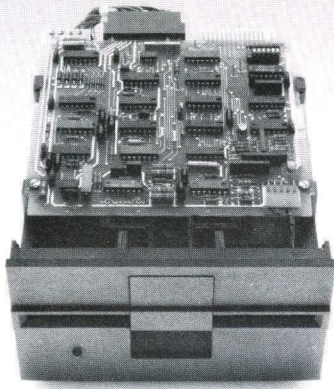


Controllers/Specifications

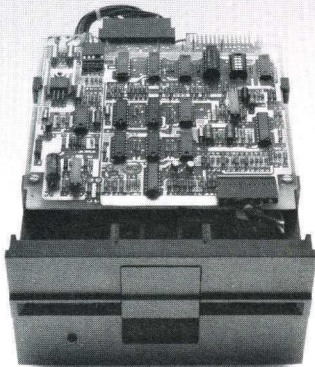
Standalone

Desktop



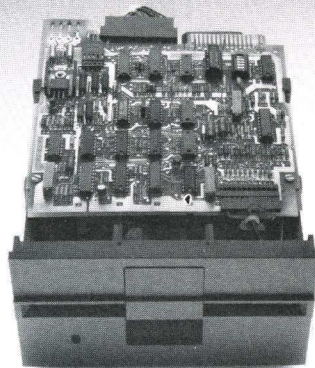
SA400 Minifloppy™ Disk Drive

The compact SA400 Minifloppy disk drive offers a reliable, low-cost, high-performance alternative for OEM data storage applications. The Minifloppy drive occupies one-fourth the space of Shugart's standard SA801 floppy disk drive, fitting comfortably in the space allocated for most cassette units. It's an ideal entry-level drive for desktop systems where cost is critical.



SA450 Double-Sided, Double-Density Minifloppy™

The SA450 Minifloppy disk drive is the same size as Shugart's SA400, but provides up to twice the on-line capacity. In addition, this enhanced double-headed version of the Minifloppy provides fast access time and low heat dissipation. Thus it's the drive of choice for systems requiring moderate amounts of storage in a low-cost package.



SA410/460 96-TPI Single/Double- sided Minifloppys™

The compact SA410 single-sided and SA460 double-sided 96-TPI Minifloppy disk drives offer a reliable, low-cost, high-performance solution for OEM data storage applications which require maximum capacity in a Minifloppy. The SA410/460 Minifloppy drives offer up to one megabyte of unformatted capacity. They're logical alternatives for today's small business systems and personal computers.



SA600 5.25-inch Fixed Disk Drive

The SA600 series of 5.25-inch fixed disk drives offer proven Winchester technology in a Minifloppy disk size package. Available in 3.33-, 6.66- and 10-Mbyte versions, the SA600 drives are the lowest cost per Mbyte Winchester drives in their capacity range. And their extra reliability features assure continued operation even when they're moved from one desktop to another.

Features

- Compact size and low weight
- Single- and double-density capability
- 125/250 Kbyte (unformatted) storage capacity
- 125/250 Kbits/second transfer rate
- Low heat dissipation
- Positive media insertion to avoid media damage
- Rapid start DC drive motor (eliminates AC requirements)
- Proprietary R/W head designed and manufactured by Shugart
- Write-protect circuitry
- Activity light

Key Specifications

| | |
|---|-----------------------|
| Capacity | Single/Double Density |
| Unformatted | |
| Per Disk | 125/250 kilobytes |
| Per Track | 3.1/6.2 kilobytes |
| Heads | 1 |
| Access Time | |
| Track-to-Track | 20 msec |
| Average (including settling) | 275 msec |
| Transfer Rate | 125/250 kilobits/sec |
| Recording Density (inside track) | 2,768/5,536 bpi |
| Flux Density | 5,536 fci |
| Media Size | 5.25 in. sq. envelope |
| Mechanical Dimensions (exclusive of front panel) | |
| Height: 3.25 in. (82.6 mm). Width: 5.75 in. (146.1 mm). | |
| Depth: 8.25 in. (209.6 mm). Weight: 3.0 lbs (1.36 kg). | |

