

Glentek's Alpha Series Digital PWM Servo Drives offer high performance DSP control of brushless (standard servo and highspeed spindle), brush type, rotary, linear, voice coil and AC induction motors. SMB/SMC9430 drives are designed for use with quadrature encoder feedback. For resolver feedback use the SMB/SMC9230. SMB/SMC9430 drives are offered as an AC powered (stand alone) package. These drives incorporate Field Oriented Control (FOC) and Space Vector Modulation (SVM) algorithms which provide optimum control that enable motors to run cooler and at higher velocities. Set-up, tuning and system diagnostics is accomplished using MotionMaestro (Glentek's Windows-based software).

| Model | Logic Power |
|-------|-----------------------------|
| SMB | Bus Power Logic |
| SMC | 24 VDC External Logic Power |

| | | | ELECTRICAL | RATINGS | | | |
|--------------------|---------|--------------------|-------------|-------------|----------------------------------|--------------------|------------|
| Model Number | Input ' | Voltage | Continuous | Peak | Available Package Configurations | | |
| Model Number | VDC | VAC | Current (A) | Current (A) | Module | Stand Alone | Multi-Axis |
| SMB9430 SMC9430 | N/A | 110-130 208-240 | 30 | 60 | | • | |

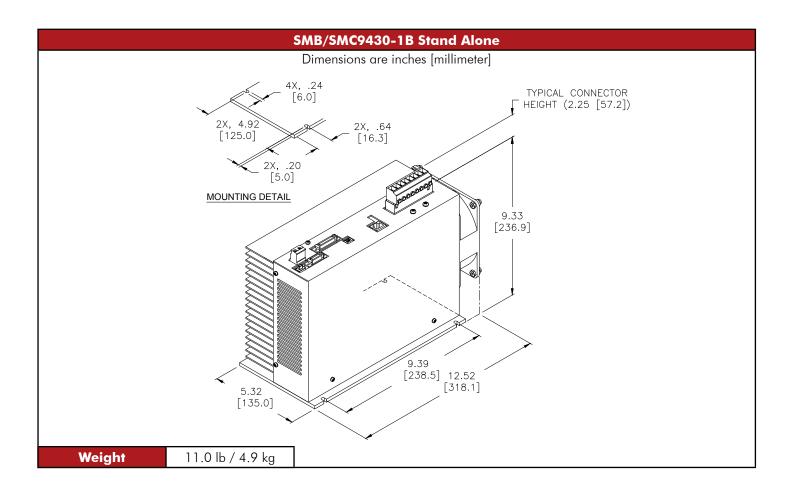
| Command/Control Modes |
|--|
| +/-10 VDC typical for current (torque) or velocity (RPM) |
| Pulse (step) and direction |
| Encoder follower |
| External Sine commutation (2-phase current mode) |
| RS-232 |
| PWM for current (torque) or velocity (RPM) |
| Camming/Gearing |
| Feedback |
| Incremental quadrature encoder |
| Digital Hall sensors or commutation tracks from encoder |
| Analog tachometer |
| I/O |
| Dedicated I/O: Analog signal command, +/- limits, inhibit/enable, fault, |
| reset, motor temperature, encoder and step & direction |
| Programmable analog out: 1 12-bit or optional 2 16-bit |
| General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V |
| |

FEATURES

| FOC All Alpha Series employ Field Oriented Control method which allows accurate control in both stady states or transient operation, and optimal orientation of the magnetic field. Space Vector Glanak's advanced adjourthms allow for maximum utilization of the DC bus voltage while generating minimum harmanic distantion of the currents in the winding of 3-phase AC motor. Current loop bandwidths up to 3 kHz. Digital current loops All parameters at digitaly. No potentioneates as digital, DSP control for the ulimate in high performance. Parameter is filtering 0 suphases AC motor. Smart-Comm Eliminates the need for Hall sensor or commutation tracks for many applications. Initialization Plog and Play for all types of three phase brushless motors. Provides control adjourithm vill automatically find and dign the motor phases to allow for the most optimized smachness and efficient commutation. Sinusoidal commutation For the ulimate in efficiency and smooth motion, commutates from alumate any resolution linear, rotary encoder, or Hall sensors only. Fault protection Short from output to autout, short form output to ground, amplifier tWS ower current, drive undar/over voltage, amplifier over temperature, motor over temperature, and vicked wave current, drive undar/over voltage, amplifier over temperature, motor over temperature, and whole with a window and the drive can switch between any mode of operation on-the-fly. That is, the drive can switch between any mode of operation on-the-fly. That is, the drive can switch between any mode of operation on-the-fly. That is, the drive can switch between any mode of operation on-the-fly. That is, the drive can switch between any mo | FOC | Performance |
|---|--|--|
| Space Vector steady state or transact operation, and optimal operation, of the DC bus voltage while generating minimum harmonic distortion of the currents in the winding of 3-phase AC motor. Digital current loops Current loop bandwidths up to 3 kHz. All parametric filtering Provides cantel engineers advanced filtering to eliminate unwanted system mechanical esonance. Simur-Comm Filtering to eliminate unwanted system mechanical esonance. Simur-Comm Filtering to eliminate unwanted system mechanical esonance. Simusoidal commutation Filtering to eliminate unwanted system mechanical esonance. Simusoidal commutation Filtering to eliminate unwanted system mechanical esonance. Simusoidal commutation Filtering to elimicate and align the motor phases to ado on the motor optimized monothes and eligitien commutation. Sinusoidal commutation For the ulimotie in efficiency and smooth motion, commutation and elimicate motor phases to evolve, motor objects on optimized monothes and elimicate commutation. Fault protection Short from output to ovalculy control, commutation from output to provide some control. Short from output to ovalculy control, commutation from output to position to repaint to current (position to repaint to current (position to previous programming experimecre required. This softwares. Software configurable Shirt fromoutput to avalculy (previde | FUL | |
