


ExMax 90° Quarter-Turn Actuators Size "S" for Class I/II/III, Div. 1, zone 1, 2, 21, 22

Explosion Proof		Features of ExMax - ... size "S"	
<p>ExMax-... XP, DIP / Class I, II, III / Div. 1 / Gr. BCDEFG Class I, Zone 1 AEx d [ia] IIC T6 Class II, III, Zone 21 AEx tD [iaD] T80°C</p>	<p>Size "S"</p> 	<p>Description</p> <p>ExMax are, in accordance with type, for automation of air dampers, fire and smoke dampers, volume control, as well as for ball valves, throttle valves and other quarter-turn armatures.</p> <p>Scope of Delivery: 1 actuator, ~ 39.4 inch cable, allen key for manual override, 4 screws, manuals.</p>	<p>Basics for all ExMax-.. size "S"</p> <ul style="list-style-type: none"> • 24...240 VAC/DC self adaptable power supply • 95° angle of rotation (5° for preload) • 100% overload protected • Aluminum housing NEMA4X / IP66, cable ~ 39.4" • -40°F...+104°F/+122°F, integrated heater • Emergency manual override • Squared shaft connection 0.47" x 0.47" • Dimensions (H x W x D) 8.27" x 3.74" x 3.15" • Approximate weight 8 lbs (.VAS = 16 lbs)


Quarter-Turn Actuators Without Spring Return, 24 to 240 VAC/DC							
Type	Torque	Running Time 90°	Spring Return	Control Mode	Feedback	Features	Size
ExMax- 45.90-A	45 / 90 in-lbs	3/15/30/60 s	-	On-off, 3-pos	-	-	S
ExMax-135.270-A	135 / 270 in-lbs	3/15/30/60 s	-	On-off, 3-pos	-	-	S
ExMax- 45.90-S-A	45 / 90 in-lbs	3/15/30/60 s	-	On-off, 3-pos	2 x limit switches (5°/85°)	-	S
ExMax-135.270-S-A	135 / 270 in-lbs	3/15/30/60 s	-	On-off, 3-pos	2 x limit switches (5°/85°)	-	S
ExMax- 45.90-Y-A	45 / 90 in-lbs	7.5/15/30/60 s	-	0...10 VDC, 4...20 mA	0...10 VDC, 4...20 mA	-	S
ExMax-135.270-Y-A	135 / 270 in-lbs	7.5/15/30/60 s	-	0...10 VDC, 4...20 mA	0...10 VDC, 4...20 mA	-	S
ExMax- 45.90-U-A	45 / 90 in-lbs	7.5/15/30/60 s	-	On-off, 3-pos	0...10 VDC, 4...20 mA	-	S
ExMax-135.270-U-A	135 / 270 in-lbs	7.5/15/30/60 s	-	On-off, 3-pos	0...10 VDC, 4...20 mA	-	S

Quarter-Turn Actuators With Spring Return, 24 to 240 VAC/DC							
Type	Torque	Running Time 90°	Spring Return	Control Mode	Feedback	Features	Size
ExMax-45.90-F-A	45 / 90 in-lbs	3/15/30/60 s	~ 3 s / 10 s	On-off, 3-pos	-	-	S
ExMax- 135-F-A	135 in-lbs	3/15/30/60 s	~ 3 s / 10 s	On-off, 3-pos	-	-	S
ExMax-45.90-SF-A	45 / 90 in-lbs	3/15/30/60 s	~ 3 s / 10 s	On-off, 3-pos	2 x limit switches (5°/85°)	-	S
ExMax- 135-SF-A	135 in-lbs	3/15/30/60 s	~ 3 s / 10 s	On-off, 3-pos	2 x limit switches (5°/85°)	-	S
ExMax-45.90-YF-A	45 / 90 in-lbs	7.5/15/30/60 s	~ 3 s / 10 s	0...10 VDC, 4...20 mA	0...10 VDC, 4...20 mA	-	S
ExMax- 135-YF-A	135 in-lbs	7.5/15/30/60 s	~ 3 s / 10 s	0...10 VDC, 4...20 mA	0...10 VDC, 4...20 mA	-	S
ExMax-45.90-UF-A	45 / 90 in-lbs	7.5/15/30/60 s	~ 3 s / 10 s	On-off, 3-pos	0...10 VDC, 4...20 mA	-	S
ExMax- 135-UF-A	135 in-lbs	7.5/15/30/60 s	~ 3 s / 10 s	On-off, 3-pos	0...10 VDC, 4...20 mA	-	S
ExMax-45.90-BF-A	45 / 90 in-lbs	3/15/30/60 s	~ 3 s / 10 s	On-off, 3-pos	2 x limit switches (5°/85°)	ExPro-TT... connector	S
ExMax- 135-BF-A	135 in-lbs	3/15/30/60 s	~ 3 s / 10 s	On-off, 3-pos	2 x limit switches (5°/85°)	ExPro-TT... connector	S