Features

- Compact size and low weight
- SA400 I/O compatibility
- 250/500 Kbyte (unformatted) storage capacity
- 125/250 Kbits/second transfer rate
- Single- and double-density capability
- Low heat dissipation
- Positive media insertion to avoid media damage
- Rapid start DC drive motor (eliminates AC requirements)
- Bi-Compliant™ R/W head technology
- Reads and writes on any single- or double-sided mini-diskette
- Write-protect circuitry
- Activity light

Key Specifications

| | |
|---|-----------------------|
| Capacity | Single/Double Density |
| Unformatted | |
| Per Disk | 250/500 kilobytes |
| Per Surface | 125/250 kilobytes |
| Per Track | 3.1/6.2 kilobytes |
| Heads | 2 |
| Access Time | |
| Track-to-Track | 20 msec |
| Average (including settling) | 275 msec |
| Transfer Rate | 125/250 kilobits/sec |
| Recording Density (inside track) | 2,938/5,876 bpi |
| Flux Density | 5,876 fci |
| Media Size | 5.25 in. sq. envelope |
| Mechanical Dimensions (exclusive of front panel) | |
| Height: 3.25 in. (82.6 mm). Width: 5.75 in. (146.1 mm). | |
| Depth: 8.25 in. (209.6 mm). Weight: 3.0 lbs (1.36 kg). | |

Features

- Same compact size and weight as SA400/450
- SA400/450 I/O compatibility
- 0.5/1 Mbyte (unformatted) capacity
- 96 tracks per inch
- Precise HeliCam™ actuator
- Single- and double-density capability
- Low heat dissipation
- Positive media insertion to avoid media damage
- Rapid start DC drive motor (eliminates AC requirements)
- Bi-Compliant™ R/W head technology on the SA460
- Write-protect circuitry
- Activity light

Key Specifications

| | | |
|---|-----------------------|-----------------------|
| | SA410 | SA460 |
| Capacity | Single/Double Density | Single/Double Density |
| Unformatted | | |
| Per Disk | 250/500 kilobytes | 0.5/1 megabyte |
| Per Surface | 250/500 kilobytes | 250/500 kilobytes |
| Per Track | 3.1/6.2 kilobytes | 3.1/6.2 kilobytes |
| Heads | 1 | 2 |
| Access Time | | |
| Track-to-Track | 6 msec | 6 msec |
| Average (no settling) | 158 msec | 158 msec |
| Transfer Rate | 125/250 kilobits/sec | 125/250 kilobits/sec |
| Recording Density (inside track) | 2,788/5,576 bpi | 2,961/5,922 bpi |
| Flux Density | 5,576 fci | 5,922 fci |
| Media Size | 5.25 in. sq. envelope | |
| Mechanical Dimensions (exclusive of front panel) | | |
| Height: 3.25 in. (82.6 mm). Width: 5.75 in. (146.1 mm). | | |
| Depth: 8.25 in. (209.6 mm). Weight: 3.2 lbs (1.45 kg). | | |

Features

- Mounting identical to Shugart Minifloppy drives
- Brushless DC spindle motor
- Integral spindle and actuator lock
- Electronic damping
- Proprietary Fasflex IV™ band actuator
- Winchester head and media technology
- 5.0 Mbits/second transfer rate
- Simple interface similar to SA1000
- Same DC voltages as Shugart's Minifloppys
- Microprocessor-based electronics

Key Specifications

| | |
|---|--------------------------|
| Capacity | SA602/604/606 |
| Unformatted | |
| Per Drive | 3.33/6.66/10.0 megabytes |
| Per Surface | 1.66 megabytes |
| Per Track | 10.4 kilobytes |
| Heads | 2/4/6 |
| Access Time | |
| Track-to-Track | 3 msec |
| Average | 60 msec |
| Maximum | 145 msec |
| Settling Time | 15 msec |
| Transfer Rate | 5.0 megabits/sec |
| Recording Density | 7,900 bpi |
| Flux Density | 7,900 fci |
| Media Size | 5.25 in. |
| Mechanical Dimensions (exclusive of front panel) | |
| Height: 3.38 in. (85.9 mm). Width: 5.88 in. (149.4 mm). | |
| Depth: 8.19 in. (208.0 mm). Weight: 4.0 lbs (1.8 kg). | |

SA801/801R Floppy Disk Drives

Shugart's SA801 and SA801R 8-inch floppy disk drives provide both single- and double-density operation. The SA801R is mechanically and electrically the same as the SA801, except that it has a narrower chassis width plus side and bottom mounting posts. This facilitates installation of two drives side by side in a standard 19-inch RETMA rack. Recognized as industry standards, the SA800 series drives are ideal for applications demanding low cost, high reliability and removable media.

