

POWERMETRIX

EXCELLENCE IN TESTING

Powermetrix Division of Technology for Energy Corporation

Example Meter Compensation Usage

Upon entering the normal Meter Test Menu {Option #6 from the Main Menu}, The F3 key is labeled as "SPECIAL TESTING". **Press the F3 key to activate the Special Test Screen** which includes the Meter Compensation operating mode.

The Special Tests Menu allows the user to select a number of test modes that are used for both calibrations and field testing. Press 1 to 5 for selection of any single phase (A, B, or C) or fast/slow pulses. Press 6 or 7 to select "Positive Detent" or "Absolute Value" meter registration modes. **Press 8 to select Meter Compensation setup.**

After entering the Setup screen, the compensation parameters are entered. Test must be set active (YES) and additive (++) or subtractive (--) mode selected. Reference Amps and Volts are the conditions for which compensation values have been calculated. {For ERCOT, Ref Amps = Class Amps/2 and Ref Volts = Rated voltage.} **Loss parameters are entered as Percentage values.**

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METER ENERGY[KW-HR]/DEMAND SETUP
DESC:LAB TEST - EU4 METER
TYPE :
METER CONST [KH] : 1.0000 KW@1000/HR
TEST REUS (#PULSE): 100 ->PULSE/REV
ENERGY TEST MODE : W-HR SECONDARY
TOTAL TEST TIME : 90 SECONDS
PULSE FACTOR [PULSE:REUS= 12 : 1 ]
METER CORRECTION FACTOR = 1.0000
DEMAND INTERVAL : 15 MINUTES
F.S. DEMAND [MU] : 1000.0 KW
AS FOUND VALUE,UNITS:
VALUE,UNITS:
PULSES DETECTED AT CONTACT CLOSURE
    
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SERVICE TYPE	SET TEXT FIELDS	SPECIAL TESTING	CURRENT SOURCE	MAIN MENU
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SPECIAL TESTS
[1] A ONLY / FAST
[2] B ONLY / FAST
[3] C ONLY / FAST
[4] *FAST* PULSES
[5] *NORMAL* PULSES
[6] +DETENT MODE
[7] +[WATT] MODE
[8] SET COMPENSATION

05-MAR-02 01:33:58
**RECALL**

SETUP: NORMAL PULSES 3-PHASE
*NO* COMPENSATION ACTIVE
    
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FILE=NONAME 10-033000-01	#066	POWERMATE 330 ANALYSIS SAVED ON 05-MAR-02 01:33:59
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COMPENSATION SETUP
COMPEN ACTIVE : YES
COMPEN POLARITY: ++
REFERENCE AMPS : 10.000
REFERENCE VOLT : 120.00
LOSSES AT REFERENCE:
%XFMR WATT FE LOSS: .07774
%XFMR WATT CU LOSS: 1.0187
%XFMR VAR FE LOSS : .15645
%XFMR VAR CU LOSS : 21.017
%LINE WATT CU LOSS: 1.0285
BE SURE TO ENTER %LOSS IN PERCENT (100 TIMES FRACTIONAL LOSS)
    
```

I N P U T S T A T U S	VA=	--
	VB=	--
	VC=	--
	VN=	--
	IA=	--
	IB=	--
	IC=	--
	IN=	--
	BR=	--
	SA=	--
PR=	--	
IG=	--	
AUTO DETECT		
RECALL		
RECALL		

FILE=NONAME 10-033000-01	#068	POWERMATE 330 ANALYSIS SAVED ON 05-MAR-02 01:34:20
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Example Meter Compensation Usage (Continued)

Anytime the Special Tests Menu is entered, a summary of active test conditions is shown at the bottom of the screen. In this example, the Meter Test mode is set for normal (de-bounced) pulse inputs, all 3 phases are active, and the meter compensation is active in the additive mode.

SPECIAL TESTS	
[1] A ONLY / FAST	
[2] B ONLY / FAST	
[3] C ONLY / FAST	
[4] *FAST* PULSES	
[5] NORMAL PULSES	
[6] +DETENT MODE	
[7] +[WATT] MODE	
[8] SET COMPENSATION	
05-MAR-02 01:34:26	
SETUP: NORMAL PULSES 3-PHASE	
++ METER COMPENSATION ACTIVE	
FILE-NONAME #069	POWERMATE 330 ANALYSIS
10-033000-01	SAVED ON 05-MAR-02 01:34:28

When Meter Test results are displayed, the right-hand status identifies that Additive Meter Compensation is active (“+MTR COMP”). (Note that the 430 Load Box was also active for this test as signified by the “LOAD BOX” label.)

KH-HR TESTS				LOAD BOX	IN	VA=
DESC: 10-033000-01				30 0 . .	VA=	124
RH=0.15000 TYPE=					VB=	124
PF=.9925	W-HR	VA-HR	VAR-HR		VC=	124
ACTUAL:	31.60	31.84	3.881		VN=	90.00
METER :	31.20	---	---		IA=	5.00
%ACCUR:	98.72	---	---		IB=	5.00
					IC=	5.00
					IN=	0005
					BR=	---
					SA=	---
					PR=	---
					IO=	---
PREV1: ACTUAL=1.064	METER=1.050				AUTO	
PREV2: ACTUAL=1.064	METER=1.050				DETECT	
PREV3: ACTUAL=1.064	METER=1.050					
PULSTIME=00:59.65				UARY=	0.01%	
PULSES EXPECTED : 210.7						
METER ACTUAL : 209						
LAST VOLT:	124.3	124.3	124.3		F=60.01	
LAST AMPS:	5.049	5.053	5.075		BAT=68%	
LAST WATT:	627.24	627.80	630.70		05-MAR-02	
LAST VA :	627.61	628.19	631.01		01:51:22	
LAST VAR :	12.062	12.275	9.8695			
FILE-NONAME #074	POWERMATE 330 ANALYSIS					
10-033000-01	SAVED ON 05-MAR-02 01:51:26					

Upon test completion, the screen is (optionally) saved and the next test in the sequence started. (This example shows the subtractive compensation mode active.)

KH-HR TESTS				LOAD BOX	IN	VA=
DESC: 10-033000-01				30 0 . .	VA=	122
RH=0.15000 TYPE=					VB=	122
PF=.9991	W-HR	VA-HR	VAR-HR		VC=	122
ACTUAL:	2.806	2.809	-0.1200		VN=	89.1
METER :	2.850	---	---		IA=	497.1
%ACCUR:	101.56	---	---		IB=	5002
					IC=	5004
					IN=	0005
					BR=	---
					SA=	---
					PR=	---
					IO=	---
PREV1: ACTUAL=-.1478	METER=-.1500				AUTO	
PREV2: ACTUAL=-.1476	METER=-.1500				DETECT	
PREV3: ACTUAL=-.1478	METER=-.1500					
PULSTIME=00:56.10				UARY=	0.03%	
PULSES EXPECTED : 18.71						
METER ACTUAL : 19						
LAST VOLT:	122.3	122.3	122.3		F=60.02	
LAST AMPS:	6.4974	6.5022	6.5045		BAT=65%	
LAST WATT:	60.800	61.371	61.640		05-MAR-02	
LAST VA :	60.826	61.411	61.695		02:03:14	
LAST VAR :	.26035	.55253	-.5164			
FILE-NONAME #089	POWERMATE 330 ANALYSIS					
10-033000-01	SAVED ON 05-MAR-02 02:03:17					