| Modulation generating minimum hormonic distortion of the currents in the winding of 3-phase AC motor. Digital current loops Current loops bandwidths up to 3 k thz. Digital procession All parameters set digitally. No potentioneders to adjust, DSP control for the ultimate in high performance. Parametric filtering Provides control engineers advanced filtering to eliminate unwarded system mechanical resonance. Bindi Station Eliminates the need for Hall sensor or commutation tracks for many applications. Auto Phase Advance For the differ of the differ on advanced filtering to advance to differ of anony advance on advance on advance on provides control engineers the ability to connect any motor to the drive's motor outputs. The drives smoot adjoint on commutation. Fault protection For the ultimate in efficiency and smooth motion, commutates from almost any resolution interar, torary encoder, or Hall sensors only. Fault protection Short from output to cuput, short from output to ground, amplifier RMS over current, drive under/over voltage, amplifier over temperature, motor over temperature. This faoture allows the drive so which bekeen any mode of poreation on the-fly. That is, the drive can switch bekeen any mode of poreation on the-fly. That is, the drive can switch bekeen any mode of poreation on the-fly. That is, the drive available upon request. Please contect Genetic applications engineers for asistance. Software configurable Short more available upon request. Please contect Genetic applications engineers for asistance. </th <th></th> <th></th> | | |
| Digital current loops Current loops Current loop bandwidths up to 3 kttz. Parametric filtering Provides control engineers advanced filtering to eliminate unwanted system mechanical resonance. Parametric filtering Provides control engineers advanced filtering to eliminate unwanted system mechanical resonance. Auto Phase Advance Eliminates the need for Hull sensor or commutation tracks for many applications. Sinusoidal commutation Fug and Play for all types of three phase brushless motors. Provides control engineers the ability to connect any motor to the drive's motor adjustit. The drives smort adjustith will automatically find and align the motor phases to allow for the most aphimsed smoothness and fiftient commutation. For the ultimate in fiftiency and smooth motion, commutates from almost any resolution linear, rotary encoder, or Hall sensors only. Fault protection Short from output to output, short from output to ground, amplifier RMS over current, drive under/over voltage, amplifier over temperature, motor over temperature. On-the-fly mode switch between current to velocity for velocity to current to, current to position to row witch deveen any mode of operation on the-fly. That is, the drive can switch between current to velocity for velocity drive discustes of set-up, monitoring and turing with and request. Plaes control control engineers in solutance. Software configurable Set MV TWM standard. Silent operation +/10 VDC for current (forque) or velocity (RPM), pulse (step) and direction, encoder follower, extend line dependent]. <tr< th=""><th></th><th></th></tr<> | | |
| Digitally tuned All parameters set digitally. No potentionneers to adjus. DSP control for the dimote in high performance. Barametric filtering Provides control engineers advanced filtering to eliminate unwanted system mechanical resonance. Simulation Eliminates the need for Hall sensor or commutation tracks for many applications. Auto Phase Advance Eliminates the need for Hall sensor on outputs. The drives smoot logarithm will outomatically find and dign the motor phases to allow for the most ophinized smoothness and efficient commutation. Sinusoidal commutation For the ultimate in efficiency and smooth motion, commutates from almost any resolution linear, rotary encoder, or Hall sensor only. Fault protection Short fram autput to output, short from output to ground, amplifier MRS over current, drive under/over vollage, amplifier over temperature, motor over temperature. On-the-fly mode Current1, and velocity to position (or position to velocity) while the motor is in motion. This feature is available upon request. Please contact Clentek suplication engineers for assistance. Software configurable Software for current to velocity (RPM), pulse (step) and direction, encoder followar, external velocity (RPM), and comming/gearing. Software configurable Rob Commutation (2-phase current mode), RS-232, RS-485, PWM for current (forque) or velocity (RPM), pulse (step) and direction, encoder followar, external Sine commutation (2-phase current mode), RS-232, RS-485, PWM for current (forque) or velocity (RPM), and camming/gearing. So | | |
