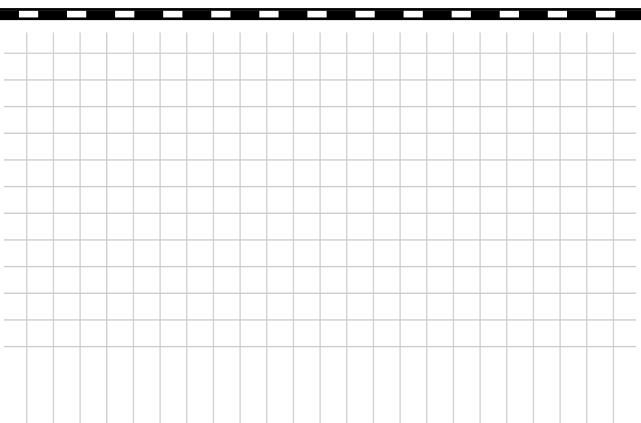


S3 Series Electric Actuator



*Corrosion Resistant Fluid and
Air Handling Systems.*

SIMTECH



S3 Series - *Electric Actuator*

Table of Contents:

Special Features	4
Product Line Overview	5
Options: Battery Spring Return	6-7
Options: Digital Positioning System	8
Actuator Specification Sheets:	
S3-E20:	10
S3-L20:	11
S3-E35:	12
S3-L35:	13
S3-E55:	14
S3-L55:	15
S3-E85:	16
S3-L85:	17

S3 Series - *Electric Actuator*

Feature rich S3 Series multi-voltage actuator with LED status light and plug & play accessories.

The S3 range of electric actuators takes its highly successful predecessor, the S2, to the next level.

With an all new, rugged weatherproof and anti-corrosive Polyamide housing, the S3 offers more user friendly features than the S2, and introduces a highly visible LED status light.

This visual indicator shows whether the actuator is operating correctly, or has tripped out either by its electronic torque limiter, or has been left in 'manual' mode. Site operators are no longer left with the "valve or actuator?" question when an actuator doesn't respond to a signal.

There is no need to remove the cover to connect the S3 electrically, saving installation time.

Using the external DIN plugs and external wiring diagrams supplied with the actuator, installations can be prewired.

Protection against valve jams is provided by an

electronic torque limiter, which auto-relaxes the gearbox when activated, allowing the manual override to be selected to assist in clearing the jam.

The effect of condensation is eliminated by an internal thermostatic anti-condensation heater that does not require a separate independent power supply.

Standard function for the S3 is power open, power close, stays put on power failure.

New to the S3 are plug and play accessories the function can be changed to either failsafe or modulating by fitting the new plug and play conversion kits. The modulating kit has the new digital positioner that offers auto-calibrating and self reset-ting functionality.

These conversion kits are available as optional extras.

The S3 is a very smart Actuator!

S3 Status light functions:

Constantly lit LED

If the actuator is operating correctly with no faults, the LED shows a constantly lit light.

The LED flashes with 2 blinks

If the actuator has been left in 'manual' mode, the actuator's motor runs but doesn't drive the output shaft. After a preset time, the actuator knows that as the torque limiter has not activated and that the motor is running, it must be in manual.

The LED flashes on/ off

When the actuator senses an impending valve jam, the electronic torque limiter is activated and on activation, repeatedly flashes the LED on and off.

S3 Series - *Electric Actuator*

Special Features:

S3 is the new concept 1/4 turn multi voltage electric actuator that finally offers all the solutions that utilize the reversible electric actuators for the operation and control of the valves.

ALL S3 TYPES AND MODELS have the following STANDARD features:

ATC - AUTOMATIC TEMPERATURE CONTROL:

An internal 4w thermostatically controlled anti-condensation heater maintains the internal between +20° C and +30° C, (68° F – 86° F) eliminating the possibility of damage by condensation.

AVS - AUTO VOLTAGE SENSING:

The S3 actuators are, within the voltage ranges specified for "L" or "H" series, multi-voltage capable and make automatic internal adjustments to ensure the actuator operates, irrespective of the power supply

"L" series operates from 12 to 24V AC or 12 to 24 V DC

"E" series operates from 85 to 250V AC or DC

ETL - ELECTRONIC TORQUE LIMITER:

Continuous electric monitoring of the motor produces smooth operation and accurate control of the motor consumption up to the maximum permissible torque. Should the maximum torque be exceeded, the ETL automatically cuts the power to the motor to prevent damage to the actuator, and automatically relaxes the gearbox to allow simple operation of the manual override.

MO - MANUAL OVERRIDE:

For emergency manual operation, operated by a selector lever on the side of the actuator, with automatic motor power tripping when selected.

PES - PROTECTED ELECTRICAL SUPPLY:

This take 2 forms; first the actuator is protected against short circuit when connected and while the actuator won't operate if incorrectly connected, no internal damage will result, and secondly, the S3 accepts the same wiring connection for either AC or DC operation (grey connector).

External DIN plugs eliminate the need to remove the actuator's cover to connect.

VCO - VISUAL CONTROL OF OPERATION:

- A external LED indicates the normal operation of the actuator.
- A flashing LED frequency 1 advises that the actuator's torque limiter has been exceeded and the ETL has activated.
- A flashing LED frequency 2 advises that the actuator is in MANUAL position.

VFC - VOLT FREE CONTACTS:

- 1 set of open and closed volt free contacts are provided

SIMTECH has designed and made the third generation of electric actuators that incorporates 4 models in each one of the series "L" (Low Voltage) & "E" (High Voltage) covering the following operational torques: 177, 309, 486, and 752 in/lbs

QUICK AND EASY TO INSTALL

These user friendly actuators are designed to be fully connected WITHOUT REMOVING THE ACTUATOR COVER via externally supplied DIN plugs, simply wire the plugs and they are ready for use . A wiring diagram label showing how to wire the plugs is affixed to the side of the actuator. Standard wiring (3 wire) for either AC or DC power supply is identical with a common, and a live switch between open and close. However, for DC power supplies, the actuators will also operate on a 2 wire system with a user supplied voltage polarity switch, used to reverse the motor, if this wiring configuration is preferred.