Quarter-Turn Actuators With 1 Second Spring Return, 24 to 240 VAC/DC							
Type	Torque	Running Time 90°	Spring Return	Control Mode	Feedback	Features	Size
ExMax- 72-F1-A	72 in-lbs	3/15/30/60 s	≤ 1 s	On-off	-	-	S
ExMax-135-F1-A	135 in-lbs	3/15/30/60 s	≤ 1 s	On-off	-	-	S
ExMax- 72-SF1-A	72 in-lbs	3/15/30/60 s	≤ 1 s	On-off	2 x limit switches (5°/85°)	-	S
ExMax-135-SF1-A	135 in-lbs	3/15/30/60 s	≤ 1 s	On-off	2 x limit switches (5°/85°)	-	S
ExMax- 72-BF1-A	72 in-lbs	3/15/30/60 s	≤ 1 s	On-off	2 x limit switches (5°/85°)	ExPro-TT... connector	S
ExMax-135-BF1-A	135 in-lbs	3/15/30/60 s	≤ 1 s	On-off	2 x limit switches (5°/85°)	ExPro-TT... connector	S

Accessories and Special Designs (Additional Price)	
Type	Technical Data
Stick	Stick to change parameter and factory settings such as running time, torque, spring return time, force control and write protection depending on actuator
ExPro-TT-72	Safety temperature trigger for fire dampers, switching at 162°F / 72°C, with electrical connector, only connectable to ...Max-...-BF actuators!
ExMax-...VAS	Size "S", housing material in stainless steel AISI 316, some parts nickel plated
ExMax-...CTS	Size "S", aluminum housing MARINE painted, resistant against corrosive and/or maritime atmosphere, some parts nickel plated
KB-S	Mounting clamp for round damper shafts 0.4" to 0.75" and squared shafts 0.4" to 0.6", including bracket, connectable to all ExMax-... actuators size "S"
HV-SK, HV-SL	Manual override, connectable to actuators size „S“. HV-SK = short version, HV-SL = long version for add. mounting of ..Box/...Switch (not suitable for ..Max-...-F1!)
AR-12-xx	Squared reduction part from 0.47" x 0.47" to shafts with 0.43" (type AR-12-11), 0.39" (type AR-12-10), 0.32" (type AR-12-08)
D-F-...S-A	Adaptation with flange according to DIN EN 5211 for butterfly or ball-valves suitable for size "S", see page 48 for more information

ExMax 90° Quarter-Turn Actuators Size "M" for Class I/II/III, Div. 1, zone 1, 2, 21, 22

Explosion Proof		Features of ExMax - ... size "M"	
ExMax-... XP, DIP / Class I,II,III / Div. 1 / Gr. BCDEFG Class I, Zone 1 AEx d [ia] IIC T6 Class II, III, Zone 21 AEx tD [iaD] T80°C	Size "M" 	Description ExMax are, in accordance with type, for automation of air dampers, fire and smoke dampers, volume control, as well as for ball valves, throttle valves and other quarter-turn armatures. Scope of Delivery: 1 actuator, ~ 39.4 inch cable, allen key for manual override, 4 screws, manuals.	Basics for all ExMax-.. size "M" <ul style="list-style-type: none"> • 24...240 VAC/DC self adaptable power supply • 95° angle of rotation (5° for preload) • 100% overload protected • Aluminum housing NEMA4X / IP66, cable ~ 39.4" • -40°F...+104°F/+122°F, integrated heater • Emergency manual override • Squared shaft connection 0.63" × 0.63" • Dimensions (H × W × D) 11.31" × 5.87" × 4.57" • Approximate weight 21 lbs

