

## THREE-PHASE-ASYNCHRONOUS-MOTOR FCA 90 S 2 /PHE

IE3AC09S2028N

### General data

|                          |                               |
|--------------------------|-------------------------------|
| Type of motor            | 3~                            |
| Type designation         | FCA                           |
| Frame size               | 90                            |
| Mounting                 | B14a                          |
| Frame execution          | S                             |
| Frame material           | Aluminium                     |
| Insulationclass          | F/B                           |
| Terminal box location    | top DE                        |
| Terminal box orientation | cable gland to the right side |
| Weight (kg)              | 14                            |
| Rotation Direction       | right /left                   |
| Vibration level          | A                             |
| Balancing method         | half key                      |
| cooling type             | IC411                         |
| Executed acc. to         | IEC 60034-1                   |
| noise level              | IEC 60034-9                   |

### Influential factors

|                          |               |
|--------------------------|---------------|
| Duty                     | S1            |
| Ambient temperature (°C) | -20 up to +40 |
| Height of location (m)   | 1000          |

### Electrical specification

|                                                           |           |
|-----------------------------------------------------------|-----------|
| Power 1 50Hz (kW)                                         | 1.5       |
| Power 1 60Hz (kW)                                         | 1.5       |
| Frequency (Hz)                                            | 50/60     |
| Voltage 50Hz (V)                                          | 230/400   |
| Voltage 60Hz (V)                                          | 265/460   |
| Voltage/Frequency tolerance (not valid for range voltage) | +/-10%    |
| Connection                                                | Δ/Y       |
| Poles                                                     | 2         |
| Efficiency 100% 50Hz (%)                                  | 84,2      |
| Efficiency 75% 50Hz (%)                                   | 84,2      |
| Efficiency 50% 50Hz (%)                                   | 82,5      |
| Efficiency 100% 60Hz (%)                                  | 88,5      |
| Efficiency 75% 60Hz (%)                                   | 85,5      |
| Efficiency 50% 60Hz (%)                                   | 83,8      |
| Power factor                                              | 0,84      |
| Starting current factor                                   | 7,6       |
| Starting torque factor                                    | 2,3       |
| Tilting moment factor                                     | 2,3       |
| Rated current 50Hz (A)                                    | 5,32/3,06 |
| Rated current 60Hz (A)                                    | 4,56/2,64 |
| Eff.Cl.50Hz                                               | IE3       |

### Electrical specification

|             |     |
|-------------|-----|
| Eff.Cl.60Hz | IE3 |
|-------------|-----|

### Mechanical data

|                                     |               |
|-------------------------------------|---------------|
| Torque (Nm)                         | 4,95/4,12     |
| Rotation speed (1/min)              | 2895/3474     |
| Bearing DE                          | 6205.ZZ.C3    |
| Bearing NDE                         | 6205.ZZ.C3    |
| Mounting of bearing DE              | loose bearing |
| Mounting of bearing NDE             | loose bearing |
| Bearing lifetime                    | 20000         |
| allow. Radial load (X/2)            | 600           |
| allow. Radial load (X0)             | 675           |
| allow. Radial load (Xmax)           | 525           |
| allow. Axial load B3,B5,B35,B14,B34 | 500           |
| allow. Axial load V1,V3,V19,V18     | 460           |
| Moment of inertia                   | 0,0015        |

### Motor properties

|                                     |                        |
|-------------------------------------|------------------------|
| Color                               | RAL7030                |
| Paint surface                       | shiny                  |
| Protection class                    | IP55                   |
| Cable gland size (cable connection) | 1xM25x1,5 1xblind plug |
| Cable gland type                    | Standard               |
| Shaft end                           | 24 x 50                |
| Shaft material                      | C45                    |
| Specification NDE                   | Plastic fan            |
| Flange                              | 140                    |