S3 Series - *Electric Actuator*

Product Line Overview:

	Model 20		Model 35		Model 55		Model 85	
	S3-L20	S3-E20	S3-L35	S3-E35	S3-L55	S3-E55	S3-L85	S3-E85
Voltage	12 to 24 v AC 12 to 24 v DC	85 to 240v AC 85 to 240v DC	12 to 24 v AC 12 to 24 v DC	85 to 240v AC 85 to 240v DC	12 to 24 v AC 12 to 24 v DC	85 to 240v AC 85 to 240v DC	12 to 24 v AC 12 to 24 v DC	85 to 240v AC 85 to 240v DC
Operation Time - Unloaded	10 Sec	10 Sec	10 Sec	10 Sec	13 Sec	13 Sec	30 Sec	30 Sec
Maximum Torque Break	25Nm	25Nm	38Nm	38Nm	60Nm	60Nm	90Nm	90Nm
	221 in/Lbs	221 in/Lbs	359.3 in/Lbs	359.3 in/Lbs	530 in/Lbs	530 in/Lbs	796.3 in/Lbs	796.3 in/Lbs
Maximum Operational Torque	20Nm	20Nm	35Nm	35Nm	55Nm	55Nm	85Nm	85Nm
	177 in/Lbs	177 in/Lbs	309 in/Lbs	309 in/Lbs	486 in/Lbs	486 in/Lbs	752 in/Lbs	752 in/Lbs
Duty Rating %	75%	75%	75%	75%	75%	75%	75%	75%
Working Angle	90° to 270°	90° to 270°	90° to 270°	90° to 270°	90° to 270°	90° to 270°	90° to 270°	90° to 270°
Limit Switch	4 SPDT Micro	4 SPDT Micro	4 SPDT Micro	4 SPDT Micro	4 SPDT Micro	4 SPDT Micro	4 SPDT Micro	4 SPDT Micro
Plugs	DIN 43650	DIN 43650	DIN 43650	DIN 43650	DIN 43650	DIN 43650	DIN 43650	DIN 43650
	ISO 440 & C192	ISO 440 & C192	ISO 440 & C192	ISO 440 & C192	ISO 440 & C192	ISO 440 & C192	ISO 440 & C192	ISO 440 & C192
Heater	3.5w	3.5w	3.5w	3.5w	3.5w	3.5w	3.5w	3.5w
IP Rating IEC 60529	IP-67	IP-67	IP-67	IP-67	IP-67	IP-67	IP-67	IP-67
Temperature	-20° to 70°C	-20° to 70°C	-20° to 70°C	-20° to 70°C	-20° to 70°C	-20° to 70°C	-20° to 70°C	-20° to 70°C
	-4 to 158°F	-4 to 158°F	-4 to 158°F	-4 to 158°F	-4 to 158°F	-4 to 158°F	-4 to 158°F	-4 to 158°F
Consumption at Maximun Torque +/- 5%	24v AC	787.5mA 18.9W	1071mA 25.7W		1239mA 29.7W		934.5mA 22.4W	
	24v DC	913.5mA 21.9W	1491mA 35.8W		1428mA 34.3W		1176mA 28.2W	
	110v AC	168 mA 18.5W	231 mA 25.4W		231 mA 25.4W		168 mA 18.5W	
	220v DC	84 Ma 18.5W	115.5 mA 26.6W		115.5 Ma 26.6W		84 Ma 18.5W	
Weight	1.8kg	1.8kg	1.9kg	1.9kg	2.4kg	2.4kg	3kg	3kg
	3.96lbs	3.96lbs	4.18lbs	4.18lbs	5.28lbs	5.28lbs	6.6lbs	6.6lbs

Optional extras:



BSR kit



DPS kit

Digital Positioner (DPS): 0-20mA, 4-20ma, or 0-10v

Battery Fail Safe (BSR)

Digital Potentiometer: 1K, 5K, and 10K

3 position Stops: 0° to 45° to 90°, 0° to 45° to 180°

S3 Series - *Electric Actuator*

Options:

Failsafe Version “S3-BSR” Battery Spring Return

What it does and how it works

S3-BSR system simply provides an alternative power supply to drive the electric actuator to a preset failsafe position in the event of a mains power failure. It has no mechanical springs, it uses internal battery power.

During normal operation the **S3-BSR** operates as a power open / power closed electric actuator, simultaneously maintaining the industrial rechargeable battery at full strength from an internal trickle charging system.



The main advantage of **S3-BSR** system is that it is more competitively priced compared to mechanical spring return electric actuators, as the S3 fail safe actuator has no mechanical springs to compress, or solenoids to release them the actuator is the same size as that for an on/off version. This offers massive savings compared to true mechanical spring return electric actuators.

The industrial battery is deliberately oversized and while not necessary, can provide many cycles at full load. This offers a degree of protection in the unlikely event that the battery degrades and loses some charge.



In the event of a main failure, if not already in that position, an internal switch changes to immediately draw battery power to drive the actuator to the failsafe position.

Following a battery driven cycle the actuator will need to charge for a short period to replace the energy used in the battery cycle. This is particularly relevant if you intend to use the **S3-BSR** like a solenoid, ie: energize open, fail close.

The **S3-BSR** fits inside the S3 electric actuator housing eliminating extra piggy backed housings, making the S3 failsafe actuator very compact and lightweight. It can be supplied as a retrofit kit containing all the parts needed to convert a standard on/off electric actuator.