| Parametric filtering Smart-Commond/control Provides control engineers advanced filtering to eliminate unwanted system mechanical resonance. Smart-Commond/control Eliminates the need for Hall sensor or commutation tracks for many applications. Auto Phase Advance Plug and Play for all types of three phase brushless motors. Provides control engineers the ability to connect any motor to the drive's motor outputs. The drives smart algorithm will outomatically find and align the motor phases to allew for the most optimized smoothness and efficient commutation. For the ultimate in efficiency and smooth motion, commutates from elmost any resolution linear, rotary encoder, or Hall sensors only. Fault protection Short from output to optivel, short from output to ground, amplifier RMS over current, drive under/over voltage, amplifier over temperature, motor over temperature. This feature allows the drive to switch between any mode of operation on-the-fly. That is, the drive switching On-the-fly mode switching Clientek's Windows" based MotionAvaestro® software provides ease of set-up, monitoring and tuning with no previous programming experience required. This software is Windows" 95/98/2000//P, NT, Vista, 7, and 8 compatible. Software configurable Z5 ktri PVM standard. +/-10 VDC for current (forque) or velocity (RPM), pulse (step) and direction, encoder follower, external Sine commutation (2-phase current mode), RS-232, RS-485, PVM for current (forque or velocity (RPM), and camming/gening. RoHS compliance RoHS compliance optional. Connectivity RoHS compliance optional. Connectivity Accepts nominal encoder signals up to | | |
| Smart-Comm Initialization Eliminates the need for Hall sensor or commutation tracks for many applications. Auto Phase Advance Plug and Play for all types of three phase bushless motors. Provides control engineers the ability to connect any motor to the drive's motor outputs. The drives smart algorithm will outomatically find and align the motor phases to allow for the most optimized smoothness and efficient commutation. Sinusoidal commutation For the ultimate in efficiency and smooth motion, commutates from almost any resolution linear, rotary encoder, or Hall sensors only. Fault protection Short from output to output, short from output to ground, amplifier RMS over current, drive under/over vallage, amplifier over temperature, motor over temperature on the-fly mode On-the-fly mode Coursell, and velocity to position for position to velocity while the motor is in motion. This feature is available upon request. Please contact Glentek application engineers for assistance. Software configurable Command/control 25 kHz PWN standard. Silent operation 25 kHz PWN standard. 2 kHz PWN standard. Command/control 24 kH2 AVN standard. 2 standard PWN standard. Regulatory Regulatory Regulatory RoHS compliance RoHS compliance optional. Feedback Lineoder feedback Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). | | |
| Auto Phase Advance Plug and Play for all types of three phase brushless motors. Provides control engineers the ability to connect any motor to the drive's motor outputs. The drives sum algorithm will automatically find and align the motor phases to allow for the most optimized smoothness and efficient communication. For the ultimate in efficiency and smooth motion, commutates from almost any resolution linear, rotary encoder, or Hall sensors only. Fault protection Short from output to output, short from output to ground, amplifier RMS over current, drive under/over voltage, amplifier over temperature, motor over temperature. This feature allows the drive to switch between any mode of operation on-the-fly. That is, the drive can switch between current to velocity for velocity to current), corrent to position to second while the motor is in motion. This feature is available upon request. Please context Glenetk opplication engineers for assistance. Glenetk's Windows''' based MotonMasstro® oothware provides ease of set-up, monitoring and tuning with no previous programming experience required. This software is Windows'' 95/98/2000/XB, NI, Vista, 7, and 8 compatible. Software configurable Software (orter) (RPM), and camming/gearing. Software control RoHS compliance optional. Commend/control RoHS compliance optional. RoHS compliance RoHS compliance optional. RoHS compliance Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is sposible, but is system dependent). RoHS compliance Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is spossible, but is system dependent). <th></th> <th></th> | | |
| Auto Phase Advance connect any motor to the drive's motor outputs. The drives smort algorithm will automatically find and align the motor phases to allow for the most optimized smoothness and efficient commutation. For the ultimate in efficiency and smooth motion, commutates from almost any resolution linear, rotary encoder, or Hall sensors only. Fault protection Short from output to output, short from output to ground, amplifier RMS over current, drive under/over voltage, amplifier over temperature, motor over temperature. On-the-fly mode switching This feature allows the drive to switch between any mode of operation on-the-fly. That is, the drive can switch between current to velocity (or velocity to current), current to position to current), and velocity to position (or position to current), current to position to current) and velocity to position (or position to savistance. Software configurable Clentek's Windows " based Motion/Maestro® software provides ease of set-up, monitoring and tuning with no previous programming experience required. This software is Windows " 95/99/2000/XP. NT, Visto, 7, and 8 compatible. Silent operation 25 kHz PVM standard. Command/control Modes RoHS compliance RoHS compliance RoHS compliance optional. RoS-232 or RS-485 High speed (115.2K baud) serial communication interface for setup and tuning and diagnostics. Note: RS-485 is optional. Peedback Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, direction. Programmable anolog out: 112-bit or optional 2 16-bit. General purpose relay: m | Initialization | |
