



Figure similar

Data sheet for SIMOTICS M-1PH8

Article No. : 1PH8165-6HF13-2AA2-Z  
U60

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 | l <sub>μ</sub><br>[A] |
|---|--------------|------------------------|------------------------|-----------------------|-----------------------|------------------------|-------------------------|--------------------------|-------------------------|---------------------------|------------------------|-----------------------|-------|-------|-----------------------|
| Y | ALM 400V     | 52.0                   | 285.0                  | 107.0                 | 401                   | 58.3                   | 1,750                   | 750                      | 250.0                   | 4,500                     | 290.0                  | 107                   | 0.950 | 0.741 | 0.0                   |
|   | BLM/SLM 400V | 45.0                   | 285.0                  | 107.0                 | 344                   | 50.0                   | 1,500                   | 750                      | 250.0                   | 4,500                     | 290.0                  | 107                   | 0.948 | 0.743 | 0.0                   |
|   | ALM 480V     | 66.0                   | 285.0                  | 107.0                 | 498                   | 73.3                   | 2,200                   | 750                      | 250.0                   | 4,500                     | 290.0                  | 107                   | 0.949 | 0.745 | 0.0                   |
|   | BLM/SLM 480V | 60.0                   | 285.0                  | 107.0                 | 448                   | 66.7                   | 2,000                   | 750                      | 250.0                   | 4,500                     | 290.0                  | 107                   | 0.947 | 0.753 | 0.0                   |

Mechanical data

|                           |                                                                 |
|---------------------------|-----------------------------------------------------------------|
| Motor type                | Reluctance efficiency                                           |
| Efficiency class          | IE4                                                             |
| Shaft height              | 160                                                             |
| Cooling                   | Forced ventilation NDE -> DE                                    |
| Vibration severity grade  | A                                                               |
| Shaft and flange accuracy | N                                                               |
| Degree of protection      | IP55                                                            |
| Design acc. to Code I     | IM B35 (IM V15, IM V35)                                         |
| 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        | 25 min                  |
| Moment of inertia with brake | 2,096 kgcm <sup>2</sup> |
| Weight with brake (approx.)  | 287 kg                  |

Connection

|                               |              |
|-------------------------------|--------------|
| Type of electrical connection | Terminal box |
| Position of the connection    | NDE top      |
| Power connection              | right        |
| Signal connection             | DE           |
| Terminal box designation      | gk874        |

Cooling data and sound pressure level

|                                                                                               |                        |
|-----------------------------------------------------------------------------------------------|------------------------|
| Airflow, min.                                                                                 | 0.16 m <sup>3</sup> /s |
| Sound pressure level LpA(1m) motor + external fan operation 50 HZ rated load, tolerance + 3dB | 73 dB <sup>1)</sup>    |
| Air discharge                                                                                 | axial                  |
| Pressure drop                                                                                 | 200 Pa                 |

Holding brake

|                                    |                              |
|------------------------------------|------------------------------|
| Holding torque                     | 280 ... 500 Nm <sup>2)</sup> |
| Moment of inertia                  | 266 kgcm <sup>2</sup>        |
| Power supply voltage               | AC 230 V ± 10%               |
| Coil current                       | 1.4 A                        |
| Permissible brake work             | 24 kJ                        |
| Speed (Emergency Stop)             | 3,100 rpm                    |
| Number of emergency stops          | 2,000                        |
| Number of emergency stops per hour | 3                            |
| Opening time                       | 750 ms                       |
| Closing time                       | 150 ms                       |

External fan

Max. power consumption

|                           |        |
|---------------------------|--------|
| 3 AC 400 V / 50 Hz (±10%) | 0.16 A |
| 3 AC 400 V / 60 Hz (±10%) | 0.21 A |
| 3 AC 480 V / 60 Hz (±10%) | 0.21 A |

Special design

U60 230 V AC holding brake

<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.