S3 Series - *Electric Actuator*

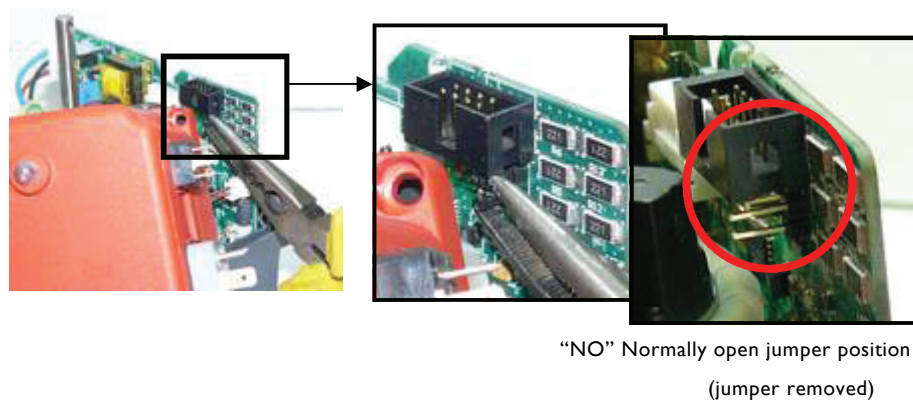
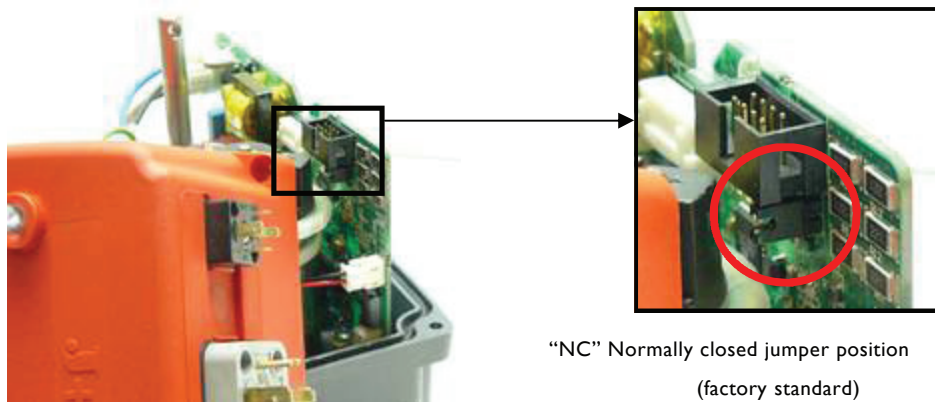
Options:

Failsafe Version “S3-BSR” Battery Spring Return

The **S3-BSR** is factory supplied to fail closed on main failure (normally closed) but can be configured to fail open (normally open) simply by removing a jumper from the actuator PCB see below.

A few seconds after a power cut, the S3's LED will slowly flash and the actuator will be driven to the fail safe position, the LED will continue to flash on/off for 3 minutes during this time the battery provides power to the S3's internal circuitry and anti-condensation heater. At the end of these 3 minutes, if main power has not been restored, the S3 completely shuts down and the LED goes out.

On resumption of main power, conditional that the control signal has not changed during the power outage, the actuator will reset to the position it saw at the moment of the power failure.



	S3-E20	S3-E55	S3-E35	S3-E85
Initial minimum charge time BEFORE being put into service	36 Hours	36 Hours	36 Hours	36 Hours
Nominal capacity 5%	800mA	800mA	800mA	800mA
Battery consumption per Movement (W)	0.1	0.18	0.23	
Minimum recharge time after movement by battery	26 mins	26 mins	50 mins	65 mins

S3 Series - *Electric Actuator*

Options:

Modulating Version “**DPS**” **D**igital **P**ositioning **S**ystem

What it does and how it works

S3-DPS system provides accurate modulating function whereby the movement of the actuator is controlled by either a 4-20mA or a 0-10VDC control signal. Any change in the control input signal results in a corresponding and proportional change in the position of the actuator.

This is achieved with the use of an internal digital positioning system designed and developed by SIMTECH.

The main advantages of **S3-DPS** system are that the system is retrofittable to the standard S3 on-off electric actuator, it is self-calibrating, provides an output signal as standard, and virtually eliminates “hunting”.

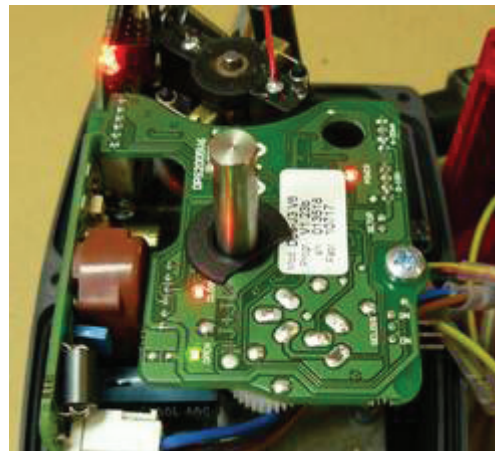
An internal microprocessor on the **S3-DPS** circuit board continuously monitors digitally the analogue input and output signals and compares them to the physical position via an output shaft feedback system, moving the actuator as required to balance the signals.

Digital control ensures high sensitivity and repetitively, with all the usual positioner characteristics coming in at under 1% (hysteresis, linearity & precision).

The **S3-DPS** is self calibrating, and on initial start-up or on restoration following a power cut, will go through a short automatic set-up sequence.

In situations where the actuator is used in manual mode (eg: commissioning) and put back into automatic mode with the actuator out of it's normal operating quadrant, the DPS will auto adjust itself back into the correct quadrant, reset itself, and be ready for use.

The **S3-DPS** can be supplied as a retro-fit kit containing all the parts required to convert a standard on-off electric actuator to a modulating unit, and can be used in conjunction with the S3- BSR kit to produce failsafe modulating functionality.



S3

Electric Actuator Specification Sheets

S3-E20 Series - *Electric Actuator*



General:

The S3-E20 electric actuator offers multi-voltage capability, electronic torque limiter, Dome Position Indicator, anti-condensation heater, local and remote position confirmation and a manual override with safety cut-out switch when activated. Same wiring connections for AC & DC power supplies and with external DIN plug connections, eliminating the need to remove the actuator's cover to connect, the S3-E20 is quick and easy to install.

