800, 7200 Modification	120	8700		N.M.P.	05-03-71
JVM-5	7200, 8400, 12000, 14400	120	15000			
ET-11	115000	115	115000	09-27-60		
JVPO	240	120	416	12-28-60	RG&E	10-19-60
JVPO	288	120	480			
JVPO	300	120	480			
JVPO	480	120	480			
JVPO	600	120	600			
ES-200	34500	115		09-09-87	RG&E	06-10-87
EW-450	69000	69/115	115000	04-09-63	NYSEG	03-14-63
EW-550	69000	69/115	115000			
EW-650	80500	67.08/115	138000			
EW-750	92000	67.71/115	161000			
EW-900	13800	69/115	230000			
EW-1175	207000	69/115	345000			
EW-1300	207000	69/115	345000			
ET-150	24000	120	24000	04-23-63	NYSEG	03-14-63
ET-200	27600	115	34500			
ET-200	34500	115	34500			
ET-250	46000	115	46000			
ET-350	69000	115	69000			
JVS-150	25000	72/120	150000	05-24-66	N.M.P.	
JVS-200	34500	67/115	200000	05-24-66	N.M.P.	

*NxTPhase*



# VOLTAGE TRANSFORMERS

NXVT

115-765kV

5/120

06/05/04

NGRID

10/20/05

## VOLTAGE TRANSFORMERS

TYPE	PRIMARY VOLTS	SEC. VOLT	INSULATION LEVEL	APPROVED DATE	TESTING ENTITY	APPROVAL SUBMITTED
<i>Nissen Electric</i>						
SVR-34C	207kV	69/115	345	8-30-06	HVB Power	3-7-06
<i>KUHLMAN ELECTRIC</i>						
POF	34.5 - 138kV			9-19-07	Kuhlman	9-19-07
UTF	138-230kV			9-19-07	Kuhlman	9-19-07
UTF	345kV			2-20-09	Kuhlman	1/30/09

# METERING UNITS

## GENERAL ELECTRIC

TYPE	PRIMARY VOLTS	SEC. VOLT	INSULATION LEVEL	APPROVED DATE	TESTING ENTITY	APPROVAL SUBMITTED
JVT-150	25000 Modification	120	150000	05-24-66	N.M.P.	05-04-71
JVT-200	34500	115	200000	05-24-66	N.M.P.	"
JVT-200	27600	115	200000	05-24-66	N.M.P.	"
JVS-250	27600	69/115	250000	09-13-67	N.M.P.	
JVS-350	40250	67/115	350000	09-13-67	N.M.P.	
JVT-250	46000	115	250000	09-13-67	N.M.P.	
JVT-350	69000	115	350000	09-13-67	N.M.P.	
JVA-0	120,240,288,300,480,600	120	600	09-13-67	N.M.P.	
JE-27	160	120 25n	2500	06-06-68	CON ED	05-13-68
JVW-110	7200, 8400, 12000, 14400	120	15000	07-20-71	N.M.P.	
EW-900Y	138000	115		08-31-72	N.M.P.	
JVM-95	7200, 8400, 12000, 14400	120	15000	03-12-74	N.M.P.	12-24-73
JVW-110	60-70/1 Revised design	120	15000	06-09-75	N.M.P.	
JVW-7	27.6 and 34.5kv, 175/1, 240/1, 300/1	120	150kv	12-28-78	N.M.P.	
JVW-4A	2400, 7200	120	8700	12-04-97	NYSEG	02-13-97
JVW-5A	7200, 14400	120	15000	12-04-97	NYSEG	02-13-97
JVM-4A	2400, 7200	120	8700	12-04-97	NYSEG	02-13-97
JVM-5A	7200, 14400	120	15000	12-04-97	NYSEG	02-13-97
JVA-0C	120 - 600	120	10000	02/19/03	GE	
JVM-0C	69.3 - 600	120	10000	02/19/03	GE	
JVM-3C	2400 - 4800	120	60000	02/19/03	GE	
JVM-4C	4200 - 7200	120	75000	02/19/03	GE	
JVM-4AC	4200 - 7200	120	75000	02/19/03	GE	
JVM-5C	7200 - 14400	120	110000	02/19/03	GE	
JVM-5AC	7200 - 14400	120	110000	02/19/03	GE	
JVM-6C	12000 - 24000	120	125000	02/19/03	GE	
PT7-2-150*	24000, 27600, 34500	120	150kV	08-29-03	GE	08-20-03
PT7-2-200*	24000, 27600, 34500	120	200kV	08-29-03	GE	08-20-03

