



# MGM IEC General Purpose 3-phase Motors

## SMX Series: TEFC Motors 1/4HP to 5HP

### Features

- 230/460 Voltage
- Rated Output: 1/4 - 5 HP (0.18 - 3.7kW)
- Frame Sizes: IEC 63 to 112
- 1800 or 3600 RPM
- Continuous Duty (S1)
- Premium Efficiency (IE3) Frames 80-112, High efficiency (IE2) Frame 63/71
- IP55
- Class F insulation
- Inverter speed ratings: Constant torque 5:1, Variable torque 1000:1
- Mounting options: Footless B5 & B14, Rigid base B3 & B34 (with removable base)
- Enclosure: TEFC
- Aluminum construction
- F3(top) Junction Box Orientation
- Ring Lug Terminal connections
- Agency approvals: CE and CSA
- Mounting orientation:
  - C-face – horizontal or vertical
  - Rigid base – horizontal or vertical

### The IEC and MGM advantage:

- Motors built to the IEC standard provide the same power output as NEMA, but in a smaller footprint and robust design
- Top mount junction box design, with threaded entries, provides great terminal access
- Ring Lug Terminals makes wiring easy
- Aluminum construction: 25% weight savings
- MGM quality: produced in Italy with state of the art, high quality manufacturing processes

### Applications

Typical uses in many commercial and industrial environments such as:

- Pumps
- Fans
- Packaging Machinery
- Conveyors
- Machine tools
- Gear reducers



**18J9**  
C-face/  
removable  
rigid base  
(B34)

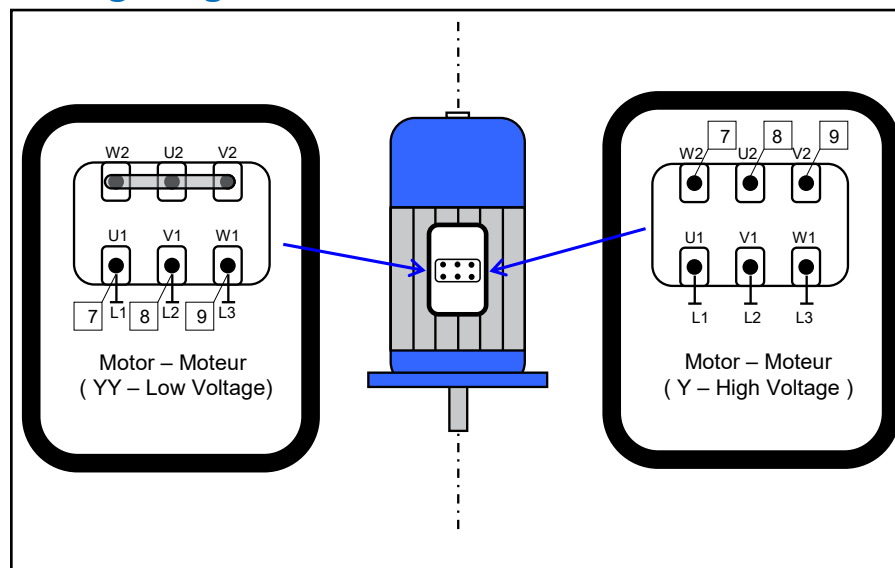


**18OR**  
D-flange (B5)



**0NUL**  
Rigid Base  
(B3)

### Wiring Diagram



NOTE: Interchange any 2 line wires to reverse rotation

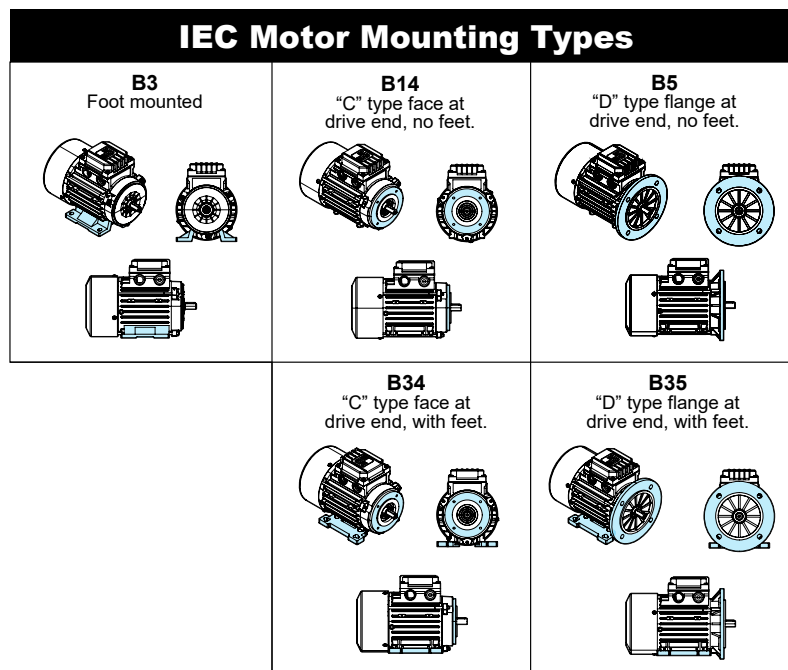


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# MGM IEC General Purpose 3-phase Motors

| Motor Specifications – 3-phase |          |                  |      |          |             |       |              |                 |                                   |                        |                     |                     |                     |
|--------------------------------|----------|------------------|------|----------|-------------|-------|--------------|-----------------|-----------------------------------|------------------------|---------------------|---------------------|---------------------|
| Part Number                    | Price    | Rated Power (Pn) |      | Base RPM | Volts       | Encl. | Frame        | Service Factor* | Mounting                          | Efficiency Group       | Weight (lb)         | Drawing Links       |                     |
|                                |          | HP               | kW   |          |             |       |              |                 |                                   |                        |                     |                     |                     |
| Footless                       |          |                  |      |          |             |       |              |                 |                                   |                        |                     |                     |                     |
| <a href="#">0NX7</a>           | \$148.00 | 1/4              | .018 | 1800     | 230/460 VAC | TEFC  | IEC 63       | 1.15            | D-flange (B5)                     | IE2 high efficiency    | 12                  | <a href="#">PDF</a> |                     |
| <a href="#">0NXA</a>           | \$148.00 |                  |      |          |             |       |              |                 | C-face (B14)                      |                        |                     | <a href="#">PDF</a> |                     |
| <a href="#">0NUN</a>           | \$200.00 | 1/2              | 0.37 |          |             |       |              |                 | IEC 71                            |                        | D-flange (B5)       | 17                  | <a href="#">PDF</a> |
| <a href="#">0NUP</a>           | \$200.00 |                  |      |          |             |       | C-face (B14) |                 |                                   |                        | <a href="#">PDF</a> |                     |                     |
| <a href="#">0YGA</a>           | \$299.00 | 1                | 0.75 |          |             |       | IEC 80       |                 | D-flange (B5)                     | IE3 premium efficiency | 28                  | <a href="#">PDF</a> |                     |
| <a href="#">0YGB</a>           | \$299.00 |                  |      |          |             |       |              |                 | C-face (B14)                      |                        | 27                  | <a href="#">PDF</a> |                     |
| <a href="#">18PU</a>           | \$408.00 | 2                | 1.5  |          |             |       | IEC 90       |                 | D-flange (B5)                     |                        | 43                  | <a href="#">PDF</a> |                     |
| <a href="#">18OR</a>           | \$497.00 | 3                | 2.2  |          |             |       |              |                 |                                   |                        | IEC 100             | 64                  | <a href="#">PDF</a> |
