BASIC SERIES

- 400Nm torque output makes the Series 400 perfect for large size ball valves and butterfly valves.
- Introduces 'Wiring Box' and removes pre wired cable.
- Multi Voltage 24VAC/DC or 95-265VAC voltage range, reducing stock required to be held to cover possible on site voltages.
- Declutchable manual override selector button located in top cover.
- Available with internal super capacitor fitted for Failsafe functionality.
- 2 x M20 Conduit Entry

Version 001: 3/10/22 subject to change without notice

Technical Specifications

Rated Torque Nm (in.lbs):	450Nm Break (3540) / Run 400Nm (3982)	Enclosure:	PC+ PET Plastic Housing ** IP67/Nema 4X
ISO 5211:	F07/10 x 22mm Output Drive	LED Status Light:	Yes, RGB Open, Close, Alarm.
Voltage Range:	24VAC/DC, 95-265VAC	Run Time no load:	25 seconds
Connecting Cable:	2 x M20 Conduit Wiring Box*	Weight:	6Kg - only available in plastic currently
Working Angle Range:	0-270 degrees. Set via internal cams.	Temperature Range:	-20 > +80C ***
Duty Cycle:	75% rated	Shock Resistance:	<300m/S2
Sound Power Level:	Max50dB(A)	Vibration Rating:	10 to 55Hz, 1.5mm double amplitude
Position Indicator:	Mechanical Dome Window. As above	Installation :	Vertical/Horizontal - not underslung
Withstand Voltage:	500VAC for 1 minute	Maintenance:	Maintenance Free - do not remove cover
Insulation Resistance:	100MΩ/ 500VDC	Approvals:	TUV CE & EMC Certified, REACH, RoHS****
Explosion Proof:	No, not to be used in a hazardous location. Can only be used in safe area applications.		⚠️

* Series 400 doesn't have pre wired cable. Customer to supply and fit own cable as required. However, we can supply prewired, speak to your sales representative.

** PC+PET plastic cover as standard. Aluminium cover to be made available in the future.

*** Note that we can extend the lower temperature range through special lubricant and grease and upgraded heater system. Speak to your sales representative.

**** AVA has began the process to have all of our electric actuators approved for UL and CSA

Main Ordering Codes for Basic Series: *indicates standard options for stock product   Example : B4005-PHB-22

Series ›		Function ›		Voltage +		Housing ›		Heater ›		Wiring +		Output Drive ›	
B	Basic	400	On Off	5	95-265VAC	P	PC+PET*	H	Included*	A	3 wire SPST	22	22mm*
		404	Failsafe	6	24VAC/DC			0	Without	B	3 wire SPDT*		

New feature, we are adding a QR label to all of our products that will enable users of our product to have quicker and more direct access to support documents via our new purpose built QR website. Simply scan the QR code using your Smart phone camera and you will be taken directly to the specific actuator you have on site and will have access to Technical Datasheets, Firmware guides and product support videos.

SCAN ME

English version. Available in Spanish

Join the orange and grey revolution

SMART SERIES

- Larger OLED screen to display more information than ever before.
- New SmartMenu provides onboard Firmware and enables user to change certain parameters in the actuator including speed, angle, accuracy.
- Self diagnostic tool, actuator will check its vital components to ensure everything is in good working order. Motor RPM, ambient temperature, humidity.
- Local Control as standard allows the user to operate the actuator open › close via the touch buttons.
- Increased functionality including Modulating, Failsafe Modulating, Modulating , Modbus RS485/RTU.

