

# MSBCCL

ASYNCHRONOUS THREE-PHASE BRAKE MOTORS  
WITH SQUIRREL CAGE ROTOR · DIRECT CURRENT BRAKE



series -enclosed construction externally ventilated -sizes 63 ~ 160

The brake-motors of the MSBCCL series result from coupling an asynchronous three-phase motor and an electromagnetic D.C. brake unit. Due to their reliability and operating safety, as well as their quick braking time (connection & disconnection time = 5~80 milliseconds) they are suitable for a great variety of applications, as:

- Braking of loads or torques on the driving shaft.
- Braking of rotating masses to reduce any lost-time.
- Braking operations to increase the set-up precision.
- Braking of machine parts, according to safety rules.

## TECHNICAL FEATURES

2 poles-3000rpm-50Hz

Brake motors have a ±6% tolerance on the supply voltage

| Model         | Power<br>(KW) | Speed<br>(r/min) | Eff.<br>(%) | Power<br>factor | Rated Current (A) |       |       | Tstart/Tn<br>(Times) | Tmax/Tn<br>(Times) | Tmin/Tn<br>(Times) | Is/In | Noise<br>dB(A) |
|---------------|---------------|------------------|-------------|-----------------|-------------------|-------|-------|----------------------|--------------------|--------------------|-------|----------------|
|               |               |                  |             |                 | 230V              | 400V  | 690V  |                      |                    |                    |       |                |
| MSBCCL631-2   | 0.18          | 2710             | 63          | 0.75            | 0.95              | 0.55  | 0.32  | 2.2                  | 2.4                | 1.6                | 6     | 61             |
| MSBCCL632-2   | 0.25          | 2710             | 65          | 0.78            | 1.23              | 0.71  | 0.41  | 2.2                  | 2.4                | 1.6                | 6     | 61             |
| MSBCCL633-2   | 0.37          | 2710             | 65          | 0.78            | 1.82              | 1.05  | 0.61  | 2.2                  | 2.4                | 1.6                | 6     | 62             |
| MSBCCL711-2   | 0.37          | 2730             | 70          | 0.79            | 1.67              | 0.97  | 0.56  | 2.2                  | 2.4                | 1.6                | 6     | 64             |
| MSBCCL712-2   | 0.55          | 2760             | 71          | 0.79            | 2.45              | 1.42  | 0.82  | 2.2                  | 2.4                | 1.6                | 6     | 64             |
| MSBCCL713-2   | 0.75          | 2730             | 72          | 0.82            | 3.18              | 1.83  | 1.06  | 2.2                  | 2.4                | 1.5                | 6     | 65             |
| MSBCCL801-2   | 0.75          | 2770             | 73          | 0.84            | 3.06              | 1.77  | 1.02  | 2.2                  | 2.4                | 1.5                | 6     | 67             |
| MSBCCL802-2   | 1.1           | 2770             | 76.2        | 0.83            | 4.35              | 2.51  | 1.45  | 2.2                  | 2.4                | 1.5                | 6     | 67             |
| MSBCCL803-2   | 1.5           | 2800             | 78.5        | 0.83            | 5.87              | 3.32  | 1.92  | 2.2                  | 2.4                | 1.5                | 6     | 70             |
| MSBCCL90S-2   | 1.5           | 2840             | 78.5        | 0.84            | 5.76              | 3.28  | 1.90  | 2.2                  | 2.4                | 1.5                | 6     | 72             |
| MSBCCL90L1-2  | 2.2           | 2840             | 81          | 0.85            | 8.0               | 4.61  | 2.66  | 2.2                  | 2.4                | 1.4                | 6     | 72             |
| MSBCCL90L2-2  | 3             | 2840             | 82.6        | 0.86            | 10.56             | 6.10  | 3.52  | 2.2                  | 2.4                | 1.4                | 6     | 74             |
| MSBCCL100L1-2 | 3             | 2840             | 82.6        | 0.87            | 10.44             | 6.03  | 3.48  | 2.2                  | 2.3                | 1.4                | 7     | 76             |
| MSBCCL100L2-2 | 4             | 2850             | 84.2        | 0.87            | 13.65             | 7.88  | 4.55  | 2.2                  | 2.3                | 1.4                | 7.5   | 77             |
| MSBCCL112M-2  | 4             | 2880             | 84.2        | 0.87            | 13.65             | 7.88  | 4.55  | 2.2                  | 2.3                | 1.4                | 7.5   | 77             |
| MSBCCL112L-2  | 5.5           | 2880             | 85.7        | 0.88            | 18.23             | 10.53 | 6.08  | 2.2                  | 2.3                | 1.2                | 7.5   | 78             |
| MSBCCL132S1-2 | 5.5           | 2900             | 85.7        | 0.88            | 18.23             | 10.53 | 6.08  | 2                    | 2.2                | 1.2                | 7.5   | 80             |
| MSBCCL132S2-2 | 7.5           | 2920             | 87          | 0.88            | 24.49             | 14.14 | 8.16  | 2                    | 2.2                | 1.2                | 7.5   | 80             |
| MSBCCL132M1-2 | 9.2           | 2930             | 88          | 0.89            | 29.87             | 17.25 | 9.96  | 2                    | 2.2                | 1.2                | 7.5   | 81             |
| MSBCCL132M2-2 | 11            | 2930             | 88.4        | 0.9             | 34.57             | 19.96 | 11.52 | 2                    | 2.2                | 1.2                | 7.5   | 83             |
| MSBCCL160M1-2 | 11            | 2940             | 88.4        | 0.9             | 34.57             | 19.96 | 11.52 | 2                    | 2.2                | 1.2                | 7.5   | 86             |
| MSBCCL160M2-2 | 15            | 2940             | 89.4        | 0.91            | 46.09             | 26.61 | 15.36 | 2                    | 2.2                | 1.2                | 7.5   | 86             |
| MSBCCL160L-2  | 18.5          | 2940             | 90          | 0.91            | 56.47             | 32.6  | 18.82 | 2                    | 2.2                | 1.1                | 7.5   | 86             |

