



SmartDrive

• DRIVES AND CONTROLS •



New Concept

SA46 is one of a range of new style of fully cased stepper control systems. The stand alone package houses standard drive and control modules powered by the integral power supply units. Developed primarily for use with SmartDrive controllers, the SA46 provides cost effective solutions to many single and multi-axis motion control systems.

Simplicity

For the system builder this configuration means a fast response to varied customer requirements with the minimum of backplane and connector panel parts and interconnection wiring. For the volume OEM the relative simplicity of the system construction leads to reduced costs compared with conventional 19" rack style construction. SA46 is ready to bolt directly into the machine.

Construction

SA46 is constructed in steel with a tough grey epoxy coat finish. The unit can be either floor or wall mounting using the multi function mounting brackets supplied. Careful design gives easy access to the user connector panel fitted with unplugging screw terminals, whilst ensuring that swarf and general debris cannot enter the case.

Applications

These include packaging machines, wire and blank material infeeders, multiple stop setting on guillotines and punchers, XY and XYZ positioning tables, and many other systems requiring one to five axis positioning integrated with sequential or interlocked machine control functions. Using multi drop RS485 and a SmartDrive controller several SA46 units can be distributed in one machine, or in separate machines, linked to a main controller; this is often more convenient than long cable runs to all the drives and controllers mounted in one control cabinet.

Expansion

Various expansion options enable your SA46 system to undertake additional machine tasks. Extra digital I/O can remove the need for a separate PLC, whilst analogue I/O enables joystick control and an inverter speed control output. Keypad displays provide information and prompts for parameters to be entered. Encoder position feedback gives confirmation nothing has prevented motion from occurring, and enables high speed position capture within 1µs.

SmartDrive SA46

Cost effective 1 to 5 axis control in a CE compliant housing

- Cost effective 1 to 5 Axis control
- Complete stand alone system
- Wide choice of drives and controllers
- Easy configured to your application
- Floor and wall mounting
- Uses standard range Eurocards
- Integral 600VA power supply
- Ideal for system builders
- CE Compliant

Mechanical

Weight 6.0 Kg (basic SA46 only)
 Overall dimensions for floor and wall mount (all mm):
 290 wide, 260 high, 250 deep overall
 Allow 20mm access in front to remove right angle IEC mains connector and 50mm above for motor and I/O connections.

Module width 3U x 46HP (9.2") total

Environment

RH 50% max non condensing
 Temp 0 to 40°C ambient with fan and vents unrestricted
 Vertical installation only recommended
 Protected against swarf when installed vertically
 Dust protection with filters fitted
 For use only in dry non corrosive conditions

Power Supply

Integral power supply with front mounted illuminated mains switch with a unfused IEC mains inlet and EMC filter.
 4 front visible LEDs indicate power supply status

Input

600VA Linear Version

115/230Vac ± 6%
 510VA continuous 600VA peak

1200VA SMPSU Version

90-132Vrms/180-264Vrms @ full load
 Frequency 47-63Hz
 Power Factor 0.67 @ 230Vrms typical
 Mains Fuse Rating T10AHBC Ceramic 20x5mm

Outputs

600VA Linear Version

5V dc 1.2A regulated and fused at 1.6A for controller(s)
 24V dc 0.8A and fused at 1.6A for drive(s) logic supply and external use
 85V dc 3.5A continuous, 4.5A peak, with motor regeneration power dump circuit; drive backplanes are individually fused

1200VA SMPSU Version

5V dc 1.5A
 24V dc 1.5A
 92V dc 8.15A (13A peak)
 Power 750W continuous, 1200W peak. Power supply will shut down if operating temperature is exceeded.

User Connections

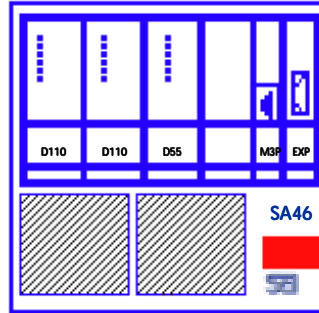
Unpluggable 0.2" pitch screw terminal blocks fitted depending on the drives and controller configuration.

Special Build Options

The standardised backplane interconnect system makes many other combinations possible. If the total width of modules is 46HP or less the combination is generally possible. Please call our Technical Sales Department for further information or to discuss your particular system application.

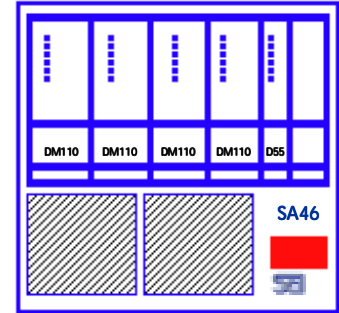
Configuration Examples

SA46/P31



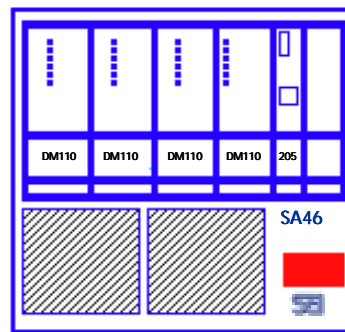
Three half step drives
 M3P position controller
 Encoder interface card

SA46/X50



Five drives (one 6HP)
 External control

SA46/C40



Four microstep drives
 Euro 205 vector controller

SA46/V30



Three microstep drives
 M3V vector controller

Special Build Options

Our backplane interconnect system makes many combinations possible. Please call our Technical Sales Department for further information or to discuss your particular system application.

Designed and built in the UK by

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