

High Accuracy DC Measurement

DESCRIPTION

Model WDC transducers will provide high accuracy dc measurements. They utilize a microprocessor based design with high speed analog-to-digital converters to provide accurate measurement of power, energy, voltage and current.

Each model number provides a system consisting of a Voltage Transducer (VT), a current transducer (CT) and a Processing Unit (WT). One, two or three VT/CT pairs may be supplied with each WT unit.

A variety of input ranges up to 1500Vdc and 4000Adc are available.

The standard MODBUS RTU interface is galvanically isolated from measured inputs and instrument power.



5 YEAR WARRANTY



FEATURES

- DIN rail mountable package, small & lightweight.
- Measures instantaneous power as well as energy.
- MODBUS RTU serial communications using RS485.

APPLICATIONS

- Determination of revenue source contributions to energy storage systems.
- Any high accuracy dc measurement requirements.

SPECIFICATIONS

INPUT

Voltage... Nominal Select from table
 Range 10% to 100% of Nominal
 Overrange (w/o damage) 125% of Nominal

Current .. Nominal Select from table
 Range 10% to 100% of Nominal
 Overrange (w/o damage) 125% of Nominal

Frequency DC

DIELECTRIC TEST

CT
 Input to Output/Inst.Pwr./Case 3000Vdc, 1min.
 Inst. Pwr. to Output/Case 500Vdc, 1min.

VT
 Input to Output/Inst.Pwr./Case 4000Vdc, 1min.
 Inst. Pwr. to Output/Case 500Vdc, 1min.

WT
 Inst. Pwr. to Output/Case 3000V, 60Hz, 1min.
 Output to Case 500V, 60Hz, 1min.

ACCURACY (setpoint/linearity/repeatability at 25°C)

Voltage, Current ±0.2% F.S.
 Watts, Energy ±0.3% F.S.

OUTPUT

MODBUS RTU Serial Communication

Measured Parameters:
 Per VT/CT pair ... Voltage, Current, Power, Energy

INSTRUMENT POWER

WT 85-264Vac, 47-63Hz, ≤10VA
 115-300Vdc ≤10VA

VT/CT pairs 24Vdc, ≤6W/pair
 (Auxiliary, 24Vdc, 20W, Din-Rail mounted, power supply is available)

PHYSICAL

Humidity Operating Any non-condensing

Weight **CT** ≤4lbs
VT 0.35lb.
WT ≤1lb.

Enclosure Mounting (all) DIN rail, 35mm
 (WT may be panel mounted using 19754 adaptors)

Material... **CT** Noryl SE1X, UL94V1
VT Polyamide, UL94V0
WT ABS, UL94HB

Connections RS-45, Screw terminals

TEMPERATURE

Range..... Operating 0 to 75°C
 Storage -25 to 85°C

Effect ±0.005% Rdg./°C
 ±0.005% F.S./°C

ORDERING INFORMATION

EXAMPLE: 2 VT/CT pairs, 1500Vdc, 4000Adc, RS485, w/24Vdc P.S.

Model number is: **WDC-26-401-M5-P**

(see table on page 2)

MODEL SELECTION

WDC - **[B]** **[C]** - **[DDD]** - **[E]** - **[F]** (Replace letters in boxes with selected options.)

SYSTEM CONFIGURATION		VOLTAGE TRANSDUCER SELECTION OPTIONS		CURRENT TRANSDUCER SELECTION OPTIONS		SERIAL COMMUNICATION		POWER SUPPLY (for VT/CT pairs)	
B	Phase (no. of elements)	C		DDD		E		F	
1	One VT/CT Pair	1	50Vdc	500	500Adc	M5	RS485	BLANK	NONE
2	Two VT/CT Pairs	2	100Vdc	600	600Adc			P	24Vdc Output Din-Rail 85-264Vac Input
3	Three VT/CT Pairs	3	250Vdc	800	800Adc				
		4	500Vdc	101	1000Adc				
		5	1000Vdc	151	1500Adc				
		6	1500Vdc	201	2000Adc				
				401	4000Adc				

