

Product Selection

For quick selection data, refer to the tables on this and the following pages.

Selection Requirements

You should have the following information before selecting a buck-boost transformer:

Line Voltage

The voltage that you want to buck (decrease) or boost (increase). This can be found by measuring the supply line voltage with a voltmeter.

Load Voltage

The voltage at which your equipment is designed to operate. This is listed on the nameplate of the load equipment.

Load Amperes or Load kVA

You do not need to know both—one or the other is sufficient for selection purposes. This information usually can be found on the nameplate of the equipment that you want to operate.

Frequency

The supply line frequency must be the same as the frequency of the equipment to be operated—Eaton’s buck-boost transformers operate at 60 Hz only.

Phase

The supply line should be the same as the equipment to be operated—either single- or three-phase.

Transformer Interconnection

For three-phase applications, interconnections of transformers should be made in a junction box. Two or three transformers may be used depending on an open delta (2) or wye (3) connection.

5-Step Selector

The tables that follow will simplify the selection of the buck-boost transformers. There are no calculations needed; simply follow these five steps:

1. Refer to the table having the same output voltage as the equipment you want to operate. For example, if you are installing a 240 volt 6 kVA single-phase load use selection table on the page.
2. Select the available line voltage across the top of the chart that is closest to the actual supply voltage. Therefore, for example, if the available line voltage is 213 volts, use the 212 volt column.
3. Read down the column until you reach an output kVA or amps rating equal to or greater than the load requirements. Since 6 kVA, in the example, is not listed, use the next higher rating, or 7.5 kVA.
4. Read across to the far left columns for the catalog number and quantity of transformers for your application. In this case, you will need one (1) catalog number S10N06P01P.
5. Connect the buck-boost transformer(s) you have selected in accordance with the connection diagram specified at the bottom of the available line voltage column. In this example, Diagram “F” would be used.

Note: For single-phase connections and three-phase open delta connections, inputs and outputs may be reversed. kVA capacity remains constant.

Additional Product Selection information begins on **Page V2-T2-187**.

120 x 240 Volts to 12/24 Volts

| kVA | °C Temp. Rise | Frame | Weight Lbs (kg) | Style Number |
|------|---------------|--------|-----------------|--------------|
| 0.05 | 115 | FR52 | 7 (3) | S10N04A81N |
| 0.10 | 115 | FR54 | 7 (3) | S10N04A82N |
| 0.15 | 115 | FR55 | 8 (4) | S10N04A83N |
| 0.25 | 115 | FR57P | 12 (5) | S10N04P26P |
| 0.50 | 115 | FR57P | 13 (5) | S10N04P51P |
| 0.75 | 115 | FR58AP | 21 (10) | S10N04P76P |
| 1 | 115 | FR67P | 31 (14) | S10N04P01P |
| 1.5 | 115 | FR67P | 40 (18) | S10N04P16P |
| 2 | 115 | FR68P | 40 (18) | S10N04P02P |
| 3 | 115 | FR176 | 65 (29) | S10N04A03N |
| 5 | 115 | FR177 | 113 (51) | S10N04A05N |
| 7.5 | 115 | FR178 | 123 (55) | S10N04A07N |

120 x 240 Volts to 16/32 Volts

| kVA | °C Temp. Rise | Frame | Weight Lbs (kg) | Style Number |
|------|---------------|--------|-----------------|--------------|
| 0.05 | 115 | FR52 | 7 (3) | S10N06A81N |
| 0.10 | 115 | FR54 | 7 (3) | S10N06A82N |
| 0.15 | 115 | FR55 | 8 (4) | S10N06A83N |
| 0.25 | 115 | FR57P | 12 (5) | S10N06P26P |
| 0.50 | 115 | FR57P | 13 (5) | S10N06P51P |
| 0.75 | 115 | FR58AP | 21 (10) | S10N06P76P |
| 1 | 115 | FR67P | 31 (14) | S10N06P01P |
| 1.5 | 115 | FR67P | 40 (18) | S10N06P16P |
| 2 | 115 | FR68P | 40 (18) | S10N06P02P |
| 3 | 115 | FR176 | 65 (29) | S10N06A03N |
| 5 | 115 | FR177 | 113 (51) | S10N06A05N |
| 7.5 | 115 | FR178 | 123 (55) | S10N06A07N |

240 x 480 Volts to 24/48 Volts

| kVA | °C Temp. Rise | Frame | Weight Lbs (kg) | Style Number |
|------|---------------|--------|-----------------|--------------|
| 0.05 | 115 | FR52 | 7 (3) | S20N08A81N |
| 0.10 | 115 | FR54 | 7 (3) | S20N08A82N |
| 0.15 | 115 | FR55 | 8 (4) | S20N08A83N |
| 0.25 | 115 | FR57P | 12 (5) | S20N08P26P |
| 0.50 | 115 | FR57P | 13 (5) | S20N08P51P |
| 0.75 | 115 | FR58AP | 21 (10) | S20N08P76P |
| 1 | 115 | FR67P | 31 (14) | S20N08P01P |
| 1.5 | 115 | FR67P | 40 (18) | S20N08P16P |
| 2 | 115 | FR68P | 40 (18) | S20N08P02P |
| 3 | 115 | FR176 | 65 (29) | S20N08A03N |
| 5 | 115 | FR177 | 113 (51) | S20N08A05N |
| 7.5 | 115 | FR178 | 123 (55) | S20N08A07N |

Note
Frame drawings/dimensions information begins on **Page V2-T2-213**.