| Sindsolud commutation linear, rotary encoder, or Hall sensors only. Fault protection Short from output to output, short from output to ground, amplifier RMS over current, drive under/over voltage, amplifier over temperature, motor over temperature. On-the-fly mode This feature allows the drive to switch between any mode of operation on-the-fly. That is, the drive to aswitch between current to velocity (or velocity to current), current to position to solution. This feature is available upon request. Please contact Glentek application engineers for assistance. Software configurable Glentek's Windows TM based MotionMastro® Software provides case of set-up, monitoring and troing with no previous programming experience required. This software is Windows TM 95/98/2000/XP, NT, Vista, 7, and 8 compatible. Silent operation 25 kHz PVM standard. Command/control +/-10 VDC for current (torque) or velocity (RPM), pulse (step) and direction, encoder follower, externol Sine commutation (2-phase current mode), RS-232, RS-485, PVM for current (torque or velocity (RPM), and camning/gearing. RoHS compliance RoHS compliance optional. Encoder feedback Roteps nominel encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). Tachometer feedback Accepts nominel encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). Mathysis analog sig, command, +\-\ limits, inhibi/enable, fault, reset, m | Auto Phase Advance | connect any motor to the drive's motor outputs. The drives smart algorithm will automatically find and align the motor phases to allow for the most optimized smoothness and efficient commutation. |
| Pail protection under/over voltage, amplifier over temperature, motor over temperature. On-the-fly mode switching This feature allows the drive to switch between any mode of operation on-the-fly. That is, the drive can switch between current to velocitly (or velocitly to current), current to position to switching Software configurable Clentek's Windows'* based MotionMaestro© software provides ease of set-up, monitoring and tuning with no previous programming experience required. This software is Windows'* 95/98/2000/XP, NT, Visto, 7, and 8 compatible. Silent operation 25 kHz PVM standard. - - +/10 VDC for current (torque) or velocity (RPM), pulse (step) and direction, encoder follower, external Sine commutation (2-phase current mode), RS-232, RS-485, PWM for current (torque or velocity (RPM), and camming/gearing. Res-232 or RS-485 High speed (115.2K boud) serial communication interface for setup and tuning and diagnostics. Note: RS-485 is optional. Recepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). Tachometer feedback Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). Mide operating voltage Analog sig. command, +\- limits, inibibienable, fault, reset, motor temp, encoder and step & direction. Programmable analog out 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC, Nais P/N; | Sinusoidal commutation | linear, rotary encoder, or Hall sensors only. |
| On-the-fly mode switching can switch between current to velocity to current), current, ourrent, ourrent, ourrent, ourrent, and velocity to position to velocity on the temporation to velocity on the temporation of temporation of the temporation of temporatemenerece of temporation of temporation of temetemence o | Fault protection | under/over voltage, amplifier over temperature, motor over temperature. |
| Software configurable tuning with no previous programming experience required. This software is Windows™ Silent operation 25 kHz PWM standard. Command/control +/-10 VDC for current (torque) or velocity (RPM), pulse (step) and direction, encoder follower, external Sine commutation (2-phase current mode), RS-232, RS-485, PWM for current (torque or velocity (RPM), and carming/gearing. RoHS compliance RoHS compliance optional. RoHS compliance RoHS compliance optional. RoHS compliance RoHS compliance optional. RoHS compliance Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). Tachometer feedback Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). Tachometer feedback Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). Tachometer feedback Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). Tachometer feedback Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). Tachometer feedback Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). Tachometer feedback Accepts nothis pN: TQSA-SV. | - | can switch between current to velocity (or velocity to current), current to position (or position to current), and velocity to position (or position to velocity) while the motor is in motion. This feature is |