DIMENSIONS - WT Processing Unit

With Panel Mount Adapters (OSI P/N 19754)

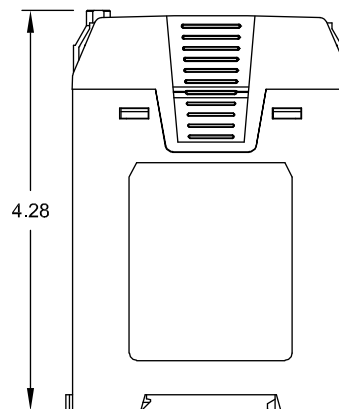
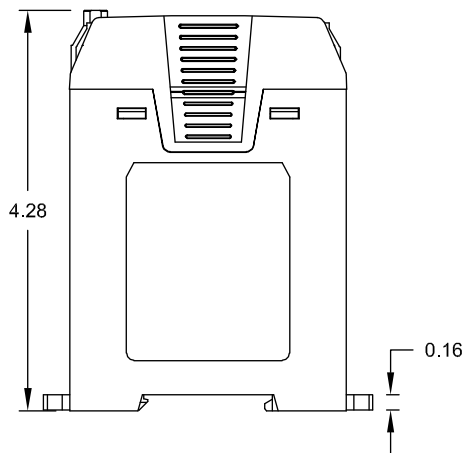
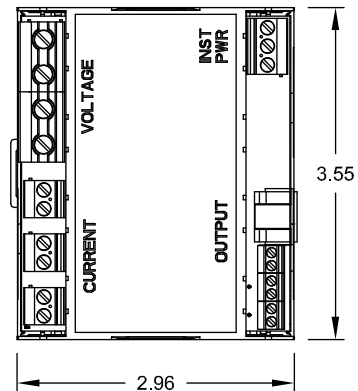
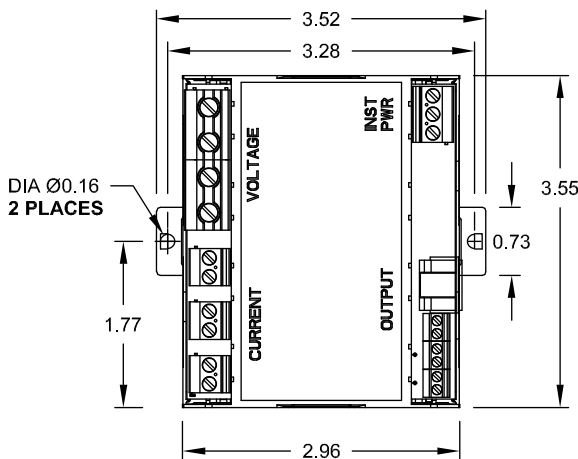
DIN Rail Mounting (35mm)

DIMENSIONS FOR ALL MODELS

All dimensions in inches.

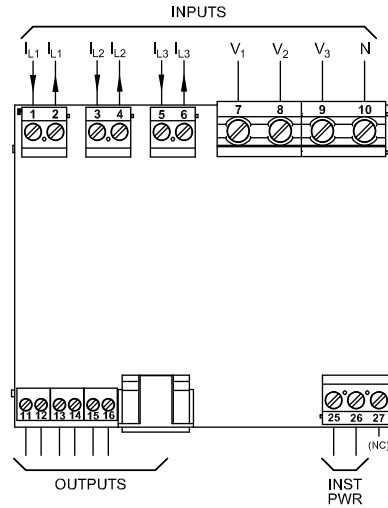
Tolerance - 0.00±0.03

(unless otherwise specified)



