Standard delivery times:

20

working

days

On

request

10

working

days

Supplements to order numbers and special versions

Voltages – Aluminum series 1LA7, 1LA5, 1LA9, 1LP7, 1LP5, 1PP7, 1PP5

Selection and ordering data

| Voltages | Volt- | Addi- | Motor categor | У | Stand | ard deli | very tim | e (color | ed area) | | | | | | |
|--|---------------|---------------------|----------------------------|-------------------|------------|----------|----------|----------|---|----------|----------|----------|----------|----------|----------|
| 5 | age code | tional identifi- | Motor version | Motor | | | Frame | | , | | | | | | |
| | 11th posi- | cation code | version | type (alum.) | | | | | | | | | | | |
| | tion | with | IE2 High | 1LA9 | 63 1LA9 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| | of the | order code | Efficiency | | | Ŭ | | | | | | | | | |
| | Order No. | and plain | IE1 Standard Efficiency | 1LA7/1LA5 1LA9 | | <u> </u> | creased | Loutput | | | | | 1LA5 | 3 | |
| | | text if required | | 1PP7/1PP5 | | | cieasec | routput | . 🖽 | | | | 1PP5 | 6 | |
| | | | | 1LP7/1LP5 | | | | | | | | | 1LP5 | 8 | |
| | | | NEMA Energy Efficient | 1LA9 | 1LA9 | | | | | | | | | | |
| 1PP | | | Motor version | Motor type | | | | | | | | | | | |
| 1L Voltage at 50 Hz or 60 Hz | | _ | | | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| 50 Hz 230 V∆/400 VY, | 1 | - | All | All | | | | | | | | | | | |
| 60 Hz 460 VY 50 Hz 400 V∆/690 VY, | 6 | _ | All except (9) | | | | • | | | | 0 | | - | | |
| 60 Hz 460 VA ⁽¹⁾ | | | | | - | - | - | - | - | - | - | - | | - | - |
| Voltage at 50 Hz and 50 H 500 VY | Hz outpu 3 | ut | All | All | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 500 VΔ | 5 | - | All | All | - | - | - | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 220 VA/380 VY | 9 | L1R | All | All | √ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| (440 VY at 60 Hz) 230 VΔ | 9 | L1E | All | All | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 380 V∆/660 VY | 9 | L1L | All except (9) | | ✓ | <i>√</i> | <i>√</i> | <i>√</i> | <i>√</i> | <i>√</i> | <i>√</i> | <i>√</i> | 1 | <i>√</i> | <i>√</i> |
| (440 VA at 60 Hz) ¹⁾ 415 VY | 9 | L1C | All | All | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 415 VΔ | 9 | L1D | All | All | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 400 VY 400 VΔ | 9 9 | L1A L1B | All | All | 0 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | L1U | All | All | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Voltage at 60 Hz and requ | | | | | | | | | | | | | | | |
| 220 VΔ/380 VY; 50 Hz output | 9 | L2A | All | All | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ~ |
| 220 VA/380 VY; | 9 | L2B | All except (9) | | ✓ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | √ | 1 | 1 |
| 60 Hz output ²⁾ 380 VΔ/660 VY; | 9 | L2C | All except (9) | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 5 |
| 50 Hz output ¹⁾ | | | | | | | | | | | | | | | |
| 380 V∆/660 VY; 60 Hz output ^{1) 2)} | 9 | L2D | | | ~ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 440 VY; 50 Hz output | 9 | L2Q | All | All | √ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 440 VY; 60 Hz output ²⁾ 440 VΔ; 50 Hz output | 9 9 | L2W L2R | All except () | All | √ √ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ |
| 440 VΔ; 60 Hz output ²⁾ | 9 | L2X | All except (9) | | ✓ ✓ | <i>✓</i> | <i>✓</i> | <i>✓</i> | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ |
| 460 VY; 50 Hz output | 9 | L2S | All | All | ✓ ○ | ✓ ○ | ✓ ○ | ✓ ○ | ✓ ○ | ✓ ○ | ✓ ○ | ✓ ○ | ✓ ○ | ✓ ○ | ✓ ○ |
| 460 VY; 60 Hz output ²⁾ 460 VΔ; 50 Hz output | 9 9 | L2E L2T | All except () All | All | 0 ✓ | ○ ✓ | ○ ✓ | 0 ✓ | 0 ✓ | 0 ✓ | ○ ✓ | 0 ✓ | 0 ✓ | 0 | ○ ✓ |
| 460 VΔ; 60 Hz output ²⁾ | 9 | L2F | All except (9) | | 0 | 0 | 0 | 0 | 0 | • | 0 | 0 | 0 | 0 | 0 |
| 575 VY; 50 Hz output | 9 | L2U | All | All | ✓ ✓ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ✓ ✓ |
| 575 VY; 60 Hz output ²⁾ 575 VΔ; 50 Hz output | 9 9 | L2L L2V | All except () All | All | ✓ ✓ | ✓ ✓ | ✓ ✓ | <u> </u> | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ |
| 575 VA; 60 Hz output ²⁾ | 9 | L2M | All except (9) | | ✓ | <i>·</i> | <i>·</i> | <i>\</i> | <i>.</i> | <i>\</i> | · · | <i>\</i> | <i>√</i> | <i>·</i> | <i>✓</i> |
| Multi-voltage at 60 Hz an | d requir | | | A.11 | 1 | , | , | , | | | | , | 1 | | |
| 230 VYY/460 VY 60 Hz; 50 Hz output, 9 main | 9 | L3E | All | All | ~ | ~ | 1 | 1 | 1 | 1 | ~ | 1 | ~ | 1 | - |
| terminals and electrical design to NEMA ³⁾ | | | | | | | | | | | | | | | |
| 230 VYY/460 VY 60 Hz; | 9 | L3F | All | All | √ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | - |
| 60 Hz output, 9 main terminals and electrical | | | | | | | | | | | | | | | |
| design to NEMA ³⁾ 230 VΔΔ/460 VΔ 60 Hz; | 9 | L3G | All | All | _ | | | | Image: A start of the start of | / | / | I | 1 | I | |
| 50 Hz output, 12 main | | 200 | 7.111 | | | | | | • | • | • | | | • | |
| terminals and electrical design to NEMA ³⁾ | | | | | | | | | | | | | | | |
| 230 VΔΔ/460 VΔ 60 Hz; 60 Hz output, 12 main | 9 | L3H | All | All | - | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | - |
| terminals and electrical | | | | | | | | | | | | | | | |
| design to NEMA ³⁾ Non-standard voltage an | d/or fre | quencies | | | | | | | | | | | | | |
| Non-standard winding ⁴⁾ | | L1Y • | All | All | √ | 1 | ✓ | ✓ | 1 | 1 | 1 | 1 | ✓ | ✓ | 1 |
| | | and identifi- | | | | | | | | | | | | | |
| | | cation code | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