# METERING UNITS

\* Approved on similarity to JVM series

## *NxTPhase*

NXVCT	69-765kV range 0-4000amps	120	350-2100kV	06/05/04	NGRID	10/20/05
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## **WESTINGHOUSE/ABB**

<b>SEC. TYPE</b>	<b>INSULATION PRIMARY VOLTS</b>	<b>APPROVED VOLT</b>	<b>TESTING LEVEL</b>	<b>APPROVAL DATE</b>	<b>ENTITY</b>	<b>SUBMITTED</b>
EMPL	240	120	600-1200	05-10-60	RG&E	04-18-60
EMPL	288	120	600-1200			
EMPL	300	120	600-1200			
EMPL	480	120	600-1200			
EMPL	600	120	600-1200			
APT-550 Tertiary	69000	69/115	115000	12-13-60	N.M.P.	09-21-60
APT-150 Tertiary	14400 (1-Bushing)	72/120	24000	01-15-63	NYSEG	10-29-62
APT-200	20125 (1-Bushing)	67.08/115	34500			
APT-250	27600 (1-Bushing)	69/115	46000			
APT-350	40250 (1-Bushing)	67.08/115	69000			
APT-150	24000 (2-Bushing)	69.3/120	24000	01-15-63	NYSEG	
APT-200	34500 (2-Bushing)	66.4/115	34500			
APT-250	46000 (2-Bushing)	66.4/115	46000			
APT-350	69000 (2-Bushing)	66.4/115	69000			
APT-200	27600	115	27600	04-09-63	Con-Ed	03-12-63
PTM5	2400/4160Y through	120	5000 through	07-21-64	Con-Ed	06-16-64
PTM15	14400/14400Y	120	15000			
PTOM5	2400/4160Y through	120	5000 through	08-11-64	Con-Ed	07-09-64
PTOM15	14400/14400Y	120	15000			
APT-150	24000/14400V 25 cycle	69.3/120	25000	06-06-68	Con-Ed	05-24-68
PTM and PTOM-75	4200/7280Y through	120	75kv through	12-19-68	L.I.L.	

## METERING UNITS

PTM and PTOM-110	14400/14400Y		110kv			
PPM	240, 288, 300, 480, 600	120	10kv	03-09-82	N.M.P.	03-30-81
VOG-11	7200, 7620, 8400	120	15kv	02-07-83	N.M.P.	

### WESTINGHOUSE/ABB

TYPE	PRIMARY VOLTS	SEC. VOLT	INSULATION LEVEL	APPROVED DATE	TESTING ENTITY	APPROVAL SUBMITTED
VOY-60	2400-4800	120	60kV	03-09-82	N.M.P.	03-30-81
VIZ-11	7200-14400	120	110kV	09-22-83	Cen-Hud	03-03-83
VOZ-11	7200-14400	120	110kV	10-07-83	Cen-Hud	03-03-83
VIY-60*	Indoor 2400-4800	120	60kV	12/02/03	ABB	11/10/03
VIZ-75*	Indoor 2400-7800	120	75kV	12/02/03	ABB	11/10/03
VIZZ-15*	Indoor 12000-24000	120	150kV	12/02/03	ABB	11/10/03
VOZ-75*	Outdoor 2400-7200 (2 Bushing)	120	75kV	12/02/03	ABB	11/10/03
VOY-11*	Outdoor 7200-14400 (2 Bushing)	120	110kV	12/02/03	ABB	11/10/03
VOY-12*	Outdoor 12000-24000 (2 Bushing)	120	125kV	12/02/03	ABB	11/10/03
VOG-12*	Outdoor 12000-24000 (1 Bushing)	120	125kV	12/02/03	ABB	11/10/03
VOY-15*	Outdoor 12000-24000 (2 Bushing)	120	150kV	12/02/03	ABB	11/10/03
VOY-15G*	Outdoor 12000-24000 (1 Bushing)	120	150kV	12/02/03	ABB	11/10/03
VOZ-15*	Outdoor 12000-24000 (2 Bushing)	120	150kV	12/02/03	ABB	11/10/03
VOHD-200*	Outdoor 21000-34500 (2 Bushing)	120	200kV	12/02/03	ABB	11/10/03
VOHD-200G*	Outdoor 21000-34500 (1 Bushing)	120	200kV	12/02/03	ABB	11/10/03
VOZZ-20*	Outdoor 21000-34500 (2 Bushing)	120	200kV	12/02/03	ABB	11/10/03
VOZZ-20G*	Outdoor 21000 (1 Bushing)	120	200kV	12/02/03	ABB	11/10/03
VOY-20*	Outdoor 21000-34500 (2 Bushing)	120	200kV	12/02/03	ABB	11/10/03
VOY-20G*	Outdoor 21000 (1 Bushing)	120	200kV	12/02/03	ABB	11/10/03
PTM-75	Indoor, 60Hz			11-19-68	L.I.L.	
PTM-110	Indoor, 60Hz			11-19-68		

