Weyn-Lauwers N.V
INDUSTRIEPARK-NOORD 12
B - 9100 SINT-NIKLAAS
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weynlauwers@weynlauwers.be
www.weynlauwers.be

J2 MULTIVOLTAGE ELECTRIC ACTUATORS

The J2 reversible electric actuators are the most modern representation of the future generations of the actuators for the electric valve control.

The range of the actuators J2 series “L and “H is a true revolution in the field of the reversible electric actuators. Incorporating the most modern available technology to ours advanced electronic designs and the great experience of our human team, we have obtained a product where the security of operation, economy in cost and long life have been caress to the most minimum detail.

Especifically developed for applications of ¼ turn (with possibilities of angle of maneouvre up to 270º) and torques since 20 Nm up to 300 Nm, this new range is the accesory ideal for the electric automation of ball valves, butterfly valves, plug valves, dumpers, ectra. ALL THE J2 MODELS series “L” & “H” are fitted with the following elements:

ATC AUTOMATIC TEMPERATURE CONTROL:
A 4 W anti-condensation heater is thermostatically controlled to maintain the actuator’s internal beetwen 20º and 30ºC (68ºF – 86ºF)

AVS AUTOVOLTAGE SENSING:
Accepts a range of AC or DC voltajes
Series “L” accepts 12 to 48 V AC or VD
Series “H” accepts 80 to 240 V AC or VD

CE

ETL ELECTRONIC TORQUE LIMITER:
Continuosly monitors and controls the motor producing smooth operation and accurate control over the maximum permisible torque. Should the torque requirement excede this. The ETL system will automatically cut the power to the motor preventing posible internal damage.
ETL also provides automatic relaxing con the actuator’s gear box to facilitate simple operation of manual override.
An internal visible led provides indication on ETL’s status.
Continuosly lid led means normal actuator operation.
Flashing led indicates ETL has activated and cut the power of motor.

MO MANUAL OVERRIDE:
For emergency use, with automatic motor power tripping when selected.

PES PROTECTED ELECTRICAL SUPPLY:
Accepts the same wiring connection for AC or DC. Incorrect electrical connection will not damage the actuator internals.
All external plugs eliminate the need to remove the actuator cover to connect. See the wiring diagran outside the actuator.

VFC VOLT FREE CONTACS:
1 set of open and closed volt free contacts are provided.

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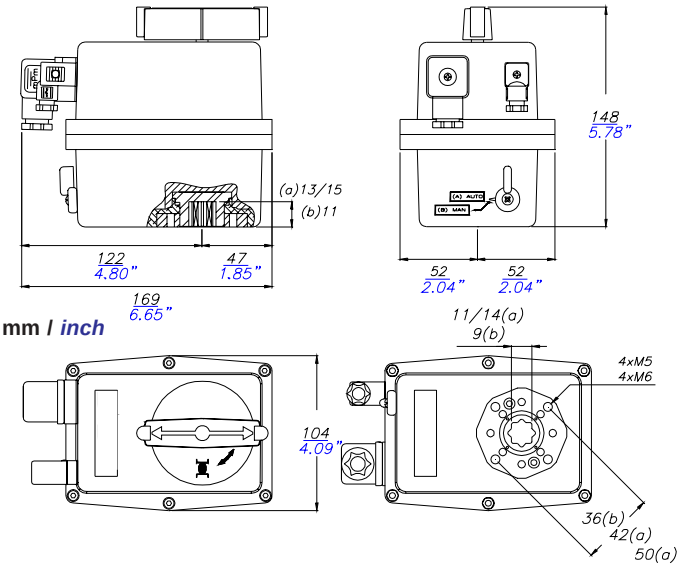
J2-L20 / J2-H20 MULTIVOLTAGE ELECTRIC ACTUATORS

MATERIALS

Enclosure :	Anticorrosive Polyamide
Internal cams :	Polyamide
Main external shaft :	Stainless Steel
Gears :	Steel and Polyamide
Position indicator :	Glass filled Polyamide
Fastening :	Stainless Steel

