

Mod.4142-pm

Permanent magnet synchronous machine 12,7Nm, 1500rpm, 90% efficiency, 8poles rotor with surface mount magnet, 380Vac 3Phase.

- Wide speed range
 - Constant torque 15÷1500rpm
 - Rare-earth magnet
 - 8 poles construction, sinusoidal c.e.m.f.
 - Integrated PTC thermal protection
 - Sensorless, self-ventilated
 - Reduced sizes and weight
 - High efficiency, reduced losses
 - Quiet, high protection level
- Shaft height: 71mm
 - Shaft diameter: 19 mm
 - Shaft length: 40 mm
 - Total length: 250 mm
 - Weight: 6 kg

Accessories:

-Mod.4203-07

Torque & Speed meters

-Mod.4203-07-TT

Torque Transducer

-Mod.4203-07-TT

Load cell

-Mod.4185-O

Optical speed encoder 1PPR 12Vdc

-Mod.4185-S

Speed encoder 1024PPR HTL/TTL A+B+Z



THREE-PHASE PERMANENT MAGNET SYNCHRONOUS MACHINE (PMSM)

PMSM Machine can work as motor or as generator.

- Line voltage: 380volts AC
- Rotor: surface mount permanent magnets, (with 8 poles)
- Nominal power: 1,3kW
- Max current: 2,9A
- Max torque: 12,7 Nm
- Speed: 15÷1500rpm
- Nominal Speed: 1500rpm
- Nominal Frequency: 100Hz
- Peak current: 11A
- Rotor inertia: 8,5(kg cm²)
- Inductance: 23,4 mH
- Efficiency as motor: >87,8%(IE4)



- Constant torque 15÷1500rpm
- Protection against thermal overload.
- All connections on 4 mm safety sockets included thermal contact.
- Imprinted terminal boards with the synoptic.
- With coupling cog for easy coupling with other machines.
- Optional rail base t-top with anti-vibration rubber feet.
- As motors can only be operated in connection with a frequency inverter (VFD with PMSM sensorless control mode)
- Frequency inverter (VFD) included with motor

Didactical purpose

- Motor /Generator connection
- Typical machine data evaluation
- No-load test of the motor
- Test with two machines one as motor and one as generator /load

- Direct test with load/brake for electro-mechanical characteristic (torque, speed, input current, efficiency as function of the output power and speed)

