

## Electric actuator *Attuatore elettrico*

Rev. Sep 2020

*EFFAST's actuators is a completely multi-voltage compact electrical actuator range for the control and regulation of ball valves or butterfly valves.*

*Gli attuatori EFFAST sono una gamma di attuatori elettrici compatti completamente multi-tensione per il controllo e la regolazione delle valvole a sfera o a farfalla.*



<b>GENERAL CHARACTERISTICS / CARATTERISTICHE GENERALI</b>	<b>L020/H020</b>	<b>L035/H035</b>	<b>L055/H055</b>	<b>L085/H085</b>	<b>L140/H140</b>	<b>L300/H300</b>
<b>Housing / Coperchio</b>	Anticorrosive polyamide (lid & body) / <i>Poliammide anticorrosiva (coperchio e corpo)</i>	Anticorrosive polyamide (lid & body) / <i>Poliammide anticorrosiva (coperchio e corpo)</i>				
<b>Main external shaft / Asta</b>	Anticorrosive polyamide / <i>Poliammide anticorrosiva</i>	Stainless steel / <i>Acciaio Inox</i>				
<b>External screws / Viti esterne</b>	Stainless steel / <i>Acciaio Inox</i>	Stainless steel / <i>Acciaio Inox</i>				
<b>Gears / Ingranaggi</b>	Steel and polyamide / <i>Acciaio Inox e poliammide</i>	Steel and polyamide / <i>Acciaio Inox e poliammide</i>				
<b>Visual position indicator / Indicatore di posizione visiva</b>	Polyamide / <i>Poliammide</i>	Polyamide / <i>Poliammide</i>				
<b>Dome / Cupola</b>	Polycarbonate / <i>Policarbonato</i>	Polycarbonate / <i>Policarbonato</i>				
<b>Insulation / Isolamento</b>	Class B	Class B				
<b>(IEC 60034) Service</b>	S4	S4				

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TECNICAL FEATURES / CARATTERISTICHE TECNICHE	L020	H020
Voltage VAC/VDC 50/60 Hz -0/+5% / Voltaggio VAC/VDC 50/60 Hz -0/+5%	12 V AC / 12 V DC	24-240 V AC/24-135 V DC
Operation time unload / Tempo di manovra		9 sec. / 90°
Maximum torque break / Torque massimo a rottura		25 Nm / 221 lb/in
Maximum operating torque / Torque massimo operativo		20 Nm / 177 lb/in
Duty rating / Potenza operativa		75%
Maximum working angle / Massimo angolo di lavoro		0° to 270°
Limit switch / Finecorsa	4 SPST NO micro ( 2motor stop and 2 confirmations)	
Automatic Heater / Riscaldatore automatico		3.5 W
Big plug / Connettore grande	EN175301-803 FORM A	
Small plug / Connettore piccolo	DIN43650/C	
Protection IEC 60529 rating / Grado di protezione IEC 60529	IP67	
Temperature / Temperatura	-20°C+70°C / -4°F +158°F	

TECNICAL FEATURES / CARATTERISTICHE TECNICHE	L035	H035
Voltage VAC/VDC 50/60 Hz -0/+5% / Voltaggio VAC/VDC 50/60 Hz -0/+5%	12 V AC / 12 V DC	24-240 V AC/24-135 V DC
Operation time unload / Tempo di manovra		9 sec. / 90°
Maximum torque break / Torque massimo a rottura		38 Nm / 359.3 lb/in
Maximum operating torque / Torque massimo operativo		35 Nm / 309 lb/in
Duty rating / Potenza operativa		75%
Maximum working angle / Massimo angolo di lavoro		0° to 270°
Limit switch / Finecorsa	4 SPST NO micro ( 2motor stop and 2 confirmations)	
Automatic Heater / Riscaldatore automatico		3.5 W
Big plug / Connettore grande	EN175301-803 FORM A	
Small plug / Connettore piccolo	DIN43650/C	
Protection IEC 60529 rating / Grado di protezione IEC 60529	IP67	
Temperature / Temperatura	-20°C+70°C / -4°F +158°F	

