DAP Series
Digital AC-Powered Servo Drivers

- *User friendly*
- *AC power input*
- *Intuitive software GUI enables –fast and easy setup, configuration, and tuning*
- *Sophisticated and reliable control performance*

DAP31 Series

- Intelligent functionality
- Compact design
- Superior control performance, flexible, efficient, and reliable
- Higher dynamics and increased precision for automated applications
- Smart digital servo drive for brush, brushless and linear motor
- Integrated with fully digital motion controller
- Can be operated in standalone mode or in a multi-axis distributed network

Datasheet

Specifications \ Model	DAP31-10	DAP31-18
Dimension, mm	180 x 123 x 75	180 x 123 x 75
Weight, gm	1100	1100
Minimum AC supply voltage, Vac	60.0	60.0
Rated AC supply voltage, Vac	1 x 115, 1 x 230, 3 x 230	1 x 115, 1 x 230, 3 x 230
Maximum supply voltage, Vac	1 x 270 or 3 x 270	1 x 270 or 3 x 270
Maximum output power (from the drive), W	1370.0	2500.0
Efficiency at rated power, %	>93	>93
Auxiliary supply voltage, ext. Vdc	24 ±20%	24 ±20%
Auxiliary supply power, ext. VA	20.0	20.0
DC and trapezoidal commutation continuous RMS current limit, Ic, A	5.0	9.0
Sinusoidal commutation continuous RMS current limit, Ic, A	3.5	6.4
Peak current limit, RMS, A	2 x Ic	2 x Ic
Built-in shunt, peak power, KW	2.4	2.4
Current loop sampling rate, kHz	14	14

Hardware Interfaces

Specifications \ Model	DAP31-10	DAP31-18
Digital in / digital out / analog in	10 / 6 / 2	10 / 6 / 2
Feedback options	• Incremental Encoder (20MHz) • Analog SIN/COS Encoder (250kHz; x4096) • Digital Hall (2kHz) • Resolver (10-15 bits) • DC Tachometer (velocity feedback) • Analog Potentiometer (position feedback)	
Communications	RS232, CANOpen	

Control

Specifications \ Model	DAP31-10	DAP31-18
Command Modes	• Current/Torque • Velocity • Pulse and Direction • Software (Standalone)	
Protection and Faults	• Software error handling • Abort (hard stop & soft stop) • Status reporting • Protection against shorts, overheating, over/under voltage, velocity loss feedback, current limits, following error, etc.	
Programming Languages	High Level Script Language	

Sample Program

```
...
...
...
AC=60000;       'set acceleration
DC=60000;       'set deceleration
SP=30000;       'set speed

while(1)        'Loop forever, until user kill the program
  PA=10000;     'Set destination (absolute position)
  BG;           'Begin motion
  until(MS==0); 'Wait until motion is completed
  wait 500;     'Wait another 500 milliseconds

  PA=0;         'Set destination (absolute position)
  BG;           'Begin motion
  until(MS==0); 'Wait until motion is completed
  wait 500;     'Wait another 500 milliseconds
end

...
...
...
```

DAP32 Series

- Designed for brushless motor
- Panel control or via RS232
- Can be controlled in current, velocity or pulse and direction modes
- Dedicated I/O
- Using 5-digit LED display status monitoring
- Programmable by external controller

Datasheet

Specifications \ Model	DAP32-8	DAP32-11	DAP32-17
Dimension, mm	206 x 60 x 139	206 x 60 x 139	205 x 88.2 x 185.8
Minimum supply voltage, Vac	180 (Single-Phase)	180 (Single-Phase)	180 (Three-Phase)
Maximum supply voltage, Vac	240 (Single-Phase)	240 (Single-Phase)	240 (Three-Phase)
Auxiliary supply voltage, ext., Vdc	24	24	-
Continuous RMS current limit, Ic, A	4.2	5.7	8.5
Peak current limit, RMS, A	8.4	11.4	17.0
Feedback options	• Incremental Encoder		
Command modes	• Current / Torque (± 10V, 10-bit) • Speed (± 10V, 10-bit) • Position (Pulse/Direction or CW/CCW)		
Protection and faults	• Inhibit • Torque/Speed limit • Over-temperature, Over-current • Protection against under/over voltage, over load, encoder signal error, etc.		