| Type          | Brake<br>Type<br>k | Brake<br>torque<br>Nm | Brake<br>Rated<br>Power<br>W | J<br>brake<br>Pd²<br>kgm² | No.of<br>Starts/Hr.<br>Under no<br>load | Delayed<br>Cut-in<br>Time★<br>Msec. | Quick<br>Cut-in<br>Time<br>Msec. | Cut<br>out<br>Time<br>Msec. | Noise<br>dB(A) |
|---------------|--------------------|-----------------------|------------------------------|---------------------------|-----------------------------------------|-------------------------------------|----------------------------------|-----------------------------|----------------|
| MSBCCL63      | K 1                | 5                     | 15                           | 0.00005                   | 3000                                    | 45                                  | 20                               | 10                          | 62             |
| MSBCCL 71     | K 2                | 12                    | 20                           | 0.00014                   | 3000                                    | 50                                  | 30                               | 15                          | 64             |
| MSBCCL 80     | K 3                | 16                    | 25                           | 0.00021                   | 1300                                    | 55                                  | 30                               | 15                          | 67             |
| MSBCCL 90S    | K 4                | 20                    | 30                           | 0.00039                   | 1100                                    | 65                                  | 40                               | 15                          | 72             |
| ●MSBCCL 90S   | K 4 D              | 40                    | 30                           | 0.00078                   | 1100                                    | 65                                  | 40                               | 15                          | 72             |
| MSBCCL 90 L   | K 4                | 20                    | 30                           | 0.00039                   | 1100                                    | 65                                  | 40                               | 15                          | 72             |
| ●MSBCCL 90 L  | K 4 D              | 40                    | 30                           | 0.00078                   | 1100                                    | 65                                  | 40                               | 15                          | 72             |
| MSBCCL 100 L  | K 5                | 40                    | 45                           | 0.00104                   | 900                                     | 75                                  | 45                               | 20                          | 76             |
| ●MSBCCL 100 L | K 6                | 60                    | 50                           | 0.00135                   | 900                                     | 180                                 | 85                               | 25                          | 76             |
| MSBCCL 112 MT | K 5                | 40                    | 45                           | 0.00104                   | 880                                     | 75                                  | 45                               | 20                          | 77             |
| MSBCCL 112 M  | K 6                | 60                    | 50                           | 0.00135                   | 880                                     | 180                                 | 85                               | 25                          | 78             |
| MSBCCL 132 S  | K 7                | 90                    | 55                           | 0.00219                   | 480                                     | 200                                 | 95                               | 50                          | 80             |
| ●MSBCCL 132 S | K 7 D              | 180                   | 55                           | 0.00438                   | 480                                     | 200                                 | 95                               | 50                          | 80             |
| MSBCCL 132 M  | K 7                | 90                    | 55                           | 0.00219                   | 450                                     | 200                                 | 95                               | 50                          | 80             |
| ●MSBCCL 132 M | K 7 D              | 180                   | 55                           | 0.00438                   | 480                                     | 200                                 | 95                               | 50                          | 80             |
| MSBCCL 160 MT | K 7 D              | 180                   | 55                           | 0.00438                   | 350                                     | 200                                 | 95                               | 50                          | 86             |
| MSBCCL 160 L  | K 8                | 200                   | 60                           | 0.00408                   | 350                                     | 210                                 | 100                              | 60                          | 86             |
| ●MSBCCL 160 L | K 8 D              | 400                   | 60                           | 0.00816                   | 350                                     | 210                                 | 100                              | 60                          | 86             |

●Motor with increased braking torque on request  
★On request, delayed brake cut in time for lifting equipments. We suggest double disk brake D for lifting equipments.