CE



SPECIFICATIONS	Mod. J2-L20	Mod. J2-H20
VOLTAGE (v) **OPERATION TIME (s / 90º) NO LOAD + / - 10%**	**12 to 48 VAC / VDC** -0 / +5% **8 sec**	**80 to 240 VAC / VDC** **8 sec**
MAXIMUM OPERATIONAL TORQUE (Nm) **MAXIMUM TORQUE BREAK (Nm)**	**20 Nm** **25 Nm**	**20 Nm** **25 Nm**
DUTY RATING (%) **IP RATING IEC 60529**	**75** **IP-65**	**75** **IP-65**
WORKING ANGLE (º) **TEMPERATURA ºC**	**90º - (180º - 270º)** **-20º + 70º C**	**90º - (180º - 270º)** **-20º + 70º C**
LIMIT SWITCH **HEATER (W)**	**4 SPDT micro** **4**	**4 SPDT micro** **4**
CONSUMPTION AT MAXIMUM TORQUE + / - 5%	**24 VAC 1900 mA - 45,6 W** **24 VDC 900 mA - 21,6 W** **48 VAC 900 mA - 43,2 W** **48 VDC 400 mA - 19,2 W**	**110 V 180 mA - 19,8 W** **220 V 85 mA - 20,9 W**
PLUGS **WEIGHT (Kg)**	**DIN 43650** **ISO 4400 & C192** **1,5**	**DIN 43650** **ISO 4400 & C192** **1,5**

EXTRA OPTIONS

DPS 2000 positioner 4÷20 mA or 0÷10 V INTERFACE

ISO 5211

Multiflange F-03, F-04 and F-05

DIN 3337

Double sq. hole 14 mm
Double sq. hole 9 or 11 mm OPTIONAL

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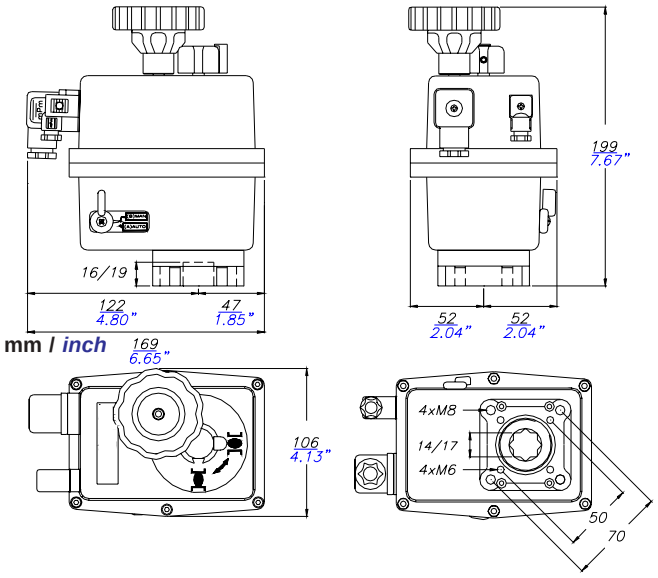
J2-L55 / J2-H55 MULTIVOLTAGE ELECTRIC ACTUATORS

MATERIALS

Enclosure :	Anticorrosive Polyamide
Internal cams :	Polyamide
Main external shaft :	Stainless Steel
Gears :	Steel and Polyamide
Position indicator :	Glass filled Polyamide
Fastening :	Stainless Steel

CE



SPECIFICATIONS	Mod. J2-L55	Mod. J2-H55
VOLTAGE (v) **OPERATION TIME (s / 90º) NO LOAD + / - 10%**	**12 to 48 VAC / VDC** -0 / +5% **10 sec**	**80 to 240 VAC / VDC** **10 sec**
MAXIMUM OPERATIONAL TORQUE (Nm) **MAXIMUM TORQUE BREAK (Nm)**	**55 Nm** **60 Nm**	**55 Nm** **60 Nm**
DUTY RATING (%) **IP RATING IEC 60529**	**75** **IP-65**	**75** **IP-65**
WORKING ANGLE (º) **TEMPERATURA ºC**	**90º - (180º - 270º)** **-20º + 70º C**	**90º - (180º - 270º)** **-20º + 70º C**
LIMIT SWITCH **HEATER (W)**	**4 SPDT micro** **4**	**4 SPDT micro** **4**
CONSUMPTION AT MAXIMUM TORQUE + / - 5%	**24 VAC 3100 mA - 74,4 W** **24 VDC 2800 mA - 67,7 W** **48 VAC 1300 mA - 62,4 W** **48 VDC 1000 mA - 48,0 W**	**110 V 400 mA - 44 W** **220 V 125 mA - 27,5 W**
PLUGS **WEIGHT (Kg)**	**DIN 43650** **ISO 4400 & C192** **1,8**	**DIN 43650** **ISO 4400 & C192** **1,8**

