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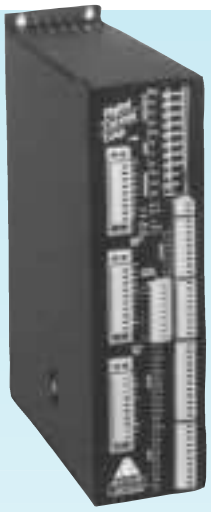
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Find the *Rockwell / Anorad M-Serv-MLH* at our website: *Click HERE*

# Digital Servo Controllers

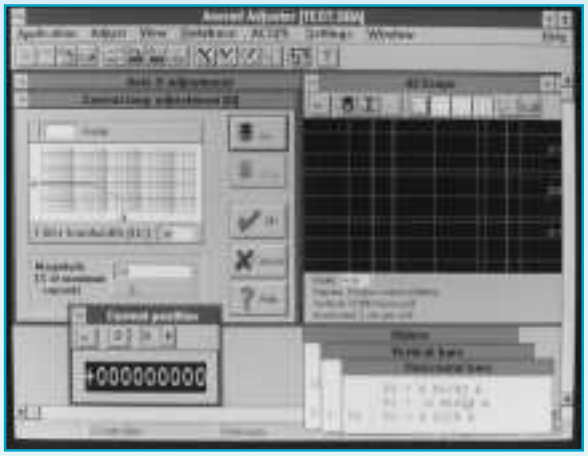
## D-Serv/ M-Serv





- Matched to all Anorad linear motors
- 1-3 axis digital servo controllers
- Integral digital amplifier and power supply
- Sinusoidal software commutation
- Graphical User Interface with Softscope
- 20 kHz servo update rate, per axis

Many other Anorad servo controllers are available, including bus based (PC & VME) and C-programmable. Anorad linear motors also work with many third party controls. Contact factory for details.



### Specifications

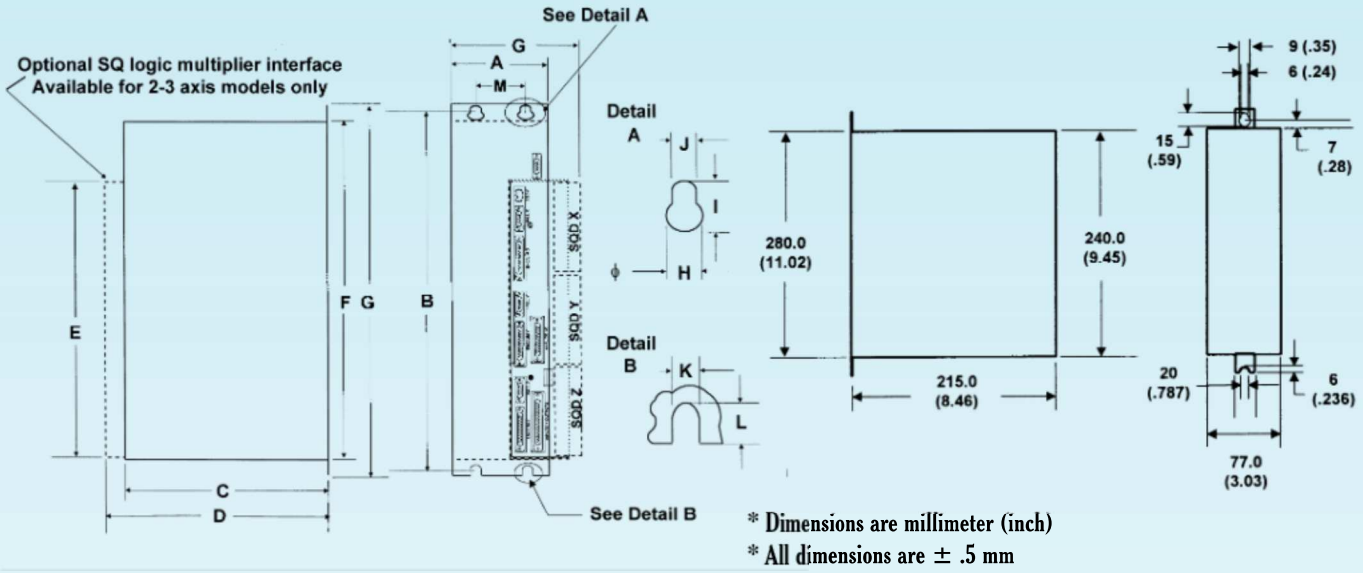
| Number of Axes | 1 | | | 2 | 3 |
|---|---|---|---|---|---|
| Model Number | M-Serv-MLH-1 | D-Serv-DLM-1 | D-Serv-DLH-1 | D-Serv-DLM-2 | D-Serv-DLM-3 |
| Order Number | 70641-A | 70782-A | 70642-A | 71028-A | 70855-A |
| Continuous Output Current (RMS) | 2.1 A | 7.1 A | 10.6 A | 4.6 A | 4.6 A |
| Peak Output Current (RMS) | 4.3 A | 14 A | 21 A | 9.2 A | 9.2 A |
| AC Input Voltage | 85 Vac - 240 Vac | 115 or 230 VAC | | | |
| | 47-63 Hz Single Phase | 47-63 Hz Single or 3 Phase | | | |
| Bus Voltage @ 230 VAC | 320 Vdc | | | | |
| Bus Voltage @ 115 VAC | 170 Vdc | | | | |
| Continuous Power | 25 W | 100 W | | | |
| Peak Power | 1K W | 1.5 KW | | | |
| Update Period | 50 µs (20kHz) | | | | |
| Current Resolution @ 2 kHz | 14 BITS | | | | |
| Velocity Resolution | 14 BITS | | | | |
| Current Loop Bandwidth | 2.5 kHz | | | | |



