

# 9-4 Transformers General Purpose Transformers

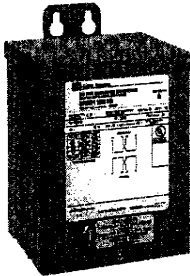
**Cutler-Hammer**

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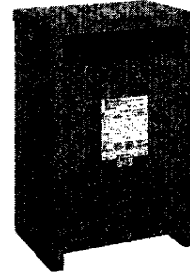
Single-Phase, Types EP, DS-3, 60 Hz

## Product Selection

Additional Product Selection information begins on **Page 9-120**.



Type EP 3-37.5 kVA



Type DS-3 15-167 kVA

**Table 9-3. Single-Phase Selection Information — Types EP, DS-3, 60 Hz**

| kVA                                       | Full Cap. Taps |         | Type | °C Temp. Rise | Dimensions (Inches) |        |        | Wt. Lbs. | Dimensions (mm) |     |     | Wt. Kg | Frame | Wiring Diagram Number | Weathershield      |               | Catalog Number | Price U.S. \$ |
|---|----------------|---------|------|---------------|---------------------|--------|--------|----------|-----------------|-----|-----|--------|-------|-----------------------|--------------------|---------------|----------------|---------------|
|   | FCAN           | FCBN    |      |               | H                   | W      | D      |          | H               | W   | D   |        |       |                       | Catalog Number     | Price U.S. \$ |                |               |
| <b>120 x 240 Volts to 120/240 Volts ①</b> |                |         |      |               |                     |        |        |          |                 |     |     |        |       |                       |                    |               |                |               |
| 0.5                                       | —              | —       | EP   | 115           | 6-1/2               | 4-7/8  | 4-5/8  | 13       | 165             | 124 | 117 | 6      | 57    | 3E                    | Indoor-<br>Outdoor | —             | S10N11S51N     | 424.          |
| 1   | —              | —       | EP   | 115           | 8-3/8               | 6      | 5-3/4  | 31       | 213             | 152 | 146 | 14     | 59A   | 3E                    | —                  | —             | S10N11S01N     | 765.          |
| 1.5                                       | —              | —       | EP   | 115           | 10-3/4              | 6-3/16 | 6-1/8  | 40       | 273             | 157 | 156 | 18     | 67    | 3E                    | —                  | —             | S10N11S16N     | 940.          |
| 2   | —              | —       | EP   | 115           | 10-3/4              | 6-3/16 | 6-1/8  | 40       | 273             | 157 | 156 | 18     | 68    | 3E                    | Indoor-<br>Outdoor | —             | S10N11S02N     | 1,020.        |
| 3   | —              | —       | EP   | 115           | 14-1/8              | 7-3/4  | 8      | 65       | 359             | 197 | 203 | 29     | 176   | 3E                    | —                  | —             | S10N11S03N     | 1,110.        |
| 5   | —              | —       | EP   | 115           | 16                  | 10-3/8 | 9-7/8  | 113      | 406             | 263 | 251 | 51     | 177   | 3E                    | —                  | —             | S10N11S05N     | 1,510.        |
| 7.5                                       | —              | —       | EP   | 115           | 16                  | 10-3/8 | 9-7/8  | 123      | 406             | 263 | 251 | 55     | 178   | 3E                    | Indoor-<br>Outdoor | —             | S10N11S07N     | 1,940.        |
| 10  | —              | —       | EP   | 115           | 19                  | 13-3/8 | 10-1/2 | 191      | 482             | 339 | 266 | 87     | 179   | 3E                    | —                  | —             | S10N11S10N     | 2,360.        |
| 15  | —              | —       | EP   | 115           | 19                  | 13-3/8 | 10-1/2 | 216      | 482             | 339 | 266 | 98     | 180   | 3E                    | —                  | —             | S10N11S15N     | 2,955.        |
| 25  | —              | —       | EP   | 115           | 22-3/8              | 16-3/8 | 14-1/2 | 375      | 568             | 416 | 368 | 170    | 182   | 3E                    | —                  | —             | S10N11S25N     | 4,645.        |
| 37.5                                      | —              | —       | DS-3 | 150           | 43-3/4              | 22-1/2 | 20     | 375      | 1111            | 571 | 508 | 170    | 810   | 233A                  | WS11               | 303.          | T10N11S37D     | 4,930.        |