TECNICAL FEATURES / CARATTERISTICHE TECNICHE	L055	H055
Voltage VAC/VDC 50/60 Hz -0/+5% / Voltaggio VAC/VDC 50/60 Hz -0/+5%	12 V AC / 12 V DC	24-240 V AC/24-135 V DC
Operation time unload / Tempo di manovra		13 sec. / 90°
Maximum torque break / Torque massimo a rottura		60 Nm / 530 lb/in
Maximum operating torque / Torque massimo operativo		55 Nm / 468 lb/in
Duty rating / Potenza operativa		75%
Maximum working angle / Massimo angolo di lavoro		0° to 270°
Limit switch / Finecorsa	4 SPST NO micro ( 2motor stop and 2 confirmations)	
Automatic Heater / Riscaldatore automatico		3.5 W
Big plug / Connettore grande	EN175301-803 FORM A	
Small plug / Connettore piccolo	DIN43650/C	
Protection IEC 60529 rating / Grado di protezione IEC 60529	IP67	
Temperature / Temperatura	-20°C+70°C / -4°F +158°F	

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TECNICAL FEATURES / CARATTERISTICHE TECNICHE	L085	H085
Voltage VAC/VDC 50/60 Hz -0/+5% / <i>Voltaggio VAC/VDC 50/60 Hz -0/+5%</i>	12 V AC / 12 V DC	24-240 V AC/24-135 V DC
Operation time unload / <i>Tempo di manovra</i>		29 sec. / 90°
Maximum torque break / <i>Torque massimo a rottura</i>		90 Nm / 796.3 lb/in
Maximum operating torque / <i>Torque massimo operativo</i>		85 Nm / 752 lb/in
Duty rating / <i>Potenza operativa</i>		75%
Maximum working angle / <i>Massimo angolo di lavoro</i>		0° to 270°
Limit switch / <i>Finecorsa</i>		4 SPST NO micro ( 2motor stop and 2 confirmations)
Automatic Heater / <i>Riscaldatore automatico</i>		3.5 W
Big plug / <i>Connettore grande</i>		EN175301-803 FORM A
Small plug / <i>Connettore piccolo</i>		DIN43650/C
Protection IEC 60529 rating / <i>Grado di protezione IEC 60529</i>		IP67
Temperature / <i>Temperatura</i>		-20°C+70°C / -4°F +158°F

TECNICAL FEATURES / CARATTERISTICHE TECNICHE	L140	H140
Voltage VAC/VDC 50/60 Hz -0/+5% / <i>Voltaggio VAC/VDC 50/60 Hz -0/+5%</i>	12 V AC / 12 V DC	24-240 V AC/24-135 V DC
Operation time unload / <i>Tempo di manovra</i>		34 sec. / 90°
Maximum torque break / <i>Torque massimo a rottura</i>		170 Nm / 1504.5 lb/in
Maximum operating torque / <i>Torque massimo operativo</i>		140 Nm / 1239 lb/in
Duty rating / <i>Potenza operativa</i>		75%
Maximum working angle / <i>Massimo angolo di lavoro</i>		0° to 270°
Limit switch / <i>Finecorsa</i>		4 SPST NO micro ( 2motor stop and 2 confirmations)
Automatic Heater / <i>Riscaldatore automatico</i>		3.5 W
Big plug / <i>Connettore grande</i>		EN175301-803 FORM A
Small plug / <i>Connettore piccolo</i>		DIN43650/C
Protection IEC 60529 rating / <i>Grado di protezione IEC 60529</i>		IP67
Temperature / <i>Temperatura</i>		-20°C+70°C / -4°F +158°F