EXTRA OPTIONS

DPS 2000 positioner 4÷20 mA or 0÷10 V
INTERFACE

ISO 5211
Multiflange F-05 / F-07

DIN 3337
Double sq. hole 17 mm
Double sq. hole 14 mm OPTIONAL

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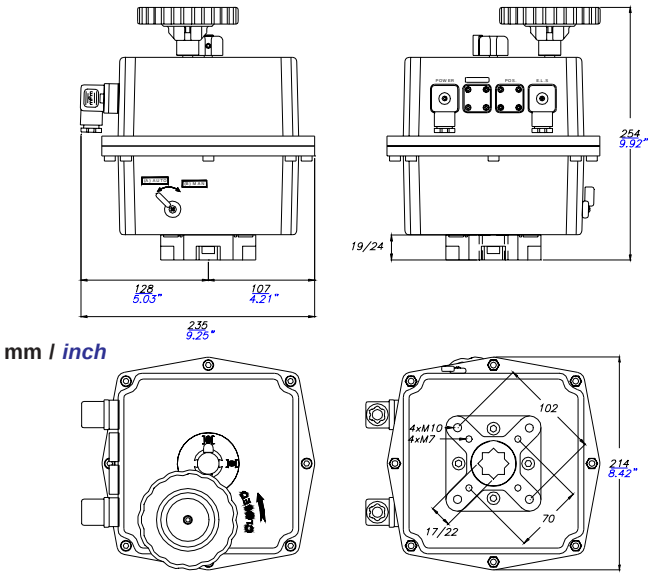
J2-L140 / J2-H140 MULTIVOLTAGE ELECTRIC ACTUATORS

MATERIALS

Enclosure :	Anticorrosive Polyamide
Internal cams :	Polyamide
Main external shaft :	Stainless Steel
Gears :	Steel and Polyamide
Position indicator :	Glass filled Polyamide
Fastening :	Stainless Steel

CE



mm / *inch*

SPECIFICATIONS	Mod. J2-L140	Mod. J2-H140
VOLTAGE (v) **OPERATION TIME (s / 90º) NO LOAD + / - 10%**	**12 to 48 VAC / VDC** -0 / +5% **33 sec**	**80 to 240 VAC / VDC** **33 sec**
MAXIMUM OPERATIONAL TORQUE (Nm) **MAXIMUM TORQUE BREAK (Nm)**	**140 Nm** **170 Nm**	**140 Nm** **170 Nm**
DUTY RATING (%) **IP RATING IEC 60529**	**75** **IP-65**	**75** **IP-65**
WORKING ANGLE (º) **TEMPERATURA ºC**	**90º - (180º - 270º)** **-20º + 70º C**	**90º - (180º - 270º)** **-20º + 70º C**
LIMIT SWITCH **HEATER (W)**	**4 SPDT micro** **4**	**4 SPDT micro** **4**
CONSUMPTION AT MAXIMUM TORQUE + / - 5%	**24 VAC 3600 mA - 86,4 W** **24 VDC 3000 mA - 72,0 W** **48 VAC 1300 mA - 62,4 W** **48 VDC 1000 mA - 48,0 W**	**110 V 700 mA - 77 W** **220 V 230 mA - 50,6 W**
PLUGS **WEIGHT (Kg)**	**DIN 43650** **ISO 4400 & C192** **5,2**	**DIN 43650** **ISO 4400 & C192** **5,2**

EXTRA OPTIONS

DPS 2000 positioner 4÷20 mA or 0÷10 V INTERFACE

ISO 5211

Multiflange F-07 / F-10

DIN 3337

Double sq. hole 22 mm
Double sq. hole 17 mm OPTIONAL

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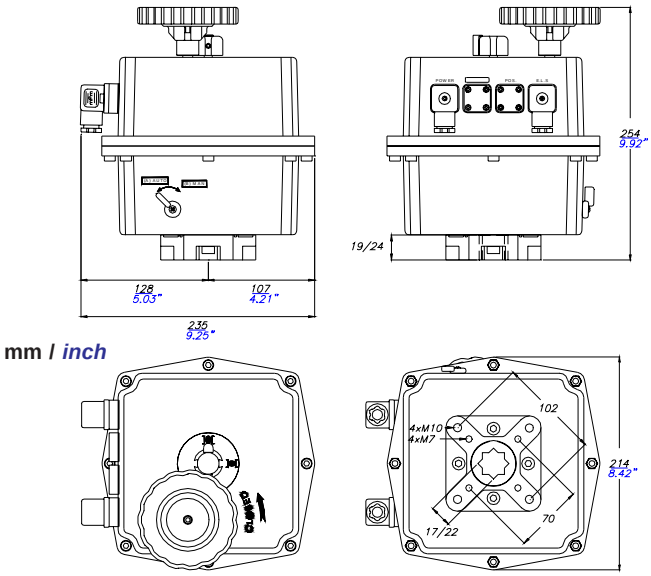
J2-L300 / J2-H300 MULTIVOLTAGE ELECTRIC ACTUATORS