SA851/851R Double-Sided Floppy Disk Drives

The SA851 floppy disk drive is the enhanced double-headed version of the standard Shugart SA801 drive. The SA851 drive provides up to four times the on-line storage capacity, faster access time, and lower heat dissipation. It's the drive to choose for standalone systems that need moderate amounts of storage on removable media.

SA1000 Fixed Disk Drive

The SA1000 series of low-cost 8-inch fixed disk drives offers OEMs proven Winchester fixed disk technology in a package that is the same physical size as the Shugart 8-inch floppy disk drives. Their high capacity, reliability and performance make them well suited for small business systems and distributed processing applications.

SA4000/4100 Fixed Disk Drives

The SA4000 and SA4100 series of 14-inch fixed disk drives offer compact, low-cost storage, utilizing highly reliable Winchester head and media technology. They're the best alternative for applications requiring very large capacities at the lowest cost per megabyte—such as shared-resource small business systems.

Features

- Bottom and side mounting holes for ease of installation (SA801R)
- Single- and double-density capability
- Proprietary ceramic R/W head designed and manufactured by Shugart
- Side-by-side mounting in standard 19-inch RETMA rack (SA801R)
- Die cast cartridge guide and base plate
- Positive diskette clamping registration
- Pop-out diskette retrieval
- Flexible interface with multiplex capability
- Reliable LSI electronics

Key Specifications

| | |
|--|-----------------------|
| Capacity | Single/Double Density |
| Unformatted | |
| Per Disk | 400/800 kilobytes |
| Per Track | 5.2/10.4 kilobytes |
| Heads | 1 |
| Access Time | |
| Track-to-Track | 8 msec |
| Average (including settling) | 210 msec |
| Transfer Rate | 250/500 kilobits/sec |
| Recording Density (inside track) | 3,268/6,536 bpi |
| Flux Density | 6,536 fci |
| Media Size | 8 in. sq. envelope |
| Mechanical Dimensions (exclusive of front panel) | |
| Height: 4.62 in. (117 mm). Width: 9.50 in. (241 mm), 8.55 in. (217 mm) rack. | |
| Depth: 14.25 in. (362 mm). Weight: 13.0 lbs (5.91 kg). | |

Features

- Storage capacity of up to four times that of SA801 and other standard floppy drives
- Single- and double-density capability
- Same physical size as standard SA801 product family
- SA801 I/O compatibility
- Reads and writes data on both single-sided and double-sided diskettes
- Fast 3-msec track-to-track access
- Proprietary Fasflex™ actuator
- Bi-Compliant™ R/W head technology
- Write protect and programmable door lock are standard for improved data security

Key Specifications

| | |
|--|-----------------------|
| Capacity | Single/Double Density |
| Unformatted | |
| Per Disk | 800/1,600 kilobytes |
| Per Surface | 400/800 kilobytes |
| Per Track | 5.2/10.4 kilobytes |
| Heads | 2 |
| Access Time | |
| Track-to-Track | 3 msec |
| Average (including settling) | 91 msec |
| Transfer Rate | 250/500 kilobits/sec |
| Recording Density (inside track) | 3,408/6,816 bpi |
| Flux Density | 6,816 fci |
| Media Size | 8 in. sq. envelope |
| Mechanical Dimensions (exclusive of front panel) | |
| Height: 4.62 in. (117 mm). Width: 9.50 in. (241 mm), 8.55 in. (217 mm) rack. | |
| Depth: 14.25 in. (362 mm). Weight: 13.0 lbs (5.91 kg). | |

