



Figure similar

Data sheet for SIMOTICS M-1PH8

Article No. : 1PH8105-3HF12-2AA2-Z  
A12+U61

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

Item no. :  
Consignment no. :  
Project :

Engineering data

|   |                  | P <sub>N</sub><br>[kW] | M <sub>N</sub><br>[Nm] | I <sub>N</sub><br>[A] | U <sub>N</sub><br>[V] | f <sub>N</sub><br>[Hz] | n <sub>N</sub><br>[rpm] | M <sub>max</sub><br>[Nm] | I <sub>max</sub><br>[A] | n <sub>max</sub><br>[rpm] | M <sub>0</sub><br>[Nm] | I <sub>0</sub><br>[A] | η     | cos φ | I <sub>μ</sub><br>[A] |
|---|------------------|------------------------|------------------------|-----------------------|-----------------------|------------------------|-------------------------|--------------------------|-------------------------|---------------------------|------------------------|-----------------------|-------|-------|-----------------------|
| Y | ALM 400V         | 8.0                    | 44.0                   | 17.5                  | 400                   | 60.2                   | 1,750                   | 95                       | 38.0                    | 5,000                     | 52.0                   | 20                    | 0.878 | 0.780 | 8.8                   |
|   | BLM/SLM 400V     | 7.0                    | 45.0                   | 17.5                  | 348                   | 51.9                   | 1,500                   | 95                       | 38.0                    | 5,000                     | 52.0                   | 20                    | 0.867 | 0.790 | 8.8                   |
|   | ALM/BLM/SLM 480V | 9.0                    | 43.0                   | 17.0                  | 453                   | 68.5                   | 2,000                   | 95                       | 38.0                    | 5,000                     | 52.0                   | 20                    | 0.911 | 0.780 | 8.7                   |

Mechanical data

|                           |                                                                 |
|---------------------------|-----------------------------------------------------------------|
| Motor type                | Squirrel cage asynchronous motor                                |
| Shaft height              | 100                                                             |
| Cooling                   | Forced ventilation NDE -> DE                                    |
| Vibration severity grade  | A                                                               |
| Shaft and flange accuracy | N                                                               |
| Degree of protection      | IP55                                                            |
| Design acc. to Code I     | IM B5 (IM V1, IM V3)                                            |
| Temperature monitoring    | Pt1000 temperature sensor in the stator winding                 |
| Color                     | Standard (Anthracite RAL 7016)                                  |
| Type of the bearing       | Standard                                                        |
| Shaft end                 | Feather key with half key balancing                             |
| Encoder system            | Incremental encoder HTL 1024 S/R, max. encoder speed = 9000 rpm |

Physical constants

|                              |                       |
|------------------------------|-----------------------|
| Thermal time constant        | 20 min                |
| Moment of inertia with brake | 300 kgcm <sup>2</sup> |
| Weight with brake (approx.)  | 86 kg                 |

Connection

|                               |              |
|-------------------------------|--------------|
| Type of electrical connection | Terminal box |
| Position of the connection    | NDE top      |
| Power connection              | right        |
| Signal connection             | DE           |
| Terminal box designation      | gk813        |

Cooling data and sound pressure level

|                                                                                               |                     |
|-----------------------------------------------------------------------------------------------|---------------------|
| Airflow, min.                                                                                 | 0.04 m³/s           |
| Sound pressure level LpA(1m) motor + external fan operation 50 HZ rated load, tolerance + 3dB | 70 dB <sup>1)</sup> |
| Air discharge                                                                                 | axial               |
| Pressure drop                                                                                 | 110 Pa              |

Holding brake

|                                    |                             |
|------------------------------------|-----------------------------|
| Holding torque                     | 60 ... 150 Nm <sup>2)</sup> |
| Moment of inertia                  | 48 kgcm <sup>2</sup>        |
| Power supply voltage               | AC 230 V ± 10%              |
| Coil current                       | 1 A                         |
| Permissible brake work             | 7 kJ                        |
| Speed (Emergency Stop)             | 4,500 rpm                   |
| Number of emergency stops          | 2,000                       |
| Number of emergency stops per hour | 3                           |
| Opening time                       | 500 ms                      |
| Closing time                       | 60 ms                       |

External fan

Max. power consumption

|                           |        |
|---------------------------|--------|
| 3 AC 400 V / 50 Hz (±10%) | 0.12 A |
| 3 AC 400 V / 60 Hz (±10%) | 0.09 A |
| 3 AC 480 V / 60 Hz (±10%) | 0.12 A |

Special design

|     |                                                        |
|-----|--------------------------------------------------------|
| A12 | Additional PTC thermistor chain for alarm and tripping |
| U61 | 230 V AC holding brake with microswitch                |

<sup>1)</sup> at a rated frequency of 4 kHz and a speed range of up to 5000 rpm  
<sup>2)</sup> Holding torque [Nm]: On motors with shaft height 100 ... 160, the holding torque can be gradually set using an adjusting ring within the value range specified (factory setting 100 % of the possible holding torque). The dynamic braking torque is approx. 70 % of the set holding torque.