| 50  | —              | —       | DS-3 | 150           | 43-3/4              | 22-1/2 | 20     | 425      | 1111            | 571 | 508 | 192    | 811   | 233A                  | WS11               | 303.          | T10N11S50D     | 6,130.        |
| <b>208 Volts to 120/240 Volts ①</b>       |                |         |      |               |                     |        |        |          |                 |     |     |        |       |                       |                    |               |                |               |
| 0.5                                       | —              | —       | EP   | 115           | 6-1/2               | 4-7/8  | 4-5/8  | 13       | 165             | 124 | 117 | 6      | 57    | 26A                   | Indoor-<br>Outdoor | —             | S29N11S51N     | 424.          |
| 1   | —              | —       | EP   | 115           | 8-3/8               | 6      | 5-3/4  | 31       | 213             | 152 | 146 | 14     | 59A   | 26A                   | —                  | —             | S29N11S01N     | 705.          |
| 1.5                                       | —              | —       | EP   | 115           | 10-3/4              | 6-3/16 | 6-1/8  | 40       | 273             | 157 | 156 | 18     | 67    | 26A                   | —                  | —             | S29N11S16N     | 865.          |
| 2   | —              | —       | EP   | 115           | 10-3/4              | 6-3/16 | 6-1/8  | 40       | 273             | 157 | 156 | 18     | 68    | 26A                   | Indoor-<br>Outdoor | —             | S29N11S02N     | 1,020.        |
| 3   | —              | —       | EP   | 115           | 14-1/8              | 7-3/4  | 8      | 65       | 359             | 197 | 203 | 29     | 176   | 26A                   | —                  | —             | S29N11S03N     | 1,110.        |
| 5   | —              | —       | EP   | 115           | 16                  | 10-3/8 | 9-7/8  | 113      | 406             | 263 | 251 | 51     | 177   | 26A                   | —                  | —             | S29N11S05N     | 1,510.        |
| 7.5                                       | —              | —       | EP   | 115           | 16                  | 10-3/8 | 9-7/8  | 123      | 406             | 263 | 251 | 55     | 178   | 26A                   | Indoor-<br>Outdoor | —             | S29N11S07N     | 1,940.        |
| 10  | —              | —       | EP   | 115           | 19                  | 13-3/8 | 10-1/2 | 193      | 482             | 339 | 266 | 87     | 179   | 26A                   | —                  | —             | S29N11S10N     | 2,360.        |
| 15  | —              | —       | EP   | 115           | 19                  | 13-3/8 | 10-1/2 | 216      | 482             | 339 | 266 | 98     | 180   | 26A                   | —                  | —             | S29N11S15N     | 2,955.        |
| 25  | —              | —       | EP   | 115           | 22-3/8              | 16-3/8 | 14-1/8 | 375      | 568             | 416 | 359 | 170    | 182   | 26A                   | —                  | —             | S29N11S25N     | 4,645.        |
| 25  | +2-2.5%        | -4-2.5% | DS-3 | 150           | 31-1/4              | 22-5/8 | 17-1/2 | 212      | 793             | 574 | 445 | 96     | 816   | 260A                  | WS11               | 303.          | T29M11S25      | 4,645.        |
| 37.5                                      | +2-2.5%        | -4-2.5% | DS-3 | 150           | 37-5/8              | 22-5/8 | 19-1/2 | 306      | 956             | 574 | 495 | 139    | 817   | 260A                  | WS11               | 303.          | T29M11S37      | 4,930.        |
| 50  | +2-2.5%        | -4-2.5% | DS-3 | 150           | 37-5/8              | 22-5/8 | 19-1/2 | 340      | 956             | 574 | 495 | 154    | 818   | 260A                  | WS11               | 303.          | T29M11S50      | 6,130.        |
| 75  | +2-2.5%        | -4-2.5% | DS-3 | 150           | 42-1/8              | 24     | 23-3/8 | 510      | 1070            | 610 | 594 | 232    | 819   | 260A                  | WS16               | 688.          | T29M11S75      | 7,430.        |