Specifications:

Supply voltages:	85-240 VAC/VDC - 50/60 Hz
Working time:	10 Sec
Torque output:	20 Nm / 177 Lb/in
Torque Break:	25 Nm / 221 Lb/in
Duty rating:	75%
IP Rating IEC 60529:	IP-67
Working Angle:	90° to 270°
Temp range:	-4° to 158°F / -20° to 70°C
Limit Switch:	4 SPDT micro
Heater:	3.4W
Consumption at	110v 168mA / 220v 90mA
Maximun Torque:	
Plugs:	DIN 43650, ISO 4400 & C192
Weight:	3.96 lbs / 1.8kg

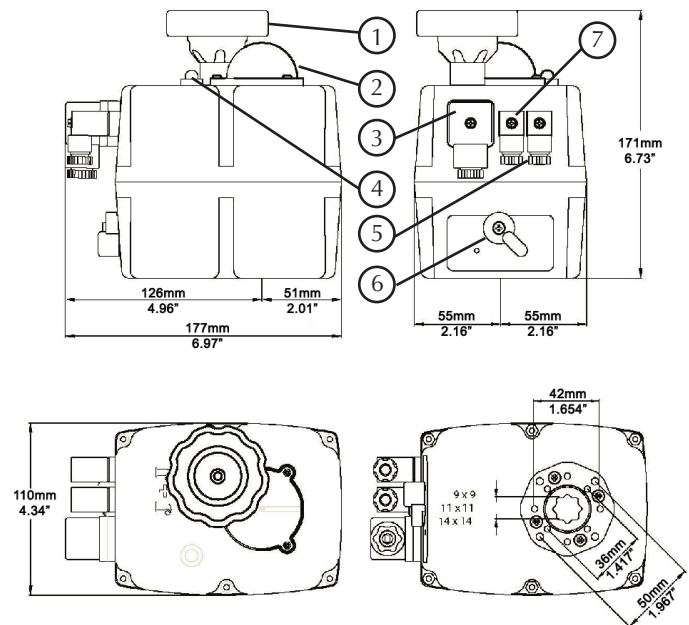
Options:

DPS - Digital positioning system
BSR - Battery Spring return

Features:

- Automatic Temperature Control
- Auto Voltage Sensing - Accepts 80-240V AC & DC
- Electronic Torque Limiter - Protects against Valve Jams
- Manual Override
- Anti-Condensation Heater - Protects Against Condensation
- Protected Electrical Supply
- Visual Control of Operation
- Volt Free Contacts
- External DIN Plug Connections - No need to Remove Cover to Connect
- Rugged Weather Proof / Non-Corrosive Polymade Housing

Dimensional Data:



On/off, stays put on power failure:

- 1) Manual override
- 2) Position indicator Dome
- 3) Power supply DIN plug
- 4) Operation Light
- 5) Volt free limit switch DIN plug
- 6) Manual override selector lever
- 7) Digital Positioner (DPS) OPTIONAL

Installation:

The S3-E20 is remarkably simple to install as all electrical connections are made without removing the actuator's cover - the supplied DIN plugs are wired in accordance with the opposite wiring diagram, reconnected to the actuator and the S3-E20 is ready for use. The S3-E20 can be mounted in any orientation but vertical orientation is preferred. Read supplied installation & operating instructions before use.

S3-L20 Series - *Electric Actuator*



General:

The S3-L20 low voltage electric actuator offers multi-voltage capability, electronic torque limiter, Dome Position Indicator, anti-condensation heater, local and remote position confirmation and a manual override with safety cut-out switch when activated. Same wiring connections for AC & DC power supplies and with external DIN plug connections, eliminating the need to remove the actuator's cover to connect, the S3-L20 is quick and easy to install.

Specifications:

Supply voltages:	12-24 VAC/VDC
Working time:	10 Sec
Torque output:	20 Nm / 177 Lb/in
Torque Break:	25 Nm / 221 Lb/in
Duty rating:	75%
IP Rating IEC 60529:	IP-67
Working Angle:	90° to 270°
Temp range:	-4° to 158°F / -20° to 70°C
Limit Switch:	4 SPDT micro
Heater:	3.4W
Consumption at Maximun Torque:	24v AC 787.5mA / 24v DC 913.5mA
Plugs:	DIN 43650, ISO 4400 & C192
Weight:	3.96 lbs / 1.8kg

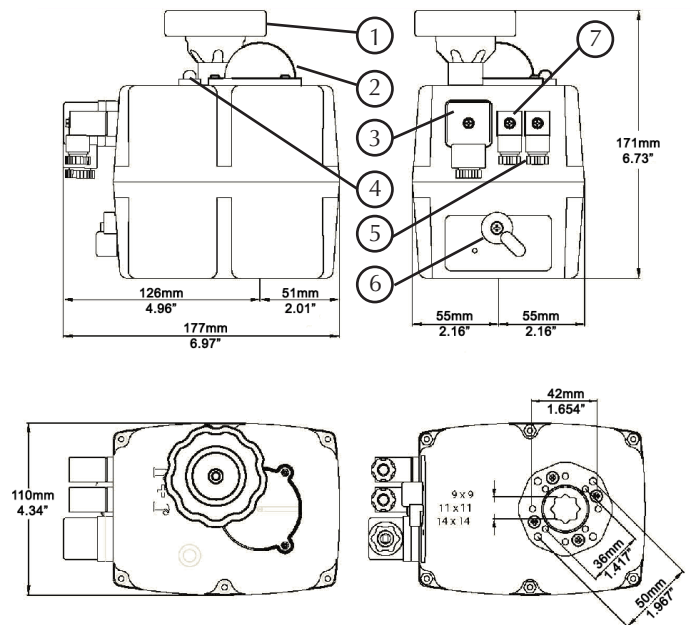
Options:

DPS - Digital positioning system
BSR - Battery Spring return

Features:

- Automatic Temperature Control
- Auto Voltage Sensing - Accepts 12-24V AC & DC
- Electronic Torque Limiter - Protects against Valve Jams
- Manual Override
- Anti-Condensation Heater - Protects Against Condensation
- Protected Electrical Supply
- Visual Control of Operation
- Volt Free Contacts
- External DIN Plug Connections - No need to Remove Cover to Connect
- Rugged Weather Proof / Non-Corrosive Polymade Housing

Dimensional Data:



On/off, stays put on power failure:

- 1) Manual override
- 2) Position indicator Dome
- 3) Power supply DIN plug
- 4) Operation Light
- 5) Volt free limit switch DIN plug
- 6) Manual override selector lever
- 7) Digital Positioner (DPS) OPTIONAL

Installation:

The S3-L20 is remarkably simple to install as all electrical connections are made without removing the actuator's cover - the supplied DIN plugs are wired in accordance with the opposite wiring diagram, reconnected to the actuator and the S3-L20 is ready for use. The S3-L20 can be mounted in any orientation but vertical orientation is preferred. Read supplied installation & operating instructions before use.