| Stands | ard delivery | times | | | S | IMC |)TI | CS | GP | 1L/ | A St | and | ard | Mot | ors | |
|------------------------------------|-----------------------|----------------|---------------------|--------------------|---------------|-------------|--------------|---|---------------------|---------------|---------------|---------------|----------|-------------|----------|-------|
| 10 | 20 | | | S | uppler | | | | | | | | | | | sions |
| working | working | - |)n uest | - | | | | | | | | | | | | LA5 – |
| days | days | Теч | uesi | | | р | ole-o | han | aing | and i | for co | nver | ter-feo | l ope | ratior | |
| | | | | | | | | | 5 5 | | | | | | | |
| Voltages | | Volt- age | Addi- tional | Motor category | , | | | | , | olored a | rea) | | | | | |
| | | code 11th | identifi- cation | Motor version | Motor type | Moto | r type | – Fran | ne size | | | | | | | |
| | | posi- | code | | (alum.) | 62 | 71 | 80 | 90 | 100 | 110 | 132 | 160 | 190 | 200 | 225 |
| | | tion of the | with order | Pole- | 1LA7/ | 63 1LA7 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 1LA5 | 200 | 225 |
| | | Order No. | code and | changing | 1LA5 | | | | | | | | | | | |
| | | | plain text if | | | | | | | | | | | | | |
| | | | required | | | _ | | | | | | | | | | |
| | 1LA | - | | Motor version | Motor type | Frame 63 | e size 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| | Hz and 50 Hz o | | lirect swit | <u>ch-on</u> | | 00 | / 1 | 00 | 90 | 100 | 112 | 102 | 100 | 100 | 200 | 223 |
| 230 V | | 1 | - | All | All | | | | | | | | | | | |
| 400 V | | 6 | - | All | All | | | | | | | | | | | |
| 500 V 690 V | | 5 0 | - | All | All | 0 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 0 | 0 | |
| Voltage at 60 H | <u>Hz</u> and require | | t at 60 Hz | Aii | All | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 220 V; 50 Hz o | | 9 | L4A | All | All | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 220 V; 60 Hz o | | 9 | L4B | All | All | ✓ | √ | Image: A start of the start of | ✓ | ✓ | ✓ | 1 | ✓ | √ | ✓ | |
| 380 V; 50 Hz or | - | 9 9 | L4C L4D | All | All | √ √ | ✓ ✓ | ✓ ✓ | ✓ ✓ | <u>ر</u> ۲ | <u>ر</u> ۲ | ✓ ✓ | ✓ ✓ | √ √ | ✓ ✓ | |
| 380 V; 60 Hz or 440 V; 50 Hz or | - | 9 | L4D L4G | All | All | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | |
| 440 V; 60 Hz o | | 9 | L4E | All | All | | <i>\</i> | <i>\</i> | · · | · · | <i>\</i> | <i>·</i> | <i>\</i> | ✓ | ✓ ✓ | |
| 460 V; 50 Hz o | | 9 | L4J | All | All | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 460 V; 60 Hz or | - | 9 | L4H | All | All | 1 | 1 | 1 | <u>ا</u> | <u>\</u> | 1 | <u>ا</u> | 1 | ✓ ✓ | <u>۲</u> | |
| 575 V; 50 Hz or 575 V; 60 Hz or | 1 | 9 9 | L4N L4M | All | All | √ √ | ✓ ✓ | ۲ ۲ | <u>ر</u> ۲ | <u>ر</u> ۲ | <u>ر</u> ۲ | <u>ر</u> ۲ | ✓ ✓ | √ √ | ✓ ✓ | |
| Non-standard | | - | | All | | v | v | v | | • | v | | • | v | • | |
| Non-standard | | 9 | L1Y • | All | All | 1 | 1 | 1 | 1 | 1 | 1 | ✓ | ✓ | 1 | ✓ | |
| | | | and identifi- | | | | | | | | | | | | | |
| | | | cation code | | | | | | | | | | | | | |
| Non-standard | | 9 | L3Y • | All | All | - | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | |
| starting at the I | lower speed 4) | | and identifi- | | | | | | | | | | | | | |
| | | | cation code | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Voltages | | Volt- age | Addi- tional | Motor category | y Motor | | | | time (co ne size | olored a | rea) | | | | | |
| | | code 11th | identifi- cation | version | type | moto | Type | Trail | NC 5120 | | | | | | | |
| | | posi- tion | code with | | (alum.) | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| | | of the | order | For converter- | 1LA7/1LA5 | | | | | 1LA7 | | | | 1LA5 | | |
| | | Order No. | code and | fed operation only | | | | | | | | | | | | |
| | | | plain text if | Motor | Motor | Frame | e size | | | | | | | | | |
| | 1LA | | required | version | type | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| Voltage at 50 H 500 VY | Hz and 50 Hz o | output 3 | - | All | All | | | | | | • | | • | | • | |
| 500 VA | | 5 | - | All | All | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 690 VY | | 8 | - | All | All | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 400 VY | | 9 | L1A | All | All | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 400 V∆ Non-standard | voltage and/o | 9 Ir freque | L1B ncies | All | All | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Non-standard | | 9 | L1Y • | All | All | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 5 | | and identifi- | | | | | | | | | | | | | |
| | | | cation | | | | | | | | | | | | | |
| ⊓ Standar | rd version | | code | | | | | | | | | | | | | |

- Standard version
- o Without additional charge
- This order code only determines the price of the version Additional plain text is required.
- ✓ With additional charge
- Not possible
- For the North America export version of 1LA9 with order code D42 NEMA Energy Efficient, voltages above 600 V will not be stamped.
- ²⁾ Not admissible in combination with order code D42 NEMA Energy Efficient.
- ³⁾ When ordering with the brake option (order code G26), only 6 motor connection terminals are possible for 1LA7 motors of frame sizes 63 to 90.
- ⁴⁾ Plain text must be specified in the order: Voltage between 200 and 690 V (voltages outside this range are available on request), frequency, circuit, for 60 Hz additionally required rated output in kW.
- $^{5)}$ $\,$ 60 Hz data is not admissible on the rating plate.

Supplements to order numbers and special versions

Types of construction – Aluminum series 1LA7, 1LA5, 1LA9, 1LP7, 1LP5, 1PP7, 1PP5

Standard delivery times:

20 working working days

10

days

On request

| Selection and o | ordering | data | | | | | | | | | | | | | | |
|--|------------|------------------------------|---------------------------------------|---|--------------------------|------------|----------|------------|------------------|----------|----------|-------|------------|----------|-------|----------|
| Types of constructi | | Туре | Addi- | Motor category | | | | | ne (colore | ed area |) | | | | | |
| | | of con- struc- tion | tional identifi- cation code | Motor version | Motor type (alum.) | Motor | type – | Frame | size | | | | | | | |
| | | code | with | | | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| | | 12th posi- | code | IE2 High Efficiency | 1LA9 | 1LA9 (| | | | | | | | | | |
| | | tion of the | and plain | IE1 Standard | | | | | | | | | | 1LA5 (| 3 | |
| | | Order No. | | Efficiency | | | | creased | d output | 4 | | | | 10 | | |
| | | | Janou | | 1PP7/1PP5 1LP7/1LP5 | | | | | | | | | 1PP5 (| | |
| | | | | NEMA Energy Efficient | | 1LA9 | | | | | | | | | | |
| | | | | Pole- changing | 1LA7/1LA5 | | 10 | | | | | | | 1LA5 (| 1) | |
| | | | | For converter- fed operation only | 1LA7/1LA5 | | | | | 1LA7 (| Q | | | 1LA5 (| 13 | |
| | | | | Motor | Motor | Frame | | | | | | | | | | |
| | | | | version | type | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| Without flange | ni in | 0 | - | All except (9) | | • | • | • | • | | • | • | • | • | • | |
| IM B6, IM B7, IM B8 ¹⁾ | | 0 | - | All except (9) | | | | | | | | | | | | |
| | \bigcirc | | | | | | | | | | | | | | | |
| IM V6 ¹⁾ | | 0 | - | All except () | | | | • | • | | | • | | • | | |
| IM V5 without | | 0 | - | All except (9) | | | 0 | 0 | | | 0 | • | 0 | 0 | | |
| protective cover ¹⁾ | | | | | | | | | | | | | | | | |
| IM V5 with protective cover 1) 2) | | 9 | | All except (5), (and (9) | | ✓ | 1 | ✓ | 1 | 1 | 1 | 1 | 1 | √ | 1 | 1 |
| With flange | | | DIN EN 5 | | | | | | 5 FF165 A 200 | | | | | | | |
| IM B5 | | acc. to | | All | All | A 140 ✓ | ▲ 160 | A 200 ✓ | A 200 ✓ | √ √ | √ ✓ | A 300 | A 350 ✓ | √ ✓ | A 400 | A 450 |
| | 1HI IN | | | | | | | | | | | | | | | |
| IM V1 without protective cover ³⁾ | | 1 | - | All | All | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | J |
| IM V1 with protective cover ^{2) 3)} | | 4 | - | All except (5), (⑧ | 6, 7 and | 1 | <i>✓</i> | 1 | 1 | 1 | 1 | ~ | 1 | v | ✓ | √ |
| IM V3 ³⁾ | | 1 | - | All | All | √ | 1 | 1 | ✓ | ✓ | √ | ✓ | 1 | - | - | - |
| | | 9 | M1G | All | All | - | | | | - | | | | 1 | 1 | 1 |
| IM B35 ¹⁾ | nei in | 6 | - | All except () | | 1 | 1 | 1 | 1 | √ | 1 | 1 | 1 | 1 | 1 | 1 |