| 100                                       | +2-2.5%        | -4-2.5% | DS-3 | 150           | 42-1/8              | 24     | 23-3/8 | 600      | 1070            | 610 | 594 | 272    | 820   | 260A                  | WS16               | 688.          | T29M11S99      | 9,990.        |
| <b>277 Volts to 120/240 Volts ①</b>       |                |         |      |               |                     |        |        |          |                 |     |     |        |       |                       |                    |               |                |               |
| 0.5                                       | —              | —       | EP   | 115           | 6-1/2               | 4-7/8  | 4-5/8  | 13       | 165             | 124 | 117 | 6      | 57    | 514B                  | Indoor-<br>Outdoor | —             | S27N11S51A     | 424.          |
| 1   | —              | —       | EP   | 115           | 8-3/8               | 6      | 5-3/4  | 31       | 213             | 152 | 146 | 14     | 59A   | 514B                  | —                  | —             | S27N11S01A     | 705.          |
| 1.5                                       | —              | —       | EP   | 115           | 10-3/4              | 6-3/16 | 6-1/8  | 40       | 273             | 157 | 156 | 18     | 67    | 514B                  | —                  | —             | S27N11S16A     | 865.          |
| 2   | —              | —       | EP   | 115           | 10-3/4              | 6-3/16 | 6-1/8  | 40       | 273             | 157 | 156 | 18     | 68    | 514B                  | Indoor-<br>Outdoor | —             | S27N11S02A     | 1,020.        |
| 3   | —              | —       | EP   | 115           | 14-1/8              | 7-3/4  | 8      | 65       | 359             | 197 | 203 | 29     | 176   | 514B                  | —                  | —             | S27N11S03N     | 1,110.        |
| 5   | —              | —       | EP   | 115           | 16                  | 10-3/8 | 9-7/8  | 113      | 405             | 263 | 251 | 51     | 177   | 514B                  | —                  | —             | S27N11S05N     | 1,510.        |
| 7.5                                       | —              | —       | EP   | 115           | 16                  | 10-3/8 | 9-7/8  | 123      | 406             | 263 | 251 | 55     | 178   | 514B                  | Indoor-<br>Outdoor | —             | S27N11S07N     | 1,940.        |
| 10  | —              | —       | EP   | 115           | 19                  | 13-3/8 | 10-1/2 | 193      | 482             | 339 | 266 | 87     | 179   | 514B                  | —                  | —             | S27N11S10N     | 2,360.        |
| 15  | —              | —       | EP   | 115           | 19                  | 13-3/8 | 10-1/2 | 216      | 482             | 339 | 266 | 98     | 180   | 514B                  | —                  | —             | S27N11S15N     | 2,955.        |
| 25  | —              | —       | EP   | 115           | 22-3/8              | 16-3/8 | 14-1/8 | 375      | 568             | 416 | 359 | 170    | 182   | 514B                  | —                  | —             | S27N11S25N     | 4,645.        |
| 25  | +2-2.25%       | -4-2.5% | DS-3 | 150           | 31-1/4              | 22-5/8 | 17-1/2 | 212      | 793             | 574 | 445 | 96     | 816   | 260A                  | WS11               | 303.          | T27M11S25      | 4,645.        |
| 37.5                                      | +2-2.25%       | -4-2.5% | DS-3 | 150           | 37-5/8              | 22-5/8 | 19-1/2 | 306      | 956             | 574 | 495 | 139    | 817   | 260A                  | WS11               | 303.          | T27M11S37      | 4,930.        |
| 50  | +2-2.25%       | -4-2.5% | DS-3 | 150           | 37-5/8              | 22-5/8 | 19-1/2 | 340      | 956             | 574 | 495 | 154    | 818   | 260A                  | WS11               | 303.          | T27M11S50      | 6,130.        |
| 75  | +2-2.25%       | -4-2.5% | DS-3 | 150           | 42-1/8              | 24     | 23-3/8 | 510      | 1070            | 610 | 594 | 232    | 819   | 260A                  | WS16               | 688.          | T27M11S75      | 7,430.        |
| 100                                       | +2-2.25%       | -4-2.5% | DS-3 | 150           | 42-1/8              | 24     | 23-3/8 | 600      | 1070            | 610 | 594 | 272    | 820   | 260A                  | WS16               | 688.          | T27M11S99      | 9,990.        |