Dwg# 0902-01066-B Rev--

TERMINAL IDENTIFICATION - WT Processing Unit



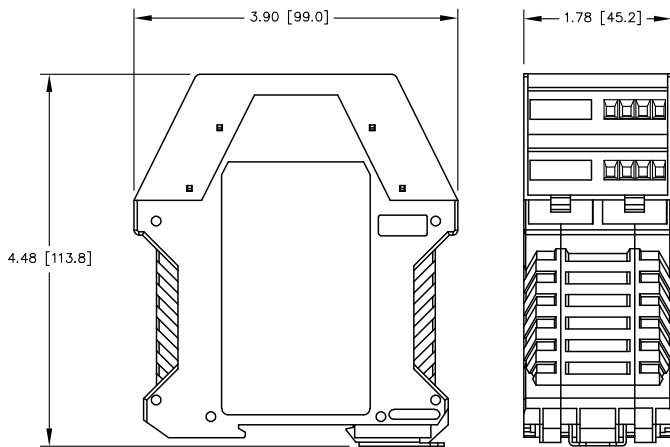
Terminals are identified using the table below.

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(MODBus RTU w /RJ45)												
	RJ45								Term. Blocks			
Mode	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	TB11	TB12	TB13, TB15	TB14, TB16
RS485	Tx-/Rx-	Tx+/Rx+	(N/C)	Tx+/Rx+	Tx-/Rx-	(N/C)	5V	COM	5V	COM	Tx-/Rx-	Tx+/Rx+

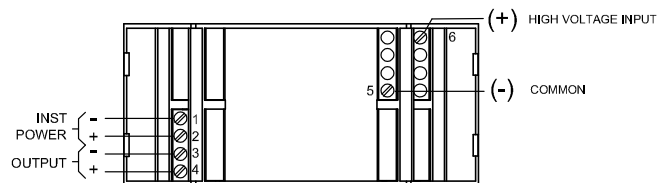
VT VOLTAGE TRANSDUCER

DIMENSIONS



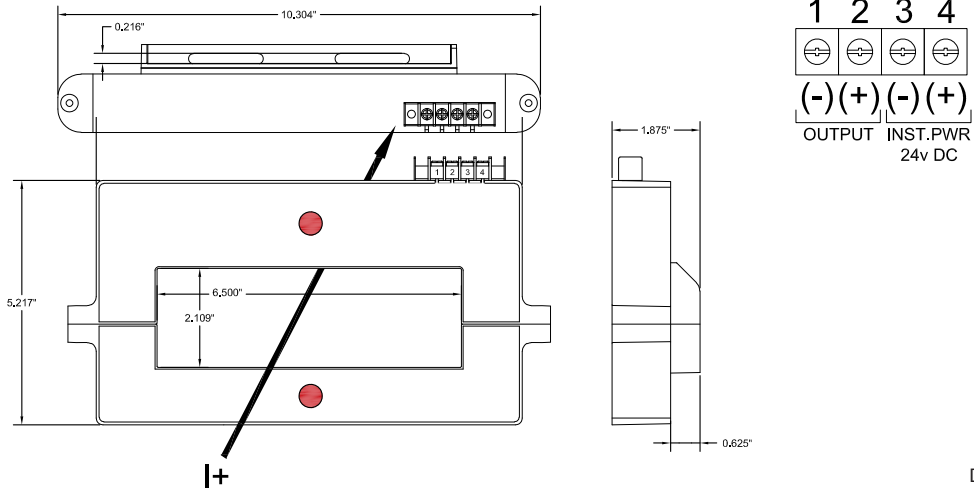
NOTES:
 1. ALL DIMENSIONS ARE IN INCHES (mm)
 2. TOLERANCE ± 0.03 IN. (0.8mm)