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TECHNICAL FEATURES

4 poles-1500rpm-50Hz

Brake motors have a ±6% tolerance on the supply voltage

| Model         | Power<br>(KW) | Speed<br>(r/min) | Eff.<br>(%) | Power<br>factor | Rated Current (A) |       |       | Tstart/Tn<br>(Times) | Tmax/Tn<br>(Times) | Tmin/Tn<br>(Times) | Is/In | Noise<br>dB(A) |
|---------------|---------------|------------------|-------------|-----------------|-------------------|-------|-------|----------------------|--------------------|--------------------|-------|----------------|
|               |               |                  |             |                 | 230V              | 400V  | 690V  |                      |                    |                    |       |                |
| MSBCCL631-4   | 0.12          | 1350             | 57          | 0.64            | 0.82              | 0.47  | 0.27  | 2.2                  | 2.4                | 1.7                | 6     | 52             |
| MSBCCL632-4   | 0.18          | 1350             | 59          | 0.65            | 1.17              | 0.68  | 0.39  | 2.2                  | 2.4                | 1.7                | 6     | 52             |
| MSBCCL633-4   | 0.25          | 1350             | 60          | 0.66            | 1.58              | 0.91  | 0.53  | 2.2                  | 2.4                | 1.7                | 6     | 54             |
| MSBCCL711-4   | 0.25          | 1350             | 60          | 0.72            | 1.45              | 0.84  | 0.48  | 2.2                  | 2.4                | 1.7                | 6     | 55             |
| MSBCCL712-4   | 0.37          | 1370             | 65          | 0.74            | 1.92              | 1.11  | 0.64  | 2.2                  | 2.4                | 1.7                | 6     | 55             |
| MSBCCL713-4   | 0.55          | 1380             | 66          | 0.75            | 2.78              | 1.60  | 0.93  | 2.2                  | 2.4                | 1.7                | 6     | 57             |
| MSBCCL801-4   | 0.55          | 1370             | 67          | 0.75            | 2.74              | 1.58  | 0.91  | 2.2                  | 2.4                | 1.7                | 6     | 58             |
| MSBCCL802-4   | 0.75          | 1380             | 72          | 0.78            | 3.34              | 1.93  | 1.11  | 2.2                  | 2.4                | 1.6                | 6     | 58             |
| MSBCCL803-4   | 1.1           | 1390             | 76.2        | 0.78            | 4.63              | 2.67  | 1.54  | 2.2                  | 2.4                | 1.6                | 6     | 60             |
| MSBCCL90S-4   | 1.1           | 1400             | 76.2        | 0.79            | 4.57              | 2.64  | 1.52  | 2.2                  | 2.4                | 1.6                | 6     | 61             |
| MSBCCL90L-4   | 1.5           | 1400             | 78.5        | 0.8             | 5.97              | 3.45  | 1.99  | 2.2                  | 2.4                | 1.6                | 6     | 61             |
| MSBCCL90L2-4  | 2.2           | 1400             | 81          | 0.8             | 8.45              | 4.90  | 2.83  | 2.2                  | 2.4                | 1.5                | 7     | 63             |
| MSBCCL100L1-4 | 2.2           | 1420             | 81          | 0.81            | 8.38              | 4.84  | 2.79  | 2.2                  | 2.3                | 1.5                | 7     | 64             |
| MSBCCL100L2-4 | 3             | 1420             | 82.6        | 0.81            | 11.21             | 6.47  | 3.74  | 2.2                  | 2.3                | 1.5                | 7     | 64             |
| MSBCCL100L3-4 | 4             | 1430             | 84.2        | 0.82            | 14.18             | 8.36  | 4.83  | 2.2                  | 2.3                | 1.5                | 7     | 65             |
| MSBCCL112M-4  | 4             | 1430             | 84.2        | 0.83            | 14.31             | 8.26  | 4.77  | 2.2                  | 2.2                | 1.5                | 7     | 65             |
| MSBCCL112L-4  | 5.5           | 1440             | 85.7        | 0.83            | 19.33             | 11.16 | 6.44  | 2.2                  | 2.2                | 1.4                | 7     | 68             |
| MSBCCL132S-4  | 5.5           | 1450             | 85.7        | 0.84            | 19.1              | 11.03 | 6.37  | 2.2                  | 2.2                | 1.4                | 7     | 71             |
| MSBCCL132M-4  | 7.5           | 1450             | 87          | 0.85            | 25.35             | 14.64 | 8.45  | 2.2                  | 2.2                | 1.4                | 7     | 71             |
| MSBCCL132L1-4 | 9.2           | 1460             | 87.5        | 0.85            | 30.92             | 17.85 | 10.31 | 2.2                  | 2.2                | 1.4                | 7.5   | 74             |
| MSBCCL132L2-4 | 10            | 1460             | 88          | 0.85            | 33.42             | 19.3  | 11.14 | 2.2                  | 2.2                | 1.4                | 7.5   | 74             |
| MSBCCL132L2-4 | 11            | 1460             | 88.4        | 0.86            | 36.17             | 20.88 | 12.06 | 2.2                  | 2.2                | 1.4                | 7.5   | 74             |
| MSBCCL160M-4  | 11            | 1460             | 88.4        | 0.87            | 35.76             | 20.64 | 11.92 | 2.2                  | 2.2                | 1.4                | 7     | 75             |
| MSBCCL160L-4  | 15            | 1460             | 88.4        | 0.87            | 48.76             | 28.15 | 16.25 | 2.2                  | 2.2                | 1.4                | 7.5   | 75             |