## METERING UNITS

\* Approved on similarity to VOG-11, VOY-60, VIZ-11 and VOZ-11 (approved in 1980s)

### *SANGAMO/SCHLUMBERGER*

T-6	240	120	600	05-22-62	N.M.P.	
T-6	288	120				
T-6	480	120				
T-6	600	120				
T-6A	120, 240, 288, 300, 480, 600	120	600	07-08-80	NYSEG	02-20-80

### *ASTRA*

DB	120, 240, 288, 300, 480, 600	120	600	08-29-77	RG&E	11-22-78
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### *ASSOCIATED ENGINEERING COMPANY/KUHLMAN ELECTRIC CORP*

TYPE	PRIMARY VOLTS	VOLT	SEC. INSULATION LEVEL	APPROVED DATE	TESTING ENTITY	APPROVAL SUBMITTED
SPOF-200	34,500 AND 27,600	115	34,500	03-06-87	Con-Ed	12-29-86
SPOF-200-2	34,500 AND 27,600	115	34,500	08-01-00	Con-Ed	

### *SQUARE "D" COMPANY/HAEFELY TRENCH / TRENCH LTD.*

U2				08-11-86	N.M.P.	01-24-86
U3				08-11-86	N.M.P.	01-24-86
UT				08-11-86	N.M.P.	01-24-86
U2H				08-11-86	N.M.P.	01-24-86
U3H				08-11-86	N.M.P.	01-24-86
UH				08-11-86	N.M.P.	01-24-86
U3-550-115	115 kV			12-23-88	N.M.P.	06-07-89
U3H-550-115	115 kV			12-23-88	N.M.P.	06-07-89
UT3-350-69	69kV			11-14-90	N.M.P.	12-28-89
UT3H-350-69	69kV			11-14-90	N.M.P.	12-28-89
UT3-550-115	115kV			11-14-90	N.M.P.	12-28-89

## METERING UNITS

UT3H-550-115	115kV			11-14-90	N.M.P.	12-28-89
UT5	115kV			10-20-95	N.M.P.	09-08-95
UT5H	115kV			10-20-95	N.M.P.	09-08-95
UT5-900-230*	230kV	115	900	9-3-03	Trench	2-18-03
UT5H-900-230*	230kV	115	900	9-3-03	Trench	2-18-03
UT5-1050-230*	230kV	115	1050	9-3-03	Trench	2-18-03
UT5H1050-230*	230kV	115	1050	9-3-03	Trench	2-18-03
N5 and N5H	69kV-230kV Upgrade core	115		2-8-06	Trench	6-14-05

\* Approved on similarity to UT3 and UT5 69kV and 115kV models

### GEC ALSTHOM

TYPE	PRIMARY VOLTS	SEC. VOLT	INSULATION LEVEL	APPROVED DATE	TESTING ENTITY	APPROVAL SUBMITTED
UXT-069	69000	115		09-11-95	L.I.L.	10-18-94
UXT-115	115000	115		09-11-95	L.I.L.	10-18-94
UXT-138	138000	115		09-11-95	L.I.L.	10-18-94

### MWB MESSWANDLER/HAEFELY TRENCH

SVS	115-765kV		SF6 Gas Insulated	09-18-95	N.M.P.	01-21-94
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### RITZ INSTRUMENT TRANSFORMERS

VEF 72.5	5.5kV to 72.5kV		69kV	10-5-04	RITZ	2-9-05
VEF 15-10	5.5kV to 72.5kV		15kV	10-5-04	RITZ	2-9-05
VZF 15-10	5.5kV to 72.5kV		15kV	10-5-04	RITZ	2-9-05
VEF 15-20	5.5kV to 72.5kV		15kV	10-5-04	RITZ	2-9-05
VZF 15-20	5.5kV to 72.5kV		15kV	10-5-04	RITZ	2-9-05
VEF 25-10	5.5kV to 72.5kV		25kV	10-5-04	RITZ	2-9-05
VZF 25-10	5.5kV to 72.5kV		25kV	10-5-04	RITZ	2-9-05
VEF 48-01	5.5kV to 72.5kV		48kV	10-5-04	RITZ	2-9-05
VEF 72.5	5.5kV to 72.5kV		69kV	10-5-04	RITZ	2-9-05
OTEF	72.5kV to 765kV		245kV-765kV	10-5-04	RITZ	2-9-05