MATERIALS

Enclosure :	Anticorrosive Polyamide
Internal cams :	Polyamide
Main external shaft :	Stainless Steel
Gears :	Steel and Polyamide
Position indicator :	Glass filled Polyamide
Fastening :	Stainless Steel

CE



mm / *inch*

SPECIFICATIONS	Mod. J2-L300	Mod. J2-H300
VOLTAGE (v) **OPERATION TIME (s / 90º) NO LOAD + / - 10%**	**12 to 48 VAC / VDC** -0 / +5% **60 sec**	**80 to 240 VAC / VDC** **60 sec**
MAXIMUM OPERATIONAL TORQUE (Nm) **MAXIMUM TORQUE BREAK (Nm)**	**300 Nm** **350 Nm**	**300 Nm** **350 Nm**
DUTY RATING (%) **IP RATING IEC 60529**	**75** **IP-65**	**75** **IP-65**
WORKING ANGLE (º) **TEMPERATURA ºC**	**90º - (180º - 270º)** **-20º + 70º C**	**90º - (180º - 270º)** **-20º + 70º C**
LIMIT SWITCH **HEATER (W)**	**4 SPDT micro** **4**	**4 SPDT micro** **4**
CONSUMPTION AT MAXIMUM TORQUE + / - 5%	**24 VAC 3600 mA - 86,4 W** **24 VDC 3000 mA - 72,0 W** **48 VAC 1300 mA - 62,4 W** **48 VDC 1000 mA - 48,0 W**	**110 V 700 mA - 77 W** **220 V 230 mA - 50,6 W**
PLUGS **WEIGHT (Kg)**	**DIN 43650** **ISO 4400 & C192** **5,2**	**DIN 43650** **ISO 4400 & C192** **5,2**

EXTRA OPTIONS

DPS 2000 positioner 4÷20 mA or 0÷10 V INTERFACE

ISO 5211

Multiflange F-07 / F-10

DIN 3337

Double sq. hole 22 mm
Double sq. hole 17 mm OPTIONAL

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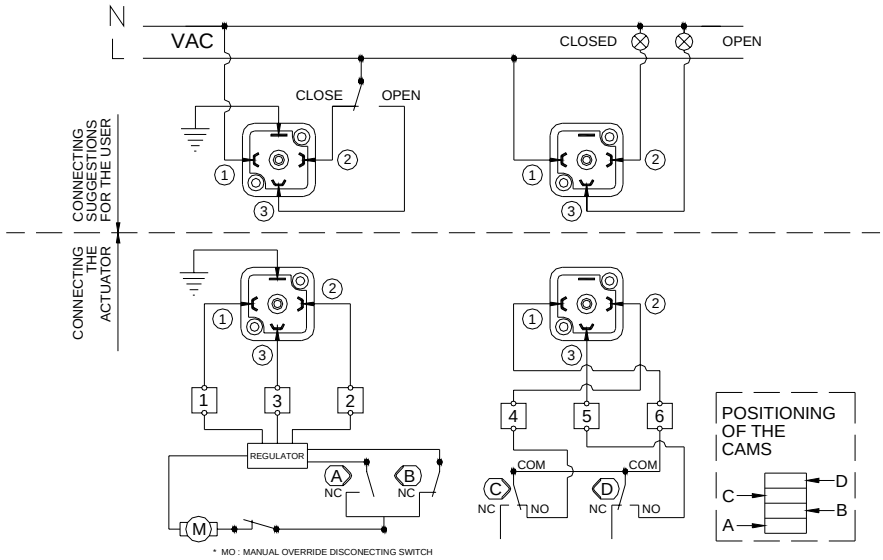
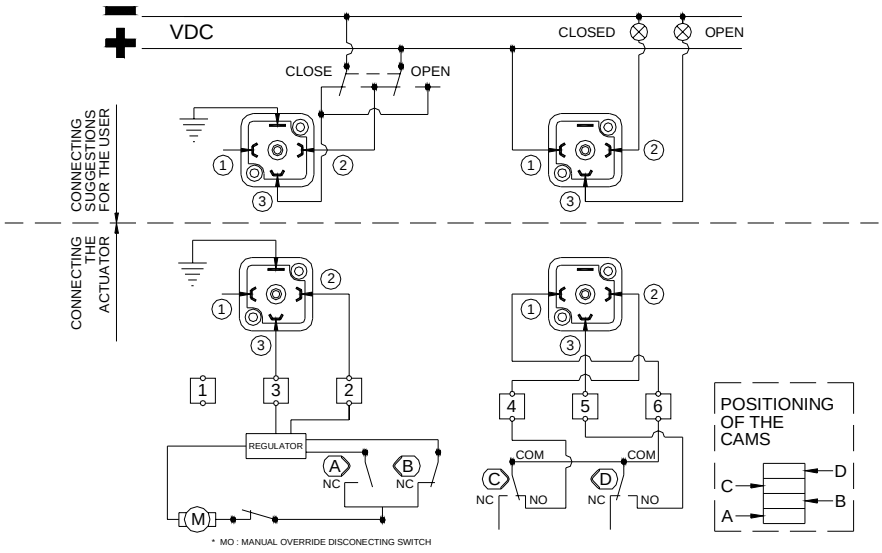
J2-ELECTRIC WIRING MULTIVOLTAGE ELECTRIC ACTUATORS