| Standa | ard delivery | times |): | | OTICS | | | | | | | | | | | |
|--|-----------------|----------------|----------------------|---|------------------------|--------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|-------|--------|
| 10 | 20 | | On | | Supplei | men | ts to | | | | | | | | | |
| working days | working days | ree | quest | | | | | Т | ypes | of co | onstru | uction | 1 – Al | umir | num s | series |
| uuyo | uuyo | | | | | | | 1L/ | 47, 1l | LA5, ' | 1LA9 | , 1LP | 7, 1L | P5, 1 | PP7, | 1PP5 |
| Types of consti | ruction | Туре | Addi- | Motor categor | y | Standa | ard deliv | very time | e (colore | ed area |) | | | | | |
| | | of con- | tional identifi- | Motor | Motor | Motor | type – | Frame | size | | | | | | | |
| | | struc- tion | cation code | version | type (alum.) | | | | | | | | | | | |
| | | code 12th | with order | | | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| | | posi- | code | IE2 High Efficiency | 1LA9 | 1LA9 | (1) | | | | | | | | | |
| | | tion of the | and plain | IE1 Standard | 1LA7/1LA5 | | <u> </u> | | | | | | | 1LA5 | 3 | |
| | | Order No. | text if required | Efficiency | 1LA9 | | with inc | reased | output | 4 | | | | | - | |
| | | 110. | required | | 1PP7/1PP5 1LP7/1LP5 | 1PP7 | <u> </u> | | | | | | | 1PP5 1LP5 | - | |
| | | | | NEMA Energy | | 1LP7 | <u> </u> | | | | | | | ILPS | 8 | |
| | | | | Efficient | | | | | | | | | | | | |
| | | | | Pole- changing | 1LA7/1LA5 | 1LA7 | | | | | | | | 1LA5 | | |
| | | | | For converter- fed operation only | 1LA7/1LA5 | | | | | 1LA7 | 12 | | | 1LA5 | 13 | |
| 11 | PP | | | Motor | Motor | Frame | size | | | | | | | | | |
| 11 | L | • | | version | type | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| With standard | flange | | DIN EN 5 DIN 4294 | | | FT75 C 90 | FT85 C 105 | FT100 C 120 | FT115 C 140 | FT130 C 160 | FT130 C 160 | FT165 C 200 | FT215 C 250 | | | |
| IM B14 | | 2 | - | All | All | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - |
| IM V19 | | 2 | - | All | All | • | 1 | ✓ | ✓ | 1 | 1 | 1 | 1 | - | - | - |
| IM V18 with- out protective cover | - T | 2 | - | All | All | • | 1 | 1 | ✓ | ✓ | 1 | 1 | 1 | - | - | - |
| IM V18 with protective cover ²⁾ | | 9 | M2A | All except (5), (8) | ⑥, ⑦ and | 1 | 1 | √ | ✓ | 1 | 1 | 1 | 1 | - | - | - |
| IM B34 ¹⁾ | | 7 | - | All except () | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - |

| | | | | V1LP/1 | | | | | ors | | ę | Standa | ard de | livery | times | : |
|--|-----------|------------------------------|--|---|-------------------------------|-------------|------------------------------|--------|--------|----------|-------------------|----------|----------|------------------|----------|-------------|
| Supplem Types of co 1LA7, 1LA5 | onstructi | on – J | Alumin | um series | | ial v | ersio | ons | | | 10 work day | ing | wor | 0 king lys | | On quest |
| Types of constru | uction | Type of con- struc- | Addi- tional identifi- cation | Motor category Motor version | y Motor type (alum.) | | ard deliv type – I | , | · · | ed area |) | | | | | |
| | | tion code | code with | | | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| | | 12th posi- tion | order code and | IE2 High Efficiency | 1LA9 | 1LA9 (| | | | | | | | | | |
| | | of the Order | plain text if | IE1 Standard Efficiency | 1LA7/1LA5 1LA9 | | ② with inc | reased | output | | | | | 1LA5 | 3 | |
| | | No. | required | | 1PP7/1PP5 | | | leasea | output | • | | | | 1PP5 | 6 | |
| | | | | | 1LP7/1LP5 | | <u> </u> | | | | | | | 1LP5 (| <u> </u> | |
| | | | | NEMA Energy Efficient | 1LA9 | 1LA9 (| 9 | | | | | | | | | |
| | | | | Pole- changing | 1LA7/1LA5 | 1LA7 (| 10 | | | | | | | 1LA5 | 1) | |
| | | | | For converter- fed operation only | | | | | | 1LA7 (| 12 | | | 1LA5 | 3 | |
| | °P | | | Motor version | Motor type | Frame 63 | size 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| With special fla | ange | | DIN EN 5 DIN 4294 | | | | FT115 C 140 | | | | | | | | | |
| IM B14 | | 3 | - | All | All | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - |
| IM V19 | | 3 | - | All | All | 1 | 1 | J | 1 | 1 | 1 | 1 | 1 | - | - | - |
| IM V18 with- out protective cover | | 3 | - | All | All | ✓ | 1 | 1 | 1 | 1 | 1 | 1 | 5 | - | - | - |
| IM V18 with protective cover ²⁾ | | 9 | M2B | All except (5), ® | | ✓ | 1 | 1 | 1 | <i>✓</i> | ✓ | <i>✓</i> | √ | - | - | - |
| IM B34 ¹⁾ | | 9 | M2C | All except (9) | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - |

- Standard version
- 0
- Without additional charge This order code only determines the price of the version Additional plain text is required.
- 1
- With additional charge Not possible

- ¹⁾ For the North America export version of 1LA9 with order code D42 NEMA Energy Efficient, types of construction with feet are not possible for 2-pole, 4-pole and 6-pole motors ≤ 200 hp in accordance with NEMA MG1 Table 12-11.
- 3) For frame sizes 180 M to 225 M, the 1LA5, 1LP5 and 1PP5 motors can be supplied with two additional eyebolts; state identification code "-Z" and order code K32.
- ²⁾ The "Second shaft extension" option, order code K16 is not possible.

