

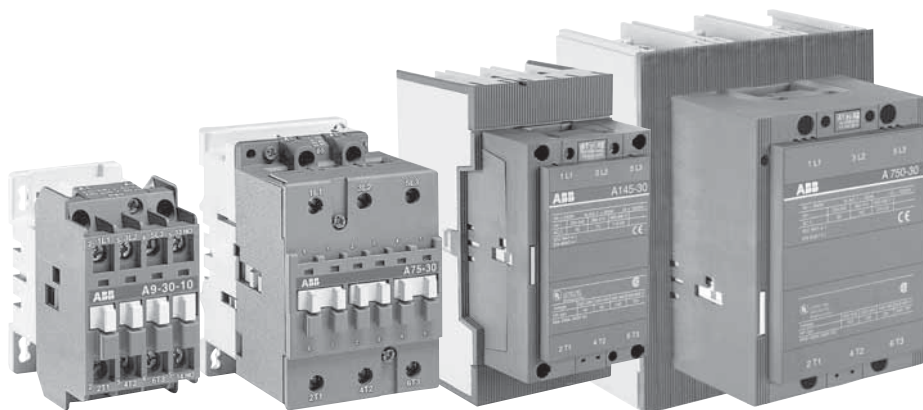
# Across the line Contactors



**Across the line contactors**

**A9 - AF1650**

1



## **A9 - A110**

- Maximum UL/CSA horsepower ratings according to UL508 and CSA22.2 No. 14
- Includes NEMA sizes 00 - 3
- CE mark
- Compact space saving design
- Standard auxiliary contact configurations:
  - A9 - A40 1 NO or 1 NC
  - A50 - A110 1 NO & 1 NC
- Contactor sizes A50 - A110 can be supplied without auxiliaries
- Additional auxiliary contact blocks are available
- D.C. ratings & D.C. control operation available
- Fast, snap-on DIN rail mounting
- Double break contact design
- Snap-on front mounted accessories include mechanical latch, pneumatic timer, and 1 & 4 pole auxiliary contact blocks
- Contactors ensure positive safety between their auxiliary contact blocks.
- Easy coil change
- Captive terminal screws
- NEMA, UL, IEC, CSA, VDE and most other international standards
- Touch safe design: All connection terminals are protected against accidental touch
- Terminals supplied open for ease of wiring
- Operates over an extended voltage range of 85% to 110% of rated control voltage
- Screwdriver guide holes
- UL File No: E39231 (A9 - A75); (AE9 - AE75); (AL9 - AL40); (AF50 - AF75)
- UL File No: E79416 (A95 - A110); (AE95 - AE110); (AF145 - AF750)
- CSA File No: LR56745 (A9 - A75); (AE9 - AE75); (AF50 - AF75)
- CSA File No: LR19700 (A95 - A110); (AE95 - AE110); (AF145 - AF750)
- CSA approved for elevator service

## **A145 - AF1650**

- Maximum UL/CSA horsepower ratings according to UL508 and CSA22.2 No. 14
- Includes NEMA sizes 4 - 8
- CE mark
- 1 NO & 1 NC auxiliary contacts are standard and up to 6 additional auxiliary contacts may be added to provide a total of 8 (4 NO & 4 NC)
- Contactors ensure positive safety between their auxiliary contact blocks.
- D.C. ratings and D.C. control operation available
- Easy maintenance of main contacts and coil inspection
- Can be mounted in any position
- Operates over an extended voltage range of 85% to 110% of rated control voltage
- NEMA, UL, IEC, CSA, VDE and most other international standards
- UL File No: E79416 (A/AF145 - AF750)
- UL File No: E73397 (AF1350 - AF1650)
- CSA File No: LR19700

## General information

### A9 - A300, AC operated

### UL rated, 3 phase

#### Application

A-Line contactors are mainly used for controlling 3-phase motors and for controlling power circuits corresponding to their operating characteristics up to 690 and even 1000 VAC. and 440 VDC.