CE

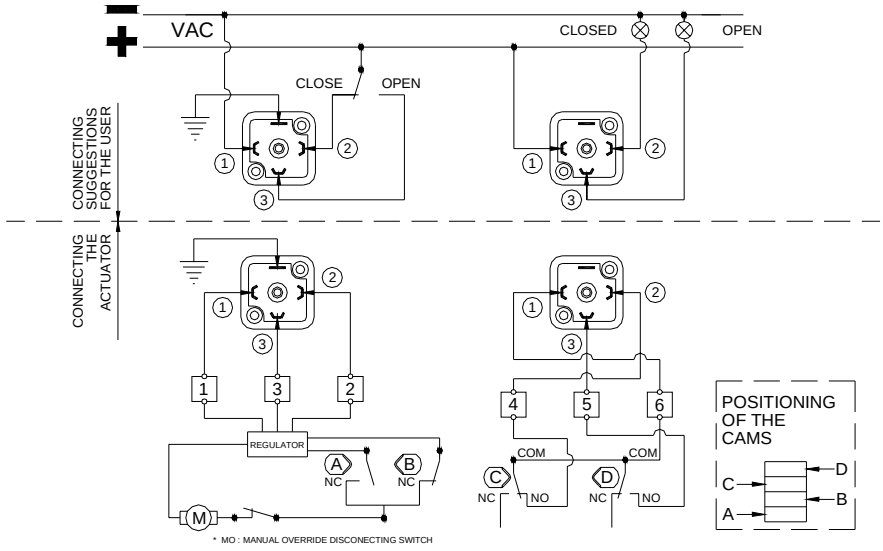
J2-H20/55/140/300 L20/55/140/300 VAC



J2-L20/55/140/300 H20/55/140/300 VDC (2 Wires)



J2-L20/55/140/300 H20/55/140/300 VDC (3 Wires)



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J2 MULTIVOLTAGE ELECTRIC ACTUATORS

J2 INSTALLATION INSTRUCTIONS

J2 Electric actuators operate with the use of live electricity. It is recommended that only qualified electrical engineers be allowed to connect or adjust these actuators. Always ensure that the power supply is disconnected prior to removing the top cover by unplugging the DIN power input plug.

1.1 Check that the voltage stated on the label of the actuator is the same as the supply voltage to be used.

1.2 Connect the power supply cable to the power input DIN plug, ensuring that the plug is wired as per the wiring diagram for the particular actuator being used, and then connect the male half of the DIN plug to the female half attached to the actuator power DIN plug.

1.3 Ensuring that there are no obstructions (tools, fingers etc) to the actuated component (valve, damper etc), switch on the power supply to the power cable connected in 1.2 above.

OPERATING INSTRUCTIONS

Damage can easily be caused to **J2** electric actuators due to incorrect operation. Ensure the operator is aware of the rotation of the actuator before he/she operates it. As with (1.3) above, ensure there are no obstructions to the actuated component.

0.1 Supply a live signal to operate the actuator. The actuator output drive will start to rotate the actuated component, and will continue to do so until the motor limit switch contact is made. The visual position indicator will a) show the direction of rotation anb b) show the finishing position.

The actuator will remain in this position until a further live signal is received.