On

request

| 10 | 20 |
|---------|---------|
| working | working |
| days | days |

SIMOTICS GP 1LA/1LP/1PP Standard Motors

Supplements to order numbers and special versions

Options – Aluminum series 1LA7, 1LA5, 1LA9, 1LP7, 1LP5, 1PP7, 1PP5

Selection and ordering data

| Selection and ordering | | | | | | | | | | | | | | |
|--|------------------------|---|--------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------------|----------------|------------|
| Special versions | Additional identifica- | Motor category | | | | | e (color | ed area |) | | | | | |
| | tion code -Z | Motor version | Motor type (alum.) | Motor | type – | Frame | size | | | | | | | |
| | with order code and | | | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| | plain text if required | IE2 High Efficiency | 1LA9 | 1LA9 | 1 | | | | | | | | | |
| | | IE1 Standard | 1LA7/1LA5 | | | | | | | | | 1LA5 | 3 | |
| | | Efficiency | 1LA9 | | | creased | doutput | 4 | | | | Lang | | |
| | | | 1PP7/1PP5 1LP7/1LP5 | | ~ | | | | | | | 1PP5 1LP5 | | |
| | | NEMA Energy | 1LA9 | 1LP7 | <u> </u> | | | | | | | TLPS | 8 | |
| | | Efficient | | | | | | | | | | | | |
| | | Pole-changing | 1LA7/1LA5 | 1LA7 | 10 | | | | | | | 1LA5 | | |
| | | For converter-fed operation only | 1LA//1LA5 | | | | | 1LA7 | | | | 1LA5 | | |
| 1PP | | Motor | Motor | Frame | size | | | | | | | | | |
| 1L | | version | type | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| Motor protection | | A.U. | A.11 | | | | , | | | , | | | | |
| Motor protection with PTC thermistors with 3 embedded temperature sensors for tripping ¹⁾ | | All | All | √ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | <i>✓</i> |
| Motor protection with PTC thermistors with 6 embedded temperature sensors for alarm and tripping ¹⁾ | A12 | All | All | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Motor temperature detection with embedded temperature sensor KTY 84-130 ⁽¹⁾ | A23 | All | All | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Motor temperature detection with embedded temperature sensors 2 x KTY 84-130 ¹⁾ | A25 | All | All | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ~ | 1 | 1 |
| Temperature detectors for tripping ¹⁾ | A31 | All except 🕲 and | 13 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Installation of 3 PT100 resistance thermometers ¹⁾ | A60 | | | - | - | - | - | ~ | ~ | 1 | ~ | ~ | 1 | 1 |
| Motor connection and conn | ection box | | | | | | | | | | | | | |
| ECOFAST motor connector Han-Drive 10e for 230 V Δ /400 VY ²⁾ | G55 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - | - |
| ECOFAST motor connector EMC Han-Drive 10e for 230 VΔ/400 VY ³⁾ | G56 | All except ④, ⑩, ⑬ | (11), 12) and | 1 | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - | - |
| Connection box on RHS | K09 | All | All | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ✓ |
| Connection box on LHS | K10 | All | All | - | - | ✓ | 1 | 1 | ✓ | 1 | 1 | ✓ | 1 | 1 |
| One metal cable gland | K54 | | | ✓ | ✓ | ✓ ✓ | 1 | ✓ ✓ | ✓ | / | 1 | ✓ | 1 | ✓ |
| | | | | - | - | 1 | 1 | ~ | 1 | 1 | 1 | - | - | |
| Cable gland, max. configuration | K55 | All except (5) and | 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Rotation of the connection box through 90°, entry from DE | K83 | All | All | ~ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Rotation of the connection box through 90°, entry from NDE | K84 | All | All | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Rotation of the connection box through 180° | K85 | All | All | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | ✓ | 1 | 1 |
| Next larger connection box | L00 | All | All | - | - | - | - | - | - | - | - | 1 | ✓ | 1 |
| External grounding | L13 | All | All | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | 1 | ✓ ✓ | ✓ ○ □ | ✓ ○ □ | ✓ ○ □ |
| 3 cables protruding, 0.5 m long ^{4) 5)} | L44 | All except (11) and and (13) on reques | | 1 | 1 | 1 | 1 | 1 | / | 1 | 1 | 0. R. | 0. R. | 0. R. |
| 3 cables protruding, 1.5 m long ^{4) 5)} 6 cables protruding. | L45 | All except (11) and and (13) on reques | | ✓ ✓ | ۲ ۲ | ٠ | ٠ ٠ | ۲ ۲ | <i>·</i> | ٠ ٠ | ٠ ٠ | O. R. O. R. | O. R. O. R. | 0. R. |
| 6 cables protruding, 0.5 m long ⁴⁾ 6 cables protruding, | L47 L48 | All; for (12) and (13) | | ✓ ✓ | <i>·</i> | <i>✓</i> | <i></i> | <i>J</i> | <i>·</i> | <i>·</i> | <i>✓</i> | 0. R. | 0. R. | O. R. ✓ |
| 1.5 m long ⁴⁾ | | All; for 12 and 13 (| | | | | - | | | | - | | | |
| 6 cables protruding, 3 m long ⁴⁾ | L49 | All except (5), (6), and (3) on reques | 7), (8); for 12 t | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Supplements to order numbers and special versions

Standard delivery times:

20 On working working request days days

10

| Options – Aluminum | series |
|----------------------|-----------------------|
| 1LA7, 1LA5, 1LA9, 11 | LP7, 1LP5, 1PP7, 1PP5 |

| Special versions | | Motor category | | | | ivery time | | d area) | | | | | | |
|---|---|-------------------------------|--------------------------|----------|----------|------------|----------|---------|----------------------|----------|----------|------------------|----------|----------|
| | identifica- tion code -Z | Motor version | Motor type (alum.) | Motor | r type – | Frame s | Size | | | | | | | |
| | with order code and | | | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| | plain text if required | IE2 High Efficiency | 1LA9 | 1LA9 (| 0 | | | | | | | | | |
| | | IE1 Standard Efficiency | 1LA7/1LA5 | | <u> </u> | | | | | | | 1LA5 (| 3 | |
| | | Linciency | 1LA9 1PP7/1PP5 | | | creased | output | (4) | | | | 1PP5 (| ۵. | |
| | | | 1LP7/1LP5 | | | | | | | | | 1PP5 (1LP5 (| | |
| | | NEMA Energy | 1LA9 | 1LA9 (| | | | | | | | | | |
| | | Efficient Pole-changing | 1LA7/1LA5 | 1LA7 | (10) | | | | | | | 1LA5 (| 11) | |
| | | For converter-fed | | | | | | 1LA7 | 12 | | | 1LA5 (| <u> </u> | |
| 1PP | | operation only Motor | Motor | Frame | size | | | | | | | | | |
| 1L | | version | type | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| Motor connection and connection | | · · · · · · | | | | | | | | | | | | |
| Connection box on NDE | M64 | All All except ① @ / | All and | / | 1 | ✓ ✓ | ۲ ۲ | 1 | / | ✓ | ✓ | 1 | 1 | ✓ |
| Terminal strip for main and auxiliary terminals | M69 | All except (1), (4), ((3) | | ~ | 1 | ~ | ~ | | | | | | | |
| Windings and insulation | 0 | | | | | | | | | | | | | |
| Temperature class 155 (F), used acc. to 155 (F), with service factor (SF) | C11 | All except ④, ⑦, 0 ⑬ | | 1 | 1 | 1 | 1 | ~ | 1 | 1 | 1 | ~ | 1 | / |
| Temperature class 155 (F), used acc. to 155 (F), with increased output | C12 | All except ④, ⑦, (⑬ | | √ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Temperature class 155 (F), used acc. to 155 (F), with increased coolant temperature | C13 | All except ④, ⑦, (18 | | ✓ | 1 | 1 | 1 | • | | 1 | 1 | 1 | 1 | √ |
| Temperature class 180 (H) at rated output and max. CT 60 °C ⁶⁾ | C18 | All except ①, ④, (and ⑬ | | 1 | √ | 1 | 1 | 1 | <i>✓</i> | 1 | 1 | 1 | 1 | 1 |
| Increased air humidity/ temperature with 30 to 60 g water per m ³ of air | C19 | All except 🔞 and | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Temperature class 155 (F), used acc. to 130 (B), coolant temperature 45 °C, derating approx. 4 % ⁷) | C22 | All except ④, ⑦ a | | √ | 1 | 1 | 1 | ~ | 1 | ~ | 1 | 1 | 1 | ~ |
| Temperature class 155 (F), used acc. to 130 (B), coolant temperature 50 °C, derating approx. 8 % ⁷⁾ | C23 | All except ④, ⑦ a | | ✓ | 1 | 1 | 1 | • | <i>、</i> | 1 | 1 | 1 | 1 | 1 |
| Temperature class 155 (F), used acc. to 130 (B), coolant temperature 55 °C, derating approx. 13 % ⁷) | C24 | All except ④, ⑦ a | | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 |
| Temperature class 155 (F), used acc. to 130 (B), coolant temperature 60 °C, derating approx. 18 % | C25 | All except ④, ⑦ a | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | √ | 1 | 1 | ✓ |
| Increased air humidity/ temperature with 60 to 100 g water per m ³ of air | C26 | All except 🕲 and | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Temperature class 155 (F), used acc. to 130 (B), with higher coolant temperature and/or site altitude | Y50 • and specified output, CT °C or SA m above sea level | All except ④, ⑦, (⑧ | | 1 | 1 | 1 | 1 | J | 1 | 1 | 1 | 1 | 1 | 1 |
| Temperature class 155 (F), used acc. to 155 (F), other requirements | Y52 • and specified output, CT °C or SA m above sea level | All except (), (), (® | ®, 10 and | V | <i>✓</i> | <i>✓</i> | <i>✓</i> | 1 | v | <i>✓</i> | ✓ | 1 | 1 | 1 |