TERMINAL IDENTIFICATION



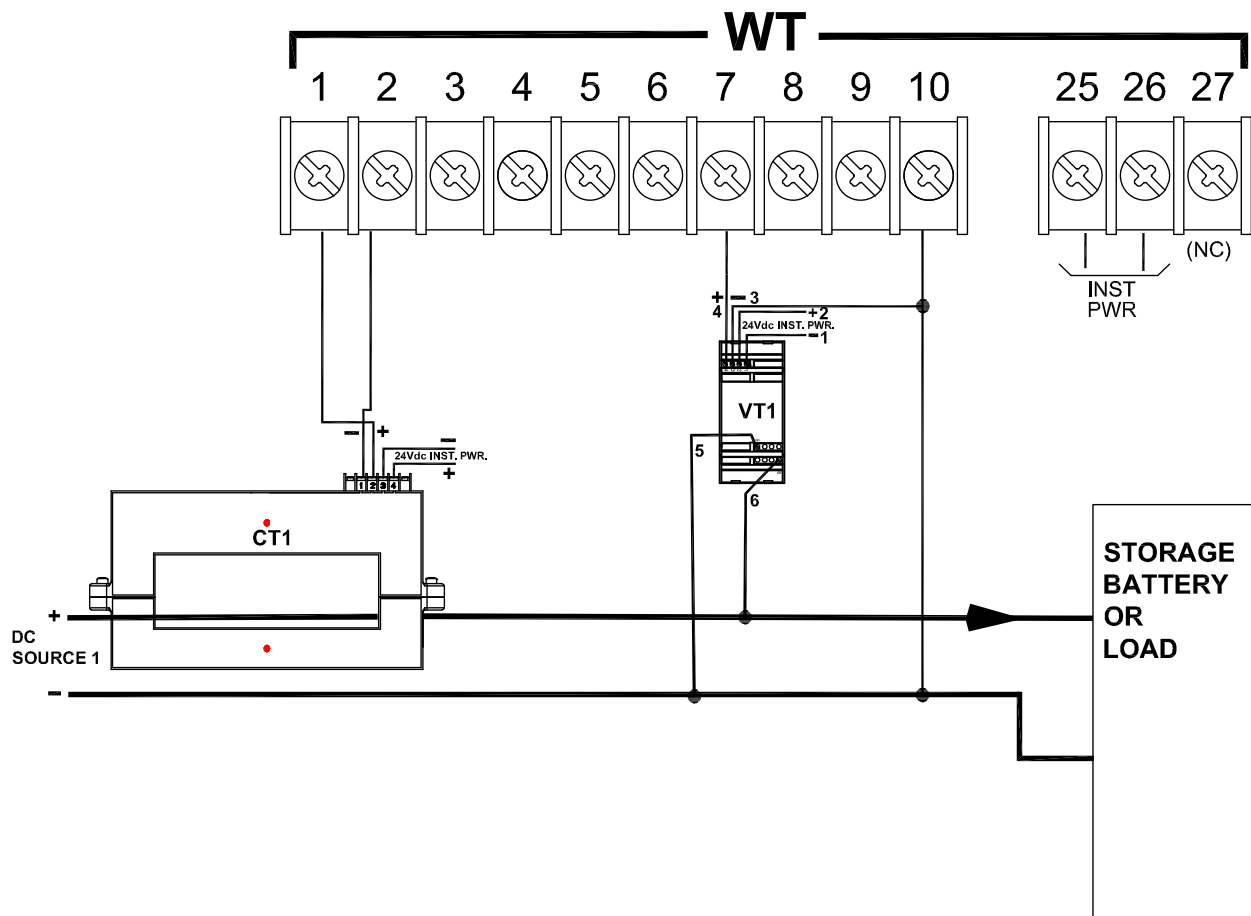
Dwg# 0902-01050-B Rev-B

CT CURRENT TRANSDUCER - DIMENSIONS/TERMINAL IDENTIFICATION



Dwg# 0902-01058-B Rev--