| Silent operation 25 kHz PWM standard. Command/control +/-10 VDC for current (torque) or velocity (RPM), pulse (step) and direction, encoder follower, external Sine commutation (2-phase current mode), RS-232, RS-485, PWM for current (torque or velocity (RPM), and camming/gearing. RoHS compliance Regulatory RoHS compliance RoHS compliance optional. Feedback Note: RS-485 High speed (115.2K baud) serial communication interface for setup and tuning and diagnostics. Note: RS-485 is optional. Feedback Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). Tachometer feedback Accepts nanlog signals from all types of tachometer feedback. Mode operating voltage Analog sig. command, +\ limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. Wide operating voltage All stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request. The stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor. External logic supply Complete isolation between signal and power stage. All parameters are stored in non-volatile memory. Non-volatile memory All parameter | Software configurable | tuning with no previous programming experience required. This software is Windows™ |
| Command/control Modes +/-10 VDC for current (torque) or velocity (RPM), pulse (step) and direction, encoder follower, external Sine commutation (2-phase current mode), RS-232, RS-485, PWM for current (torque or velocity (RPM), and camming/gearing. RoHS compliance Regulatory RoHS compliance RoHS compliance optional. Connectivity Rs-232 or RS-485 High speed (115.2K baud) serial communication interface for setup and tuning and diagnostics. Note: RS-485 is optional. Feedback Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). Tachometer feedback Accepts analog signals from all types of tachometer feedback. <i>I/O</i> Analog sig. command, + \- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. Mide operating voltage All stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request. Direct AC operation The stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor. External logic supply Complete isolation between signal and power stage. All parameters are stored in non-volatile memory for reliable start up. In addition, up to four different configurations can be stored in the amplifier's non-volatile memory. Retlay | Silent operation | |
| RoHS compliance RoHS compliance optional. Connectivity RS-232 or RS-485 High speed (115.2K baud) serial communication interface for setup and tuning and diagnostics. Note: RS-485 is optional. Feedback Feedback Encoder feedback Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). Tachometer feedback Accepts analog signals from all types of tachometer feedback. Dedicated I/O Analog sig. command, +\- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. Input All stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request. Direct AC operation The stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor. External logic supply 24-48 VDC, 600 mA min @ 24 VDC powers all logic & encoder. This works as a "keep alive" for the SMC9430 drives. Build Complete isolation Complete isolation between signal and power stage. Non-volatile memory All parameters are stored in non-volatile memory for reliable start up. In addition, up to four different configurations can be stored in the amplifier's non-volatile memory. | Command/control | external Sine commutation (2-phase current mode), RS-232, RS-485, PWM for current (torque |
| Connectivity RS-232 or RS-485 High speed (115.2K baud) serial communication interface for setup and tuning and diagnostics. Note: RS-485 is optional. Encoder feedback Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). Tachometer feedback Accepts analog signals from all types of tachometer feedback. I/O Dedicated I/O Analog sig. command, +\- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. Input Wide operating voltage All stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request. Direct AC operation The stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor. External logic supply Complete isolation between signal and power stage. Non-volatile memory All parameters are stored in non-volatile memory for reliable start up. In addition, up to four different configurations can be stored in the amplifier's non-volatile memory. Relay outputs Two pins provide an interface for the relay. They turn on when a desired condition occurs. | | |