① Contact Cutler-Hammer for availability of 0.05 – 0.25 kVA designs.

**Note:** Contact your local Cutler-Hammer sales office for CE Mark transformer requirements.

Discount Symbol ..... DT-1

# Cutler-Hammer

January 2001  
Vol. 1, Ref. No. [0289]

## Transformers General Purpose Transformers

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### Single-Phase, Types EP, DS-3, 60 Hz

**Table 9-4. Single-Phase Selection Information — Types EP, DS-3, 60 Hz**

| kVA                                     | Full Cap. Taps |      | Type | °C Temp. Rise | Dimensions (Inches) |         |        | Wt. Lbs. | Dimensions (mm) |     |     | Wt. Kg | Frame | Wiring Diagram Number | Weathershield      |               | Catalog Number | Price U.S. \$ |
|---|----------------|------|------|---------------|---------------------|---------|--------|----------|-----------------|-----|-----|--------|-------|-----------------------|--------------------|---------------|----------------|---------------|
|   | FCAN           | FCBN |      |               | H                   | W       | D      |          | H               | W   | D   |        |       |                       | Catalog Number     | Price U.S. \$ |                |               |
| <b>240 x 480 Volts to 120/240 Volts</b> |                |      |      |               |                     |         |        |          |                 |     |     |        |       |                       |                    |               |                |               |
| .050                                    | —              | —    | EP   | 115           | 6-1/2               | 3-7/8   | 3-1/2  | 7        | 165             | 98  | 89  | 3      | 52    | 3A                    | Indoor-<br>Outdoor | —             | S20N11S81N     | 107.          |
| .075                                    | —              | —    | EP   | 115           | 6-1/2               | 3-7/8   | 3-1/2  | 7        | 165             | 98  | 89  | 3      | 53    | 3A                    | —                  | —             | S20N11S85N     | 123.          |
| .100                                    | —              | —    | EP   | 115           | 6-1/2               | 3-7/8   | 3-1/2  | 7        | 165             | 98  | 89  | 3      | 54    | 3A                    | —                  | —             | S20N11S82N     | 131.          |
| .150                                    | —              | —    | EP   | 115           | 6-1/2               | 3-7/8   | 3-1/2  | 8        | 165             | 98  | 89  | 4      | 55    | 3A                    | Indoor-<br>Outdoor | —             | S20N11S83N     | 152.          |
| .25                                     | —              | —    | EP   | 115           | 6-1/2               | 4-7/8   | 3-7/8  | 12       | 165             | 124 | 98  | 5      | 56    | 3A                    | —                  | —             | S20N11S26N     | 183.          |
| .5                                      | —              | —    | EP   | 115           | 6-1/2               | 4-7/8   | 4-5/8  | 13       | 165             | 124 | 117 | 6      | 57    | 3A                    | —                  | —             | S20N11S51N     | 225.          |
| .75                                     | —              | —    | EP   | 115           | 8-3/8               | 6       | 5-3/4  | 21       | 213             | 152 | 146 | 10     | 58A   | 3A                    | Indoor-<br>Outdoor | —             | S20N11S76N     | 298.          |
| 1                                       | —              | —    | EP   | 115           | 8-3/8               | 6       | 5-3/4  | 31       | 213             | 152 | 146 | 14     | 59A   | 3A                    | —                  | —             | S20N11S01N     | 347.          |
| 1.5                                     | —              | —    | EP   | 115           | 10-3/4              | 6-3/16  | 6-1/8  | 40       | 273             | 157 | 156 | 18     | 67    | 3A                    | —                  | —             | S20N11S16N     | 426.          |
| 2                                       | —              | —    | EP   | 115           | 10-3/4              | 6-3/16  | 6-1/8  | 40       | 273             | 157 | 156 | 18     | 68    | 3A                    | Indoor-<br>Outdoor | —             | S20N11S02N     | 510.          |
| 3                                       | —              | —    | EP   | 115           | 14-1/8              | 7-3/4   | 8      | 65       | 359             | 197 | 203 | 29     | 176   | 3A                    | —                  | —             | S20N11S03N     | 620.          |
| 3                                       | ⓪              | ⓪    | EP   | 115           | 14-1/8              | 7-3/4   | 8      | 65       | 359             | 197 | 203 | 29     | 176   | 9A                    | —                  | —             | S20K11S03N     | 640.          |
| 5                                       | —              | —    | EP   | 115           | 16                  | 10-3/8  | 9-7/8  | 113      | 406             | 263 | 251 | 51     | 177   | 3A                    | Indoor-<br>Outdoor | —             | S20N11S05N     | 955.          |