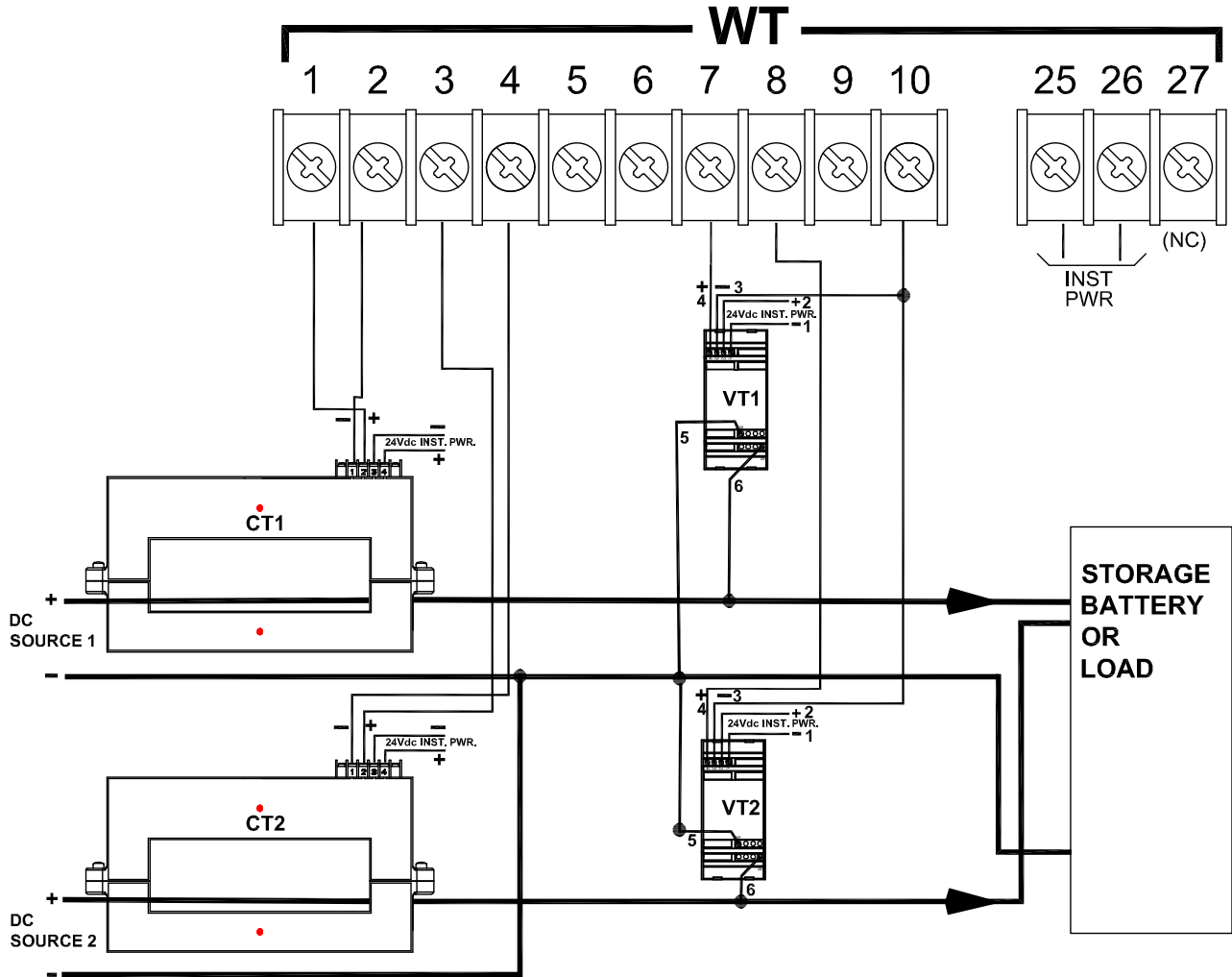
SYSTEM CONNECTIONS - ONE VT/CT PAIR



24Vdc INSTRUMENT POWER FOR VT AND CT CAN BE CUSTOMER SUPPLIED OR ORDERED FROM OSI BASED ON THE WDC MODEL NUMBER USING THE "P" OPTION.

