

## **Data sheet for SINAMICS V20**

Article No.: 6SL3210-5BE21-5UV1

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

| Rated data                    |                          |             |  |
|-------------------------------|--------------------------|-------------|--|
| nput                          |                          |             |  |
| Number of phases              | 3 AC                     |             |  |
| Line voltage                  | 380 480 V -              | 15 % +10 %  |  |
| Line frequency                | 47 63 Hz                 |             |  |
| Output                        |                          |             |  |
| Number of phases              | 3 AC                     |             |  |
| Rated voltage                 | 400V IEC                 | 480V NEC 1) |  |
| Rated power (LO)              | 1.50 kW                  | 2.00 hp     |  |
| Rated power (HO)              | 1.50 kW                  | 2.00 hp     |  |
| Rated current (LO)            | 4.10 A                   | 4.10 A      |  |
| Rated current (HO)            | 4.10 A                   | 4.10 A      |  |
| Rated current (IN)            | 4.10 A                   |             |  |
| Pulse frequency               | 4.00 kHz                 |             |  |
| Output frequency              | 0 550 Hz                 |             |  |
| Overload capability           |                          |             |  |
| Low Overload (LO)             |                          |             |  |
| 110 % rated output current fo | r 60 s, cycle time 300 s |             |  |
| High Overload (HO)            |                          |             |  |
| 150 % rated output current fo | r 60 s, cycle time 300 s |             |  |

| General tech. specifications                                |                 |  |
|-------------------------------------------------------------|-----------------|--|
| Power factor λ                                              | 0.72            |  |
| Offset factor $\cos\phi$                                    | 0.95            |  |
| Efficiency η                                                | 0.98            |  |
| Filter class (integrated)                                   | Unfiltered      |  |
| With integrated braking chopper                             | Yes             |  |
| Communication                                               |                 |  |
| Communication                                               | USS, Modbus RTU |  |
| Inputs / outputs                                            |                 |  |
|                                                             |                 |  |
| Standard digital inputs                                     |                 |  |
| Standard digital inputs  Number                             | 4               |  |
|                                                             | 4               |  |
| Number                                                      | 1               |  |
| Number  Digital outputs                                     |                 |  |
| Number  Digital outputs  Number as relay changeover contact | 1               |  |



Item no. : Consignment no. : Project :

| Ambient conditions        |                                         |  |  |  |
|---------------------------|-----------------------------------------|--|--|--|
| Cooling                   | External fan                            |  |  |  |
| Installation altitude     | 1,000 m (3,280.84 ft)                   |  |  |  |
| Ambient temperature       |                                         |  |  |  |
| 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                  | 10 m (32.81 ft)                         |  |  |  |
| Unshielded                | 50 m (164.04 ft)                        |  |  |  |
| Mechanical data           |                                         |  |  |  |
| Mounting position         | Wall mounting / side-by-side mounting   |  |  |  |
| Degree of protection      | IP20 / UL open type                     |  |  |  |
| Frame size                | FSA                                     |  |  |  |
| Net weight                | 1.00 kg (2.20 lb)                       |  |  |  |
| Dimensions                |                                         |  |  |  |
| Width                     | 90.0 mm (3.54 in)                       |  |  |  |
| Height                    | 166.0 mm (6.54 in)                      |  |  |  |
| Depth                     | 145.5 mm (5.73 in)                      |  |  |  |
| Standards                 |                                         |  |  |  |
| Compliance with standards | CE, cULus, C-Tick (RCM), KC             |  |  |  |
| CE marking                | EN 61800-5-1 /EN 60204-1 and EN 61800-3 |  |  |  |

Analog outputs

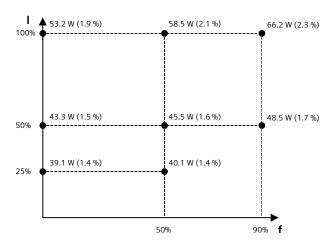
Number



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| Converter losses to IEC61800-9-2*                    |        |  |
|------------------------------------------------------|--------|--|
| Efficiency class                                     | IE2    |  |
| Comparison with the reference converter (90% / 100%) | 28.4 % |  |



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.

<sup>\*</sup>calculated 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  $^{\circ}\text{C}$  or above