#### Description of 3 pole and 4 pole contactors A9 - A300

All A-Line contactors can be assembled side by side. The add-on or built-in auxiliary contacts are suitable for low level currents.

Quick mounting on DIN rail: EN 50022 and EN 50023 standards:

35 x 7.5mm for A9 - A40

35 x 15mm for A9 - A75

75mm for A45 - A110

Location of side mounted accessories: on right or left hand side. Factory mounted on left hand side for CAL5 on A50 - A300

Holes for screw mounting (screws not supplied). Distance between holes according to EN 50003.

Terminals delivered in open position with captive screws (screws of unused terminals must be tightened).

Screwdriver guidance for all terminals makes it possible to use motorized screwdrivers.

All terminals provide protection against accidental direct contact with live parts according to VDE0106 - Part. 100.

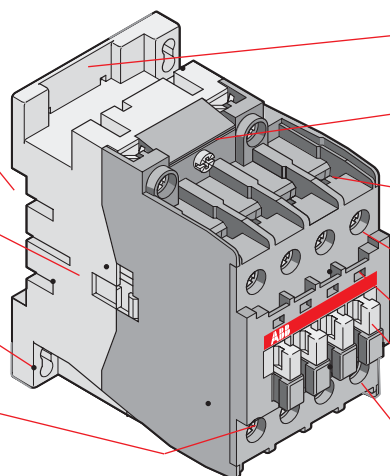
All A9 - A40 contactor terminals as well as A45 - A300 contactor auxiliary contact and coil terminals ensure IP20 degree of protection according to IEC 947-1.

#### Control circuit types

- A-Line types: AC operated with laminated magnetic circuit.

#### Contactor types

- 3 pole contactors with NO or NC built in auxiliary contact for A9 - A40 contactors; factory assembled auxiliary contacts for A50 - A300 contactors
- 4 pole contactors: 4 NO or 2 NO & 2 NC without any auxiliary contacts. (A9 - A75)



A9 - A300

Location of surge suppressors.

Clear marking of coil voltages and frequencies.

Connecting point for control leads in top part of main terminals of A50 - A75 contactors. For A95 & A110 contactors these are additional power connections.

Terminal marking according to IEC 947-4-1, EN 50005, EN 50012 and NEMA standards.

Location of function marker.

Stops for attaching front mounted accessories.

Terminal screws:

- Posidrive (+,-) No 2 for all A9 - A75
- M8 hex threaded socket screw for A95 - A300 main terminals.

## Catalog number explanation

### A9-30-10-84

Frame size

Power pole

30 = 3 NO  
40 = 4 NO  
22 = 2 NO & 2 NC

Coil voltage

(see coil voltage selection chart)

Auxiliary contacts

10 = 1 NO & 0 NC  
01 = 0 NO & 1 NC  
11 = 1 NO & 1 NC  
00 = No auxiliary provided  
22 = 2 NO & 2 NC

#### Coil voltage selection chart

| 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.

# A9 - A300, AC operated

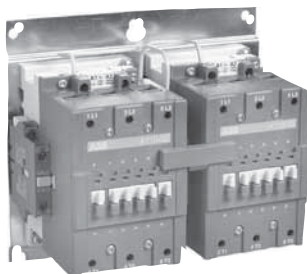
## Non-reversing, mechanically interlocked, reversing