| Type          | Brake<br>Type<br>k | Brake<br>torque<br>Nm | Brake<br>Rated<br>Power<br>W | J<br>brake<br>Pd²<br>kgm² | No.of<br>Starts/Hr.<br>Under no<br>load | Delayed<br>Cut-in<br>Time★<br>Msec. | Quick<br>Cut-in<br>Time<br>Msec. | Cut<br>out<br>Time<br>Msec. | Noise<br>dB(A) |
|---------------|--------------------|-----------------------|------------------------------|---------------------------|-----------------------------------------|-------------------------------------|----------------------------------|-----------------------------|----------------|
| MSBCCL63      | K 1                | 5                     | 15                           | 0.00005                   | 3000                                    | 45                                  | 20                               | 10                          | 52             |
| MSBCCL 71     | K 2                | 12                    | 20                           | 0.00014                   | 3000                                    | 50                                  | 30                               | 15                          | 55             |
| MSBCCL 80     | K 3                | 16                    | 25                           | 0.00021                   | 1300                                    | 55                                  | 30                               | 15                          | 58             |
| MSBCCL 90S    | K 4                | 20                    | 30                           | 0.00039                   | 1100                                    | 65                                  | 40                               | 15                          | 61             |
| ●MSBCCL 90S   | K 4 D              | 40                    | 30                           | 0.00078                   | 1100                                    | 65                                  | 40                               | 15                          | 61             |
| MSBCCL 90 L   | K 4                | 20                    | 30                           | 0.00039                   | 1100                                    | 65                                  | 40                               | 15                          | 63             |
| ●MSBCCL 90 L  | K 4 D              | 40                    | 30                           | 0.00078                   | 1100                                    | 65                                  | 40                               | 15                          | 63             |
| MSBCCL 100 L  | K 5                | 40                    | 45                           | 0.00104                   | 900                                     | 75                                  | 45                               | 20                          | 64             |
| ●MSBCCL 100 L | K 6                | 60                    | 50                           | 0.00135                   | 900                                     | 180                                 | 85                               | 25                          | 65             |
| MSBCCL 112 MT | K 5                | 40                    | 45                           | 0.00104                   | 880                                     | 75                                  | 45                               | 20                          | 65             |
| MSBCCL 112 M  | K 6                | 60                    | 50                           | 0.00135                   | 880                                     | 180                                 | 85                               | 25                          | 65             |
| MSBCCL 132 S  | K 7                | 90                    | 55                           | 0.00219                   | 480                                     | 200                                 | 95                               | 50                          | 71             |
| ●MSBCCL 132 S | K 7 D              | 180                   | 55                           | 0.00438                   | 480                                     | 200                                 | 95                               | 50                          | 71             |
| MSBCCL 132 M  | K 7                | 90                    | 55                           | 0.00219                   | 450                                     | 200                                 | 95                               | 50                          | 71             |
| ●MSBCCL 132 M | K 7 D              | 180                   | 55                           | 0.00438                   | 480                                     | 200                                 | 95                               | 50                          | 71             |
| MSBCCL 160 MT | K 7 D              | 180                   | 55                           | 0.00438                   | 350                                     | 200                                 | 95                               | 50                          | 75             |
| MSBCCL 160 L  | K 8                | 200                   | 60                           | 0.00408                   | 350                                     | 210                                 | 100                              | 60                          | 75             |
| ●MSBCCL 160 L | K 8 D              | 400                   | 60                           | 0.00816                   | 350                                     | 210                                 | 100                              | 60                          | 75             |

●Motor with increased braking torque on request  
★On request, delayed brake cut in time for lifting equipments. We suggest double disk brake D for lifting equipments.

