

Multi-axis Servo Amplifier S1800



Helping you build a better machine, **faster.**

Less is more

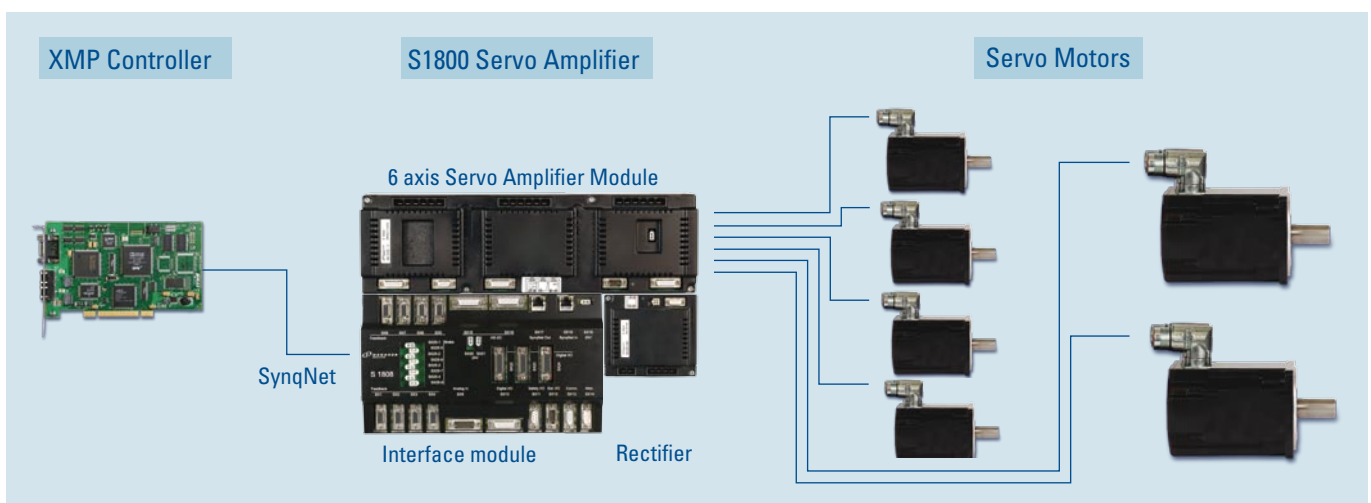
The S1800 Multi-axis Servo Amplifier is a **cost-effective** solution for multi-axis applications that demand **high reliability**. The family comprises a **broad range** of power sizes. The amplifiers are designed with an **innovative** packaging concept that permits building a 3 to 6 axes module. Each communication node can be extended up to 8 axes with single axis modules.

Combine this family with Danaher Motion SynqNet controllers, synchronous servomotors, gearboxes and other power transmission products and get a seamless motion control system from one single source.

For a system with up to 8 axes, this means

- 1 Power line connection
- 1 Communication connection
- 1 Enable connection
- 1 Shunt resistor connection
- Power sharing between axes

The drives are easy to assemble due to compact design, reduced number of interfaces and cabling needed. This provides exceptionally low machine lifetime costs.



S1800 Multi-axis Servo Amplifier family

The family consists of different modules to be combined into a system:

- Multi-axis Servo Amplifier modules
- Additional single axis Servo Amplifier modules
- Rectifier / Capacitor modules
- Interface module

The multi-axis module runs in torque mode and can control up to 2 additional axis modules.

The additional axis servo amplifier module contains only one axis and is controlled from the multi-axis module.

The rectifier and the capacitor modules generate the common DC-Bus for the total system. It will also take care of in-rush current limitation at start up and control of the shunt (regenerative/bleeder) resistor.

The Interface module takes care of all I/O and motor feedback in the node. It is the communication interface for the controller. There is a possibility to close the velocity loop locally in this unit.

Highlights

- Broad Power range 0,3 to 20 kW per axis.
- Very high reliability - 3 Mhours MTBF
- Operation directly from mains supply 230 VAC or 400 / 480 VAC
- Compact design for very small footprint system
Suitable for 200 mm deep cabinets
- Possibility to use external air for cooling
- High speed SynqNet communication
- Velocity or torque mode operation
- Fully digital model based software controller
- Extensive Fault Protection / Diagnostics
- Short Circuit Proof Design
- Isolated I/O, conforms to IEC 1131-2
- Feedback from resolver, comcoders or high resolution SinCos Encoders

Technical Data

The multi-axis servo amplifier module can be configured with up to 6 axes.

Each can have different power rating. The additional axis modules are single axis modules.

Below products are pre-defined

	Axis 1	Axis 2	Axis 3	Axis 4	Axis 5	Axis 6	
	Cont/Peak Current Arms	Cont/Peak Current Arms	Cont/Peak Current Arms	Cont/Peak Current Arms	Cont/Peak Current Arms	Cont/Peak Current Arms	Nominal Voltage 3-phase
M6_3B_3A	3 / 9	3 / 9	3 / 9	1 / 3	1 / 3	1 / 3	230
M6_3C_3B	6 / 18	6 / 18	6 / 18	3 / 9	3 / 9	3 / 9	230
M6_3D_3C	12 / 30	12 / 30	12 / 30	6 / 18	6 / 18	6 / 18	230
M6_3E_3D	24 / 48	24 / 48	24 / 48	12 / 30	12 / 30	12 / 30	230
M3_3E	24 / 48	24 / 48	24 / 48	-	-	-	230
H6_3C_3B	6 / 18	6 / 18	6 / 18	3 / 9	3 / 9	3 / 9	400/480
H6_3D_3C	12 / 30	12 / 30	12 / 30	6 / 18	6 / 18	6 / 18	400/480
H6_3E_3D	24 / 48	24 / 48	24 / 48	12 / 30	12 / 30	12 / 30	400/480
H3_3E	24 / 48	24 / 48	24 / 48	-	-	-	400/480
DC-Bus current Cont/Peak Arms							
M1_1C	6 / 18	-	-	-	-	-	230
M1_1D	12 / 30	-	-	-	-	-	230
M1_1E	24 / 48	-	-	-	-	-	230
H1_1C	6 / 18	-	-	-	-	-	400/480
H1_1D	12 / 30	-	-	-	-	-	400/480
H1_1E	24 / 48	-	-	-	-	-	400/480
RC1	7/25	-	-	-	-	-	230
R2+C2	32/103	-	-	-	-	-	230
R3+C3	32/98	-	-	-	-	-	400/480

I/O



- 1 Enable (SW enable for each axis)
- 1 Fault Relay (SW error for each axis)
- 8 High Speed Inputs
- 24 General Digital Inputs
- 32 General Digital Outputs
- 8 Brake Control
- 8 Thermal Sensor Input
- 8 General Analogue Inputs
- 4 Analogue Outputs for debug purpose
- 8 Feedback inputs
 - Resolver, Standard 2-pole (single speed) resolver
 - SinCos Encoder, BiSS
 - Comcoder, A quad B + Index with commutation signals

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