SPMD1424

01 / Product identity and control context

Inverter Power Module

Emerson SPMD1424 is a Control Techniques Unidrive SPM DC-input inverter power module for modular motor-drive systems. Its 400 V class stage provides 335 A Normal Duty output in a docked arrangement at 40°C and 3 kHz.

Key characteristics

Product type	DC-input inverter power module
Product series	Unidrive SPM, frame size 1
Normal Duty, docked	335 A at 40°C, 3 kHz
Internal brake transistor	Not fitted

Functional relationship



Power-stage identity

Match SPMD1424, its brake configuration and fitted control pod to the cabinet record.

Configuration boundary

Ratings apply to the SPMD1424 inverter stage. Docking, duty, temperature, switching frequency, altitude and parallel operation affect output; match the actual fitted control pod separately.

Product and installation enquiries

sales13@apterpower.com | +86 18030235313

Apply manufacturer instructions and approved site procedures.

SPMD1424

02 / Technical characteristics

Hardware and functional data

Product series	Unidrive SPM
Power-stage model	SPMD1424
Frame size	1
Drive voltage class	380-480 V AC ±10% system supply; inverter input is DC
Normal Duty, docked	335 A at 40°C, 3 kHz
Normal Duty, undocked	350 A at 35°C, 3 kHz

Interfaces and operating conditions

Normal Duty nominal motor power	185 kW docked / 200 kW undocked, at 400 V
Heavy Duty continuous output	290 A at 40°C, 3 kHz
Heavy Duty nominal motor power	160 kW at 400 V
Internal brake transistor	Not fitted
Fan supply	External 24 V DC
Parallel operation	Required output sharing chokes and additional current derating

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03 / Application and integration contexts

High-current motor drives

The docked Normal Duty configuration provides 335 A at 40°C and 3 kHz. Match the motor current and overload profile to the selected duty rating.

Undocked cabinet layouts

Independent mounting of the rectifier and inverter changes the thermal conditions. The 350 A Normal Duty value requires 35°C ambient and the specified switching frequency.

Electrical system

Confirm DC supply, motor current, the braking arrangement and external 24 V fan supply.

Constant-torque applications

The Heavy Duty motor-power basis is 160 kW at 400 V. Check low-speed cooling and the duration of starting or process overloads before selecting the final rating.

Coordinated parallel drives

Match the output sharing chokes, master/slave control connections and required current derating across the installation. The fitted pod determines each module control role.

Mounting and duty

Use 335 A Normal Duty docked at 40°C or 350 A undocked at 35°C, both at 3 kHz, subject to the remaining derating conditions.

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04 / Installation and release decisions

Identify the power input

SPMD is a DC-input inverter stage. Do not connect AC mains directly to its DC terminals; match the rectifier, DC bus and protection to the approved design.

Isolate every energy source

Use qualified personnel and approved isolation procedures. Account for the DC bus, external auxiliary supplies and regenerated energy; verify safe discharge before work.

Maintain cooling

Provide the external 24 V fan supply and unobstructed cooling paths. Cabinet temperature and switching frequency affect the permissible continuous current.

Respect the brake configuration

The internal brake transistor is not fitted; any braking or regenerative-energy path must use a separately engineered system arrangement. Do not infer included resistor hardware from the power-stage designation.

Preserve the control arrangement

Record the fitted pod, option modules, motor and encoder data before replacement. A slave pod does not provide the independent control interfaces of the master pod.

Validate parallel operation

Use matching power stages, the specified paralleling connections and output sharing chokes. Apply the additional current derating and test the completed drive system before release.

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05 / Lifecycle, evidence and related portfolio

Lifecycle status

The current manufacturing and service-support phase for this complete model has not been confirmed.

Supply boundary

Apter Power availability and dispatch are confirmed separately from the manufacturer lifecycle phase.

Technical basis

Control Techniques Unidrive SPM User Guide, 0471-0053-05, Issue 5.

Related product references

Emerson SPMD1423

Emerson SPMD1401

Emerson SPMD1404

Navigation only; no substitute or accessory compatibility is implied.

Offered-unit verification

Compare the complete label, connectors, mounting arrangement and applicable hardware/software revision. Confirm included components and accompanying documents in the quotation.

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