TECNICAL FEATURES / CARATTERISTICHE TECNICHE	L300	H300
Voltage VAC/VDC 50/60 Hz -0/+5% / <i>Voltaggio VAC/VDC 50/60 Hz -0/+5%</i>	12 V AC / 12 V DC	24-240 V AC/24-135 V DC
Operation time unload / <i>Tempo di manovra</i>		58 sec. / 90°
Maximum torque break / <i>Torque massimo a rottura</i>		350 Nm / 3097.5 lb/in
Maximum operating torque / <i>Torque massimo operativo</i>		300 Nm / 2655 lb/in
Duty rating / <i>Potenza operativa</i>		75%
Maximum working angle / <i>Massimo angolo di lavoro</i>		0° to 270°
Limit switch / <i>Finecorsa</i>		4 SPST NO micro ( 2motor stop and 2 confirmations)
Automatic Heater / <i>Riscaldatore automatico</i>		3.5 W
Big plug / <i>Connettore grande</i>		EN175301-803 FORM A
Small plug / <i>Connettore piccolo</i>		DIN43650/C
Protection IEC 60529 rating / <i>Grado di protezione IEC 60529</i>		IP67
Temperature / <i>Temperatura</i>		-20°C+70°C / -4°F +158°F

## Electric actuator Attuatore elettrico

TYPE / MODELLO	TORQUE (NM)	VOLTAGE VAC/VDC	WORKING ANGLE	CODE	COUPLING MOTOR-VALVE / ACCOPPIAMENTO MOTORE-VALVOLA
XEL090L	20	12 V AC/ 12 V DC	0° - 90°	XEL090.L020.Q14	Ball Valves d. 16-63 / Valvole a sfera d. 16-63
	35	12 V AC/ 12 V DC	0° - 90°	XEL090.L035.Q14	PROFLOW d. 75
	55	12 V AC/ 12 V DC	0° - 90°	XEL090.L055.Q17	Ball Valves d. 75/90-110 - PROFLOW d. 125/140 / Valvole a sfera d. 75/90-110 PROFLOW d. 125/140
		12 V AC/ 12 V DC	0° - 90°	XEL090.L055.Q14	PROFLOW d. 90-110
	85	12 V AC/ 12 V DC	0° - 90°	XEL090.L085.Q14	PROFLOW d. 140
	140	12 V AC/ 12 V DC	0° - 90°	XEL090.L140.Q17	PROFLOW d. 160
	300	12 V AC/ 12 V DC	0° - 90°	XEL090.L300.Q22	PROFLOW d. 200/225

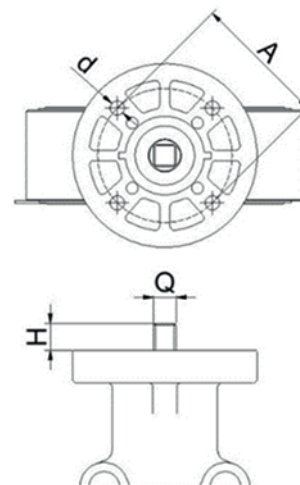
TYPE / MODELLO	TORQUE (NM)	VOLTAGE VAC/VDC	WORKING ANGLE	CODE	COUPLING MOTOR-VALVE / ACCOPPIAMENTO MOTORE-VALVOLA
XEL090H	20	24-240 V AC / 24-135 V DC	0° - 90°	XEL090.H020.Q14	Ball Valves d. 16-63 / Valvole a sfera d. 16-63
	35	24-240 V AC / 24-135 V DC	0° - 90°	XEL090.H035.Q14	PROFLOW d. 75
	55	24-240 V AC / 24-135 V DC	0° - 90°	XEL090.H055.Q17	Ball Valves d. 75/90-110 - PROFLOW d. 125/140 / Valvole a sfera d. 75/90-110 PROFLOW d. 125/140
		24-240 V AC / 24-135 V DC	0° - 90°	XEL090.H055.Q14	PROFLOW d. 90-110
	85	24-240 V AC / 24-135 V DC	0° - 90°	XEL090.H085.Q14	PROFLOW d. 140
	140	24-240 V AC / 24-135 V DC	0° - 90°	XEL090.H140.Q17	PROFLOW d. 160
	300	24-240 V AC / 24-135 V DC	0° - 90°	XEL090.H300.Q22	PROFLOW d. 200/225

### Actuation / Attuazione

PROFLOW butterfly valve can be actuated with standard electric or pneumatic actuators and can be equipped with wheel gearboxes. The mounting flange is drilled according to standard ISO 5211. No additional kit is needed.

