



## 2 Speed, 1 winding Three phase

### Open & enclosed

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| UL motor switching current | Maximum ratings – UL Listed                   |          |          |          | Open type      |            | UL Type 1 (Indoor metal) |            |
|----------------------------|---|----------|----------|----------|----------------|------------|--------------------------|------------|
|                            | Maximum motor horsepower ratings <sup>Ⓜ</sup> |          |          |          | Catalog number | List price | Catalog number           | List price |
|                            | 200/208V                                      | 230/240V | 460/480V | 575/600V |                |            |                          |            |
| <b>UL rated</b>            |   |          |          |          |                |            |                          |            |
| 9                          | 2   | 2        | 5        | 7.5      | A9ST-84★1★     | \$ 504     | A9ST1-84★1★              | \$ 690     |
| 11                         | 3   | 3        | 7.5      | 10       | A12ST-84★1★    | 525        | A12ST1-84★1★             | 771        |
| 17                         | 5   | 5        | 10       | 15       | A16ST-84★1★    | 581        | A16ST1-84★1★             | 837        |
| 28                         | 7.5   | 10       | 20       | 25       | A26ST-84★1★    | 752        | A26ST1-84★1★             | 1097       |
| 34                         | 10  | 10       | 25       | 30       | A30ST-84★1★    | 1038       | A30ST1-84★1★             | 1316       |
| 42                         | 10  | 15       | 30       | 40       | A40ST-84★1★    | 1259       | A40ST1-84★1★             | 1577       |
| 54                         | 15  | 20       | 40       | 50       | A50ST-84★1★    | 1697       | A50ST1-84★1★             | 1940       |
| 65                         | 20  | 25       | 50       | 50       | A63ST-84★1★    | 2150       | A63ST1-84★1★             | 2195       |
| 80                         | 25  | 30       | 60       | 75       | A75ST-84★1★    | 2307       | A75ST1-84★1★             | 2592       |
| 95                         | 30  | 30       | 60       | 75       | A95ST-84★1★    | 2495       | A95ST1-84★1★             | 2950       |
| 110                        | 30  | 40       | 75       | 100      | A110ST-84★1★   | 2681       | A110ST1-84★1★            | 3851       |
| 130                        | 40  | 50       | 100      | 125      | A145ST-84★1★   | 4506       | A145ST1-84★1★            | 5079       |
| 156                        | 50  | 60       | 125      | 150      | A185ST-84★1★   | 5845       | A185ST1-84★1★            | 6605       |
| 192                        | 60  | 75       | 150      | 200      | A210ST-84★1★   | 6895       | A210ST1-84★1★            | 7825       |
| 248                        | 75  | 100      | 200      | 250      | A260ST-84★1★   | 8535       | A260ST1-84★1★            | 10,710     |
| 302                        | 100   | 100      | 250      | 300      | A300ST-84★1★   | 9171       | A300ST1-84★1★            | 11,391     |
| 414                        | 125   | 150      | 350      | 400      | A400ST-70★1★   | 10,100     | A400ST1-70★1★            | 19,460     |
| 480                        | 150   | 200      | 400      | 500      | A460ST-70★1★   | 17,995     | A460ST1-70★1★            | 28,910     |
| 590                        | 200   | 250      | 500      | 600      | A580ST-70★1★   | 23,735     | A580ST1-70★1★            | 35,400     |
| 720                        | 250   | 300      | 600      | 700      | A750ST-70★1★   | 26,645     | A750ST1-70★1★            | 39,195     |