Dwg# 0902-01057-B Rev--

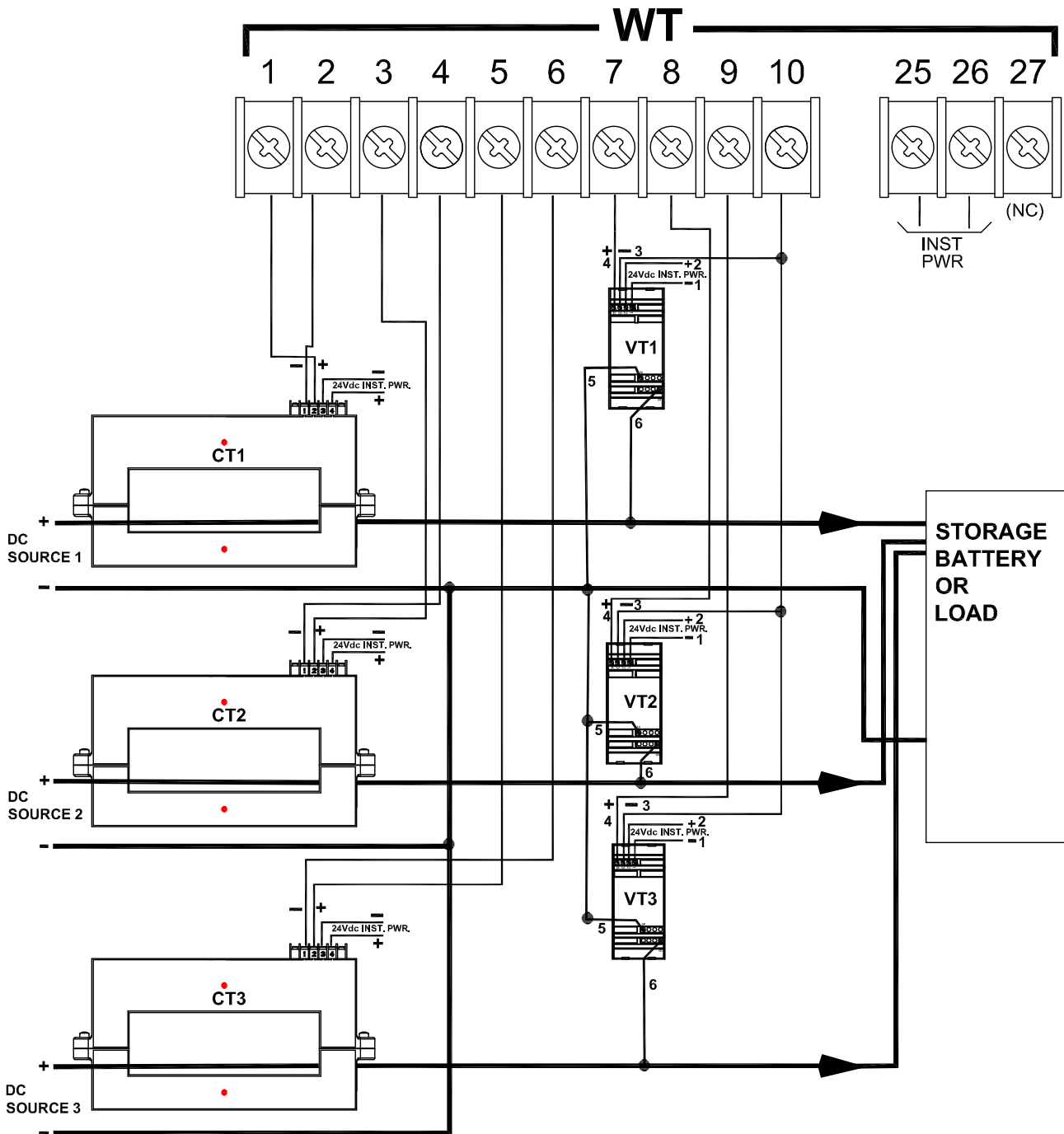
SYSTEM CONNECTIONS - TWO VT/CT PAIRS



Dwg# 0902-01057-B Rev--

24Vdc INSTRUMENT POWER FOR VTs AND CTs CAN BE CUSTOMER SUPPLIED OR ORDERED FROM OSI BASED ON THE WDC MODEL NUMBER USING THE "P" OPTION.

SYSTEM CONNECTIONS - THREE VT/CT PAIRS



Dwg# 0902-01057-B Rev--

24Vdc INSTRUMENT POWER FOR VTs AND CTs CAN BE CUSTOMER SUPPLIED OR ORDERED FROM OSI BASED ON THE WDC MODEL NUMBER USING THE "P" OPTION.