Standard delivery times: 20

working

On

10

working

SIMOTICS GP 1LA/1LP/1PP Standard Motors Supplements to order numbers and special versions

| days days | reque | st | | | | | 1LA7 | 1LA | 5, 1L | Optio A9, 1I | ns – LP7, 1 | Alum ILP5, | inum 1PP7 | series 7, 1PP5 |
|--|--|--|--------------------------|------------|---------------|-----------------------|------------|----------|--------|-----------------|----------------|---------------|--------------|-------------------|
| Special versions | Additional identifica- tion code -Z with order | Motor version | Motor type (alum.) | | | livery tim – Frame | ne (colore | | | | | | | |
| | code and plain text | IE2 High | 1LA9 | 63 1LA9 | 71 9 ① | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| | | Efficiency IE1 Standard | 1LA7/1LA5 | | Ŭ | | | | | | | 1LA5 | 10 | |
| | | Efficiency | 1LA9 | 1LA9 | 9 with in | ncreased | d output | t (4) | | | | | | |
| | | | 1PP7/1PP5 1LP7/1LP5 | | | | | | | | | 1PP5 1LP5 | | |
| | | NEMA Energy Efficient | 1LA9 | 1LA9 | | | | | | | | | | |
| | | Pole-changing | 1LA7/1LA5 | | 7 10 | | | | | | | 1LA5 | <u> </u> | |
| | | For converter-fed operation only | | | | | | 1LA7 | 12 | | | 1LA5 | (13) | |
| 1PP 1L | | Motor version | Motor type | Fram 63 | ne size 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| Colors and paint finish Special finish in RAL 7030 | | All | All | | • | | | | • | | | | | |
| stone gray | VEA and | | | | | | | | | | | | | |
| Special finish in other standard RAL colors: RAL 1002, 1013, 1015, 1019, 2003, 2004, 3000, 3007, 5007, 5009, 5010, 5012, 5015, 5017, 5018, 5019, 6011, 6019, 6021, 7000, 7001, 7004, 7011, 7016, 7022, 7031, 7032, 7033, 7035, 9001, 9002, 9005 (see Catalog D 81.1 · 2008 Part 0 "Introduction") | RAL | | All | - | <i>·</i> | <i>·</i> | 1 | 1 | | | 1 | 1 | 1 | 1 |
| Special finish in special RAL colors: For RAL colors, see "Special finish in special RAL colors" in Catalog D 81.1 · 2008 Part 0 "Introduction" | Y51 • and special finish RAL | | All | v | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ۲ ۲ | 1 | J. |
| Special finish sea air resistant Unpainted | t M94 K23 | All All | All | ✓ ○ | ✓ ○ | ✓ ○ | ✓ ○ | ✓ ○ | ✓ ○ | ✓ ○ | ✓ ○ | ✓ ○ | ✓ ○ | ✓ ○ |
| (only cast-iron parts primed) Unpainted, only primed | K24 | All | All | Ŭ ✓ | | | | ✓ | | | | | | ✓ |
| Modular technology – Basic | c versions ⁸⁾ | B) | | | | | | | | | | | | |
| Mounting of separately driven fan | G17 | All except (5), (6), | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Mounting of brake ⁹⁾ | G26 | All except (1), (4), (and (9) | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| rotary pulse encoder | | All except (1), (4), (and (9) | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Mounting of 1XP8001-2 (TTL) rotary pulse encoder | | All except (1), (4), (and (9) | | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Modular technology – Comb Mounting of separately | binations of H61 | f basic versions ⁸⁾ All except ①, ④, (| | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| driven fan and 1XP8001-1 rotary pulse encoder | | and (9) | | | | | | | × | | | | | ľ. |
| Mounting of brake and 1XP8001-1 rotary pulse encoder ⁹⁾ | H62 | All except (1), (4), (and (9) | | | | | - | 1 | 1 | 1 | 1 | √ | 1 | 1 |
| Mounting of brake and separately driven fan ⁹⁾ | H63 | All except (1), (4), (and (9) | | | - | - | - | ~ | 1 | 1 | 1 | 1 | 1 | 1 |
| Mounting of brake, separately driven fan and 1XP8001-1 rotary pulse encoder ⁹⁾ | H64 | All except ①, ④, (and ⑨ | | | - | - | - | 1 | 1 | 1 | 1 | ~ | 1 | 1 |
| Mounting of separately driven fan and 1XP8001-2 rotary pulse encoder | H97 | All except (1), (4), (and (9) | | - | | | - | 1 | 1 | 1 | 1 | 1 | 1 | ✓ |
| Mounting of brake and 1XP8001-2 rotary pulse encoder ⁹⁾ | H98 | All except ①, ④, (and ④ | | | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Mounting of brake, separately driven fan and 1XP8001-2 rotary pulse encoder ⁹⁾ | H99 | All except ①, ④, (and ⑨ | 5, 6, 7, 8 | - | - | - | - | √ | 1 | 1 | 1 | 1 | 1 | 1 |

Supplements to order numbers and special versions

Options – Aluminum series

1LA7, 1LA5, 1LA9, 1LP7, 1LP5, 1PP7, 1PP5

Standard delivery times:

10

davs

20 On working working request davs

Additional Motor category Standard delivery time (colored area) Special versions identifica-Motor Motor Motor type – Frame size tion code type (alum.) version with order 63 71 80 90 100 112 132 160 180 200 225 code and plain text if required IE2 High 1LA9 1LA9 ① Efficiency IE1 Standard 1LA7/1LA5 1LA7 ① 1LA5 ③ Efficiency 1LA9 1LA9 with increased output ④ 1PP7/1PP5 1PP7 (5) 1PP5 ⑥ 1LPZ/1LP5 1LP7 ① NEMA Energy 1LA9 (9) 1I A9 Efficient Pole-changing 1LA7/1LA5 1LA7 (0) 1LA5 (1) For converter-fed 1LA7/1LA5 1LA7 🔞 1LA5 🔞 operation only 1PP - Motor Motor Frame size version type 71 160 225 63 80 ۹n 100 112 132 180 200 1L - . . . Modular technology – Additional versions Brake supply voltage 24 V DC COO 1 1 1 1 1 / 1 1 1 1 1 Brake supply voltage 400 V AC C01 7 Ϊ 1 1 1 Ϊ Ϊ 1 1 1 1 Brake supply voltage 180 V DC, for operation on MICROMASTER 411-ECOFAST ¹⁰⁾ C02 1 ./ 1 ./ ./ Mechanical manual brake K82 ./ 1 ./ 7 ./ ./ . 1 1 1 ./ release with lever (no locking) Special technology 8) Prepared for mounting of 0. R H15 ./ ./ / 1 1 MMI 11) Mounting of LL 861 900 220 rotary pulse encoder H70 1 1 1 . 1 7 . _ Mounting of HOG 9 D 1024 I H72 1 1 1 1 1 1 rotary pulse encoder Mounting of HOG 10 D 1024 I H73 ./ ./ 1 1 ./ ./ rotary pulse encoder Prepared for mounting of H78 ./ ./ 1 ./ LL 861 900 220 Prepared for mounting of H79 . Ϊ 1 1 1 Ϊ HOG 9 D 1024 I Ź Prepared for mounting of H80 7 1 7 1 J . HOG 10 D 1024 I Mechanical design and degrees of protection Drive-end seal for flange-K17 ΑI 1 1 1 1 1 1 1 mounting motors, oil-tight to 0.1 bar 12) With two additional eyebolts for IM V1/IM V3 K32 1 1 7 Low-noise version for K37 ⁄ / 7 7 2-pole motors with clockwise direction of rotation 10) 1 1 Low-noise version for K38 1 1 1 1 7 2-pole motors with counterclockwise direction of rotation 10) 7 1 IP65 degree of protection ¹³⁾ K50 AI AI 7 7 / 1 1 1 1 1 1 1 IP56 degree of protection ¹⁴⁾ K52 All All 7 1 1 1 1 1 1 1 1 All All 1 Vibration-proof version L03 1 1 1 1 1 1 1 1 Condensation drainage holes L12 All All 1 1 1 1 1 1 7 1 1 1 Rust-resistant screws All All J 1 1 1 1 1 M27 / (externally) Mechanical protection for encoder ¹⁶⁾ M68 Ý 1 7 , 1 1 1 Coolant temperature and site altitude Coolant temperature -40 to +40 °C ¹⁷) 1 D03 1 1 1 1 1 1 1 1 7 1 1

For legends, see Page 11; for footnotes, see Page 12.

D04

ΑI

All

1

1

1

1

1

1

1

1

1

Coolant temperature -30 to +40 °C ¹⁷⁾

Standard delivery times: 20

10

SIMOTICS GP 1LA/1LP/1PP Standard Motors Supplements to order numbers and special versions

| 10 <u>20</u> | On | | Suppi | eme | 31115 | 10 01 | luer | num | | | | | | |
|--|---------------------------|--|-------------------|----------|----------|-----------------------|---------------|----------|----------|----------|----------------------|----------|----------------------|----------------------|
| working working days | reque | st | | | | | | | (| Optio | ns – / | Alum | inum | series |
| uays duys | | | | | | 1 | LA7, | 1LA5 | , 1LA | .9, 1L | P7, 1 | LP5, | 1PP7 | 7, 1PP5 |
| Special versions | Additional | Motor category | | Stand | ard deli | ivery time | e (colore | d area) | | | | | | |
| | identifica- tion code | Motor | Motor | | | Frame s | | | | | | | | |
| | -Z | version | type (alum.) | | | | | | | | | | | |
| | with order code and | | | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| | plain text if required | IE2 High Efficiency | 1LA9 | 1LA9 | 1 | | | | | | | | | |
| | 11.095 | IE1 Standard | 1LA7/1LA5 | 1LA7 | 2 | | | | | | | 1LA5 | 3 | |
| | | Efficiency | 1LA9 | 1LA9 | with in | creased | output | 4 | | | | | | |
| | | | 1PP7/1PP5 | | | | | | | | | 1PP5 | | |
| | | NEMA Energy | 1LP7/1LP5 1LA9 | 1LP7 (| | | | | | | | 1LP5 | 8 | |
| | | Efficient | | | | | | | | | | | | |
| | | Pole-changing | 1LA7/1LA5 | | 10 | | | | | | | 1LA5 | - | |
| | | For converter-fed operation only | 1LA7/1LA5 | | | | | 1LA7 (| | | | 1LA5 | | |
| 1PP | | Motor | Motor | Frame | | | | | | | | | | |
| 1L | | version | type | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| Designs in accordance with CCC China Compulsory | D01 | All except (1), (4), (| | 1 | 1 | 1 | 1 | 1 | 1 | | | - | | |
| CCC China Compulsory Certification ¹⁸⁾ | DUI | | | | | | | | | | | | | |
| | | | | 1 | ~ | 1 | ~ | - | - | - | - | - | - | |
| IE1 motor without CE marking | D22 New! | Only possible for (| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| for export outside EEA (see EU Directive 640/2009) | | | | | | | | | | | | | | |
| Electrical according to | D30 | All except (5), (6), | | 1 | 1 | 1 | 1 | ✓ | 1 | 1 | 1 | 1 | 1 | 1 |
| NEMA MG1-12 ¹⁹⁾ Design according to UL with | D31 | for () standard ve All except (2) and | | 1 | | ✓ | <u> </u> | 1 | 1 | 1 | | 1 | / | 1 |
| "Recognition Mark" ¹⁹⁾ | 531 | for (1) standard ve | | ~ | | - | | ~ | ~ | ~ | | | ~ | V |
| Certified for Korea acc. to KS C4202 20) | D33 | Only possible for (| | - | - | 1 | 1 | 1 | 1 | 1 | ✓ | 1 | 1 | |
| China Energy Efficiency | D34 New! | Only possible for (| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Label | | | | | | | | | | | | | | |
| Canadian regulations (CSA) 21) | D40 | | | ~ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| NEMA Energy Efficient, | D42 New! | Only possible for | | 0. R. | 0. R. | 0. R. | 0. R. | 0. R. | 0. R. | 0. R. | 0. R. | 0. R. | 0. R. | - |
| North America version according to NEMA MG1, | | | | | | | | | | | | | | |
| Table 12-11, incl. UL and CSA | | | | | | | | | | | | | | |
| PSE mark for Japan ²²⁾ | D46 | All except 🕲 and | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - | - |
| VIK version (comprises | K30 | Only possible for (| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - |
| Zone 2 for mains-fed operation, without Ex nA II | | | | | | | | | | | | | | |
| marking on rating plate) ²³⁾ | C07 | Only possible for (| | 1 | 1 | 1 | | 1 | 1 | 1 | ✓ | | | |
| Ex nA II on VIK rating plate | C27 | | | ~ | ~ | ~ | ~ | ~ | ~ | ~ | ~ | | | |
| Bearings and lubrication | | < 0.75 kW | | | | | | | | | | | | |
| Measuring nipple for SPM | G50 | All | All | - | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| shock pulse measurement for bearing inspection ²⁴⁾ | | | | | | | | | | | | | | |
| Bearing design for increased | K20 | All | All | - | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| cantilever forces | | | | | | | | | | | | | | |
| Regreasing device ^{24) 25)} Located bearing DE | K40 K94 | All | All | - 1 | - | - | - | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ |
| Located bearing NDE | K94 L04 | All except (5) and | | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | ✓ ✓ | | | | |
| | | | | ✓ | ✓ | ✓ | 1 | <i>√</i> | 1 | ✓ ✓ | - | - | - | |
| Balance and vibration quant | tity | | | | | | | | | | | | | |
| Vibration quantity level A Vibration quantity level B | K02 | All All | All | | | | | | | | | | | |
| Full-key balancing | K02 | All | All | ✓ ✓ | ✓ ✓ | <i>·</i> <i>·</i> | <i>✓</i> ✓ | ✓ ✓ | ✓ ✓ | <i>✓</i> | <i>✓</i> <i>✓</i> | ✓ ✓ | <i>·</i> <i>·</i> | <i>s</i> <i>s</i> |
| Balancing without key | M37 | All | All | | <i>·</i> | <i>·</i> | <i>v</i> | <i>✓</i> | <i>·</i> | 1 | <i>·</i> | <i>√</i> | 1 | ✓ ✓ |
| Shaft and rotor | | | | | | | | | | | | | | |
| Concentricity of shaft exten- sion, coaxiality and linear | K04 | All | All | 1 | 1 | 1 | 1 | ~ | 1 | 1 | 1 | ~ | 1 | 1 |
| movement in accordance with | | | | | | | | | | | | | | |
| DIN 42955 Tolerance R for flange-mounting motors ²⁶⁾ | | | | | | | | | | | | | | |
| Second standard shaft | K16 | All | All | √ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| extension Shaft extension with standard | K42 | All | All | 1 | 1 | 1 | <i>✓</i> | 1 | / | 1 | <i>✓</i> | 1 | | 1 |
| dimensions, without feather keyway | | | | | | | | | | | | | | |
| Concentricity of shaft extension in accordance with | L39 | All | All | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| DIN 42955 Tolerance R | | | | | | | | | | | | | | |