| <a href="#">18PL</a>           | \$678.00 | 5                | 3.7  |          |             |       |              |                 |                                   |                        |                     | IEC 112             | 84                  |
| <a href="#">0VNF</a>           | \$156.00 | 1/4              | .018 | 3600     | 230/460 VAC | TEFC  | IEC 63       | 1.15            | D-flange (B5)                     | IE2 high efficiency    | 10                  | <a href="#">PDF</a> |                     |
| <a href="#">0RC2</a>           | \$208.00 | 1/2              | 0.37 |          |             |       | IEC 71       |                 |                                   |                        | 15                  | <a href="#">PDF</a> |                     |
| <a href="#">0ZYZ</a>           | \$283.00 | 1                | 0.75 |          |             |       | IEC 80       |                 |                                   | IE3 premium efficiency | 21                  | <a href="#">PDF</a> |                     |
| With Rigid Base                |          |                  |      |          |             |       |              |                 |                                   |                        |                     |                     |                     |
| <a href="#">0NX5</a>           | \$144.00 | 1/4              | .018 | 1800     | 230/460 VAC | TEFC  | IEC 63       | 1.15            | rigid base (B3)                   | IE2 high efficiency    | 12                  | <a href="#">PDF</a> |                     |
| <a href="#">0NUL</a>           | \$194.00 | 1/2              | 0.37 |          |             |       | IEC 71       |                 |                                   |                        | 17                  | <a href="#">PDF</a> |                     |
| <a href="#">131C</a>           | \$290.00 | 1                | 0.75 |          |             |       | IEC 80       |                 |                                   |                        | 27                  | <a href="#">PDF</a> |                     |
| <a href="#">18J8</a>           | \$424.00 | 2                | 1.5  |          |             |       | IEC 90       |                 | C-face/removable rigid base (B34) | IE3 premium efficiency | 43                  | <a href="#">PDF</a> |                     |
| <a href="#">18J9</a>           | \$516.00 | 3                | 2.2  |          |             |       | IEC 100      |                 |                                   |                        | 61                  | <a href="#">PDF</a> |                     |
| <a href="#">18OT</a>           | \$705.00 | 5                | 3.7  |          |             |       | IEC 112      |                 |                                   |                        | 82                  | <a href="#">PDF</a> |                     |
| <a href="#">0UQR</a>           | \$162.00 | 1/4              | .018 | 3600     | 230/460 VAC | TEFC  | IEC 63       | 1.15            | C-face/removable rigid base (B34) | IE2 high efficiency    | 10                  | <a href="#">PDF</a> |                     |
| <a href="#">16SV</a>           | \$216.00 | 1/2              | 0.37 |          |             |       | IEC 71       |                 |                                   |                        | 15                  | <a href="#">PDF</a> |                     |
| <a href="#">18J7</a>           | \$294.00 | 1                | 0.75 |          |             |       | IEC 80       |                 |                                   | IE3 premium efficiency | 21                  | <a href="#">PDF</a> |                     |