| <b>NEMA rated</b> |                    |      |      |          |                |        |                |        |
|-------------------|--------------------|------|------|----------|----------------|--------|----------------|--------|
| NEMA size         | Continuous current | 200V | 230V | 460/575V |                |        |                |        |
| 00                | 9                  | 1.5  | 1.5  | 2        | A9N00ST-84★1★  | \$ 504 | A9NST1-84★1★   | \$ 690 |
| 0                 | 18                 | 3    | 3    | 5        | A16N0ST-84★1★  | 581    | A16NST1-84★1★  | 837    |
| 1                 | 27                 | 7.5  | 7.5  | 10       | A26N1ST-84★1★  | 752    | A26NST1-84★1★  | 1097   |
| 2                 | 45                 | 10   | 15   | 25       | A50N2ST-84★1★  | 1697   | A50NST1-84★1★  | 1940   |
| 3                 | 90                 | 25   | 30   | 50       | A75N3ST-84★1★  | 2307   | A75NST1-84★1★  | 2589   |
| 4                 | 135                | 40   | 50   | 100      | A145N4ST-84★1★ | 4506   | A145NST1-84★1★ | 5079   |
| 5                 | 270                | 75   | 100  | 200      | A260N5ST-84★1★ | 8535   | A260NST1-84★1★ | 10,710 |
| 6                 | 540                | 150  | 200  | 400      | A460N6ST-70★1★ | 17,995 | A460NST1-70★1★ | 28,910 |
| 7                 | 810                | —    | 300  | 600      | A750N7ST-70★1★ | 26,645 | A750NST1-70★1★ | 39,195 |

★ Overload relay suffix code. Select from the overload relay selection chart on page 3.6.  
1st ★ low speed, 2nd ★ high speed

### Description

Motors that have separate windings for each speed provide more combinations of speed variations. Multi-speed starters from ABB Control are available for constant horsepower, constant torque and variable torque motors.

#### Constant horsepower

Motors that maintain the same horsepower regardless of speed are called constant horsepower motors. These motors are used in applications like metal working.

#### Constant torque

Motors that maintain constant torque at all speeds are called constant torque motors. In applications like conveyors, horsepower varies directly with speed.

#### Variable torque motors

Motors that produce a torque characteristic which varies as the square of the speed are called variable torque motors and are used in applications like blowers and fans.

### Control transformer option

| Contactor size    | VA rating       | List price adder |
|-------------------|-----------------|------------------|
| A9 – A40          | 45 <sup>①</sup> | \$ 300           |
| A9 – A40          | 50              | 360              |
| A9 – A40 (N7 & 9) | 50              | 630              |
| A50 – A75         | 75              | 435              |
| A95 – A110        | 100             | 560              |
| A145 – A185       | 150             | 720              |
| A210 – A300       | 250             | 795              |
| A400 – A460       | 150             | 720 <sup>③</sup> |
| A580 – A750       | 250             | 795 <sup>③</sup> |

<sup>①</sup> No primary fusing provided.

<sup>②</sup> For AF50 – AF 300 starters, consult factory.

<sup>③</sup> A400 - A750 utilizes the AF wide range coil with a lower coil consumption than A210 - A300.

### Coil voltage selection

All catalog numbers include a 120V coil. To select other coil voltages, substitute the code from the coil voltage selection chart for the first digit after the dash in the catalog number.

Ex.: A 240V coil is required for an A95-starter: A95ST-80★1B★

### D.C. operated starters

If DC operation is required, consult factory.

### Factory modifications

See page 3.3

#### Coil voltage selection – A9 - A300 <sup>②</sup>

| Hz | Cntr type | Volts |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |
|----|-----------|-------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|    |           | 12    | 24 | 48 | 110 | 120 | 125 | 208 | 220 | 240 | 277 | 380 | 415 | 440 | 480 | 500 | 600 |
| 60 | A         | 81    | 83 | 84 | 84  |     | 34  | 36  | 80  | 42  |     | 86  | 86  | 51  | 53  | 55  |     |
| 50 | A         | 81    | 83 | 84 |     |     |     |     | 80  |     |     | 85  | 86  |     |     | 55  |     |

For other voltages, see page 1.26.

#### Coil voltage selection – A400 - A750 <sup>②</sup>

| Hz | Cntr type | Volts   |          |           |           |
|----|-----------|---------|----------|-----------|-----------|
|    |           | 24 - 60 | 48 - 130 | 100 - 250 | 250 - 500 |
| 60 | AF        | 68      | 69       | 70        | 71        |
| 50 | AF        | 68      | 69       | 70        | 71        |
| DC | AF        | 68      | 69       | 70        | 71        |

#### Control transformer voltage selection

| Hz    | Type | Volts   |               |               |               |
|-------|------|---------|---------------|---------------|---------------|
|       |      | 208/120 | 230 – 240/120 | 460 – 480/120 | 575 – 600/120 |
| 50/60 | A/AF | 0       | 7             | 8             | 9             |

For other voltages, consult factory.