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TECHNICAL FEATURES

6 poles-1000rpm-50Hz

Brake motors have a ±6% tolerance on the supply voltage

| Model         | Power<br>(KW) | Speed<br>(r/min) | Eff.<br>(%) | Power<br>factor | Rated Current (A) |       |       | Tstart/Tn<br>(Times) | Tmax/Tn<br>(Times) | Tmin/Tn<br>(Times) | Is/In | Noise<br>dB(A) |
|---------------|---------------|------------------|-------------|-----------------|-------------------|-------|-------|----------------------|--------------------|--------------------|-------|----------------|
|               |               |                  |             |                 | 230V              | 400V  | 690V  |                      |                    |                    |       |                |
| MSBCCL631-6   | 0.09          | 840              | 42          | 0.61            | 0.88              | 0.51  | 0.29  | 2                    | 2                  | 1.5                | 3.5   | 50             |
| MSBCCL632-6   | 0.12          | 850              | 45          | 0.62            | 1.08              | 0.62  | 0.36  | 2                    | 2                  | 1.5                | 3.5   | 50             |
| MSBCCL711-6   | 0.18          | 880              | 56          | 0.66            | 1.22              | 0.70  | 0.41  | 1.6                  | 1.7                | 1.5                | 4     | 52             |
| MSBCCL712-6   | 0.25          | 900              | 59          | 0.7             | 1.51              | 0.87  | 0.50  | 2.1                  | 2.2                | 1.5                | 4     | 52             |
| MSBCCL713-6   | 0.37          | 890              | 61          | 0.69            | 2.2               | 1.27  | 0.73  | 2                    | 2.1                | 1.5                | 4     | 54             |
| MSBCCL801-6   | 0.37          | 900              | 62          | 0.7             | 2.13              | 1.23  | 0.71  | 1.9                  | 1.9                | 1.5                | 4     | 56             |
| MSBCCL802-6   | 0.55          | 900              | 67          | 0.72            | 2.85              | 1.65  | 0.95  | 2                    | 2.3                | 1.5                | 4     | 56             |
| MSBCCL803-6   | 0.75          | 900              | 68          | 0.72            | 3.83              | 2.21  | 1.28  | 2                    | 2.3                | 1.5                | 4     | 58             |
| MSBCCL90S-6   | 0.75          | 920              | 69          | 0.72            | 3.77              | 2.18  | 1.26  | 2.2                  | 2.2                | 1.5                | 5.5   | 59             |
| MSBCCL90L-6   | 1.1           | 925              | 72          | 0.73            | 5.23              | 3.02  | 1.74  | 2.2                  | 2.2                | 1.3                | 5.5   | 59             |
| MSBCCL100L-6  | 1.5           | 945              | 74          | 0.76            | 6.67              | 3.85  | 2.22  | 2.2                  | 2.2                | 1.3                | 6     | 61             |
| MSBCCL112M-6  | 2.2           | 955              | 78          | 0.76            | 9.28              | 5.36  | 3.09  | 2.2                  | 2.2                | 1.3                | 6     | 64             |
| MSBCCL132S-6  | 3             | 960              | 79          | 0.76            | 12.49             | 7.21  | 4.16  | 2                    | 2                  | 1.3                | 6.5   | 64             |
| MSBCCL132M1-6 | 4             | 960              | 80.5        | 0.76            | 16.35             | 9.44  | 5.45  | 2                    | 2                  | 1.3                | 6.5   | 68             |
| MSBCCL132M2-6 | 5.5           | 960              | 83          | 0.77            | 21.51             | 12.42 | 7.17  | 2                    | 2                  | 1.3                | 6.5   | 68             |
| MSBCCL132L-6  | 7.5           | 960              | 85          | 0.77            | 28.65             | 16.54 | 9.55  | 2                    | 2                  | 1.3                | 6.5   | 68             |
| MSBCCL160M-6  | 7.5           | 960              | 86          | 0.8             | 27.25             | 15.73 | 9.08  | 2                    | 2.2                | 1.3                | 6.5   | 68             |
| MSBCCL160L-6  | 11            | 960              | 87.5        | 0.79            | 39.78             | 22.97 | 13.26 | 2                    | 2.2                | 1.2                | 6.5   | 73             |