\*Note: 1.15 SF (1.0 SF with VFD)





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# MGM IEC General Purpose 3-phase Motors

| Performance Data – 3-phase |             |      |                |              |                       |                        |      |                                |                       |        |                               |              |                |                     |          |                            |
|----------------------------|-------------|------|----------------|--------------|-----------------------|------------------------|------|--------------------------------|-----------------------|--------|-------------------------------|--------------|----------------|---------------------|----------|----------------------------|
| Part Number                | Rated Power |      | Service Factor | Duty Service | Full Load Speed (RPM) | Full Load Current (In) |      | Starting Current Ratio (Is/In) | Full Load Torque (Tn) |        | Starting Torque Ratio (Ts/Tn) | Power Factor | Efficiency (%) | Torque Speed Rating |          | Moment of Inertia (Joules) |
|                            | HP          | kW   |                |              |                       | 230V                   | 460V |                                | Nm                    | Lb-in  |                               |              |                | Constant            | Variable |                            |
| Footless                   |             |      |                |              |                       |                        |      |                                |                       |        |                               |              |                |                     |          |                            |
| <a href="#">0NX7</a>       | 1/4         | .018 | 1.15           | S1           | 1670                  | 1.24                   | 0.62 | 3.71                           | 1.03                  | 9.12   | 3.88                          | 0.56         | 68.0           | 5:1                 | 1000:1   | 3.4                        |
| <a href="#">0NXA</a>       |             |      |                |              |                       |                        |      |                                |                       |        |                               |              |                |                     |          |                            |
| <a href="#">0NUN</a>       | 1/2         | 0.37 |                |              | 1690                  | 1.82                   | 0.91 | 4.4                            | 2.09                  | 18.50  | 2.58                          | 0.71         | 72.0           |                     |          | 6.42                       |
| <a href="#">0NUP</a>       |             |      |                |              |                       |                        |      |                                |                       |        |                               |              |                |                     |          |                            |
| <a href="#">0YGA</a>       | 1           | 0.75 |                |              | 1730                  | 3.2                    | 1.6  | 6.6                            | 4.14                  | 36.64  | 3.6                           | 0.70         | 85.5           |                     |          | 15                         |
| <a href="#">0YGB</a>       |             |      |                |              |                       |                        |      |                                |                       |        |                               |              |                |                     |          |                            |
| <a href="#">18PU</a>       | 2           | 1.5  |                |              | 1739                  | 6.2                    | 3.1  | 7.1                            | 8.2                   | 72.58  | 4.1                           | 0.73         | 86.5           |                     |          | 29                         |
| <a href="#">18OR</a>       | 3           | 2.2  |                |              | 1750                  | 8.6                    | 4.3  | 7.4                            | 12                    | 106.21 |                               |              |                |                     |          | 89.5                       |
| <a href="#">18PL</a>       | 5           | 3.7  | 1757           | 14           | 7                     | 8.8                    | 20.1 | 177.90                         | 4                     |        |                               | 130          |                |                     |          |                            |
| <a href="#">0VNF</a>       | 1/4         | .018 | 1.15           | S1           | 3400                  | 1.04                   | 0.52 | 4.8                            | 0.51                  | 4.51   | 3.75                          | 0.68         | 64.0           | 5:1                 | 1000:1   | 1.78                       |
| <a href="#">0RC2</a>       | 1/2         | 0.37 |                |              | 3440                  | 1.92                   | 0.96 | 5                              | 1.03                  | 9.12   | 3.3                           |              | 72.0           |                     |          | 3.2                        |
| <a href="#">0ZYZ</a>       | 1           | 0.75 |                |              | 3465                  | 3.3                    | 1.65 | 5.8                            | 2.08                  | 18.41  | 3.6                           |              | 0.77           |                     |          | 77.0                       |
| With Rigid Base            |             |      |                |              |                       |                        |      |                                |                       |        |                               |              |                |                     |          |                            |
| <a href="#">0NX5</a>       | 1/4         | .018 | 1.15           | S1           | 1670                  | 1.24                   | 0.62 | 3.71                           | 1.03                  | 9.12   | 3.88                          | 0.56         | 68.0           | 5:1                 | 1000:1   | 3.4                        |
| <a href="#">0NUL</a>       | 1/2         | 0.37 |                |              | 1690                  | 1.82                   | 0.91 | 4.4                            | 2.09                  | 18.50  | 2.58                          | 0.71         | 72.0           |                     |          | 6.42                       |
| <a href="#">131C</a>       | 1           | 0.75 |                |              | 1730                  | 3.2                    | 1.6  | 6.6                            | 4.14                  | 36.64  | 3.6                           | 0.70         | 85.5           |                     |          | 15                         |
| <a href="#">18J8</a>       | 2           | 1.5  |                |              | 1739                  | 6.2                    | 3.1  | 7.1                            | 8.2                   | 72.58  | 4.1                           |              | 86.5           |                     |          | 29                         |
| <a href="#">18J9</a>       | 3           | 2.2  |                |              | 1750                  | 8.6                    | 4.3  | 7.4                            | 12                    | 106.21 |                               | 0.73         | 89.5           |                     |          | 50                         |
| <a href="#">18OT</a>       | 5           | 3.7  |                |              | 1757                  | 14                     | 7    | 8.8                            | 20.1                  | 177.90 | 4                             |              |                |                     |          | 130                        |
| <a href="#">0UQR</a>       | 1/4         | .018 | 1.15           | S1           | 3400                  | 1.04                   | 0.52 | 4.8                            | 0.51                  | 4.51   | 3.75                          | 0.68         | 64.0           | 5:1                 | 1000:1   | 1.78                       |
| <a href="#">16SV</a>       | 1/2         | 0.37 |                |              | 3440                  | 1.92                   | 0.96 | 5                              | 1.03                  | 9.12   | 3.3                           |              | 72.0           |                     |          | 3.2                        |
| <a href="#">18J7</a>       | 1           | 0.75 |                |              | 3465                  | 3.3                    | 1.65 | 5.8                            | 2.08                  | 18.41  | 3.6                           |              | 0.77           |                     |          | 77.0                       |