| RS-232 or RS-485 High speed (115.2K baud) serial communication interface for setup and tuning and diagnostics. Note: RS-485 is optional. Encoder feedback Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). Tachometer feedback Accepts analog signals from all types of tachometer feedback. I/O Dedicated I/O Analog sig. command, +\- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. U Image: Non-standard voltages can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request. The stand-alone versions can be ordered on request. Direct AC operation The stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor. External logic supply Complete isolation Complete isolation between signal and power stage. Non-volatile memory All parameters are stored in non-volatile memory for reliable start up. In addition, up to four different configurations can be stored in the amplifier's non-volatile memory. Relay outputs Two pins provide an interface for the relay. They turn on when a desired condition occurs. | RoHS compliance | |
| Encoder feedback Accepts nominal encoder signals up to 5 MHz (maximum frequency of up to 10 MHz is possible, but is system dependent). Tachometer feedback Accepts analog signals from all types of tachometer feedback. I/O Dedicated I/O Analog sig. command, +\- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. Wide operating voltage All stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request. Direct AC operation The stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor. External logic supply Complete isolation Complete isolation between signal and power stage. Non-volatile memory All parameters are stored in non-volatile memory for reliable start up. In addition, up to four different configurations can be stored in the amplifier's non-volatile memory. Relay outputs Two pins provide an interface for the relay. They turn on when a desired condition occurs. | RS-232 or RS-485 | High speed (115.2K baud) serial communication interface for setup and tuning and diagnostics. Note: RS-485 is optional. |
| Encoder feedback but is system dependent). Tachometer feedback Accepts analog signals from all types of tachometer feedback. I/O Analog sig. command, +\- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. Input All stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request. Direct AC operation The stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor. External logic supply 24-48 VDC, 600 mA min @ 24 VDC powers all logic & encoder. This works as a "keep alive" for the SMC9430 drives. Mon-volatile memory All parameters are stored in non-volatile memory for reliable start up. In addition, up to four different configurations can be stored in the amplifier's non-volatile memory. Two pins provide an interface for the relay. They turn on when a desired condition occurs. | | |
| Tachometer feedback Accepts analog signals from all types of tachometer feedback. I/O Dedicated I/O Analog sig. command, +\- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. Input Wide operating voltage All stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request. Direct AC operation The stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor. External logic supply 24-48 VDC, 600 mA min @ 24 VDC powers all logic & encoder. This works as a "keep alive" for the SMC9430 drives. Complete isolation Complete isolation between signal and power stage. Non-volatile memory All parameters are stored in non-volatile memory for reliable start up. In addition, up to four different configurations can be stored in the amplifier's non-volatile memory. Relay outputs Two pins provide an interface for the relay. They turn on when a desired condition occurs. | | |
| I/ODedicated I/OAnalog sig. command, +\- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V.InputWide operating voltageAll stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request.Direct AC operationThe stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor.External logic supply24-48 VDC, 600 mA min @ 24 VDC powers all logic & encoder. This works as a "keep alive" for the SMC9430 drives.Complete isolationComplete isolation between signal and power stage.Non-volatile memory different configurations can be stored in the amplifier's non-volatile memory. Two pins provide an interface for the relay. They turn on when a desired condition occurs. | Encoder teedback | but is system dependent). |
| Dedicated I/Odirection. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V.InputWide operating voltageAll stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request.Direct AC operationThe stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor.External logic supply24-48 VDC, 600 mA min @ 24 VDC powers all logic & encoder. This works as a "keep alive" for the SMC9430 drives.Complete isolationComplete isolation between signal and power stage.Non-volatile memory different configurations can be stored in the amplifier's non-volatile memory. Two pins provide an interface for the relay. They turn on when a desired condition occurs. | | , , , |
| Wide operating voltageAll stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request.Direct AC operationThe stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor. 24-48 VDC, 600 mA min @ 24 VDC powers all logic & encoder. This works as a "keep alive" for the SMC9430 drives.Complete isolationComplete isolation between signal and power stage. All parameters are stored in non-volatile memory different configurations can be stored in the amplifier's non-volatile memory. Two pins provide an interface for the relay. They turn on when a desired condition occurs. | | Accepts analog signals from all types of tachometer feedback. |