| Type          | Brake<br>Type<br>k | Brake<br>torque<br>Nm | Brake<br>Rated<br>Power<br>W | J<br>brake<br>Pd²<br>kgm² | No.of<br>Starts/Hr.<br>Under no<br>load | Delayed<br>Cut-in<br>Time★<br>Msec. | Quick<br>Cut-in<br>Time<br>Msec. | Cut<br>out<br>Time<br>Msec. | Noise<br>dB(A) |
|---------------|--------------------|-----------------------|------------------------------|---------------------------|-----------------------------------------|-------------------------------------|----------------------------------|-----------------------------|----------------|
| MSBCCL63      | K 1                | 5                     | 15                           | 0.00005                   | 3000                                    | 45                                  | 20                               | 10                          | 50             |
| MSBCCL 71     | K 2                | 12                    | 20                           | 0.00014                   | 3000                                    | 50                                  | 30                               | 15                          | 52             |
| MSBCCL 80     | K 3                | 16                    | 25                           | 0.00021                   | 1300                                    | 55                                  | 30                               | 15                          | 56             |
| MSBCCL 90S    | K 4                | 20                    | 30                           | 0.00039                   | 1100                                    | 65                                  | 40                               | 15                          | 59             |
| ●MSBCCL 90S   | K 4 D              | 40                    | 30                           | 0.00078                   | 1100                                    | 65                                  | 40                               | 15                          | 59             |
| MSBCCL 90 L   | K 4                | 20                    | 30                           | 0.00039                   | 1100                                    | 65                                  | 40                               | 15                          | 59             |
| ●MSBCCL 90 L  | K 4 D              | 40                    | 30                           | 0.00078                   | 1100                                    | 65                                  | 40                               | 15                          | 59             |
| MSBCCL 100 L  | K 5                | 40                    | 45                           | 0.00104                   | 900                                     | 75                                  | 45                               | 20                          | 61             |
| ●MSBCCL 100 L | K 6                | 60                    | 50                           | 0.00135                   | 900                                     | 180                                 | 85                               | 25                          | 61             |
| MSBCCL 112 MT | K 5                | 40                    | 45                           | 0.00104                   | 880                                     | 75                                  | 45                               | 20                          | 64             |
| MSBCCL 112 M  | K 6                | 60                    | 50                           | 0.00135                   | 880                                     | 180                                 | 85                               | 25                          | 64             |
| MSBCCL 132 S  | K 7                | 90                    | 55                           | 0.00219                   | 480                                     | 200                                 | 95                               | 50                          | 64             |
| ●MSBCCL 132 S | K 7 D              | 180                   | 55                           | 0.00438                   | 480                                     | 200                                 | 95                               | 50                          | 64             |
| MSBCCL 132 M  | K 7                | 90                    | 55                           | 0.00219                   | 450                                     | 200                                 | 95                               | 50                          | 68             |
| ●MSBCCL 132 M | K 7 D              | 180                   | 55                           | 0.00438                   | 480                                     | 200                                 | 95                               | 50                          | 68             |
| MSBCCL 160 MT | K 7 D              | 180                   | 55                           | 0.00438                   | 350                                     | 200                                 | 95                               | 50                          | 68             |
| MSBCCL 160 L  | K 8                | 200                   | 60                           | 0.00408                   | 350                                     | 210                                 | 100                              | 60                          | 73             |
| ●MSBCCL 160 L | K 8 D              | 400                   | 60                           | 0.00816                   | 350                                     | 210                                 | 100                              | 60                          | 73             |

●Motor with increased braking torque on request  
★On request, delayed brake cut in time for lifting equipments. We suggest double disk brake D for lifting equipments.

# TECHNICAL FEATURES

## 8 poles-750rpm-50Hz

Brake motors have a ±6% tolerance on the supply voltage

| Model         | Power (KW) | Speed (r/min) | Eff. (%) | Power factor | Rated Current (A) |       |      | Tstart/Tn (Times) | Tmax/Tn (Times) | Tmin/Tn (Times) | Is/In | Noise dB(A) |
|---------------|------------|---------------|----------|--------------|-------------------|-------|------|-------------------|-----------------|-----------------|-------|-------------|
|               |            |               |          |              | 230V              | 400V  | 690V |                   |                 |                 |       |             |
| MSBCCL711-8   | 0.09       | 680           | 48       | 0.56         | 0.84              | 0.48  | 0.28 | 1.5               | 1.7             | 1.3             | 3     | 50          |
| MSBCCL712-8   | 0.12       | 690           | 51       | 0.59         | 1.00              | 0.58  | 0.33 | 1.6               | 1.7             | 1.3             | 2.7   | 50          |
| MSBCCL801-8   | 0.18       | 680           | 51       | 0.61         | 1.45              | 0.84  | 0.48 | 1.5               | 1.7             | 1.3             | 2.8   | 52          |
| MSBCCL802-8   | 0.25       | 680           | 56       | 0.61         | 1.83              | 1.06  | 0.61 | 1.6               | 2               | 1.3             | 2.7   | 52          |
| MSBCCL90S-8   | 0.37       | 680           | 63       | 0.63         | 2.33              | 1.35  | 0.78 | 1.6               | 1.8             | 1.3             | 2.8   | 56          |
| MSBCCL90L-8   | 0.55       | 680           | 66       | 0.65         | 3.21              | 1.85  | 1.07 | 1.6               | 1.8             | 1.3             | 3     | 56          |
| MSBCCL100L1-8 | 0.75       | 710           | 66       | 0.67         | 4.24              | 2.45  | 1.41 | 1.7               | 2.1             | 1.3             | 3.5   | 59          |
| MSBCCL100L2-8 | 1.1        | 710           | 72       | 0.69         | 5.54              | 3.20  | 1.85 | 1.7               | 2.1             | 1.2             | 3.5   | 59          |
| MSBCCL112M-8  | 1.5        | 710           | 74       | 0.68         | 7.45              | 4.30  | 2.48 | 1.8               | 2.1             | 1.2             | 4.2   | 61          |
| MSBCCL132S-8  | 2.2        | 720           | 75       | 0.71         | 10.33             | 5.96  | 3.44 | 2                 | 2               | 1.2             | 5.5   | 64          |
| MSBCCL132M-8  | 3          | 720           | 77       | 0.73         | 13.34             | 7.70  | 4.45 | 2                 | 2               | 1.2             | 5.5   | 64          |
| MSBCCL160M1-8 | 4          | 730           | 80       | 0.73         | 17.12             | 9.89  | 5.71 | 1.9               | 2.1             | 1.2             | 6     | 68          |
| MSBCCL160M2-8 | 5.5        | 720           | 83.5     | 0.74         | 22.25             | 12.85 | 7.42 | 2                 | 2.2             | 1.2             | 6     | 68          |
| MSBCCL160L-8  | 7.5        | 720           | 85       | 0.75         | 29.41             | 17.0  | 9.8  | 1.9               | 2.2             | 1.2             | 6     | 68          |