Features

- Mounting identical to either rack mounted or standard Shugart 8-inch floppy drives
- Lowest cost/megabyte 8-inch drive in its capacity range
- Winchester head and media technology
- Proprietary Fasflex III™ band actuator
- 4.34 Mbits/second transfer rate
- Simple interface similar to floppy
- Same DC voltages as Shugart's 8-inch floppys
- Optional SA1400 intelligent controller

Key Specifications

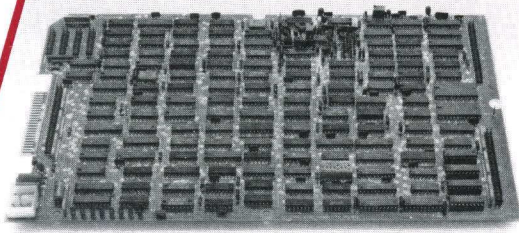
| | |
|--|----------------------|
| Capacity | SA1002/1004 |
| Unformatted | |
| Per Drive | 5.33/10.67 megabytes |
| Per Surface | 2.67 megabytes |
| Per Track | 10.4 kilobytes |
| Heads | 2/4 |
| Access Time | |
| Track-to-Track | 1 msec |
| Average | 52 msec |
| Maximum | 132 msec |
| Settling Time | 18 msec |
| Transfer Rate | 4.34 megabits/sec |
| Recording Density | 6,270 bpi |
| Flux Density | 6,270 fci |
| Media Size | 8 in. |
| Mechanical Dimensions | |
| Height: 4.62 in. (117.3 mm). Width: 8.55 in. (217.2 mm) rack, 9.50 in. (241.3 mm). | |
| Depth: 14.25 in. (362.0 mm). Weight: 17 lbs (7.7 kg). | |

Features

- Winchester head and media technology
- Compact size — 19-inch RETMA rack mountable using only 5.25 inches of panel space
- Low weight (35 and 40 lbs)
- Low heat dissipation
- 7.1 Mbits/second transfer rate
- Optional head-per-track storage — 144 Kbytes (unformatted)
- Proprietary Fasflex II™ band actuator
- Optional SA1400 intelligent controller

Key Specifications

| | |
|--|--------------------------|
| Capacity | SA4004/4008/4104 |
| Unformatted | |
| Per Drive | 14.5/29.0/58.0 megabytes |
| Per Surface | 7.3 megabytes |
| Per Track | 18 kilobytes |
| Heads | 4/8/16 |
| Access Time | |
| Track-to-Track | 1 msec |
| Average | 45 msec |
| Maximum | 120 msec |
| Settling Time | 20 msec |
| Transfer Rate | 7.1 megabits/sec |
| Recording Density | 5,534 bpi |
| Flux Density | 5,534 fci |
| Media Size | 14 in. |
| Mechanical Dimensions (exclusive of front panel) | |
| Height: 5.22 in. (132.6 mm). Width: 16.6 in. (421.6 mm). | |
| Depth: 21.9 in. (556.3 mm). Weight: 35 lbs (15.9 kg)/40 lbs (18.2 kg). | |



SA1400 Disk Drive Controllers

The SA1400 series of intelligent disk drive controllers offer micro-programmed control functions and data transfers between a host CPU and Shugart fixed disk drives, and floppy disk drives or 1/4-inch streaming tape cartridge drives.