### UL rated, 3 phase

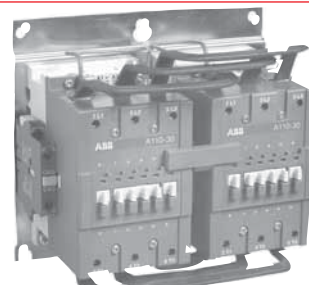
Across the line  
1



A26-30-10-84



A110M-30-11-84



A110R-30-11-84

| UL general<br>purpose<br>current | UL motor<br>switching<br>current | Maximum motor<br>horsepower ratings  |      |      |          | Standard<br>Aux. contacts |        | Non-reversing                    |               | Mechanically interlocked       |               | Reversing                      |               |
|----------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------|------|------|----------|---------------------------|--------|----------------------------------|---------------|--------------------------------|---------------|--------------------------------|---------------|
|                                  |                                  | 208V                                                                                                                  | 240V | 480V | 575/600V | NO                        | NC     | Catalog<br>number                | List<br>price | Catalog<br>number              | List<br>price | Catalog<br>number              | List<br>price |
| AC1                              |                                  | UL rated                                                                                                              |      |      |          |                           |        |                                  |               |                                |               |                                |               |
| 21                               | 9                                | 2                                                                                                                     | 2    | 5    | 7.5      | 1<br>0                    | 0<br>1 | A9-30-10-84<br>A9-30-01-84       | \$ 78         | A9M-30-10-84<br>A9M-30-01-84   | \$ 255        | A9R-30-10-84<br>A9R-30-01-84   | \$ 315        |
| 25                               | 11                               | 3                                                                                                                     | 3    | 7.5  | 10       | 1<br>0                    | 0<br>1 | A12-30-10-84<br>A12-30-01-84     | 84            | A12M-30-10-84<br>A12M-30-01-84 | 315           | A12R-30-10-84<br>A12R-30-01-84 | 375           |
| 30                               | 17                               | 5                                                                                                                     | 5    | 10   | 15       | 1<br>0                    | 0<br>1 | A16-30-10-84<br>A16-30-01-84     | 102           | A16M-30-10-84<br>A16M-30-01-84 | 345           | A16R-30-10-84<br>A16R-30-01-84 | 413           |
| 40                               | 28                               | 7.5                                                                                                                   | 10   | 20   | 25       | 1<br>0                    | 0<br>1 | A26-30-10-84<br>A26-30-01-84     | 183           | A26M-30-10-84<br>A26M-30-01-84 | 405           | A26R-30-10-84<br>A26R-30-01-84 | 480           |
| 50                               | 34                               | 10                                                                                                                    | 10   | 25   | 30       | 1<br>0                    | 0<br>1 | A30-30-10-84<br>A30-30-01-84     | 252           | A30M-30-10-84<br>A30M-30-01-84 | 548           | A30R-30-10-84<br>A30R-30-01-84 | 623           |
| 60                               | 42                               | 10                                                                                                                    | 15   | 30   | 40       | 1<br>0                    | 0<br>1 | A40-30-10-84<br>A40-30-01-84     | 297           | A40M-30-10-84<br>A40M-30-01-84 | 639           | A40R-30-10-84<br>A40R-30-01-84 | 750           |
| 80                               | 54                               | 15                                                                                                                    | 20   | 40   | 50       | 1                         | 1      | A50-30-11-84                     | 330           | A50M-30-11-84                  | 713           | A50R-30-11-84                  | 810           |
| 90                               | 65                               | 20                                                                                                                    | 25   | 50   | 60       | 1                         | 1      | A63-30-11-84                     | 372           | A63M-30-11-84                  | 870           | A63R-30-11-84                  | 1013          |
| 105                              | 80                               | 25                                                                                                                    | 30   | 60   | 75       | 1                         | 1      | A75-30-11-84                     | 413           | A75M-30-11-84                  | 1155          | A75R-30-11-84                  | 1298          |
| 125                              | 95                               | 30                                                                                                                    | 30   | 60   | 75       | 1                         | 1      | A95-30-11-84                     | 450           | A95M-30-11-84                  | 1230          | A95R-30-11-84                  | 1425          |
| 140                              | 110                              | 30                                                                                                                    | 40   | 75   | 100      | 1                         | 1      | A110-30-11-84                    | 480           | A110M-30-11-84                 | 1365          | A110R-30-11-84                 | 1628          |
| 230                              | 130                              | 40                                                                                                                    | 50   | 100  | 125      | 1                         | 1      | A145-30-11-84                    | 825           | A145M-30-11-84                 | 2235          | A145R-30-11-84                 | 2250          |
| 250                              | 156                              | 50                                                                                                                    | 60   | 125  | 150      | 1                         | 1      | A185-30-11-84                    | 1290          | A185M-30-11-84                 | 3360          | A185R-30-11-84                 | 3375          |
| 300                              | 192                              | 60                                                                                                                    | 75   | 150  | 200      | 1                         | 1      | A210-30-11-84                    | 1635          | A210M-30-11-84                 | 4035          | A210R-30-11-84                 | 4050          |
| 350                              | 248                              | 75                                                                                                                    | 100  | 200  | 250      | 1                         | 1      | A260-30-11-84                    | 1815          | A260M-30-11-84                 | 4485          | A260R-30-11-84                 | 4500          |
| 400                              | 302                              | 100                                                                                                                   | 100  | 250  | 300      | 1                         | 1      | A300-30-11-84                    | 1875          | A300M-30-11-84                 | 5460          | A300R-30-11-84                 | 5475          |
| 550                              | 414                              | 125                                                                                                                   | 150  | 350  | 400      | 1                         | 1      | See Type AF contactors, page 1.9 |               |                                |               |                                |               |
| 650                              | 480                              | 150                                                                                                                   | 200  | 400  | 500      | 1                         | 1      |                                  |               |                                |               |                                |               |
| 750                              | 602                              | 200                                                                                                                   | 250  | 500  | 600      | 1                         | 1      |                                  |               |                                |               |                                |               |
| 900                              | 810                              | 250                                                                                                                   | 300  | 600  | 700      | 1                         | 1      |                                  |               |                                |               |                                |               |
| 1350                             | 960                              | —                                                                                                                     | 400  | 800  | 900      | 1                         | 1      |                                  |               |                                |               |                                |               |
| 1650                             | 1080                             | —                                                                                                                     | 450  | 900  | 1000     | 1                         | 1      |                                  |               |                                |               |                                |               |