Version 001: 3/10/22 subject to change without notice

Technical Specifications:

Rated Torque Nm (in.lbs):	450Nm Break (3540) / Run 400Nm (3982)	Alarm Relay:	Yes, option for fault alarm output
ISO 5211:	F07/10 x 22mm Output Drive	LED Status Light:	Yes, RGB Open, Close, Alarm.
Voltage Range:	24VAC/DC, 95-265VAC,	Run Time no load:	25 seconds
Connecting Cable:	2 x M20 Conduit Wiring Box*	3 Position Function:	Yes, setup via SmartMenu firmware
Working Angle Range:	0-270 degrees. Set via digital encoder. Working angle can be digitally set via SmartMenu firmware.		
Duty Cycle:	75% rated - 100% rated for Modulating	Brushless Motor:	Yes, DC brushless motor
Sound Power Level:	Max50dB(A)	Modulating Control:	Pre set at factory where applicable.
Position Indicator:	Mechanical connected to digital encoder sensor for accurate position sensing.		
Local Control:	Yes via SmartMenu using touch buttons	Reverse Acting:	Yes, set via SmartMenu
Speed Control:	PWM or PULSE speed control via SmartMenu	Fail to 3rd Position:	Yes, set via SmartMenu
Explosion Proof:	No, not to be used in a hazardous location. Can only be used in safe area applications. ⚠️		

* See previous page for details on options available on pre wired cable lengths, temperature rating, cover and upcoming approvals.

Main Ordering Codes for Smart Series: *indicates standard options for stock product   Example : S40010-6PHE-22

Series ›		Function +		Voltage ›		Housing ›		Heater ›		Wiring +		Output Drive ›	
S400	Smart	10	On Off	5	95-265VAC	P	PC+PET*	H	Included*	E	3 wire SPDT*	22	22mm*
		14	Failsafe	6	24VAC/DC			0	Without	P	4-20mA		
		19	Hi Speed							U	0-10V	**Alarm Relay ›**	
		25	Modulating							V	2-10V	A	Alarm
		26	Modulating Failsafe							W	RS485 Modbus		
		29	Modulating Hi Speed										
		31	Modbus On Off										
		34	Modbus Failsafe										
		35	Modbus Modulating										

Failsafe via internal super capacitor if you have selected Failsafe version. Capacitor is charged whilst power applied. When power is removed capacitor will close/open actuator.

POWER & WIRING

All you need to know for sizing the correct power supply for the actuators you are installing including the power requirements when the actuator is running and what we would call Peak or maximum power requirements.
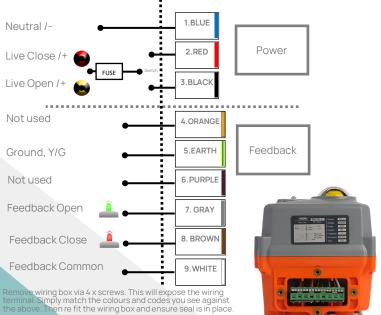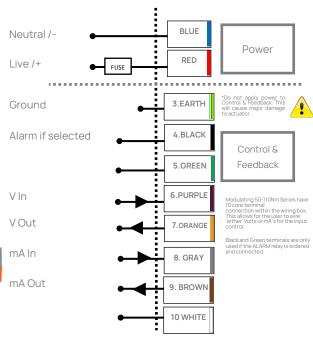
Version 001: 3/10/22 subject to change without notice

Power Ratings for most common series: *Note that internal heater power is 2W.*

Code	Voltage	Power	Time	Fuse	Peak	Code	Voltage	Power	Time	Fuse	Peak
B4005-PHB-22	95-265VAC	150W	25s	15A	9.3A	S40025-6PHP/U-22	24VAC/DC	150W	25s	15A	9.3A
B4006-PHB-22	24VAC/DC	150W	25s	15A	9.3A	S40026-5PHP/U-22	95-265VAC	180W	25s	15A	9.3A
B4045-PHB-22	95-265VAC	180W	25s	15A	9.3A	S40026-6PHP/U-22	24VAC/DC	180W	25s	15A	9.3A
B4046-PHB-22	24VAC/DC	180W	25s	15A	9.3A	S40031-5PHW-22	95-265VAC	150W	25s	15A	9.3A
S40010-5PHE-22	95-265VAC	150W	25s	15A	9.3A	S40031-6PHW-22	24VAC/DC	150W	25s	15A	9.3A
S40010-6PHE-22	24VAC/DC	150W	25s	15A	9.3A	S40034-5PHW-22	95-265VAC	180W	25s	15A	9.3A
S40014-5PHE-22	95-265VAC	180W	25s	15A	9.3A	S40034-6PHW-22	24VAC/DC	180W	25s	15A	9.3A
S40014-6PHE-22	24VAC/DC	180W	25s	15A	9.3A	S40035-5PHW-22	95-265VAC	150W	25s	15A	9.3A
S40025-5PHP/U-22	95-265VAC	150W	25s	15A	9.3A	S40035-6PHW-22	24VAC/DC	150W	25s	15A	9.3A