| | SA801 Single/ Double Density | SA851 Single/ Double Density | SA400 Single/ Double Density | SA450 Single/ Double Density |
|----------------------------------|---|---|--|---|
| Performance | | | | |
| Capacity (Unformatted) | | | | |
| Per Drive | | | | |
| Per Disk | 400/800 Kbytes | 800/1,600 Kbytes | 125/250 Kbytes | 250/500 Kbytes |
| Per Surface | 400/800 Kbytes | 400/800 Kbytes | 125/250 Kbytes | 125/250 Kbytes |
| Capacity (Formatted) | | | | |
| Per Drive | | | | |
| Per Disk | 256/630 Kbytes | 606/1,212 Kbytes | 102.4/204.8 Kbytes | 204.8/409.6 Kbytes |
| Per Surface | 256/630 Kbytes | 303/606 Kbytes | 102.4/204.8 Kbytes | 102.4/204.8 Kbytes |
| Per Track | 3.3 Kbytes | 4.1/8.2 Kbytes | 2.6/5.1 Kbytes | 2.6/5.1 Kbytes |
| Per Sector | 128/256 bytes | 128/256 bytes | 256/512 bytes | 256/512 bytes |
| Sector/Track | 32/16/8 | 32 | 10 | 10 |
| Transfer Rate | 250/500 Kbits/sec | 250/500 Kbits/sec | 125/250 Kbits/sec | 125/250 Kbits/sec |
| Access Time | | | | |
| Track-to-Track | 8 msec | 3 msec | 20 msec | 20 msec |
| Average | 210 msec | 91 msec | 275 msec | 275 msec |
| Settling Time | 8 msec | 15 msec | 15 msec | 15 msec |
| Head Load Time | 35 msec | 50 msec | 50 msec | 50 msec |
| Average Latency | 83 msec | 83 msec | 100 msec | 100 msec |
| DC Motor Start Time | | | 200 msec | 200 msec |
| Functional | | | | |
| Rotational Speed | 360 rpm | 360 rpm | 300 rpm | 300 rpm |
| Recording Density (inside track) | 3,268/6,536 bpi | 3,408/6,816 bpi | 2,768/5,536 bpi | 2,938/5,876 bpi |
| Flux Density | 6,536 fci | 6,816 fci | 5,536 fci | 5,876 fci |
| Track Density | 48 tpi | 48 tpi | 48 tpi | 48 tpi |
| Cylinders | | | | |
| Tracks | 77 | 154 | 40 | 40 |
| R/W Heads | 1 | 2 | 1 | 2 |
| Disks | | | | |
| Encoding Method | FM/MFM/M ² FM | FM/MFM/M ² FM | FM/MFM | FM/MFM |
| Physical | | | | |
| Environmental Limits | | | | |
| Ambient Temperature | | | 40°F to 115°F (4.4°C to 46.1°C) | |
| Relative Humidity | | | 20% to 80% | |
| Maximum Wet Bulb | | | 85°F non-condensing (29°C) | |
| AC Power Requirements | | | | |
| | | | 50/60 Hz ±0.5 Hz | |
| | | | 110/115 VAC Installations = 85-127V at 0.3A typical | |
| | | | 200/230 VAC Installations = 170-253V at 0.2A typical | |
| DC Voltage Requirements | | | | |
| | +24 VDC ±5%, 1.3A typical | +24 VDC ±10%, 0.9A typical | +12 VDC ±5%, 0.9A typical | +12 VDC ±5%, 0.9A typical |
| | +5 VDC ±5%, 0.8A typical | +5 VDC ±5%, 1.0A typical | +5 VDC ±5%, 0.5A typical | +5 VDC ±5%, 0.5A typical |
| Mechanical Dimensions | | | | |
| Height | 4.62 in. (117 mm) | 4.62 in. (117 mm) | 3.25 in. (82.6 mm) | 3.25 in. (82.6 mm) |
| Width | 8.55 in. (217 mm) rack 9.50 in. (241 mm) | 8.55 in. (217 mm) rack 9.50 in. (241 mm) | 5.75 in. (146.1 mm) | 5.75 in. (146.1 mm) |
| Depth | 14.25 in. (362 mm) | 14.25 in. (362 mm) | 8.25 in. (209.6 mm) | 8.25 in. (209.6 mm) |
| Weight | 13 lbs (5.9 kg) | 13 lbs (5.9 kg) | 3 lbs (1.36 kg) | 3 lbs (1.36 kg) |
| Heat Dissipation | | | | |
| | 271 BTU/hr (80W) typical | 204 BTU/hr (60W) | 45 BTU/hr (13.3W) cont. 25 BTU/hr (7.3W) standby | 45 BTU/hr (13.3W) cont. 25 BTU/hr (7.3W) standby |
| Reliability | | | | |
| MTBF | 8,000 POH under typical usage | 8,000 POH under typical usage | 8,000 POH under typical usage | 8,000 POH under typical usage |
| PM | 12 months | 12 months | Not required | Not required |
| MTTR | 30 minutes | 30 minutes | 30 minutes | 30 minutes |
| Component Life | 5 years | 5 years | 5 years | 5 years |
| Error Rates | | | | |
| Soft Read | 1 per 10 ⁹ bits read | 1 per 10 ⁹ bits read | 1 per 10 ⁹ bits read | 1 per 10 ⁹ bits read |
| Hard Read | 1 per 10 ¹² bits read | 1 per 10 ¹² bits read | 1 per 10 ¹² bits read | 1 per 10 ¹² bits read |
| Seek Errors | 1 per 10 ⁶ seeks | 1 per 10 ⁶ seeks | 1 per 10 ⁶ seeks | 1 per 10 ⁶ seeks |