Quarter-Turn Actuators Without Spring Return, 24 to 240 VAC/DC

Type	Torque	Running Time 90°	Spring Return	Control Mode	Feedback	Features	Size
ExMax-450.675-A	450 / 675 in-lbs	40/60/90/120 s	-	On-off, 3-pos	-	-	M
ExMax- 900-A	900 in-lbs	40/60/90/120 s	-	On-off, 3-pos	-	-	M
ExMax- 1350-A	1,350 in-lbs	40/60/90/120 s	-	On-off, 3-pos	-	-	M
ExMax-450.675-S-A	450 / 675 in-lbs	40/60/90/120 s	-	On-off, 3-pos	2 × limit switches (5°/85°)	-	M
ExMax- 900-S-A	900 in-lbs	40/60/90/120 s	-	On-off, 3-pos	2 × limit switches (5°/85°)	-	M
ExMax- 1350-S-A	1,350 in-lbs	40/60/90/120 s	-	On-off, 3-pos	2 × limit switches (5°/85°)	-	M
ExMax-450.675-Y-A	450 / 675 in-lbs	40/60/90/120 s	-	0...10 VDC, 4...20 mA	0...10 VDC, 4...20 mA	-	M
ExMax- 900-Y-A	900 in-lbs	40/60/90/120 s	-	0...10 VDC, 4...20 mA	0...10 VDC, 4...20 mA	-	M
ExMax-450.675-U-A	450 / 675 in-lbs	40/60/90/120 s	-	On-off, 3-pos	0...10 VDC, 4...20 mA	-	M
ExMax- 900-U-A	900 in-lbs	40/60/90/120 s	-	On-off, 3-pos	0...10 VDC, 4...20 mA	-	M

Quarter-Turn Actuators With Spring Return, 24 to 240 VAC/DC

Type	Torque	Running Time 90°	Spring Return	Control Mode	Feedback	Features	Size
ExMax-270-F-A	270 in-lbs	40/60/90/120 s	~ 20 s	On-off, 3-pos	-	-	M
ExMax-450-F-A	450 in-lbs	40/60/90/120 s	~ 20 s	On-off, 3-pos	-	-	M
ExMax-540-F-A	540 in-lbs	40/60/90/120 s	~ 20 s	On-off, 3-pos	-	-	M
ExMax-270-SF-A	270 in-lbs	40/60/90/120 s	~ 20 s	On-off, 3-pos	2 × limit switches (5°/85°)	-	M
ExMax-450-SF-A	450 in-lbs	40/60/90/120 s	~ 20 s	On-off, 3-pos	2 × limit switches (5°/85°)	-	M
ExMax-540-SF-A	540 in-lbs	40/60/90/120 s	~ 20 s	On-off, 3-pos	2 × limit switches (5°/85°)	-	M
ExMax-270-YF-A	270 in-lbs	40/60/90/120 s	~ 20 s	0...10 VDC, 4...20 mA	0...10 VDC, 4...20 mA	-	M
ExMax-450-YF-A	450 in-lbs	40/60/90/120 s	~ 20 s	0...10 VDC, 4...20 mA	0...10 VDC, 4...20 mA	-	M
ExMax-270-UF-A	270 in-lbs	40/60/90/120 s	~ 20 s	On-off, 3-pos	0...10 VDC, 4...20 mA	-	M
ExMax-450-UF-A	450 in-lbs	40/60/90/120 s	~ 20 s	On-off, 3-pos	0...10 VDC, 4...20 mA	-	M
ExMax-540-UF-A	540 in-lbs	40/60/90/120 s	~ 20 s	On-off, 3-pos	0...10 VDC, 4...20 mA	-	M
ExMax-270-BF-A	270 in-lbs	40/60/90/120 s	~ 20 s	On-off, 3-pos	2 × limit switches (5°/85°)	ExPro-TT... connector	M
ExMax-450-BF-A	450 in-lbs	40/60/90/120 s	~ 20 s	On-off, 3-pos	2 × limit switches (5°/85°)	ExPro-TT... connector	M
ExMax-540-BF-A	540 in-lbs	40/60/90/120 s	~ 20 s	On-off, 3-pos	2 × limit switches (5°/85°)	ExPro-TT... connector	M