| 5                                       | ⓪              | ⓪    | EP   | 115           | 16                  | 10-3/8  | 9-7/8  | 113      | 406             | 263 | 251 | 51     | 177   | 9A                    | —                  | —             | S20K11S05N     | 980.          |
| 7.5                                     | —              | —    | EP   | 115           | 16                  | 10-3/8  | 9-7/8  | 123      | 406             | 263 | 251 | 55     | 178   | 3A                    | —                  | —             | S20N11S07N     | 1,300.        |
| 7.5                                     | ⓪              | ⓪    | EP   | 115           | 16                  | 10-3/8  | 9-7/8  | 123      | 406             | 263 | 251 | 55     | 178   | 9A                    | Indoor-<br>Outdoor | —             | S20K11S07N     | 1,335.        |
| 10                                      | —              | —    | EP   | 115           | 19                  | 13-3/8  | 10-1/2 | 193      | 482             | 339 | 266 | 87     | 179   | 3A                    | —                  | —             | S20N11S10N     | 1,575.        |
| 10                                      | ⓪              | ⓪    | EP   | 115           | 19                  | 13-3/8  | 10-1/2 | 193      | 482             | 339 | 266 | 87     | 179   | 9A                    | —                  | —             | S20K11S10N     | 1,625.        |
| 15                                      | —              | —    | EP   | 115           | 19                  | 13-3/8  | 10-1/2 | 216      | 482             | 339 | 266 | 98     | 180   | 3A                    | Indoor-<br>Outdoor | —             | S20N11S15N     | 1,940.        |
| 15                                      | ⓪              | ⓪    | EP   | 115           | 19                  | 13-3/8  | 10-1/2 | 216      | 482             | 339 | 266 | 98     | 180   | 23A                   | —                  | —             | S20L11S15N     | 2,050.        |
| 25                                      | —              | —    | EP   | 115           | 22-3/8              | 16-3/8  | 14-1/2 | 375      | 568             | 416 | 368 | 170    | 182   | 3A                    | —                  | —             | S20N11S25N     | 2,840.        |
| 25                                      | ⓪              | ⓪    | EP   | 115           | 22-3/8              | 16-3/8  | 14-1/2 | 375      | 568             | 416 | 368 | 170    | 182   | 23A                   | Indoor-<br>Outdoor | —             | S20L11S25N     | 2,870.        |
| 37.5                                    | ⓪              | ⓪    | EP   | 115           | 28-1/4              | 20-9/16 | 13     | 775      | 717             | 522 | 330 | 352    | 300   | 23A                   | —                  | —             | S20L11S37CU ⓪  | 7,780.        |
| 15                                      | ⓪              | ⓪    | DS-3 | 150           | 30-1/4              | 16-7/8  | 15-7/8 | 147      | 768             | 428 | 402 | 67     | 815   | 3XA                   | WS15               | 303.          | T20P11S15      | 1,860.        |
| 25                                      | ⓪              | ⓪    | DS-3 | 150           | 31-1/4              | 22-5/8  | 17-1/2 | 212      | 793             | 574 | 445 | 96     | 816   | 3XA                   | WS11               | 303.          | T20P11S25      | 2,485.        |
| 37.5                                    | ⓪              | ⓪    | DS-3 | 150           | 37-5/8              | 22-5/8  | 19-1/2 | 306      | 956             | 574 | 495 | 139    | 817   | 3XA                   | WS11               | 303.          | T20P11S37      | 3,170.        |
| 50                                      | ⓪              | ⓪    | DS-3 | 150           | 37-5/8              | 22-5/8  | 19-1/2 | 340      | 956             | 574 | 495 | 154    | 818   | 3XA                   | WS11               | 303.          | T20P11S50      | 3,940.        |
| 75                                      | ⓪              | ⓪    | DS-3 | 150           | 42-1/8              | 24      | 23-3/8 | 510      | 1070            | 610 | 594 | 232    | 819   | 3XA                   | WS16               | 688.          | T20P11S75      | 4,770.        |
| 100                                     | ⓪              | ⓪    | DS-3 | 150           | 42-1/8              | 24      | 23-3/8 | 600      | 1070            | 610 | 594 | 272    | 820   | 3XA                   | WS16               | 688.          | T20P11S99      | 6,430.        |

- ⓪ 1 – 10% FCBN at 240V; 2 – 5% FCBN at 480V.
- ⓪ 2 – 5% FCBN at 240V; 4 – 2.5% FCBN at 480V.
- ⓪ Available with copper windings only.
- ⓪ +1 – 5%, -2 – 5% at 240V primary; +2 – 2.5%, -4 – 2.5% at 480V primary.

**Note:** Contact your local Cutler-Hammer sales office for CE Mark transformer requirements.

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For other ratings or types not shown, or for special windings, types, including stainless steel, refer to Cutler-Hammer.

Discount Symbol..... DT-1