*La valvola a farfalla PROFLOW può essere azionata mediante attuatori elettrici o pneumatici standard e può essere dotata di riduttore a volantino. Lo standard di accoppiamento è conforme allo standard ISO 5211. Non sono necessari kit addizionali.*

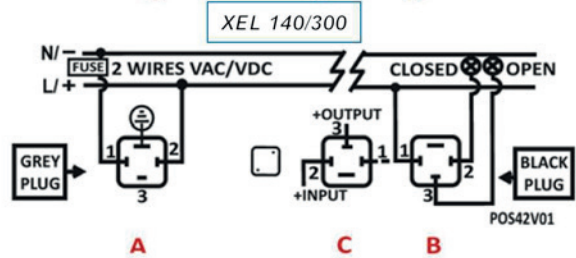
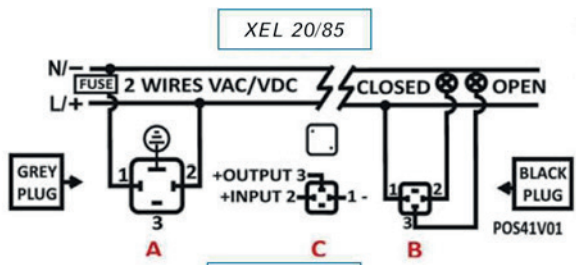
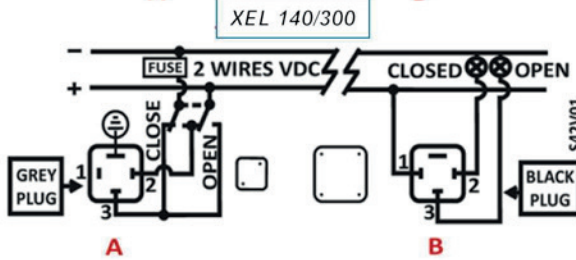
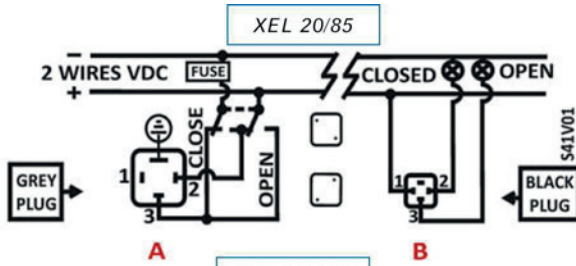
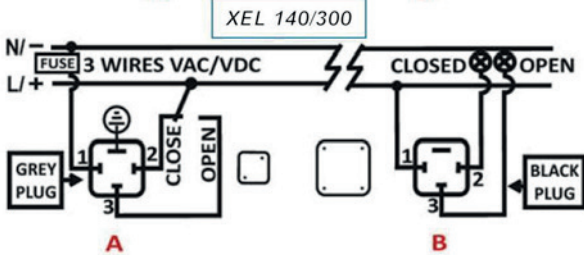
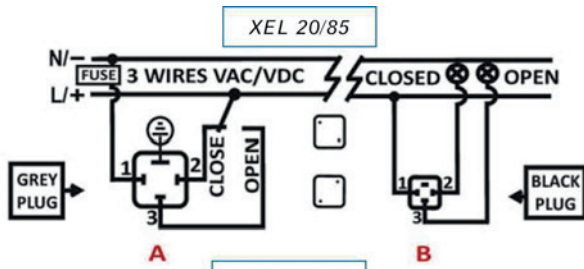
DN	ISO 5211	A	d	Q	H
65	F07	70	9	14	16
90	F07	70	9	14	16
100	F07	70	9	14	16
125	F07	70	9	14	16
150	F07/F10	70/102	9/11	17	19
200	F07/F10	70/102	9/11	22	24



# Electric actuator

## Attuatore elettrico

### External connecting diagram / *Schemi di collegamento*



### 3 WIRES ON-OFF

A = Power supply plug

A: VAC 3 WIRES (Grey plug)

PIN 1 = Neutral + PIN 2 = Phase = Close

PIN 1 = Neutral + PIN 3 = Phase = Open

A: VDC 3 WIRES (Grey plug)