# METERING UNITS

## *GENERAL ELECTRIC*

<b>TYPE</b>	<b>PRIMARY VOLTS</b>	<b>SEC. VOLT</b>	<b>INSULATION LEVEL</b>	<b>APPROVED DATE</b>	<b>TESTING ENTITY</b>	<b>APPROVAL SUBMITTED</b>
MB-150	10/20, 25/50, 50/100, 100/200, 200/400	34.5kv	5	09-30-75	O & R GE	02-20-74 03-28-80

## *KUHLMAN ELECTRIC CORP*

<b>TYPE</b>	<b>PRIMARY VOLTS</b>	<b>SEC. VOLT</b>	<b>INSULATION LEVEL</b>	<b>APPROVED DATE</b>	<b>TESTING ENTITY</b>	<b>APPROVAL SUBMITTED</b>
MVCT-200	34,500	115	up to 400	08-18-87	RG&E	06-02-87

## *FERRANTI PACKARD*

KM-35	34,500	115	5	07-07-89	RG&E	03-02-89
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## *MWB MESSWANDLER/HAEFELY TRENCH*

SVAS	115-765kV	SF6 Gas Insulated		09-18-95	N.M.P.	01-21-95
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## **RITZ INSTRUMENT TRANSFORMERS**

KOTEF	72-362kV	115	Oil	2-9-05	RITZ	10-5-04
KSKEF	123-765kV	115	SF6	2-9-05	RITZ	10-5-04

## *NxtPhase*

NXVCT	1 to 3000	69-765kV	Opitical	06/05/04	NGRID	10/20/05
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# DATA COLLECTION SYSTEM

## *METRETEK*

<b>TYPE</b>	<b>CHANNELS</b>	<b>VOLTAGE</b>	<b>DATE</b>	<b>TESTING ENTITY</b>	<b>APPROVAL SUBMITTED</b>
SIP-AC	4	120	04/23/90	NYSEG	
SIP-B	4	w/12V DC Power Supply			
CMU	2	w/12V DC Power Supply			

# AUTOMATIC METER READING DEVICE

## *CONSERT COMMUNICATE CONTROL*

<b>TYPE</b>	<b>DESCRIPTION</b>	<b>DATE</b>	<b>TESTING ENTITY/ENTITY</b>
Tru Smart Energy Gateway	Retrofit module for GE I210 Cl200, 240Vac	4/21/11	Central Hudson
	GE I210+ cn Form 25S	9/8/11	Con Edison

## *ITRON*

<b>TYPE</b>	<b>DESCRIPTION</b>	<b>DATE</b>	<b>TESTING ENTITY/ENTITY</b>
40E ERT Module	Retrofit Transmitter Module	10-13-95	RG&E
40ER-1	Retrofit Module, single-phase GE, ABB and L&G meters	10/10/96	RG&E
40EN	Retrofit Module, Polyphase meters	10/10/96	RG&E
41ER-1	Retrofit Module	2/24/99	JBPU
45ERT Series	Retrofit Module 45ER-1 ABB, GE, Siemens; 45ES-1 Schlumberger; 45EN-1 ABB Polyphase Meters.	9/18/02	ITRON
52ESS	Net metering capabilities as Delivered - Received	6/18/09	Central Hudson

## *SCHLUMBERGER*

R300	Radio Frequency Meter Interface Unit Single Phase Version	6/11/01	Based on Similarity
R300C	Radio Frequency Meter Interface Unit Centron Version	6/11/01	Based on Similarity

## AUTOMATIC METER READING DEVICE

R300V	Radio Frequency Meter Interface Unit Vectron Version	6/11/01	Based on Similarity
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### ***HUNT Technologies***

TS1 and TS2	RF Power Line Carrier Automatic Meter Reading Device	4/11/06	Hunt Technologies
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### ***Landis+Gyr***

Comverge	Landis+Gyr Comverge Maingate AMR Module	4/20/06	National Grid
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Metrum	Landis + Gyr Metrum OV2000IP	9/27/10	National Grid
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### ***SILVER SPRING***

I-210+, GE Kv2c with remote disconnect		6/18/09	Con Edison
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### ***TRILLIANT NETWORKS***

Trilliant SecureMesh Communication Card GE I-210+, Itron Centron, L+G Focus, Itron Sentinel		10/19/09	Central Hudson
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Trilliant Cell Reader communication Card GE kv2c+		3/28/11	National Grid
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