

## Data sheet for SINAMICS V20

Article No. : 6SL3210-5BE31-8UV0



Figure similar

Client order no. :  
Order no. :  
Offer no. :  
Remarks :

Item no. :  
Consignment no. :  
Project :

### Rated data

#### Input

|                  |                           |
|------------------|---------------------------|
| Number of phases | 3 AC                      |
| Line voltage     | 380 ... 480 V -15 % +10 % |
| Line frequency   | 47 ... 63 Hz              |

#### Output

|                      |                 |                               |
|----------------------|-----------------|-------------------------------|
| Number of phases     | 3 AC            |                               |
| <b>Rated voltage</b> | <b>400V IEC</b> | <b>480V NEC <sup>1)</sup></b> |
| Rated power (LO)     | 22.00 kW        | 30.00 hp                      |
| Rated power (HO)     | 18.50 kW        | 25.00 hp                      |
| Rated current (LO)   | 45.00 A         | 40.00 A                       |
| Rated current (HO)   | 38.00 A         | 34.00 A                       |
| Rated current (IN)   | 45.00 A         |                               |
| Pulse frequency      | 4.00 kHz        |                               |
| Output frequency     | 0 ... 550 Hz    |                               |

#### Overload capability

|                                                       |
|-------------------------------------------------------|
| Low Overload (LO)                                     |
| 110 % rated output current for 60 s, cycle time 300 s |
| High Overload (HO)                                    |
| 150 % rated output current for 60 s, cycle time 300 s |

### General tech. specifications

|                              |            |
|------------------------------|------------|
| Power factor $\lambda$       | 0.72       |
| Offset factor $\cos \varphi$ | 0.95       |
| Efficiency $\eta$            | 0.98       |
| Filter class (integrated)    | Unfiltered |

### Communication

|               |                 |
|---------------|-----------------|
| Communication | USS, Modbus RTU |
|---------------|-----------------|

### Inputs / outputs

#### Standard digital inputs

|        |   |
|--------|---|
| Number | 4 |
|--------|---|

#### Digital outputs

|                                    |   |
|------------------------------------|---|
| Number as relay changeover contact | 1 |
| Number as transistor               | 1 |

#### Analog inputs

|        |                                             |
|--------|---------------------------------------------|
| Number | 2 (Can be used as additional digital input) |
|--------|---------------------------------------------|

#### Analog outputs

|        |   |
|--------|---|
| Number | 1 |
|--------|---|

### Ambient conditions

|                            |                                |
|----------------------------|--------------------------------|
| Cooling                    | External fan                   |
| Installation altitude      | 1,000 m (3,280.84 ft)          |
| <b>Ambient temperature</b> |                                |
| Operation <sup>2)</sup>    | -10 ... 60 °C (14 ... 140 °F)  |
| Storage                    | -40 ... 70 °C (-40 ... 158 °F) |

#### Relative humidity

|                |      |
|----------------|------|
| Max. operation | 95 % |
|----------------|------|

### Connections

#### Max. motor cable length

|            |                   |
|------------|-------------------|
| Shielded   | 50 m (164.04 ft)  |
| Unshielded | 100 m (328.08 ft) |

### Mechanical data

|                      |                                                               |
|----------------------|---------------------------------------------------------------|
| Mounting position    | Through-hole mounting / wall mounting / side-by-side mounting |
| Degree of protection | IP20 / UL open type                                           |
| Frame size           | FSE                                                           |
| Net weight           | 6.24 kg (13.76 lb)                                            |

#### Dimensions

|        |                     |
|--------|---------------------|
| Width  | 245.0 mm (9.65 in)  |
| Height | 264.5 mm (10.41 in) |
| Depth  | 209.0 mm (8.23 in)  |

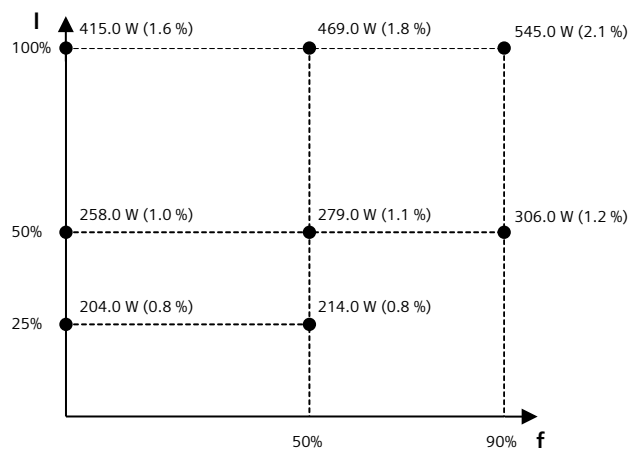
### Standards

|                           |                                          |
|---------------------------|------------------------------------------|
| Compliance with standards | CE, cULus, C-Tick (RCM), KC              |
| CE marking                | EN 61800-5-1 / EN 60204-1 and EN 61800-3 |

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| Converter losses to IEC61800-9-2*                    |        |
|------------------------------------------------------|--------|
| Efficiency class                                     | IE2    |
| Comparison with the reference converter (90% / 100%) | 41.0 % |



The percentage values show the losses in relation to the rated apparent power of the converter.

The diagram shows the losses for the points (as per standard IEC61800-9-2) of the relative torque generating current (I) over the relative motor stator frequency (f). The values are valid for the basic version of the converter without options/components.

\*converted values

<sup>1)</sup> The output current and HP ratings are valid for the voltage range 440V-480V

<sup>2)</sup> Please observe derating at temperatures of 40 °C or above