PIN 1 = (-) Negative + PIN 2 = (+) Positive = Close

PIN 1 = (-) Negative + PIN 3 = (+) Positive = Open

B = Volt free contact, plug

PIN 1 / PIN 2 = Close

PIN 1 / PIN 3 = Open

### 2 WIRES ON-OFF

A = Power supply plug

A: VDC 2 WIRES (Grey plug)

PIN 2 = (+) Positive + PIN 3 = (-) Negative = Close

PIN 2 = (-) Negative + PIN 3 = (+) Positive = Open

B = Volt free contact, plug

PIN 1 / PIN 2 = Close

PIN 1 / PIN 3 = Open

### POSITIONER

A = Power supply plug

A: VAC 2 WIRES (Grey plug)

PIN 1 = Neutral + PIN 2 = Phase = Power supply plug

A: VDC 2 WIRES (Grey plug)

PIN 1 = (-) Negative + PIN 2 = (+) Positive = Power supply plug

B = Volt free contact plug

PIN 1 / PIN 2 = Close

PIN 1 / PIN 3 = Open

C = Instrumentation signal

C: input signal: 4/20 mA or 0/10 V

PIN 1 = (-) Negative + PIN 2 = (+) Positive = Input signal

PIN 1 = (-) Negative + PIN 3 = (+) Positive = Output signal

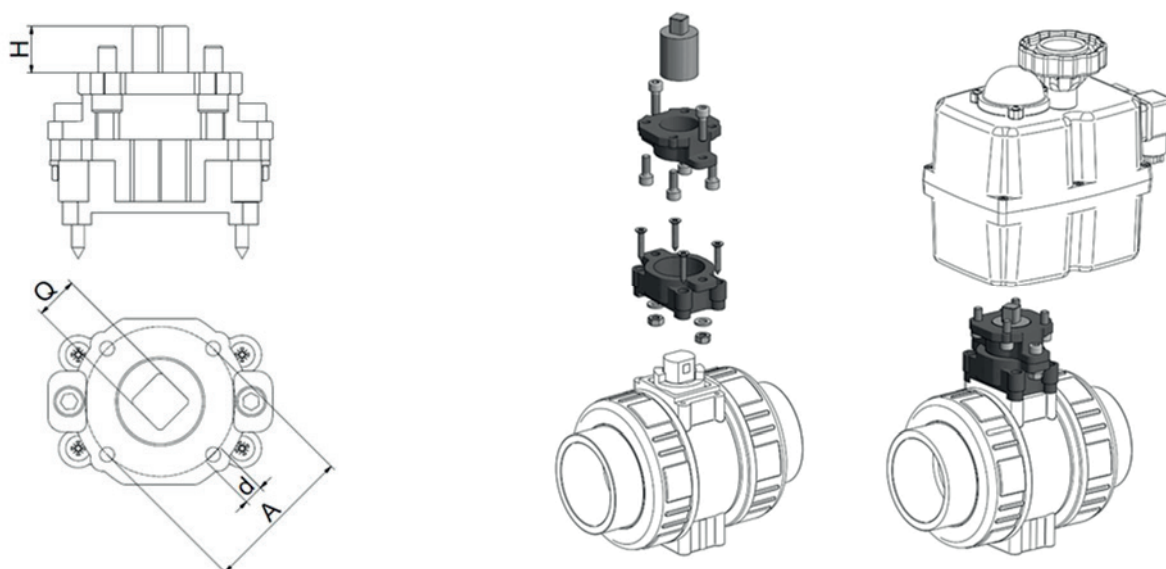


## Electric actuator Attuatore elettrico

### Actuation and fastening / Attuazione e fissaggio

BK1 ball valve can be actuated with standard electric or pneumatic actuators using the dedicated kit (ref. code BDRKITB1). The mounting flange is drilled according to standard ISO 5211.

La valvola a sfera BK1 può essere automatizzata mediante attuatore elettrico o pneumatico usando il kit dedicato (rif. codice BDRKITB1). La flangia di accoppiamento è forata secondo lo standard ISO 5211.