Quarter-Turn Actuators With 3 Second Spring Return, 24 to 240 VAC/DC

Type	Torque	Running Time 90°	Spring Return	Control Mode	Feedback	Features	Size
ExMax-270-F3-A	270 in-lbs	40/60/90/120 s	≤ 3 s	On-off	-	-	M
ExMax-450-F3-A	450 in-lbs	40/60/90/120 s	≤ 3 s	On-off	-	-	M
ExMax-270-SF3-A	270 in-lbs	40/60/90/120 s	≤ 3 s	On-off	2 × limit switches (5°/85°)	-	M
ExMax-450-SF3-A	450 in-lbs	40/60/90/120 s	≤ 3 s	On-off	2 × limit switches (5°/85°)	-	M
ExMax-270-BF3-A	270 in-lbs	40/60/90/120 s	≤ 3 s	On-off	2 × limit switches (5°/85°)	ExPro-TT... connector	M
ExMax-450-BF3-A	450 in-lbs	40/60/90/120 s	≤ 3 s	On-off	2 × limit switches (5°/85°)	ExPro-TT... connector	M

Accessories and Special Designs (Additional Price)

Type	Technical Data
Stick	Stick to change parameter and factory settings such as running time, torque, spring return time, force control and write protection depending on actuator
ExPro-TT-72	Safety temperature trigger for fire dampers, switching at 162°F / 72°C, with electrical connector, only connectable to ...Max-...BF actuators!
ExMax-...-CTM	Size "M", aluminum housing MARINE painted, resistant against corrosive and/or maritime atmosphere, some parts nickel plated
HV-MK	Manual override, connectable to actuators size „M“ (not suitable for ..Max-...F3!)
AR-16-xx	Squared reduction part from 0.63" × 0.63" to shafts with 0.55" (type AR-16-14), 0.47" (type AR-16-12)
D-F-...M-A	Adaptation with flange according to DIN EN 5211 for butterfly or ball-valves suitable for size "M", see page 48 for more information

RedMax 90° Quarter-Turn Actuators Size "S" for Class I/II/III, Div. 2, zone 2, 22

Explosion Proof		Features of RedMax - ... size "S"	
RedMax-... NI, DIP / Class I,II,III / Div. 2 / Gr. ABCDEFG Class I, Zone 2 AEx nC IIC T6 Class II, III, Zone 22 AEx ID T80°C	Size "S" 	Description RedMax are, in accordance with type, for automation of air dampers, fire and smoke dampers, volume control, as well as for ball valves, throttle valves and other quarter-turn armatures. Scope of Delivery: 1 actuator, ~ 39.4 inch cable, allen key for manual override, 4 screws, manuals.	Basics for all RedMax-.. size "S" <ul style="list-style-type: none"> • 24...240 VAC/DC self adaptable power supply • 95° angle of rotation (5° for preload) • 100% overload protected • Aluminum housing NEMA4X / IP66, cable ~ 39.4" • -40°F...+104°F/+122°F, integrated heater • Emergency manual override • Squared shaft connection 0.47" x 0.47" • Dimensions (H x W x D) 8.27" x 3.74" x 3.15" • Approximate weight 8 lbs (.VAS = 16 lbs)

Quarter-Turn Actuators Without Spring Return, 24 to 240 VAC/DC							
Type	Torque	Running Time 90°	Spring Return	Control Mode	Feedback	Features	Size
RedMax- 45.90-A	45 / 90 in-lbs	3/15/30/60 s	-	On-off, 3-pos	-	-	S
RedMax-135.270-A	135 / 270 in-lbs	3/15/30/60 s	-	On-off, 3-pos	-	-	S
RedMax- 45.90-S-A	45 / 90 in-lbs	3/15/30/60 s	-	On-off, 3-pos	2 x limit switches (5°/85°)	-	S
RedMax-135.270-S-A	135 / 270 in-lbs	3/15/30/60 s	-	On-off, 3-pos	2 x limit switches (5°/85°)	-	S
RedMax- 45.90-Y-A	45 / 90 in-lbs	7.5/15/30/60 s	-	0...10 VDC, 4...20 mA	0...10 VDC, 4...20 mA	-	S
RedMax-135.270-Y-A	135 / 270 in-lbs	7.5/15/30/60 s	-	0...10 VDC, 4...20 mA	0...10 VDC, 4...20 mA	-	S
RedMax- 45.90-U-A	45 / 90 in-lbs	7.5/15/30/60 s	-	On-off, 3-pos	0...10 VDC, 4...20 mA	-	S
RedMax-135.270-U-A	135 / 270 in-lbs	7.5/15/30/60 s	-	On-off, 3-pos	0...10 VDC, 4...20 mA	-	S