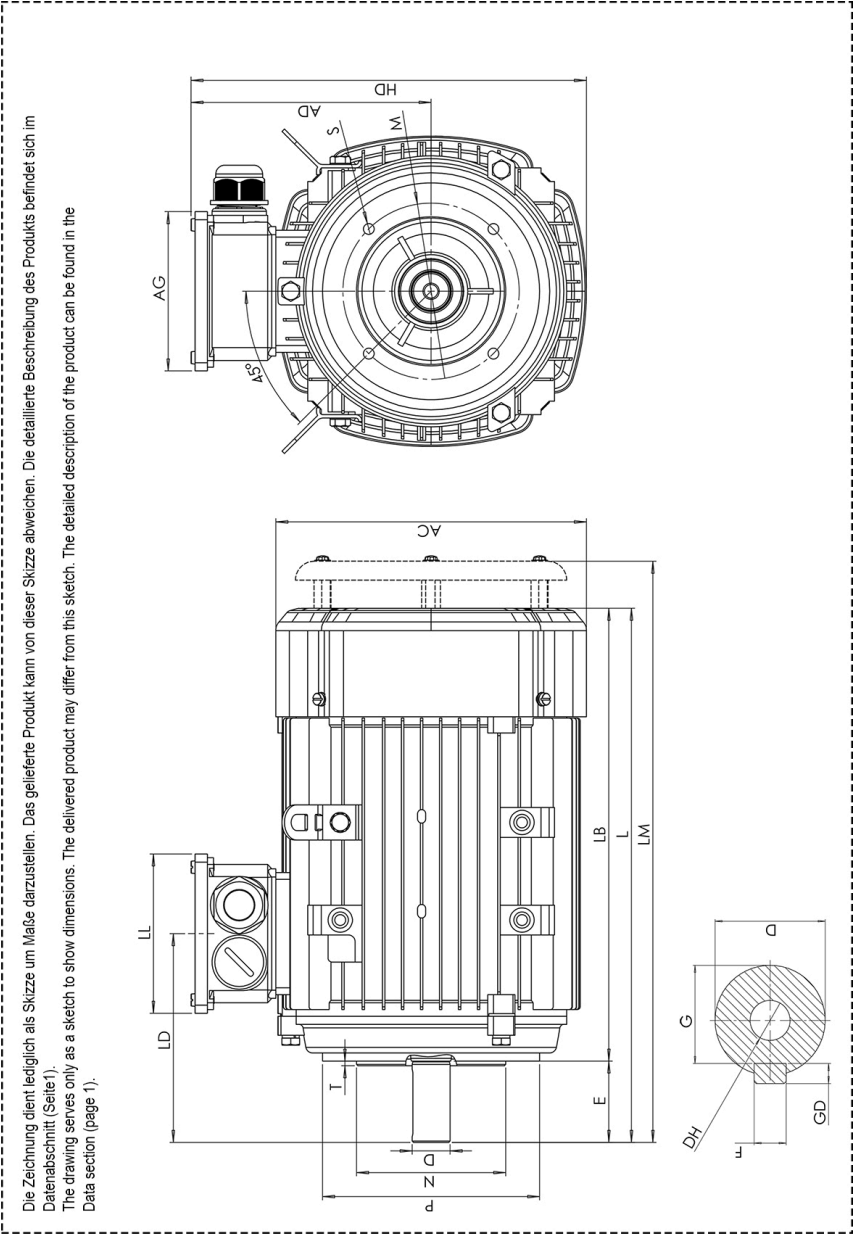
### Additional operating points

|                                    |         |
|------------------------------------|---------|
| Voltage operating point 2          | 265/460 |
| Power operating point 2 (kW)       | 1.8     |
| Connection operating point 2       | Δ/Y     |
| Frequency operating point 2        | 60      |
| Efficiency class operating point 2 | IE2     |

Dimension drawings

Three-Phase-Asynchronous-  
Motor FCA 90 S 2 /PHE  
IE3AC09S2028N

ac motoren



| AC  | AG  | D  | E  | HD  | L   | LM  | LB  | LD  | LL  | M   | N  | P   | S  | T | F | G  | DH    | EB | ED | GD |
|-----|-----|----|----|-----|-----|-----|-----|-----|-----|-----|----|-----|----|---|---|----|-------|----|----|----|
| 165 | 109 | 24 | 50 | 228 | 313 | 343 | 263 | 136 | 109 | 115 | 95 | 140 | M8 | 3 | 8 | 20 | M8x19 | 40 | 5  | 7  |