For legends, see Page 11; for footnotes, see Page 12.

Supplements to order numbers and special versions

Standard delivery times:

10

20 working working days days

On reauest

Options – Aluminum series 1LA7, 1LA5, 1LA9, 1LP7, 1LP5, 1PP7, 1PP5

| Special versions | Additional identifica- | Motor category | | | | | e (colore | ed area) |) | | | | | |
|---|------------------------------------|----------------------------|--------------------------|----------|--------|---------|-----------|----------|--------|----------|----------|----------|----------|-----|
| | tion code -Z | Motor version | Motor type (alum.) | Motor | type – | Frame | size | | | | | | | |
| | with order code and | | (arann) | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| | plain text if required | IE2 High Efficiency | 1LA9 | 1LA9 | | | | | | | | | | |
| | | IE1 Standard | 1LA7/1LA5 | 1LA7 | 2) | | | | | | | 1LA5 | (3) | - |
| | | Efficiency | 1LA9 | | | creased | output | 4 | | | | | <u> </u> | |
| | | | 1PP7/1PP5 | 1PP7 | 5 | | | | | | | 1PP5 | 6 | |
| | | | 1LP7/1LP5 | 1LP7 | 0 | | | | | | | 1LP5 | 8 | |
| | | NEMA Energy | 1LA9 | 1LA9 | 9 | | | | | | | | | |
| | | Efficient Pole-changing | 1LA7/1LA5 | 11 \ \ 7 | 6 | | | | | | | 1LA5 | (II) | |
| | | For converter-fed | | | | | | 1LA7 | 12 | | | 1LA5 | <u> </u> | |
| | | operation only | | | | | | | | | | | • | |
| 1PP | | Motor | Motor | Frame | | | | | | | | | | |
| 1L | | version | type | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | 180 | 200 | 225 |
| Shaft and rotor (continued) | Mer | | | | | , | , | (| , | , | , | | , | (|
| Standard shaft made of stainless steel | M65 | All except ①, ④ a | | - | - | 1 | / | 1 | 1 | <i>✓</i> | / | 1 | / | 1 |
| Non-standard cylindrical shaft extension ²⁷) | Y55 • and identifica- | All | All | 1 | ~ | 1 | 1 | 1 | 1 | 1 | 1 | ~ | 1 | 1 |
| | tion code | | | | | | | | | | | | | |
| Heating and ventilation | 1147 | | | | | | , | 1 | , | , | , | | , | 1 |
| Fan cover for textile industry 28) | H17 | | | - | - | 1 | 1 | ~ | 1 | 1 | 1 | ~ | ~ | 1 |
| | | | | - | - | - | - | - | 1 | 1 | - | - | - | |
| Metal external fan ²⁹⁾ | K35 | All except (5), (6), | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Anti-condensation heating for 230 V $^{\rm 30)}$ | K45 | All; for 🕲 and 🔞 🤉 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Anti-condensation heating for 115 V $^{30)}$ | K46 | All; for 🕲 and 🔞 🤉 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Rating plate and extra rating | g plates | | | | | | | | | | | | | |
| Second lubrication plate, loose | B06 | All | All | - | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Extra rating plate for voltage tolerance ³¹⁾ | B07 New! | 8-pole motors | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Second rating plate, loose | K31 | All | All | ✓ | ✓ ✓ | ✓ ✓ | | ✓ | ✓ ✓ | | ✓ ✓ | ✓ | 1 | 1 |
| Rating plate, stainless steel | M40 New! Y80 • and | Only possible for (All | 1), (4) and (9) | ٠ • | ۲ ۲ | 1 | \ \ | ۲ ۲ | ۲ ۲ | 1 | <u>۲</u> | - | - | - |
| Extra rating plate or rating plate with deviating rating plate data | identifica- tion code | All | All | ~ | • | 1 | ~ | ~ | V | 1 | ~ | v | 1 | ~ |
| Extra rating plate with identification codes | Y82 • and identifica- tion code | All | All | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Y84 • and identifica- | All | All | ~ | 1 | 1 | 1 | ~ | 1 | 1 | 1 | 1 | 1 | 1 |
| label (max. 20 characters) Packaging, safety notes, doo | tion code | n and test certific | ates | | | | | | | | | | | |
| With one safety and start-up | B01 | All except (5), (6), | | | | | | | | | | | _ | - |
| guide per box pallet | | | | - | - | - | - | - | - | - | - | - | - | |
| Acceptance test certificate 3.1 in acc. with EN 10204 ³²⁾ | B02 | All | All | ✓ | 1 | 1 | 1 | √ | 1 | 1 | 1 | √ | 1 | 1 |
| Printed German/English Operating Instructions (Compact) enclosed ³³⁾ | | All | All | | | | | • | | | | • | • | • |
| Printed German/English Operating Instructions enclosed | B23 | All | All | √ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Type test with heat run for horizontal motors, with acceptance | F83 | All except @ and | 13 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Wire-lattice pallet | L99 | All | All | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| Connected in star for dispatch | M32 | All | All | ✓ | 1 | 1 | 1 | √ | 1 | 1 | 1 | √ | 1 | 1 |
| Connected in delta for dispatch | M33 | All | All | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Standard version | | | | | | | | | | | | | | |

- Standard version
- Without additional charge 0
- This order code only determines the price of the version -٠
- Additional plain text is required.
- O. R. Possible on request
- 1 With additional charge
- Not possible

For footnotes, see Page 12.