| Wide operating voltageVAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request.Direct AC operationThe stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor.External logic supply24-48 VDC, 600 mA min @ 24 VDC powers all logic & encoder. This works as a "keep alive" for the SMC9430 drives.Complete isolationComplete isolation between signal and power stage.Non-volatile memoryAll parameters are stored in non-volatile memory for reliable start up. In addition, up to four different configurations can be stored in the amplifier's non-volatile memory.Relay outputsTwo pins provide an interface for the relay. They turn on when a desired condition occurs. | Tachometer feedback | Accepts analog signals from all types of tachometer feedback. I/O Analog sig. command, +\- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. |
| Direct AC operation dumping resistor. External logic supply 24-48 VDC, 600 mA min @ 24 VDC powers all logic & encoder. This works as a "keep alive" for the SMC9430 drives. External logic supply External logic supply Complete isolation Complete isolation between signal and power stage. Non-volatile memory All parameters are stored in non-volatile memory for reliable start up. In addition, up to four different configurations can be stored in the amplifier's non-volatile memory. Relay outputs Two pins provide an interface for the relay. They turn on when a desired condition occurs. | Tachometer feedback | Accepts analog signals from all types of tachometer feedback. I/O Analog sig. command, +\- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. Input |
| External logic supply for the SMC9430 drives. Build Complete isolation Complete isolation between signal and power stage. Non-volatile memory All parameters are stored in non-volatile memory for reliable start up. In addition, up to four different configurations can be stored in the amplifier's non-volatile memory. Relay outputs Two pins provide an interface for the relay. They turn on when a desired condition occurs. | Tachometer feedback Dedicated I/O | Accepts analog signals from all types of tachometer feedback. I/O Analog sig. command, +\- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. Input All stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). |
| Complete isolationComplete isolation between signal and power stage.Non-volatile memoryAll parameters are stored in non-volatile memory for reliable start up. In addition, up to four different configurations can be stored in the amplifier's non-volatile memory.Relay outputsTwo pins provide an interface for the relay. They turn on when a desired condition occurs. | Tachometer feedback Dedicated I/O Wide operating voltage | Accepts analog signals from all types of tachometer feedback. I/O Analog sig. command, +\- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. Input All stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request. The stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor. |
| Non-volatile memoryAll parameters are stored in non-volatile memory for reliable start up. In addition, up to four different configurations can be stored in the amplifier's non-volatile memory.Relay outputsTwo pins provide an interface for the relay. They turn on when a desired condition occurs. | Tachometer feedback Dedicated I/O Wide operating voltage Direct AC operation | Accepts analog signals from all types of tachometer feedback. I/O Analog sig. command, +\- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. Input All stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request. The stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor. 24-48 VDC, 600 mA min @ 24 VDC powers all logic & encoder. This works as a "keep alive" for the SMC9430 drives. |
| Non-volatile memorydifferent configurations can be stored in the amplifier's non-volatile memory.Relay outputsTwo pins provide an interface for the relay. They turn on when a desired condition occurs. | Tachometer feedback Dedicated I/O Wide operating voltage Direct AC operation External logic supply | Accepts analog signals from all types of tachometer feedback. I/O Analog sig. command, +\- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. Input All stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request. The stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor. 24-48 VDC, 600 mA min @ 24 VDC powers all logic & encoder. This works as a "keep alive" for the SMC9430 drives. Build |
| Relay outputs Two pins provide an interface for the relay. They turn on when a desired condition occurs. | Tachometer feedback Dedicated I/O Wide operating voltage Direct AC operation External logic supply Complete isolation | Accepts analog signals from all types of tachometer feedback. I/O Analog sig. command, +\- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. Input All stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request. The stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor. 24-48 VDC, 600 mA min @ 24 VDC powers all logic & encoder. This works as a "keep alive" for the SMC9430 drives. Build Complete isolation between signal and power stage. |