Quarter-Turn Actuators With Spring Return, 24 to 240 VAC/DC							
Type	Torque	Running Time 90°	Spring Return	Control Mode	Feedback	Features	Size
RedMax-45.90-F-A	45 / 90 in-lbs	3/15/30/60 s	~ 3 s / 10 s	On-off, 3-pos	-	-	S
RedMax- 135-F-A	135 in-lbs	3/15/30/60 s	~ 3 s / 10 s	On-off, 3-pos	-	-	S
RedMax-45.90-SF-A	45 / 90 in-lbs	3/15/30/60 s	~ 3 s / 10 s	On-off, 3-pos	2 x limit switches (5°/85°)	-	S
RedMax- 135-SF-A	135 in-lbs	3/15/30/60 s	~ 3 s / 10 s	On-off, 3-pos	2 x limit switches (5°/85°)	-	S
RedMax-45.90-YF-A	45 / 90 in-lbs	7.5/15/30/60 s	~ 3 s / 10 s	0...10 VDC, 4...20 mA	0...10 VDC, 4...20 mA	-	S
RedMax- 135-YF-A	135 in-lbs	7.5/15/30/60 s	~ 3 s / 10 s	0...10 VDC, 4...20 mA	0...10 VDC, 4...20 mA	-	S
RedMax-45.90-UF-A	45 / 90 in-lbs	7.5/15/30/60 s	~ 3 s / 10 s	On-off, 3-pos	0...10 VDC, 4...20 mA	-	S
RedMax- 135-UF-A	135 in-lbs	7.5/15/30/60 s	~ 3 s / 10 s	On-off, 3-pos	0...10 VDC, 4...20 mA	-	S
RedMax-45.90-BF-A	45 / 90 in-lbs	3/15/30/60 s	~ 3 s / 10 s	On-off, 3-pos	2 x limit switches (5°/85°)	ExPro-TT... connector	S
RedMax- 135-BF-A	135 in-lbs	3/15/30/60 s	~ 3 s / 10 s	On-off, 3-pos	2 x limit switches (5°/85°)	ExPro-TT... connector	S

Quarter-Turn Actuators With 1 Second Spring Return, 24 to 240 VAC/DC							
Type	Torque	Running Time 90°	Spring Return	Control Mode	Feedback	Features	Size
RedMax- 72-F1-A	72 in-lbs	3/15/30/60 s	≤ 1 s	On-off	-	-	S
RedMax-135-F1-A	135 in-lbs	3/15/30/60 s	≤ 1 s	On-off	-	-	S
RedMax- 72-SF1-A	72 in-lbs	3/15/30/60 s	≤ 1 s	On-off	2 x limit switches (5°/85°)	-	S
RedMax-135-SF1-A	135 in-lbs	3/15/30/60 s	≤ 1 s	On-off	2 x limit switches (5°/85°)	-	S
RedMax- 72-BF1-A	72 in-lbs	3/15/30/60 s	≤ 1 s	On-off	2 x limit switches (5°/85°)	ExPro-TT... connector	S
RedMax-135-BF1-A	135 in-lbs	3/15/30/60 s	≤ 1 s	On-off	2 x limit switches (5°/85°)	ExPro-TT... connector	S

Accessories and Special Designs (Additional Price)	
Type	Technical Data
Stick	Stick to change parameter and factory settings such as running time, torque, spring return time, force control and write protection depending on actuator
ExPro-TT-72	Safety temperature trigger for fire dampers, switching at 162°F / 72°C, with electrical connector, only connectable to ...Max-...-BF actuators!
RedMax-...-VAS	Size "S", housing material in stainless steel AISI 316, some parts nickel plated
RedMax-...-CTS	Size "S", aluminum housing MARINE painted, resistant against corrosive and/or maritime atmosphere, some parts nickel plated
KB-S	Mounting clamp for round damper shafts 0.4" to 0.75" and squared shafts 0.4" to 0.6", including bracket, connectable to all ExMax-... actuators size "S"
HV-SK, HV-SL	Manual override, connectable to actuators size „S“. HV-SK = short version, HV-SL = long version for add. mounting of ..Box/...Switch (not suitable for ..Max-...-F1!)
AR-12-xx	Squared reduction part from 0.47" x 0.47" to shafts with 0.43" (type AR-12-11), 0.39" (type AR-12-10), 0.32" (type AR-12-08)
D-F-...S-A	Adaptation with flange according to DIN EN 5211 for butterfly or ball-valves suitable for size "S", see page 48 for more information