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| Alternate Performance Data (50Hz) – 3-phase |             |      |                       |             |                 |                |                |                   |
|---------------------------------------------|-------------|------|-----------------------|-------------|-----------------|----------------|----------------|-------------------|
| Part Number                                 | Rated Power |      | F.L. RPM<br>(380-415) | Volts       | Current         |                | Efficiency (%) | F.L. Power Factor |
|                                             | HP          | kW   |                       |             | No Load Current | Full Load Amps |                |                   |
| Footless                                    |             |      |                       |             |                 |                |                |                   |
| <a href="#"><u>0NX7</u></a>                 | 1/4         | .018 | 1361                  | 200/400 VAC | 1.3/0.65        | 1.42/0.71      | 64.7           | 0.55              |
| <a href="#"><u>0NXA</u></a>                 |             |      |                       |             |                 | 1.42/0.71      |                |                   |
| <a href="#"><u>0NUN</u></a>                 | 1/2         | 0.37 | 1415                  |             | 2.0/1.0         | 2.1/1.05       | 72.7           | 0.70              |
| <a href="#"><u>0NUP</u></a>                 |             |      |                       |             |                 | 2.1/1.05       |                |                   |
| <a href="#"><u>0YGA</u></a>                 | 1           | 0.75 | 1420                  |             | 3.0/1.5         | 3.94/1.97      | 82.5           | 0.67              |
| <a href="#"><u>0YGB</u></a>                 |             |      |                       |             |                 | 3.94/1.97      |                |                   |
| <a href="#"><u>18PU</u></a>                 | 2           | 1.5  | 1428                  |             | 5.0/2.5         | 7.0/3.5        | 85.3           | 0.74              |
| <a href="#"><u>18QR</u></a>                 | 3           | 2.2  | 1440                  |             | 6.0/3.0         | 9.6/4.8        | 86.7           | 0.76              |
| <a href="#"><u>18PL</u></a>                 | 5           | 3.7  | 1448                  |             | 10.0/5.0        | 16.2/8.1       | 88.4           | 0.75              |
| <a href="#"><u>0VNF</u></a>                 | 1/4         | .018 | 2820                  | 200/400 VAC | 1.1/0.55        | 1.2/0.6        | 60.44          | 0.64              |
| <a href="#"><u>0RC2</u></a>                 | 1/2         | 0.37 | 2790                  |             | 0.8             | 2.1/1.05       | 69.5           | 0.73              |
| <a href="#"><u>0ZYZ</u></a>                 | 1           | 0.75 | 2849                  |             | 2.6/1.3         | 3.48/1.74      | 80.7           | 0.77              |
| With Rigid Base                             |             |      |                       |             |                 |                |                |                   |
| <a href="#"><u>0NX5</u></a>                 | 1/4         | .018 | 1361                  | 200/400 VAC | 1.3/0.65        | 1.42/0.71      | 64.7           | 0.55              |
| <a href="#"><u>0NUL</u></a>                 | 1/2         | 0.37 | 1415                  |             | 2.0/1.0         | 2.1/1.05       | 72.7           | 0.70              |
| <a href="#"><u>131C</u></a>                 | 1           | 0.75 | 1420                  |             | 3.0/1.5         | 3.94/1.97      | 82.5           | 0.67              |
| <a href="#"><u>18J8</u></a>                 | 2           | 1.5  | 1428                  |             | 5.0/2.5         | 7.0/3.5        | 85.3           | 0.74              |
| <a href="#"><u>18J9</u></a>                 | 3           | 2.2  | 1440                  |             | 6.0/3.0         | 9.6/4.8        | 86.7           | 0.76              |
| <a href="#"><u>18OT</u></a>                 | 5           | 3.7  | 1448                  |             | 10.0/5.0        | 16.2/8.1       | 88.4           | 0.75              |
| <a href="#"><u>0UQR</u></a>                 | 1/4         | .018 | 2820                  | 200/400 VAC | 1.1/0.55        | 1.2/0.6        | 60.44          | 0.64              |
| <a href="#"><u>16SV</u></a>                 | 1/2         | 0.37 | 2790                  |             | 0.8             | 2.1/1.05       | 69.5           | 0.73              |
| <a href="#"><u>18J7</u></a>                 | 1           | 0.75 | 2849                  |             | 2.6/1.3         | 3.48/1.74      | 80.7           | 0.77              |