S3-E35 Series - *Electric Actuator*



General:

The S3-E35 electric actuator offers multi-voltage capability, electronic torque limiter, Dome Position Indicator, anti-condensation heater, local and remote position confirmation and a manual override with safety cut-out switch when activated. Same wiring connections for AC & DC power supplies and with external DIN plug connections, eliminating the need to remove the actuator's cover to connect, the S3-E35 is quick and easy to install.

Specifications:

Supply voltages:	85-240 VAC/VDC - 50/60 Hz
Working time:	10 Sec
Torque output:	35 Nm / 309 Lb/in
Torque Break:	38 Nm / 359.3 Lb/in
Duty rating:	75%
IP Rating IEC 60529:	IP-67
Working Angle:	90° to 270°
Temp range:	-4° to 158°F / -20° to 70°C
Limit Switch:	4 SPDT micro
Heater:	3.4W
Consumption at Maximun Torque:	110v 231mA / 220v 115.5mA
Plugs:	DIN 43650, ISO 4400 & C192
Weight:	4.18 lbs / 1.9kg

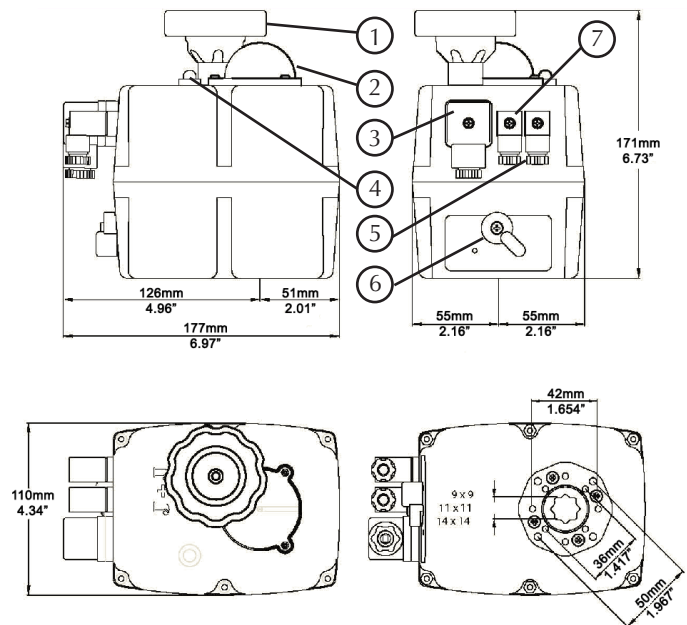
Options:

DPS - Digital positioning system
BSR - Battery Spring return

Features:

- Automatic Temperature Control
- Auto Voltage Sensing - Accepts 80-240V AC & DC
- Electronic Torque Limiter - Protects against Valve Jams
- Manual Override
- Anti-Condensation Heater - Protects Against Condensation
- Protected Electrical Supply
- Visual Control of Operation
- Volt Free Contacts
- External DIN Plug Connections - No need to Remove Cover to Connect
- Rugged Weather Proof / Non-Corrosive Polymade Housing

Dimensional Data:



On/off, stays put on power failure:

- 1) Manual override
- 2) Position indicator Dome
- 3) Power supply DIN plug
- 4) Operation Light
- 5) Volt free limit switch DIN plug
- 6) Manual override selector lever
- 7) Digital Positioner (DPS) OPTIONAL

Installation:

The S3-E35 is remarkably simple to install as all electrical connections are made without removing the actuator's cover - the supplied DIN plugs are wired in accordance with the opposite wiring diagram, reconnected to the actuator and the S3-E35 is ready for use. The S3-E35 can be mounted in any orientation but vertical orientation is preferred. Read supplied installation & operating instructions before use.

S3-L35 Series - *Electric Actuator*



General:

The S3-L35 low voltage electric actuator offers multi-voltage capability, electronic torque limiter, Dome Position Indicator, anti-condensation heater, local and remote position confirmation and a manual override with safety cut-out switch when activated. Same wiring connections for AC & DC power supplies and with external DIN plug connections, eliminating the need to remove the actuator's cover to connect, the S3-L35 is quick and easy to install.

Specifications:

Supply voltages:	12-24 VAC/VDC
Working time:	10 Sec
Torque output:	35 Nm / 309 Lb/in
Torque Break:	38 Nm / 359.3 Lb/in
Duty rating:	75%
IP Rating IEC 60529:	IP-67
Working Angle:	90° to 270°
Temp range:	-4° to 158°F / -20° to 70°C
Limit Switch:	4 SPDT micro
Heater:	3.4W
Consumption at Maximun Torque:	24v AC 1071mA / 24v DC 1491mA
Plugs:	DIN 43650, ISO 4400 & C192
Weight:	4.18 lbs / 1.9kg

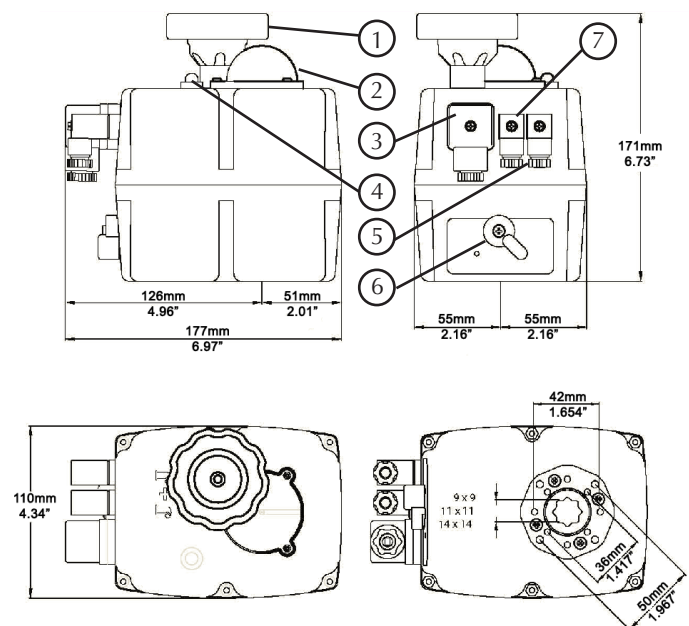
Options:

DPS - Digital positioning system
BSR - Battery Spring return

Features:

- Automatic Temperature Control
- Auto Voltage Sensing - Accepts 12-24V AC & DC
- Electronic Torque Limiter - Protects against Valve Jams
- Manual Override
- Anti-Condensation Heater - Protects Against Condensation
- Protected Electrical Supply
- Visual Control of Operation
- Volt Free Contacts
- External DIN Plug Connections - No need to Remove Cover to Connect
- Rugged Weather Proof / Non-Corrosive Polymade Housing

Dimensional Data:



On/off, stays put on power failure:

- 1) Manual override
- 2) Position indicator Dome
- 3) Power supply DIN plug
- 4) Operation Light
- 5) Volt free limit switch DIN plug
- 6) Manual override selector lever
- 7) Digital Positioner (DPS) OPTIONAL

Installation:

The S3-L35 is remarkably simple to install as all electrical connections are made without removing the actuator's cover - the supplied DIN plugs are wired in accordance with the opposite wiring diagram, reconnected to the actuator and the S3-L35 is ready for use. The S3-L35 can be mounted in any orientation but vertical orientation is preferred. Read supplied installation & operating instructions before use.

S3-E55 Series - *Electric Actuator*



General:

The S3-E55 electric actuator offers multi-voltage capability, electronic torque limiter, Dome Position Indicator, anti-condensation heater, local and remote position confirmation and a manual override with safety cut-out switch when activated. Same wiring connections for AC & DC power supplies and with external DIN plug connections, eliminating the need to remove the actuator's cover to connect, the S3-E55 is quick and easy to install.

Specifications:

Supply voltages:	85-240 vAC/vDC - 50/60 Hz
Working time:	14 Sec
Torque output:	55 Nm / 486 Lb/in
Torque Break:	60 Nm / 530 Lb/in
Duty rating:	75%
IP Rating IEC 60529:	IP-67
Working Angle:	90° to 270°
Temp range:	-4° to 158°F / -20° to 70°C
Limit Switch:	4 SPDT micro
Heater:	3.5W
Consumption at	
Maximun Torque:	110v 231mA / 220v 115.5mA
Plugs:	DIN 43650, ISO 4400 & C192
Weight:	5.28 lbs / 2.4kg

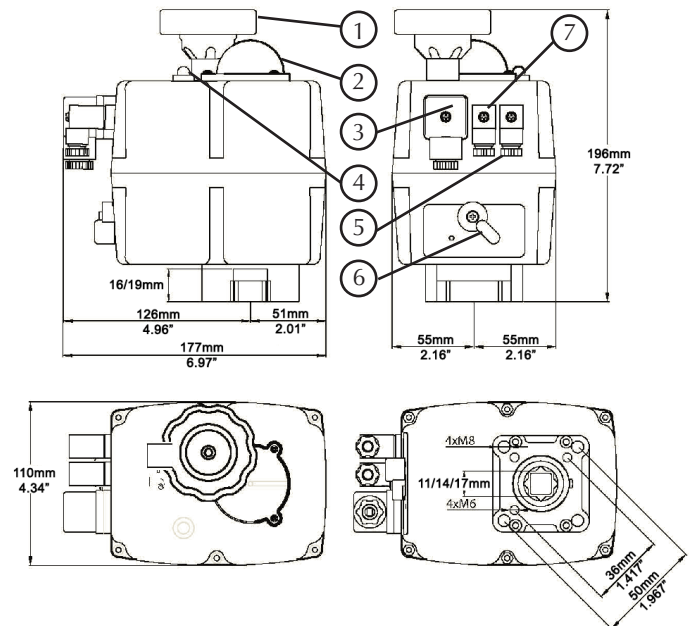
Options:

DPS - Digital positioning system
BSR - Battery Spring return

Features:

- Automatic Temperature Control
- Auto Voltage Sensing - Accepts 80-240V AC & DC
- Electronic Torque Limiter - Protects against Valve Jams
- Manual Override
- Anti-Condensation Heater - Protects Against Condensation
- Protected Electrical Supply
- Visual Control of Operation
- Volt Free Contacts
- External DIN Plug Connections - No need to Remove Cover to Connect
- Rugged Weather Proof / Non-Corrosive Polymade Housing

Dimensional Data:



On/off, stays put on power failure:

- 1) Manual override
- 2) Position indicator Dome
- 3) Power supply DIN plug
- 4) Operation Light
- 5) Volt free limit switch DIN plug
- 6) Manual override selector lever

Installation:

The S3-E55 is remarkably simple to install as all electrical connections are made without removing the actuator's cover - the supplied DIN plugs are wired in accordance with the opposite wiring diagram, reconnected to the actuator and the S3-E55 is ready for use. The S3-E55 can be mounted in any orientation but vertical orientation is preferred. Read supplied installation & operating instructions before use.

S3-L55 Series - *Electric Actuator*



General:

The S3-L55 low voltage electric actuator offers multi-voltage capability, electronic torque limiter, Dome Position Indicator, anti-condensation heater, local and remote position confirmation and a manual override with safety cut-out switch when activated. Same wiring connections for AC & DC power supplies and with external DIN plug connections, eliminating the need to remove the actuator's cover to connect, the S3-L55 is quick and easy to install.