DN	d (mm)	d (in)	ISO 5211	A	d	Q	H
15	16 - 20	3/8" - 1/2"	F05	50	M6	14*	16
20	25	3/4"	F05	50	M6	14*	16
25	32	1"	F05	50	M6	14*	16
32	40	1"1/4	F05	50	M6	14*	16
40	50	1"1/2	F05	50	M6	14*	16
50	63	2"	F05	50	M6	14*	16
80	75 - 90	2"1/2 - 3"	F07	70	M8	17**	19
100	110	4"	F07	70	M8	17**	19

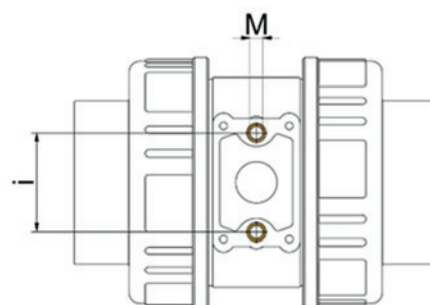
\*) Square 11 on request / Quadro 11 a richiesta \*\*\*) Square 14 on request / Quadro 14 a richiesta

BK1 ball valve<sup>1</sup> is provided with integrated threaded inserts that permit to fasten the valve. For wall installation, a dedicated mounting plate can be used (ref. code BDR1BASE/BDR1BASF).

La valvola a sfera BK1 è dotata di inserti filettati integrati per il fissaggio della valvola. Per installazione a parete, è disponibile la base appositata (rif. codice BDR1BASE/BDR1BASF).

DN	d (mm)	d (in)	i	M
15	16 - 20	3/8" - 1/2"	18	M4 x 8
20	25	3/4"	21,5	M4 x 8
25	32	1"	28	M4 x 8
32	40	1"1/4	30	M5 x 10
40	50	1"1/2	38	M6 x 14
50	63	2"	45	M6 x 14

1) From DN 15 to DN 50 / Da DN 15 a DN 50



## Electric actuator *Attuatore elettrico*

### Factory options / *Opzioni di fabbrica*

- DPS digital positioner: 4-20 Ma, 2-20 Ma, 0-10 V or 1-10V / *Posizionatore digitale DPS : 4-20 Ma, 2-20 Ma, 0-10 V o 1-10V*
- BSR Battery system returns / *Kit BSR per ritorno automatico alla posizione*
- Digital potentiometer: 1 K, 5 K or 10 K / *Potenziometro digitale: 1 K, 5 K o 10 K*
- Interface module wired or Wifi / *Collegamento all'interfaccia mediante cavo o Wifi*
- Bluetooth module / *Modulo Bluetooth*
- Other options on request / *Altre opzioni su richiesta*

### Self-mounting kits / *Kit per il montaggio fai da te*

**Interface system:** Using the interface kit cable we communicate with the actuator, read parameters and change the actuator configuration / **Sistema di interfaccia:** *tramite il cavo del kit di interfaccia si può comunicare con l'attuatore, leggere i parametri e cambiarne la configurazione .*

**Battery system returns:** BSP system for our 20 Nm to 85 Nm models is an emergency fail safe kit system by battery which is common to both L and H models. The BSP system for our models 140 Nm and 300 Nm is the same but with a bigger capacity battery / **Sistema di ritorno automatico alla posizione:** *Il sistema BSR per i motori da 20 a 85 Nm è un kit di emergenza a batteria uguale per i modelli L e H. I nostri motori 140 Nm e 300 Nm montano lo stesso sistema ma con una batteria di capacità superiore.*

**Digital Positioner system 20-85 :** Digital positioner for our models from 20 Nm to 85 Nm. Instrumentation signal 4-20 mA, 0-20 mA, 0-10 V or 1-10 V signal. The DPS digital positioner is suitable for L and H models / **Posizionatore digitale 20-85:** *Posizionatore digitale per i nostri modelli da 20 Nm a 85 Nm. Segnale di strumentazione 4-20 mA, 0-20 mA, 0-10 V o 1-10 V. Il posizionatore digitale DPS è adatto sia per i modelli L e che per i modelli H.*

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