Features

- Controls up to four drives of:
 - a) SA600 fixed and SA410/460 Minifloppy
 - b) SA1000 fixed and SA801/851 floppy or 1/4-inch streaming tape cartridge
 - c) SA4000/4100 fixed and SA801/851 floppy or 1/4-inch streaming tape cartridge
- Overlapped seek and implied seek with position verify
- Automatic seek and verify
- Automatic switching of head and cylinder
- Data error sensing and autonomous correction
- IBM-compatible track formats available for the floppys
- Sector buffer(s) and sector interleaving
- Integral data separator(s)
- 256-byte sectors standard for fixed disks
- Single backup command for tape in streaming mode

Key Specifications

| | |
|---|--|
| Controller Power | +5V @ 4.6 Amps -5V @ 500 mA +24V @ 100 mA |
| Operating Temperature | 32°F to 122°F (0°C to 50°C) |
| Fixed Disk Capacity (Formatted—256 byte sectors) | SA1002 4.2 megabytes (max.) SA1004 8.4 megabytes (max.) SA4004 12.4 megabytes (max.) SA4008 24.8 megabytes (max.) SA4104 49.6 megabytes (max.) SA602 2.6 megabytes (max.) SA604 5.2 megabytes (max.) SA606 7.8 megabytes (max.) |
| Mechanical Dimensions | 8.25 in. x 13.70 in. |