0.2 Supply a reversing signal to the actuator , in the case of reversible actuators, the actuator output drive will rotate IN THE OPPOSITE DIRECTION to (0.1) above. The visual position indicator will operate as in (0.1).
The actuator will remain in this position until a further live signal is received.

0.3 In the case of a power failure / emergency, a manual override mechanism is provided on all models – move the selector to “Manual” from “Auto” and then rotate the manual override lever or handwheel to move the actuated component to the desired position. **AUTOMATIC MOTOR DISCONNECTING WHEN THE SELECTOR IN “MANUAL” POSITION.**

Standard wiring connection for VAC for model J2-H20, J2-H55, J2-H140 and J2-H300
Standard wiring connection for VDC for models J2-L20, J2-L55, J2-L140 and J2-L300

VERY IMPORTANT
DC SUPPLY
J2-L20, J2-L55, J2-L140 & J2-L300 ACTUATORS: MINIMUM REAL ELECTRIC SUPPLY 11,6 V. LESS THAT 11,6 V THE ACTUATOR DOES NOT WORK
AC SUPPLY
J2-L20, J2-L55, J2L-140 & J2-L300 ACTUATORS: MINIMUM REAL ELECTRIC SUPPLY 15 V. LESS THAT 15 V THE ACTUATORS DOES NOT WORK.

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J2 MULTIVOLTAGE ELECTRIC ACTUATORS

CE

MAINTENANCE INSTRUCTIONS

J2 actuators are intended to be maintenance free. Simple cleaning using mild detergents of any build-up of deposits will ensure that the local visual position indicator is operable and the open and closed position motifs are visible.

Common sense should prevail at all times

WARNING-READ THESE EXTRA INSTRUCTIONS BEFORE CONNECTING THE ACTUATOR
DAMAGE CAUSED BY NON COMPLIANCE TO THESE INSTRUCTIONS IS NOT COVERED BY OUR WARRANTY.

1) ELECTRICAL CONNECTION ERRORS

1.1 Danger of short-circuiting

Never connect live connections across the two live terminals (open & close) as this will short circuit the actuator. Clear wiring diagrams are provided for all models, follow the diagrams carefully and you should enjoy trouble free operation. If in doubt, check BEFORE you connect turn on the power.

1.2 Overload protection

We strongly recommend that the actuator has it's own independant fused supply-there is a danger that the motor current of other system components (eg: pumps) can be drawnn through the actuator if not independantly connected which will cause irreparable damage.

2) MOUNTING TO COMPONENT BEING ACTUATED (EG: VALVE)

2.1
It is vital that the mounting kit used to connect the electric actuator to the component being actuated (eg: valve) is correctly manufactured and assembled. The mounting bracket's holes must be drilled to ensure that the centerline of the actuator's drive is perfectly in line with the component's drive centerline, and that the drive coupling/ adaptor rotates around this centerline. The male square end of the drive coupling MUST NOT be longer than the maximum depth of the actuator when the assembly is bolted together.
The mounting holes of the actuator conform to ISO 5211, and the female output drive conforms to DIN 3337. We strongly recommend that valves/ components to be actuated that have ISO 5211 compliant topworks are used wherever possible.

3) USE OF MANUAL OVERRIDE

3.1 On the side of the actuator is a small black selector lever marked "AUTO" (automatic operation) and "MAN" (manual operation). NEVER remove the selector lever securing screw as this will cause internal parts to fall into the gearbox and will cause irreparable damage.
When in "AUTO" position the movement of the actuator is controlled by external electrical signals sent to the actuator, who's movement is automatically controlled by internal limit switches operated by cams fitted to the shaft capped with the position indicator.
a)If the manual override lever/ handwheel rotates during automatic operation, NEVER restrict, stop or obstruct it's movement or irreparable damage to the gearbox will result.

When in "MAN" (manual override) position, the output drive can be rotated by turning the manual override handle clockwise to move to the closed position, counter-clockwise to the open position. To switch back to "AUTO" move the selector lever back to the "AUTO" position. ONCE in the "AUTO" position, gently try to rotate the manual override lever- if it is still free to rotate under gently turning pressure by hand, the gears have not engaged – retry the manual override lever between the "MAN" and "AUTO" position until the gears lock and it is not possible to rotate the manual override lever under gentle pressure. The actuator will now operate automatically. We do not recommend switchying the lever between "Auto" and "Man" whilst the actuator's motor is running.
Restrict the rotation to within the open and closed logos on the top of the actuator

Open logo]O[Closed logo] () [

These actuators contain micro-components on printed circuit boards- always handle with care.