Standard On Off, Failsafe and Hi-Speed Open/Close Wiring: Additional wiring options available online.

Neutral /- — 1.BLUE
Live Close /+ — 2.RED
Live Open /+ — FUSE — Switch — 3.BLACK
Power

Not used — 4.ORANGE
Ground, Y/G — 5.EARTH
Not used — 6.PURPLE
Feedback Open — 7. GRAY
Feedback Close — 8. BROWN
Feedback Common — 9.WHITE
Feedback

Remove wiring box via 4 x screws. This will expose the wiring terminal. Simply match the colours and codes you see against the above. Then re fit the wiring box and ensure seal is in place.

Standard Modulating including Failsafe and Hi-Speed Wiring: Additional wiring options available online.

Neutral /- — BLUE
Live /+ — FUSE — RED
Power

Ground — 3.EARTH
Alarm if selected — 4.BLACK
— 5.GREEN
V In — 6.PURPLE
V Out — 7.ORANGE
mA In — 8. GRAY
mA Out — 9. BROWN
— 10 WHITE
Control & Feedback

*Do not apply power to Control & Feedback. This will cause major damage to actuator.

Modulating 50-110Nm Series have 10 core terminal connection within the wiring box. This allows for the user to wire 'either' Volts or mA's for the input control.

Black and Green terminals are only used if the ALARM relay is ordered and connected.

| 1 | 2 | 3 | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | 1 | 2 | 3 | | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

* Orange is 95-265VAC / Black 12/24V and Green is feedback/modulating

Important, we are changing our wiring box in Q4 2022 to a separate the power and feedback as shown to the left hand side compared to the current style as shown in the image of the actuator above. This will help prevent users accidentally applying power to the feedback terminals. See IOMs document for more information.

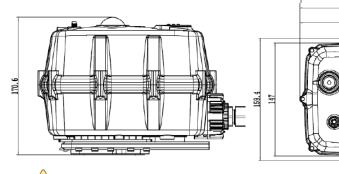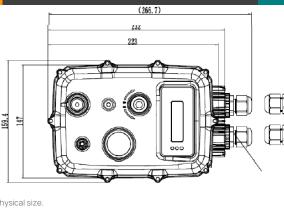# Our complete range covers 10-400Nm

MATERIALS & DIMENSIONS

Below are the materials of construction, including any options available for this specific series. Dimensional drawing can also be found below detailing key dimension details including ISO 5211 mounting details.
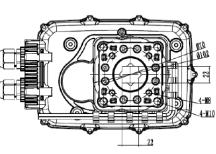
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Cover and base is PC+PET

Screen has UV rated cover. Labels are PVC. Touch buttons on Smart series are rubber

Manual override shaft is plated steel, seal is NBR rubber.

Transparent AS plastic dome indicator.

Plastic Declutchable manual override push button.

Manual Override Key is steel

Output drive is carbon steel plated finish.

ISO 5211 plate is coated steel

Screws are SS304

Cable entry is Nylon

⚠ * Note that the Basic and Smart series are the same physical size.

WEiPU® Connector

We are able to supply our actuators with a prewired cable with IP67/68 weatherproof rated plug and play connector. We can supply both male and female connectors with a pre determined cable length required. We are able to terminate the cable for your PLC as required, loose for you to terminate or with a panel mount connector for example. Options include screw terminal and welded (soldered) connection.

To access our website for additional support documents, contact information and latest news, simply scan the QR code. You can find our list of official distributors at our website.

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