Specifications:

Supply voltages:	12-24 vAC/vDC
Working time:	13 Sec
Torque output:	55 Nm / 486 Lb/in
Torque Break:	60 Nm / 530 Lb/in
Duty rating:	75%
IP Rating IEC 60529:	IP-67
Working Angle:	90° to 270°
Temp range:	-4° to 158°F / -20° to 70°C
Limit Switch:	4 SPDT micro
Heater:	3.5W
Consumption at Maximun Torque:	24v AC 1239mA / 24v DC 1428mA
Plugs:	DIN 43650, ISO 4400 & C192
Weight:	5.28 lbs / 2.4kg

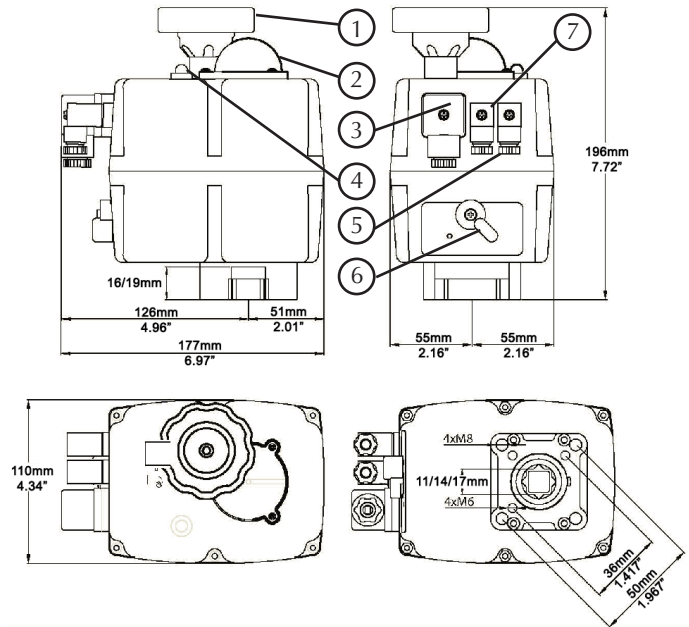
Options:

DPS - Digital positioning system
BSR - Battery Spring return

Features:

- Automatic Temperature Control
- Auto Voltage Sensing - Accepts 12-24V AC & DC
- Electronic Torque Limiter - Protects against Valve Jams
- Manual Override
- Anti-Condensation Heater - Protects Against Condensation
- Protected Electrical Supply
- Visual Control of Operation
- Volt Free Contacts
- External DIN Plug Connections - No need to Remove Cover to Connect
- Rugged Weather Proof / Non-Corrosive Polymade Housing

Dimensional Data:



On/off, stays put on power failure:

- 1) Manual override
- 2) Position indicator Dome
- 3) Power supply DIN plug
- 4) Operation Light
- 5) Volt free limit switch DIN plug
- 6) Manual override selector lever

Installation:

The S3-L55 is remarkably simple to install as all electrical connections are made without removing the actuator's cover - the supplied DIN plugs are wired in accordance with the opposite wiring diagram, reconnected to the actuator and the S3-L55 is ready for use. The S3-L55 can be mounted in any orientation but vertical orientation is preferred. Read supplied installation & operating instructions before use.

S3-E85 Series - *Electric Actuator*



General:

The S3-E85 electric actuator offers multi-voltage capability, electronic torque limiter, Dome Position Indicator, anti-condensation heater, local and remote position confirmation and a manual override with safety cut-out switch when activated. Same wiring connections for AC & DC power supplies and with external DIN plug connections, eliminating the need to remove the actuator's cover to connect, the S3-E85 is quick and easy to install.

Specifications:

Supply voltages:	85-240 VAC/VDC - 50/60 Hz
Working time:	30 Sec
Torque output:	85 Nm / 752 Lb/in
Torque Break:	90 Nm / 796 Lb/in
Duty rating:	75%
IP Rating IEC 60529:	IP-67
Working Angle:	90° to 270°
Temp range:	-4° to 158°F / -20° to 70°C
Limit Switch:	4 SPDT micro
Heater:	3.5W
Consumption at	
Maximun Torque:	110v 168mA / 220v 84mA
Plugs:	DIN 43650, ISO 4400 & C192
Weight:	6.6 lbs / 3kg

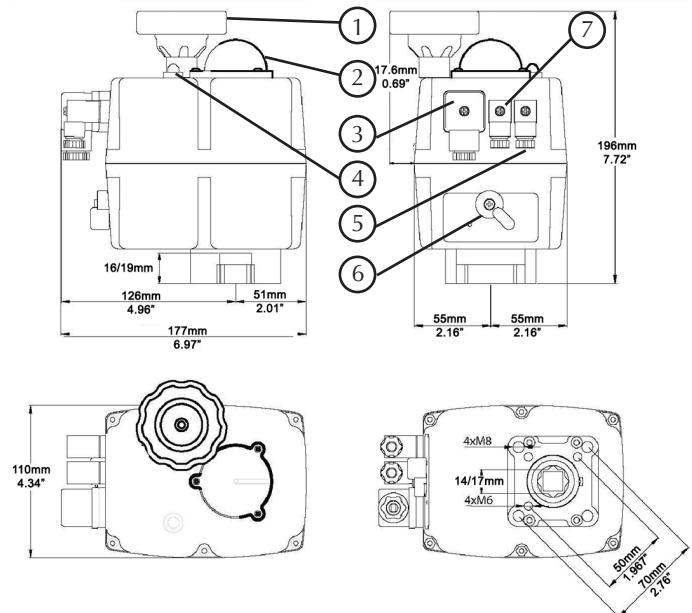
Options:

DPS - Digital positioning system
BSR - Battery Spring return

Features:

- Automatic Temperature Control
- Auto Voltage Sensing - Accepts 80-240V AC & DC
- Electronic Torque Limiter - Protects against Valve Jams
- Manual Override
- Anti-Condensation Heater - Protects Against Condensation
- Protected Electrical Supply
- Visual Control of Operation
- Volt Free Contacts
- External DIN Plug Connections - No need to Remove Cover to Connect
- Rugged Weather Proof / Non-Corrosive Polymade Housing

Dimensional Data:



On/off, stays put on power failure:

- 1) Manual override
- 2) Position indicator Dome
- 3) Power supply DIN plug
- 4) Operation Light
- 5) Volt free limit switch DIN plug
- 6) Manual override selector lever

Installation:

The S3-E85 is remarkably simple to install as all electrical connections are made without removing the actuator's cover - the supplied DIN plugs are wired in accordance with the opposite wiring diagram, reconnected to the actuator and the S3-E85 is ready for use. The S3-E85 can be mounted in any orientation but vertical orientation is preferred. Read supplied installation & operating instructions before use.

