



## Product data sheet

## HAVSO2S0004GSM

### Characteristics

Variable speed drive, SOLAR, 0.4 kW 220V, 1 phase, HD, 1 phase motor



### Main

|                                    |  |
|------------------------------------|--|
| Range of product                   | SOLAR  |
| Product or component type          | Variable speed drive   |
| Product specific application       | Solar pump   |
| Network number of phases           | 1 phase  |
| [Us] rated supply voltage          | 220 V AC - 15...15 %<br>150...440 V DC   |
| Supply voltage type support        | AC/DC  |
| Supply frequency                   | 50...60 Hz   |
| Motor power kW                     | 0.4 kW for heavy duty  |
| Motor power hp                     | 0.5 hp for heavy duty  |
| Maximum transient current          | 7.5 A during 1 min (heavy duty)<br>9 A during 3 s (heavy duty)<br>10 A during 0 s (heavy duty) |
| Asynchronous motor control profile | Sensorless vector control (SVC)<br>Voltage/frequency ratio (V/f)                               |
| Speed drive output frequency       | 0...400 Hz   |
| Continuous output current          | 5 A  |

### Complementary

|                                     |  |
|-------------------------------------|--|
| Product destination                 | Asynchronous motors  |
| Function available                  | MPPT function<br>Auto start-run-stop<br>Energy/flow calculator<br>Pump cleaning<br>Multi-speed operation<br>Energy saving mode |
| Type of cooling                     | Fan  |
| Regulation loop                     | Adjustable PID regulator   |
| Acceleration and deceleration ramps | Linear adjustable separately from 0.01 to 6500 s   |
| Frequency resolution                | Analog input: 0.05/50 Hz   |
| Analogue input number               | 1  |
| Analogue input type                 | AI1 voltage: 0...10 V<br>AI1 current: 0...20 mA  |
| Discrete input number               | 4  |
| Discrete input type                 | Programmable (DI1...DI4)   |
| Analogue output number              | 1  |
| Analogue output type                | AO1 voltage/current: 0...20 mA or 0...10 V   |
| Discrete output number              | 2  |

|                      |   |
|----------------------|---|
| Discrete output type | configurable relay logic 250 V (3 A) for NO relay output circuit<br>configurable relay logic 250 V (3 A) for NC relay output circuit<br>configurable relay logic 30 V DC (3 A) for NO relay output circuit<br>configurable relay logic 30 V DC (3 A) for NC relay output circuit<br>open collector 9...30 V (50 mA) |
|----------------------|---|

|                  |                                |
|------------------|--------------------------------|
| Output frequency | 50 kHz for pulse output at DO1 |
|------------------|--------------------------------|

|              |                                       |
|--------------|---------------------------------------|
| Display type | 5 digits 7 segments for 39 parameters |
|--------------|---------------------------------------|

|                    |               |
|--------------------|---------------|
| Device application | Speed control |
|--------------------|---------------|

|                      |                |
|----------------------|----------------|
| Type of installation | Indoor/outdoor |
|----------------------|----------------|

|              |  |
|--------------|--|
| Control type | Manual using keypad<br>Using control terminal<br>Using serial port |
|--------------|--|

|                 |                          |
|-----------------|--------------------------|
| Device mounting | Wall mounted<br>DIN rail |
|-----------------|--------------------------|

|                |                            |
|----------------|----------------------------|
| Speed accuracy | +/- 0.5 % of nominal speed |
|----------------|----------------------------|

|                 |  |
|-----------------|--|
| Protection type | Overcurrent<br>Overvoltage<br>Undervoltage<br>Overheating<br>Overload<br>Short-circuit<br>Phase loss<br>Low light protection |
|-----------------|--|

|       |       |
|-------|-------|
| Width | 84 mm |
|-------|-------|

|        |        |
|--------|--------|
| Height | 152 mm |
|--------|--------|

|       |          |
|-------|----------|
| Depth | 148.4 mm |
|-------|----------|

#### **Environment**

|                   |                               |
|-------------------|-------------------------------|
| Relative humidity | 0...95 % without condensation |
|-------------------|-------------------------------|

|                                     |             |
|-------------------------------------|-------------|
| Ambient air temperature for storage | -20...65 °C |
|-------------------------------------|-------------|

|                |    |
|----------------|----|
| Quality labels | CE |
|----------------|----|

|                    |          |
|--------------------|----------|
| Operating altitude | = 1000 m |
|--------------------|----------|

|                         |      |
|-------------------------|------|
| IP degree of protection | IP20 |
|-------------------------|------|

|                      |                      |
|----------------------|----------------------|
| Vibration resistance | 5.9 m/s <sup>2</sup> |
|----------------------|----------------------|

#### **Packing Units**

|                        |     |
|------------------------|-----|
| Unit Type of Package 1 | PCE |
|------------------------|-----|

|                              |   |
|------------------------------|---|
| Number of Units in Package 1 | 1 |
|------------------------------|---|

#### **Contractual warranty**