

SERVICE VOLTAGES

CUC's standard service/secondary voltages are:

1. 120/240 volt, single phase, three wire
2. 120/208 volt, three phase, four wire WYE
3. 277/480 volt, three phase, four wire WYE

NOTE:

- A) There are several existing non-standard 120/240 volt, three phase, four wire Delta services on the island. Where possible these will be eliminated and converted to 120/208 volt or 277/480 volt three phase, four wire WYE systems. There will be no new 120/240 volt, three phase, four wire Delta systems permitted.
- B) CUC has 120/208 volt single phase network services in complex's that have a 120/208 volt three phase main service.

CUC discourages our customers from using **small** 120/208 or 277/480 volt three phase services, particularly in areas where the total kVA is less than 75 kVA. Smaller requirements will be dealt with on an individual basis and will require a customer contribution.

CUC requires all new customers to contact CUC Planning Department for review of site plans and electrical load sheets before construction.

CUC encourages all customers with large service requirements exceeding 300 kVA to use underground where practical.



DATE: 12/09/2016

DRAWN:

REV.:

DATE:

DISTRIBUTION STANDARDS

SERVICE VOLTAGES

APPROVED BY: 

DATE: Sept. 19, 2016

STANDARD NO.

1-1

VOLTAGE LEVELS AND REGULATION

The voltage level for CUC's distribution system will be as per ANSI C84.1 Electric Power Systems and Equipment - Voltage Ratings (60 Hertz). The standard divides voltages into two ranges; Range A is the optimal voltage range, and Range B is acceptable, but not optimal.

The standard acceptable voltage levels are as follows:

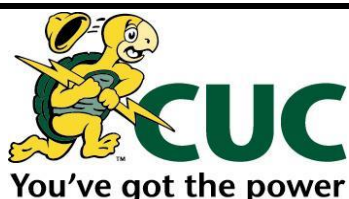
Nominal Voltage (V)	Service Voltage (V)			
	Range A		Range B	
	Max.	Min.	Max.	Min.
120	126	114	127	110
208	218	198	220	191
240	252	228	254	220
277	291	263	293	254
480	504	456	508	440

The following table lists the standard voltages at the utilization point (consumer's receptacle). The National Electrical Code (NEC) allows of up to 5% drop in the consumer's main feeder and branch circuits.

Nominal Voltage (V)	Utilization Voltage (V)			
	Range A		Range B	
	Max.	Min.	Max.	Min.
120	125	110 (108)	127	106 (104)
208	217	191 (187)	220	184 (180)
240	250	220 (216)	254	212 (208)
277	288	254 (249)	293	245 (240)
480	500	440 (432)	508	424 (416)

Notes:

- a) Service voltages outside the Range A limits should be infrequent. However, when service voltages are outside the limits of Range A, but within the limits of Range B, corrective action shall be taken within a reasonable time on a planned basis to bring the voltages back within the range.
- b) Where service voltages are outside the Range B limits immediate corrective action is required on an emergency basis.
- c) For circuits not supplying lighting loads, the Utilization Voltage minimum limits for Range A and Range B may be as per the values shown in brackets.



457 NORTH SOUND RD.
P.O. BOX 38 G.T., GRAND CAYMAN,
CAYMAN ISLANDS, B.W.I.
TELEPHONE: (345)-945-5300/5200

DATE: 12/09/2016

DRAWN:

REV.:

DATE:

DISTRIBUTION STANDARDS

SERVICE VOLTAGES

APPROVED BY:

DATE: Sept. 19, 2016

STANDARD NO.

1-2

ADDITIONS TO CUSTOMER INSTALLATIONS

The Customers shall notify CUC of any proposed additions or changes to their existing installation which may significantly increase (15% or more) the Customer's demand on CUC's system. Failure to do so may overload CUC's service equipment and may affect the quality of service to that Customer and other Customers supplied by the same equipment. CUC shall not be held liable for any damage to Customers' equipment caused by such overloads under any of the following circumstances:

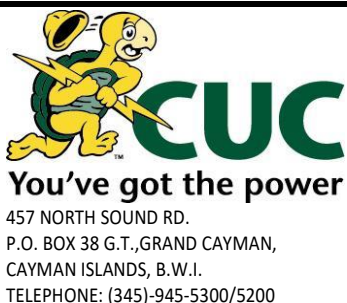
- i. In the event that the Customer has failed to notify CUC of such changes as described above.
- ii. Customer has notified CUC of such changes as described above and CUC has not completed the evaluation and distribution system upgrades for such changes and provided the Customer with the approval to install such changes.

MOTOR LOADS

Motors of the "squirrel cage" type up to thirty (30) horsepower rating, may be started directly on line (full voltage), except in cases of frequent starting (3 or more starts within an hour) . Motors over thirty (30) horsepower shall be equipped with reduced voltage starters, or other current limiting means. Persons in tending to use any motor rated thirty (30) horsepower or more on CUC's supply shall consult CUC's Customer Service Department early in the planning stages.

All motors shall be equipped with protective devices, which disconnect the motor from the power source in the event of voltage or current levels reaching outside the specified high and low levels, or the loss of one phase of a three phase supply (single phasing).

Contractors are encouraged to consult CUC's Customer Service Department during the design phase.



DATE: 16/10/2020

DRAWN:

REV.:

DATE:

DISTRIBUTION STANDARDS

VOLTAGE RANGE

APPROVED BY: N. Malcolm

DATE: Oct. 16, 2020

STANDARD NO.

1-3