| Type          | Brake Type k | Brake torque Nm | Brake Rated Power W | J brake Pd <sup>2</sup> kgm <sup>2</sup> | No.of Starts/Hr. Under no load | Delayed Cut-in Time★ Msec. | Quick Cut-in Time Msec. | Cut out Time Msec. | Noise dB(A) |
|---------------|--------------|-----------------|---------------------|------------------------------------------|--------------------------------|----------------------------|-------------------------|--------------------|-------------|
| 63 MSBCCL     | K 1          | 5               | 15                  | 0.00005                                  | 3000                           | 45                         | 20                      | 10                 | 50          |
| 71 MSBCCL     | K 2          | 12              | 20                  | 0.00014                                  | 3000                           | 50                         | 30                      | 15                 | 50          |
| 80 MSBCCL     | K 3          | 16              | 25                  | 0.00021                                  | 1300                           | 55                         | 30                      | 15                 | 52          |
| 90 S MSBCCL   | K 4          | 20              | 30                  | 0.00039                                  | 1100                           | 65                         | 40                      | 15                 | 56          |
| ●90 S MSBCCL  | K 4 D        | 40              | 30                  | 0.00078                                  | 1100                           | 65                         | 40                      | 15                 | 56          |
| 90 L MSBCCL   | K 4          | 20              | 30                  | 0.00039                                  | 1100                           | 65                         | 40                      | 15                 | 56          |
| ●90 L MSBCCL  | K 4 D        | 40              | 30                  | 0.00078                                  | 1100                           | 65                         | 40                      | 15                 | 56          |
| 100 L MSBCCL  | K 5          | 40              | 45                  | 0.00104                                  | 900                            | 75                         | 45                      | 20                 | 59          |
| ●100 L MSBCCL | K 6          | 60              | 50                  | 0.00135                                  | 900                            | 180                        | 85                      | 25                 | 59          |
| 112 MT MSBCCL | K 5          | 40              | 45                  | 0.00104                                  | 880                            | 75                         | 45                      | 20                 | 61          |
| 112 M MSBCCL  | K 6          | 60              | 50                  | 0.00135                                  | 880                            | 180                        | 85                      | 25                 | 61          |
| 132 S MSBCCL  | K 7          | 90              | 55                  | 0.00219                                  | 480                            | 200                        | 95                      | 50                 | 64          |
| ●132 S MSBCCL | K 7 D        | 180             | 55                  | 0.00438                                  | 480                            | 200                        | 95                      | 50                 | 64          |
| 132 M MSBCCL  | K 7          | 90              | 55                  | 0.00219                                  | 450                            | 200                        | 95                      | 50                 | 64          |
| ●132 M MSBCCL | K 7 D        | 180             | 55                  | 0.00438                                  | 480                            | 200                        | 95                      | 50                 | 64          |
| 160 MT MSBCCL | K 7 D        | 180             | 55                  | 0.00438                                  | 350                            | 200                        | 95                      | 50                 | 68          |
| 160 L MSBCCL  | K 8          | 200             | 60                  | 0.00408                                  | 350                            | 210                        | 100                     | 60                 | 68          |
| ●160 L MSBCCL | K 8 D        | 400             | 60                  | 0.00816                                  | 350                            | 210                        | 100                     | 60                 | 68          |

●Motor with increased braking torque on request

★On request, delayed brake cut in time for lifting equipments. We suggest double disk brake D for lifting equipments.

# ELECTROMAGNETIC DIRECT CURRENT BRAKE SERIES CCL

## OPERATING PRINCIPLE

The direct current brake is fed by means of an electronic circuit with diode bridge (rectifier) situated inside the terminal-box. When feeding the electromagnet (5), the movable anchor (4) is attracted towards the same, thus loading the braking torque springs (9) and allowing the disk (2), equipped with friction packing and fitted on the groove hub (6) to turn solitary the motor shaft (1) by means of a key (7). By interrupting the feeding, the movable anchor (4), pushed by the braking torque springs (9), exerts a pressure upon the friction surface of the disk (2), thus causing its stopping.