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## D-SERV

## M-SERV




* Dimensions are millimeter (inch)
* All dimensions are ± .5 mm

| ORDER NO. | Controller | # axes | A | B | C | D | E | F | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70782-A, 70642-A | D-Serv | 1 | 80 (3.15) | 338.5 (13.33) | 230 (9.06) | n/a | n/a | 302 (11.89) | 348 (13.70) | 8 (.32) | 11 (.43) | 5 (.20) | 5 (.20) | 8 (.32) | 50 (1.97) |
| 71028-A, 70855-A | D-Serv | 2 or 3 | 154 (6.06) | 429 (16.89) | 258 (10.16) | 281.94 (11.10) | 330.2 (13.00) | 404 (15.91) | 450 (17.72) | 12 (.47) | 18 (.71) | 7 (.28) | 7 (.20) | 18 (.71) | 100 (3.94) |
| 70641-A | M-Serv | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - |

## Controller

- Servo update rate: 20 kHz
- Servo algorithm: Second order filter, acceleration and velocity feedforward
- Position range: ± 999,999,999 counts
- Velocity range: ± 1 to 20,000,000 counts/sec (D-Serv)
  ± 1 to 10,000,000 counts/sec (M-Serv)
- Acceleration range: 1,000 to 127,000,000 counts/s$^2$

## Software Attributes

- Error-mapping, Real-time data collection, Position event generator (optional)
- Built-in motion modules: linear and repetitive point-to-point move, search for contact , jogging, master-slave, electronic cam, registration mark moves, index searching at any speed
- Conditional statements, special states and variables which reflect motion, arrays, variables, counters, nested subroutines, arithmetic and logical expressions
- Automatic execution routines, interactive data entry

## Communication/Inputs/Outputs

- Communication: RS232, RS422, up to 9,600 baud
- Encoder input: 3 channel differential line receiver
- Analog inputs: ± 10 V, 12 bit resolution
  (2) /axis D-Serv, (1) /axis M-Serv
- Analog outputs: (1) /axis ± 10V, 10 bit resolution
- Dedicated inputs: (2) limits, opto-isolated, 5V /axis, (1) drive fault
- Digital inputs: (8) single, (16) multi axis, opto-isolated D-Serv;
  (6) opto-isolated M-Serv
- Digital outputs: (8) single, (16) multi-axis, opto-isolated
  Supported by a built-in 24V isolated supply
  50 mA output sink capability D-Serv
  (2) opto isolated, CE floating M-Serv
- Brake driver: Built in 24V (0.75A) for brake/clutch control/axis (single axis D-Serv only)

## Protection, Diagnostics and Error Handling

- All errors handled by automatic routines
- Programmable software limits, stall and dynamic force limits
- Automatic drive shutdown when: emergency stop is activated, position feedback signal is lost, user-defined position error is exceeded, five volt overvoltage, and overheating
- Automatic warning if the axis moves away from its target by more than a pre-defined distance
- Host communication with check-sum validation
- Immediate status response to “begin motion” commands indicating either a successful execution or a reason for failure
- Immediate detailed error message for abnormal motion termination
- I/O status and memory integrity
- Built-in hardware watch-dog timer


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