



Figure similar

Data sheet for SIMOTICS M-1PH8

Article No. : 1PH8168-2DF23-1BC1

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         | 94.0                   | 510.0                  | 164.0                 | 410                   | 117.0                  | 1,750                   | 1,280                    | 413.0                   | 4,000                     | 620.0                  | 179                   | 0.943 | 0.00  | 0.0                   |
|   | BLM/SLM 400V     | 84.0                   | 530.0                  | 169.0                 | 355                   | 100.0                  | 1,500                   | 1,280                    | 413.0                   | 4,000                     | 620.0                  | 179                   | 0.940 | 0.00  | 0.0                   |
|   | ALM/BLM/SLM 480V | 100.0                  | 480.0                  | 157.0                 | 465                   | 133.0                  | 2,000                   | 1,280                    | 413.0                   | 4,000                     | 620.0                  | 179                   | 0.946 | 0.00  | 0.0                   |

Mechanical data

|                           |                                                                                             |
|---------------------------|---------------------------------------------------------------------------------------------|
| Motor type                | Permanent-magnet synchronous motor                                                          |
| Shaft height              | 160                                                                                         |
| Cooling                   | Water cooling                                                                               |
| Vibration severity grade  | R/A                                                                                         |
| Shaft and flange accuracy | R                                                                                           |
| Degree of protection      | IP65                                                                                        |
| 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 with fixed bearing                                                                 |
| Shaft extension           | Feather key with full key balancing                                                         |
| Encoder system            | Incremental encoder 22 bit with commutation position 11 bit, max. encoder speed = 12000 rpm |

Physical constants

|                       |                         |
|-----------------------|-------------------------|
| Thermal time constant | 5 min                   |
| Moment of inertia     | 2,440 kgcm <sup>2</sup> |
| Weight (approx.)      | 279 kg                  |

Connection

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

Cooling data and sound pressure level

|                                                                |                     |
|----------------------------------------------------------------|---------------------|
| Flow rate, min.                                                | 15 l/min            |
| Sound pressure level LpA(1m) motor rated load, tolerance + 3dB | 69 dB <sup>1)</sup> |
| Pressure drop                                                  | 0.2 bar             |
| NDE thread connection                                          | 0.5 Inches          |

Cooling water specification

|                                 |             |
|---------------------------------|-------------|
| pH value                        | 6 ... 9     |
| Total hardness                  | 1.7 mmol/l  |
| Electrical conductivity         | 500 μS/cm   |
| Chloride ions                   | 40 mg/l     |
| Sulfate ions                    | 50 mg/l     |
| Nitrate ions                    | 50 mg/l     |
| Dissolved substances            | 340 mg/l    |
| Maximum particle size           | 100 μm      |
| Antifreeze/corrosion protection | 20 ... 30 % |

<sup>1)</sup> at a rated frequency of 4 kHz and a speed range of up to 5000 rpm