| | Tachometer feedback Dedicated I/O Wide operating voltage Direct AC operation External logic supply Complete isolation | Accepts analog signals from all types of tachometer feedback. I/O Analog sig. command, +\- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. Input All stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request. The stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor. 24-48 VDC, 600 mA min @ 24 VDC powers all logic & encoder. This works as a "keep alive" for the SMC9430 drives. Build Complete isolation between signal and power stage. All parameters are stored in non-volatile memory for reliable start up. In addition, up to four |
| Status indicator /-segment display indicates drive status and diagnostics. | Tachometer feedback | Accepts analog signals from all types of tachometer feedback. I/O Analog sig. command, +\- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. Input All stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request. The stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor. 24-48 VDC, 600 mA min @ 24 VDC powers all logic & encoder. This works as a "keep alive" for the SMC9430 drives. Build Complete isolation between signal and power stage. All parameters are stored in non-volatile memory for reliable start up. In addition, up to four different configurations can be stored in the amplifier's non-volatile memory. |
| SMT construction Provides ultra compact size, cost competitive package and high reliability. | Tachometer feedback Tachometer feedback Dedicated I/O Wide operating voltage Direct AC operation External logic supply Complete isolation Non-volatile memory Relay outputs Status indicator | Accepts analog signals from all types of tachometer feedback. I/O Analog sig. command, +\- limits, inhibit/enable, fault, reset, motor temp, encoder and step & direction. Programmable analog out: 1 12-bit or optional 2 16-bit. General purpose relay: maximum 2 A @ 30 VDC. Nais P/N: TQSA-5V. Input All stand-alone versions can be ordered for operation from either 110-130 VAC or 208-240 VAC (single or 3-phase, 50/60 Hz). Note: Non-standard voltages can be ordered on request. The stand-alone units include a DC bus power supply, cooling fans and regen clamp with a dumping resistor. 24-48 VDC, 600 mA min @ 24 VDC powers all logic & encoder. This works as a "keep alive" for the SMC9430 drives. Build Complete isolation between signal and power stage. All parameters are stored in non-volatile memory for reliable start up. In addition, up to four different configurations can be stored in the amplifier's non-volatile memory. Two pins provide an interface for the relay. They turn on when a desired condition occurs. 7-segment display indicates drive status and diagnostics. |

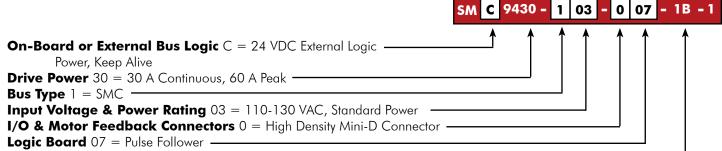
| | ENVIRONMENTAL CONDITIONS |
|------------------------|--|
| Storage Temperature: | -40°C to 80°C |
| Operating Temperature: | Standard: 0°C to 40°C without current derating, up to 50°C with 25% current derating Special: -20°C to 40°C without current derating, up to 50°C with 25% current derating |
| | 5% to 95% relative humidity, non-condensing |
| Altitude: | Up to 1000m without derating, derate current 10% per 1000m above 1000m |

| | DIMENSIONS |
|-------------|--|
| | Mounting Configurations |
| Stand Alone | This package consists of a drive module, DC bus power supply, in-rush current limiting protection at power-on, fuses, fans, and regen/clamp with a dumping resistor. |



STAND ALONE MODEL NUMBERING

This section explains the model numbering system for Glentek's Alpha Series Digital PWM Brushless Servo Drives. The model numbering system is designed so that you, our customer, will be able to quickly and accurately create the model number for the drive that best suits your requirements. Please complete the drive configuration code you require using the information on this page. After completing your model number, please contact a Glentek Sales Engineer to confirm that the model number you have created is correct.



Stand Alone Package Configuration B = Stand Alone with Built In Regen Clamp

| | SM |
|----|---|
| | ↑ |
| | On-Board or External Bus Logic |
| В | Bus Power Logic, Encoder Based |
| С | 24 VDC External Logic Power, Keep Alive |
| | Logic Power |
| 0 | SMB (Bus Power Logic) |
| 1 | SMC (24 VDC External Logic Power, Keep Alive) |
| | Input Voltage & Power Rating |
| 00 | 208-240 VAC, Standard Power |
| 03 | 110-130 VAC, Standard Power |
| | I/O & Motor Feedback Connectors |
| 0 | High Density Mini-D |
| 1 | Molex |
| | Logic Board |
| 01 | Standard Features, +/-10 VDC typical for current (torque) or velocity (RPM) |
| 07 | Pulse Follower |
| 09 | External Sine Commutation / 2 Phase Currrent Mode |
| 11 | Brush Type and Encoder |
| 13 | Brush Type and Tachometer |