S3-L85 Series - *Electric Actuator*



General:

The S3-L85 low voltage electric actuator offers multi-voltage capability, electronic torque limiter, Dome Position Indicator, anti-condensation heater, local and remote position confirmation and a manual override with safety cut-out switch when activated. Same wiring connections for AC & DC power supplies and with external DIN plug connections, eliminating the need to remove the actuator's cover to connect, the S3-L85 is quick and easy to install.

Specifications:

Supply voltages:	85-240 vAC/vDC - 50/60 Hz
Working time:	30 Sec
Torque output:	85 Nm / 752 Lb/in
Torque Break:	90 Nm / 796 Lb/in
Duty rating:	75%
IP Rating IEC 60529:	IP-67
Working Angle:	90° to 270°
Temp range:	-4° to 158°F / -20° to 70°C
Limit Switch:	4 SPDT micro
Heater:	3.5W
Consumption at Maximun Torque:	24vAC 934.5mA / 24vDC 1176mA
Plugs:	DIN 43650, ISO 4400 & C192
Weight:	6.6 lbs / 3kg

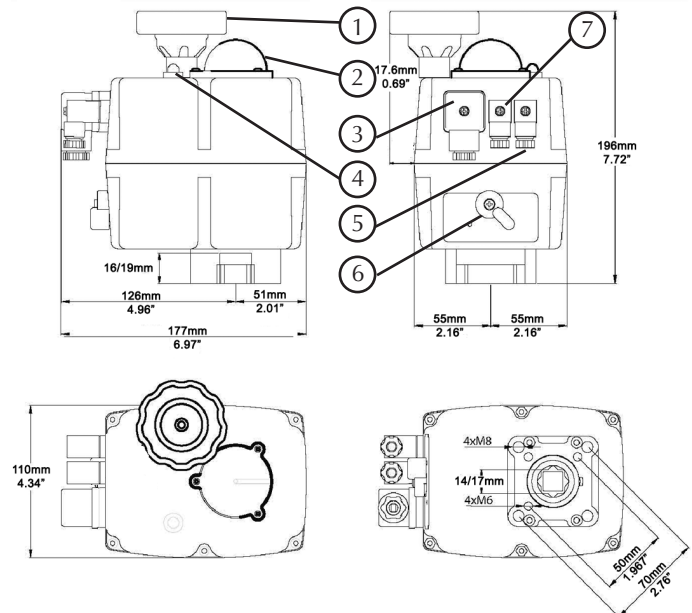
Options:

DPS - Digital positioning system
BSR - Battery Spring return

Features:

- Automatic Temperature Control
- Auto Voltage Sensing - Accepts 12-24V AC & DC
- Electronic Torque Limiter - Protects against Valve Jams
- Manual Override
- Anti-Condensation Heater - Protects Against Condensation
- Protected Electrical Supply
- Visual Control of Operation
- Volt Free Contacts
- External DIN Plug Connections - No need to Remove Cover to Connect
- Rugged Weather Proof / Non-Corrosive Polymade Housing

Dimensional Data:



On/off, stays put on power failure:

- 1) Manual override
- 2) Position indicator Dome
- 3) Power supply DIN plug
- 4) Operation Light
- 5) Volt free limit switch DIN plug
- 6) Manual override selector lever

Installation:

The S3-L85 is remarkably simple to install as all electrical connections are made without removing the actuator's cover - the supplied DIN plugs are wired in accordance with the opposite wiring diagram, reconnected to the actuator and the S3-L85 is ready for use. The S3-L85 can be mounted in any orientation but vertical orientation is preferred. Read supplied installation & operating instructions before use.

S3 Series - ***Electric Actuator***

Notes

S3 Series - ***Electric Actuator***

Notes

S3 Series - *Electric Actuator*

Simtech Industrial Products, Inc.

47-A Runway Road, Levittown, PA 19057

Phone: 215-547-0444 Fax: 215-547-9129

E-mail: info@SimtechUSA.com

Web site: www.SimtechUSA.com

WARRANTY

Simtech Industrial Products, Inc. products are warranted to be free from defects in materials and workmanship for one (1) year from date of shipment. No claim shall be permitted under this warranty unless Buyer gives Simtech Industrial Products, Inc. written notice of all respects in which Buyer claims the product to be defective. Notice must be received within ten (10) days from the date which the Buyer discovers, or should have discovered the defect. Buyer shall give Simtech Industrial Products, Inc. a reasonable opportunity to inspect the product after notice has been given. This warranty shall not apply to any products or components, which have been subjected to abnormal use, negligence or accident.

Seller's sole obligation under this warranty shall be limited solely on the repair or replacement, as elected by Simtech Industrial Products, Inc., of defective or nonconforming material. To the maximum extent permitted by law, Buyer irrevocably waives all claims for money damages relating to the condition, use and performance of the goods purchased. In no event shall Simtech Industrial Products, Inc. liability exceed the purchase price of the product sold by Simtech Industrial Products, Inc.

In no event, whether because of a breach of warranty or representation or any other cause, whether based upon contract, tort, warranty or otherwise, arising out of the performance or nonperformance by seller of its obligations under this agreement or with respect to the products sold pursuant here to; shall seller be liable for lost earnings, income or profits or indirect, incidental, liquidated or consequential damages.

The implied warranties of merchantability and fitness for a particular purpose except as set forth in this warranty, express or implied, are hereby disclaimed and excluded. Nothing shall be construed as an additional warranty unless specifically designated as such in writing and signed by Simtech Industrial Products, Inc.

Simtech Industrial Products, Inc. reserves the right, in its discretion, at any time and from time to time, to make changes to any specification, data or information contained herein.