| SA410 Single/ Double Density | SA460 Single/ Double Density | SA4004/ 4008/4104* | SA1002/1004 | SA602/604/606 |
|--|--|---|--|---|
| 250/500 Kbytes 250/500 Kbytes | 0.5/1 Mbyte 250/500 Kbytes | 14.5/29/58* Mbytes 14.5 Mbytes 7.3 Mbytes | 5.33/10.67 Mbytes 5.33 Mbytes 2.67 Mbytes | 3.33/6.66/10.0 Mbytes 3.33 Mbytes 1.66 Mbytes |
| 204.8/409.6 Kbytes 204.8/409.6 Kbytes 2.56/5.12 Kbytes 256/512 bytes 10 | 409.6/819.2 Kbytes 204.8/409.6 Kbytes 2.56/5.12 Kbytes 256/512 bytes 10 | 12.4/24.8/49.6* Mbytes 12.4 Mbytes 6.2 Mbytes 15.4 Kbytes 256 bytes 60 | 4.2/8.4 Mbytes 4.2 Mbytes 2.1 Mbytes 8.2 Kbytes 256 bytes 32 | 2.6/5.2/7.8 Mbytes 2.6 Mbytes 1.3 Mbytes 8.2 Kbytes 256 bytes 32 |
| 125/250 Kbits/sec | 125/250 Kbits/sec | 7.1 Mbits/sec | 4.34 Mbits/sec | 5.0 Mbits/sec |
| 6 msec 158 msec 15 msec | 6 msec 158 msec 15 msec | 1 msec 45 msec 20 msec | 1 msec 52 msec 18 msec | 3 msec 60 msec 15 msec |
| 100 msec 200 msec | 100 msec 200 msec | 10.1 msec | 9.6 msec | 8.33 msec |
| 300 rpm 2,788/5,576 bpi 5,576 fci 96 tpi | 300 rpm 2,961/5,922 bpi 5,922 fci 96 tpi | 2,964 rpm 5,534 bpi 5,534 fci 172 tpi 202 | 3,125 rpm 6,270 bpi 6,270 fci 172 tpi 256 | 3,600 rpm 7,900 bpi 7,900 fci 256 tpi 160 |
| 80 1 | 80 2 | 808/1,616/3,232* 4/8/16* 1/2/4* | 512/1,024 2/4 1/2 | 320/640/960 2/4/6 1/2/3 |
| FM/MFM | FM/MFM | MFM | MFM | MFM |
| 40°F to 115°F (4.4°C to 46.1°C) 20% to 80% 78°F non-condensing (25.6°C) | | 50°F to 105°F (10°C to 41°C) 8% to 80% 78°F non-condensing (25.6°C) | 50°F to 115°F (10°C to 46°C) 8% to 80% 78°F non-condensing (25.6°C) | 50°F to 115°F (10°C to 46°C) 8% to 80% 78°F non-condensing (25.6°C) |
| | | 50/60 Hz ±0.5 Hz 100/115 VAC Installations 90-127V at 1.5A/2.5A* typical 200/230 VAC Installations 180-253V at 0.8A/1.4A* typical | 50/60 Hz ±0.5 Hz 100/115 VAC Installations 90-127V at 1.1A typical 200/230 VAC Installations 180-253V at 0.6A typical | |
| +12 VDC ±5%, 1.2A typical | +12 VDC ±5%, 1.2A typical | +24 VDC ±10%, 3.0A typical During stepping* (0.1A steady state)* +5 VDC ±5%, 2.5A/5A* typical -7 to -16 VDC (Option -5 VDC ±5%) 0.15A/0.2A* typical | +24 VDC ±10%, 2.8A typical During stepping (0.2A typical steady state) +5 VDC ±5%, 3.6A typical -5 VDC ±5% (Option -7 to -16 VDC) 0.2A typical | +5 VDC ±5%, 1.6A typical 2.0A maximum +12 VDC ±10%, 1.8A typical (4.0A starting) |
| 3.25 in. (82.6 mm) 5.75 in. (146.1 mm) | 3.25 in. (82.6 mm) 5.75 in. (146.1 mm) | 5.22 in. (132.6 mm) 16.6 in. (421.6 mm) | 4.62 in. (117 mm) 8.55 in. (217 mm) rack 9.50 in. (241 mm) 14.25 in. (362 mm) 17 lbs (7.7 kg) | 3.38 in. (85.9 mm) 5.88 in. (149.4 mm) |
| 8.25 in. (209.6 mm) 3.2 lbs (1.45 kg) | 8.25 in. (209.6 mm) 3.2 lbs (1.45 kg) | 21.9 in. (556.3 mm) 35 lbs (15.9 kg)/40 lbs (18.2 kg)* | | 8.19 in. (208.0 mm) 4 lbs (1.8 kg) |
| 58 BTU/hr (16.9W) cont. 43 BTU/hr (12.7W) standby | 58 BTU/hr (16.9W) cont. 43 BTU/hr (12.7W) standby | 800 BTU/hr (234W) | 477 BTU/hr (140W) maximum 341 BTU/hr (100W) typical | 100 BTU/hr (30W) typical |
| 8,000 POH under typical usage | 8,000 POH under typical usage | 8,000 POH under typical usage | 8,000 POH under typical usage | 8,000 POH under typical usage |
| Not required | Not required | Not required | Not required | Not required |
| 30 minutes 5 years | 30 minutes 5 years | 30 minutes 5 years | 30 minutes 5 years | 30 minutes 5 years |
| 1 per 10 ⁹ bits read 1 per 10 ¹² bits read 1 per 10 ⁶ seeks | 1 per 10 ⁹ bits read 1 per 10 ¹² bits read 1 per 10 ⁶ seeks | 1 per 10 ¹⁰ bits read 1 per 10 ¹² bits read 1 per 10 ⁶ seeks | 1 per 10 ¹⁰ bits read 1 per 10 ¹² bits read 1 per 10 ⁶ seeks | 1 per 10 ¹⁰ bits read 1 per 10 ¹² bits read 1 per 10 ⁶ seeks |

*Denotes unique SA4104 specifications.

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