## ADJUSTMENT OF THE AIR GAP.

The air gap (11) is the distance between the electromagnet (5) and the movable anchor (9).

The air gap has to be regularly checked, since due to the wear of the friction packing (2) it tends to increase.

Act on the brake adjusters (3) after having unloosen the screws (8) to bring the air gap to the required value.

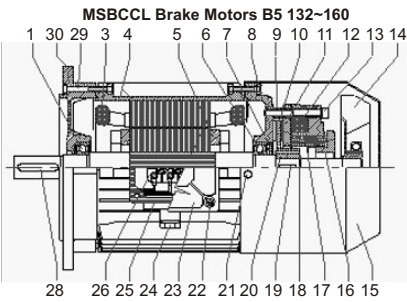
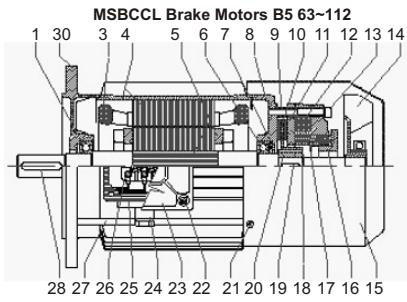
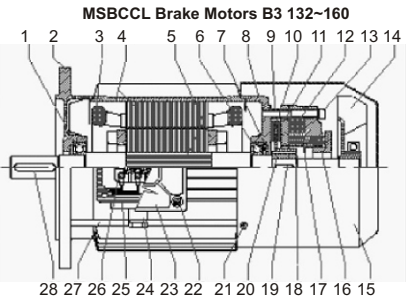
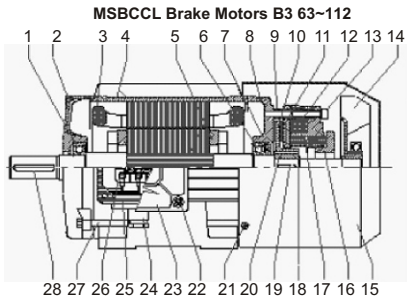
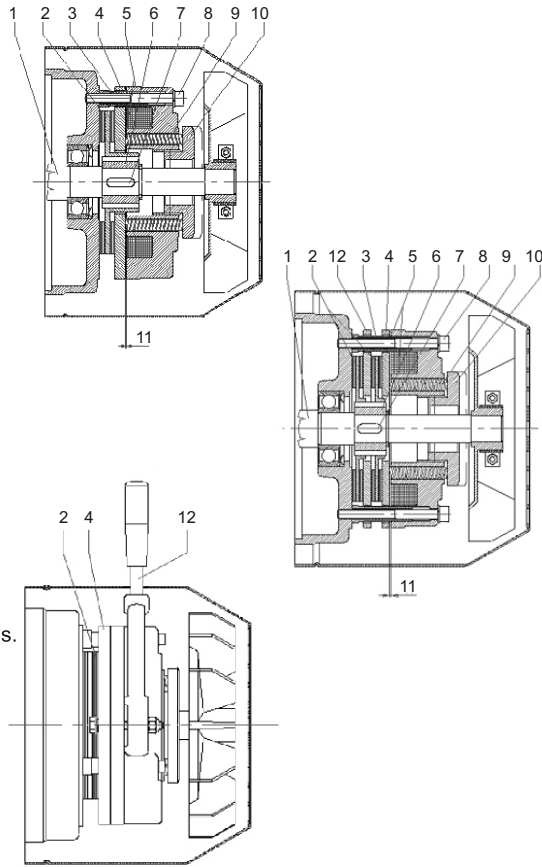
Act on the ring nut (10) which acts on the braking torque springs (9) to adjust the braking torque.

Pls. contact our technical department for information on the air gap adjustment values.

## HANDRELEASE WITH LEVER

Upon request a hand release with lever can be supplied.

In case of a current cutoff, acting on the lever (12), the release, connected to the movable anchor (4) overcomes the springs pressure, thus detaching the movable anchor from the disc friction packing (2) allowing the shaft to turn.



## SPARE PARTS

1. Front bearing
2. Front shield
3. Winding
4. Frame with stator package
5. Shaft with rotor
6. Rear bearing
7. Spring
8. Rear shield
9. Adjusting bush
10. Brake disc
11. Moving anchor
12. Electromagnet coil with diode
13. Fixing screws for brake
14. Cooling fan
15. Fan hood
16. Ring nut
17. Spring
18. See gearing
19. Key brake side
20. Toothed pinion
21. Fixing screw for fan hood
22. Fixing crew for terminal-box
23. Terminal-box
24. able-holder
25. Packing
26. Terminal-block
27. Tie-bolt
28. Coupling side key
29. Fixing screw for shield
30. Flange shield

ASYNCHRONOUS THREE-PHASE BRAKE MOTORS with direct current 63~160 Type C FECCL Frame B3 Sizes 63~160, Type FC FECCLFrame B5 Sizes 63~160 Enclosed construction -External ventilation