Supplements to order numbers and special versions

Options – Aluminum series 1LA7, 1LA5, 1LA9, 1LP7, 1LP5, 1PP7, 1PP5

- Evaluation with appropriate tripping unit (see Catalog IC 10) is recommended. For pole-changing motors with separate windings, the number of temperature sensors must be doubled (order code A11, prices of A12 or order code A12, prices available on request).
- Not possible for pole-changing motors and for 1LA9 motors with increased output in frame size 132. Only one sensor (temperature sensor or PTC thermistor) can be connected. Only possibilities are voltage code 1 with voltage of 230 VA/400 VY and special voltage with voltage code 9 and order code L1U (400 VA). The following order codes cannot be used in combination with the ECOFAST plugs, order code G55: A12, C02, C18, D31, D40, G50, H15, H17, H62, H63, H64, H98, H99, K04, K15, K16, K34, K35, K40, K45, K46, K52, K54, K82, L03, L44, L45, L47, L48, L49, L51, 152
- 3) Not possible for pole-changing motors. Only one sensor (temperature sensor or PTC thermistor) can be connected. Only possibilities are voltage code 1 with voltage of 230 V Δ /400 VY and special voltage with voltage code 9 and order code L1U (400 VA). The following order codes cannot be used in combination with the ECOFAST plugs, order code G56: A12, A23, A31, C00, C18, D31, D40, G50, H15, H17, K04, K15, K16, K34, K35, K40, K45, K46, K52, K54, K82, L03, L44, L45, L47, L48, L49, L51, L52. The following order codes can be used in combination with the ECOFAST plugs, order code G56 only with order codes C01 (400 V AC) or C02 (180 V DC): G26, H62, H63, H64, H98, H99.
- 4) In combination with the options "PTC thermistor" or "Anti-condensation heating", please inquire before ordering.
- 5) Not possible for pole-changing motors and/or with voltage code 1 or 6.
- 6) Cannot be used for motors in UL version (order code D31). Cannot be used for motors according to CSA approval (order code D40) for the 1LA5 motor series in frame sizes 180 to 225. The grease lifetime specified in Catalog D 81.1 · 2008 in Part 0 "Introduction" refers to CT 40 °C. When the coolant temperature rises by 10 K, the grease service lifetime or relubrication interval is halved.
- No derating in combination with the following order codes: L2A, L2C, L2Q, L2R, L2S, L2T, L2U, L2V, L3E and L3G
- 8) Second shaft extension is not possible, with mounted brake on request. The order codes listed cannot be combined within the various technologies nor with each other within the same technology system. This applies for:

 - Modular technology
 Basic versions of "Modular technology"
 - Combinations of basic versions "Special technology"
- 9) The standard brake supply voltage is 230 V AC, 50/60 Hz. Other brake supply voltages are possible with order codes C00, C01 and C02.
- ¹⁰⁾ Not possible in motors in a pole-changing version.
- ¹¹⁾ Converter mounting is possible, if the MICROMASTER type is specified for 230 VA/400 VY (see Catalog DA 51.3).
- ¹²⁾ Not possible for type of construction IM V3.
- ¹³⁾ Not possible in combination with rotary pulse encoder HOG 9 D 1024 I (order code H72, H79) and/or brake 2LM8 (used for motors up to and including frame size 225, order code G26)
- ¹⁴⁾ Not possible in combination with brake 2LM8 (used for motors up to and including frame size 225, order code G26).
- ¹⁵⁾ Supplied with the condensation drainage holes sealed at the drive end DE and non-drive end NDE (IP55, IP56, IP65). If condensation drainage holes are required in motors of the IM B6, IM B7 or IM B8 type of construction (feet located on side or top), it is necessary to relocate the bearing plates at the drive end (DE) and non-drive end (NDE) so that the condensation drainage holes situated between the feet on delivery are underneath.
- ¹⁶⁾ Not necessary when a rotary pulse encoder is combined with a separately driven fan, because in this case the rotary pulse encoder is installed under the fan cover
- ¹⁷⁾ For 1LA5/1LA7 motors with special insulation for converter-fed operation, in connection with mountings, the respective technical data must be observed, please inquire before ordering.

- 18) CCC certification is required for:
 - 2-pole motors \leq 2.2 kW
 - 4-pole motors \leq 1.1 kW
 - 6-pole motors ≤ 0.75 kW
 - 8-pole motors ≤ 0.55 kW

For frame sizes 100 and 112, order code D01 is only applicable to 1LA7 pole-changing motors.

- ¹⁹⁾ Possible up to 600 V max. The rated voltage is indicated on the rating plate without voltage range. Order codes D30 and D31 do not authorize importing into USA and Mexico. The North America export version of the 1LA9 with order code D42 NEMA Energy Efficient is available for this purpose.
- ²⁰⁾ The 2, 4 and 6-pole IE2 motors 1LA9 and 1LG6 in the 0.75 kW to 200 kW range for 50 Hz output at 60 Hz are certified for Korea.
- ²¹⁾ The rated voltage is indicated on the rating plate without voltage range. Order code D40 does not authorize importing into Canada. The North America export version of the 1LA9 with order code D42 NEMA Energy Efficient is available for this purpose.
- ²²⁾ "Small power motors" with a rated output of up to 3 kW which are exported to Japan must bear the correct marking.
- 23) Not possible in combination with anti-condensation heating, order codes K45 and K46. Order code M14 or M15 must be selected instead – for further details, see Part 4 "SIMOTICS XP 1MA/1MJ/1LA/1LG Explosion-Proof Motors"
- 24) Not possible when brake is mounted.
- 25) Not possible for 1LA9 134-6KA.. motors.
- ²⁶⁾ Can be combined with deep-groove bearings of series 60.., 62.. and 63.. Not possible in combination with parallel roller bearings (e.g. bearings for increased cantilever forces, order code K20), brake mounting or encoder mounting
- ²⁷⁾ When motors are ordered that have a longer or shorter shaft extension than normal, the required position and length of the feather keyway must be specified in a sketch. It must be ensured that only feather keys in accordance with DIN 6885, Form A are permitted to be used. The feather keyway is positioned centrally on the shaft extension. The length is defined by the manufacturer normatively. Not valid for: Conical shafts, non-standard threaded journals, non-standard shaft tolerances, friction welded journals, extremely "thin" shafts, special geometry dimensions (e.g. square journals), hollow shafts. Valid for non-standard shaft extensions DE or NDE. The feather keys are supplied in every case. For order codes Y55 and K16:

 Dimensions D and DA ≤ internal diameter of roller bearing (see dimension tables under "Dimensions")

Dimensions E and EA \leq 2 x length E (normal) of the shaft extension. For an explanation of the order codes, see Catalog D 81.1 · 2008 Part 0 "Introduction"

- ²⁸⁾ The special requirements of the textile industry regarding the sheet metal cover open up the possibility that a finger may be inserted between the cover and enclosure. The customer must implement appropriate measures to ensure that the installed system is "finger-safe"
- ²⁹⁾ For 1LA5/6/7/9 motors and 1LG with metal external fan, converter-fed operation is permitted. The metal external fan is not possible in combination with the low-noise version - Order code K37 or K38
- ³⁰⁾ Not possible in combination with VIK order code K30. Order code M14 or M15 must be selected instead - for further details, see Part 4 "SIMOTICS XP 1MA/1MJ/1LA/1LG Explosion-Proof Motors"
- ³¹⁾ Can be ordered for 230VΔ/400VY or 400VΔ/690VY (voltage code 1 or 6). Not possible for pole-changing motors, naturally cooled motors, 8-pole motors and in combination with order code D34.
- 32) The delivery time for the factory test certificate may differ from the delivery time for the motor.
- 33) The Operating Instructions (Compact) are available in PDF format for all official EU languages at http://support.automation.siemens.com/WW/view/en/10803948/133300.