See Type AF contactors, page 1.9

### Coil voltage selection

All AC operated catalog numbers include a 120VAC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the two digits after the last dash in the catalog number.

Ex.: A 240V coil is required for an A75 contactor: A75-30-11-**80**

### Auxiliary contact blocks

For additional auxiliary contact blocks, see catalog number explanation on page 1.2. Add \$ 20 to list price for each additional auxiliary, and see page 1.18 for available combinations. Only side-mounted blocks are allowed to be factory installed. If auxiliary contacts are not required for A50 - A300, subtract \$ 40 from list price and change catalog number to "00" instead of "11."

### Mechanical interlock

Mechanically interlocked contactors are designed for reversing, 2 speed, reduced voltage, etc. type starter applications. The complete assembly consists of two mechanically and electrically interlocked contactors mounted as follows with line and load terminals:

- A9 - A16 — mounted on 35mm DIN rail
- A26 - A300 — mounted on common baseplate

Power wiring is not included. The NC electrical interlock is provided with the mechanical interlock for A9 - A110 contactors.

### Coil voltage selection chart

| Hz | Cntr<br>type | Volts |    |    |     |     |     |     |     |     |     |     |     |
|----|--------------|-------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|    |              | 12    | 24 | 48 | 110 | 120 | 125 | 208 | 220 | 240 | 277 | 380 | 415 |
| 60 | A            |       | 81 | 83 | 84  | 84  |     | 34  | 36  | 80  | 42  |     | 86  |
| 50 | A            |       | 81 | 83 | 84  |     |     |     | 80  |     |     | 85  | 86  |

For other voltages, see page 1.26.

### Reversing

Reversing contactors are designed for reversing type starter applications. The complete assembly consists of two mechanically and electrically interlocked contactors mounted as follows with line and load terminals:

- A9 - A16 — mounted on 35mm DIN rail
- A26 - A300 — mounted on common baseplate

The NC electrical interlock is provided with the mechanical interlock for A9 - A110 contactors.