

# POWER SPECIFICATIONS

## CT Brightspeed Series/Optima CT540

(REV. DATE 12.Sep.12)

**VOLTAGE**

PRIMARY SOURCE IS REQUIRED FOR ALL INSTALLATIONS.  
 RANGE OF LINE VOLTAGES: NOMINAL LINE VOLTAGE OF 380 TO 480, 3 PHASE, 50 OR 60 Hz.

REQUIRED POWER SUPPLY: WYE CONNECTED

MAXIMUM DAILY VOLTAGE VARIATION MUST FALL WITHIN ONE OF THE RANGES IN TABLE A.

TABLE A  
 ALLOWABLE  
 INPUT  
 VOLTAGES/  
 CURRENT  
 DEMAND

NOMINAL VOLTAGE	ABSOLUTE RANGE	CURRENT (AMPS)		MINIMUM STANDARD OVERCURRENT PROTECTION
		MOMENTARY	CONTINUOUS	
380	342-418	137	30	110-A
400	360-440	130	29	110-A
420	378-462	124	27	100-A
440	396-484	118	26	100-A
460	414-506	113	25	90-A
<b>480</b>	<b>432-528</b>	<b>108</b>	<b>24</b>	<b>90-A</b>

(ALL CALCULATIONS BASED UPON NOMINAL VOLTAGE)

**PHASE-BALANCE.**

PHASE-TO-PHASE VOLTAGES MUST BE WITHIN +2 PERCENT OF THE LOWEST PHASE-TO-PHASE VOLTAGE. MAXIMUM ALLOWABLE TRANSIENT VOLTAGE SHOULD BE LIMITED TO 1500V PEAK.

VOLTAGE TRANSIENT OR IMPULSE ON THE INCOMING POWER MUST BE HELD TO A MINIMUM. TRANSIENTS CAUSED BY LIGHTNING, SURGES, LOAD SWITCHING, STATIC ELECTRICITY ETC. CAN CAUSE SCAN ABORTS OR, IN EXTREME INSTANCES, COMPONENT FAILURE IN THE COMPUTER SUBSYSTEM.

**POWER DEMAND**

CONTINUOUS POWER DEMAND = 20 KVA (MAX DEMAND = 90 KVA)

TABLE B  
 MAXIMUM  
 MOMENTARY  
 POWER  
 DEMAND.

DEMAND	CT HiSpeed
kVa *	90
POWER FACTOR AT	0.85

\* DEMAND INCLUDES POWER FOR ENTIRE CT SYSTEM.  
 LINE VOLTAGE REGULATION AT MAXIMUM POWER DEMAND MUST BE LESS THAN OR EQUAL TO 6 PERCENT.

**DISTRIBUTION TRANSFORMER**

FOR A SINGLE UNIT INSTALLATION, THE MINIMUM TRANSFORMER SIZE IS 112.5 KVA, WITH 2.4% RATED REGULATION AT UNITY POWER FACTOR. RESULTANT MAXIMUM ALLOWABLE FEEDER REGULATION IS 3.4%

NOTE: THE CT SYSTEM MUST NOT BE POWERED IN A MULTIPLE INSTALLATION WHERE FILM CHANGERS ARE USED. FILM CHANGERS UTILIZE A LARGE NUMBER OF HIGH POWERED CLOSELY SPACED EXPOSURES WHICH MAY COINCIDE WITH THE CT SCAN.



## FEEDER TABLE

### FEEDER TABLE – Brightspeed Series/ Optima CT520/540/660, Revolution EVO

- o CALCULATIONS BASED UPON NOMINAL VOLTAGE, WIRE SIZE IN AWG.
- o RECOMMENDED FEEDER SIZES FROM DISTRIBUTION TRANS. TO POWER DISTRIBUTION UNIT.
- o THE GROUNDING CONDUCTOR ( ) WILL BE A 1/0 MINIMUM. THIS GROUND WILL RUN FROM THE EQUIPMENT BACK TO THE POWER SOURCE/MAIN GROUNDING POINT AND ALWAYS TRAVEL IN THE SAME CONDUIT WITH THE FEEDERS AND NEUTRAL.
- o NEUTRAL MUST BE TERMINATED PRIOR TO OR INSIDE THE MAIN DISCONNECT PANEL AND NOT BROUGHT INTO THE POWER DISTRIBUTION UNIT.
- o FOR A FULL SYSTEM UPS REFER TO ELECTRICAL DETAILS FOR UPS FEEDER WIRES.

RUN LENGTH IN FEET	POWER SUPPLY VOLTAGE											
	350-410 380		368-432 400		386-454 420		405-475 440		423-497 460		<b>442-518 480</b>	
	FEEDER	GROUND	FEEDER	GROUND	FEEDER	GROUND	FEEDER	GROUND	FEEDER	GROUND	FEEDER	GROUND
50	2	(1/0)	2	(1/0)	3	(1/0)	3	(1/0)	3	(1/0)	<b>3</b>	<b>(1/0)</b>
100	2	(1/0)	2	(1/0)	3	(1/0)	3	(1/0)	3	(1/0)	<b>3</b>	<b>(1/0)</b>
150	2	(1/0)	2	(1/0)	3	(1/0)	3	(1/0)	3	(1/0)	<b>3</b>	<b>(1/0)</b>
200	2	(1/0)	2	(1/0)	3	(1/0)	3	(1/0)	3	(1/0)	<b>3</b>	<b>(1/0)</b>
250	1	(1/0)	1	(1/0)	2	(1/0)	2	(1/0)	2	(1/0)	<b>3</b>	<b>(1/0)</b>
300	1/0	(1/0)	1/0	(1/0)	1	(1/0)	1	(1/0)	2	(1/0)	<b>2</b>	<b>(1/0)</b>
350	2/0	(1/0)	1/0	(1/0)	1/0	(1/0)	1	(1/0)	1	(1/0)	<b>1</b>	<b>(1/0)</b>
400	2/0	(1/0)	2/0	(1/0)	1/0	(1/0)	1/0	(1/0)	1/0	(1/0)	<b>1</b>	<b>(1/0)</b>

REV. DATE: 10.Jul.14