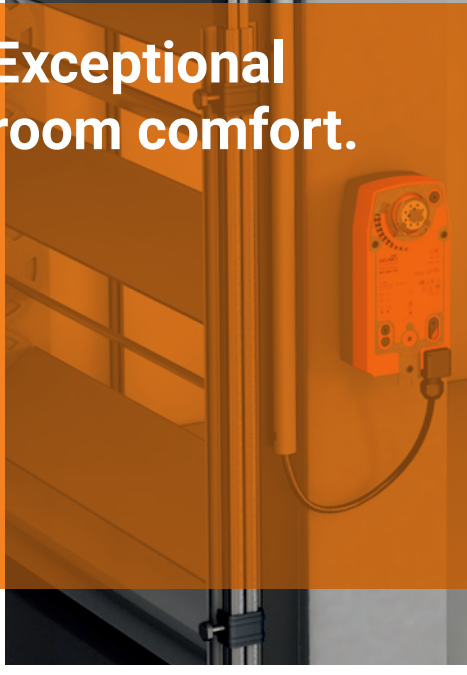


Exceptional room comfort.



The complete product range of ventilation applications

Edition 2024
















Air damper actuators

Motorisation of dampers in ventilation and air-conditioning systems

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Rotary actuators, non fail-safe







Actuator type		Nominal torque	Shaft diameter	Damper size up to approx. ¹⁾	Page
Rotary actuators with connector plug					20
UM..		1 Nm	6...12.7 mm	■ 0.2 m ²	
Rotary actuators with connecting cable					21–22
CM..		2 Nm	6...12.7 mm	■ 0.4 m ²	
LM..A.. + VLM..A..		5 Nm	6...20 mm	■ 1 m ²	
NM..A.. + VNM..A..		10 Nm	8...26.7 mm	■ 2 m ²	
SM..A.. + VSM..A..		20 Nm	10...20 mm	■ 4 m ²	
GM..A.. + VGM..A..		40 Nm	12...26.7 mm	■ 8 m ²	
Rotary actuators with connecting terminals					23–24
CM..		2 Nm	6...12.7 mm	■ 0.4 m ²	
LM..A..		5 Nm	6...20 mm	■ 1 m ²	
NM..A..		10 Nm	8...26.7 mm	■ 2 m ²	
SM..A..		20 Nm	10...20 mm	■ 4 m ²	
GM..A..		40 Nm	12...26.7 mm	■ 8 m ²	

Use of damper actuators from Belimo: The actuators listed in this documentation are designed for adjusting dampers in technical building installations.

¹⁾ When calculating the torque or actuating force required to operate air dampers, it is essential to take into account all the data supplied by the damper manufacturer concerning the cross-section and the design, as well as the installation situation and the ventilation conditions. The recommended damper sizes are guidelines.

Linear actuators, non fail-safe











Actuator type		Actuating force	Stroke range	Damper size up to approx. ¹⁾	Page
Linear actuators with connector plug					25
UH..		50 N	0...60 mm	■ 0.2 m ²	
Linear actuators with connecting cable / connecting terminals					25-26
CH..		125 N	0...100 mm	■ 0.8 m ²	
LH..A..		150 N	0...300 mm	■ 1 m ²	
SH..A..		450 N	0...300 mm	■ 3 m ²	

Use of damper actuators from Belimo: The actuators listed in this documentation are designed for adjusting dampers in technical building installations.

¹⁾ When calculating the torque or actuating force required to operate air dampers, it is essential to take into account all the data supplied by the damper manufacturer concerning the cross-section and the design, as well as the installation situation and the ventilation conditions. The recommended damper sizes are guidelines.

Rotary actuators, fail-safe















Actuator type		Fail-safe	Nominal torque	Shaft diameter	Damper size up to approx. ¹⁾	Page
Rotary actuators						27–30
TF..		■	2.5 Nm	6...12.7 mm	■ 0.5 m ²	
LF..		■	4 Nm	8...16 mm	■ 0.8 m ²	
NF..A..		■	10 Nm	10...25.4 mm	■ 2 m ²	
SF..A.. + VSF24A..		■	20 Nm	10...25.4 mm	■ 4 m ²	
EF..A..		■	30 Nm	12...26.7 mm	■ 6 m ²	
GK..A..		■	40 Nm	12...26.7 mm	■ 8 m ²	
SKM230.. + CM24K..		■	2 Nm	6...12.7 mm	■ 0.4 m ²	
Very fast running rotary actuators						30
NKQ24A..		■	6 Nm	8...26.7 mm	■ 1.2 m ²	

Use of damper actuators from Belimo: The actuators listed in this documentation are designed for adjusting dampers in technical building installations.

¹⁾ When calculating the torque or actuating force required to operate air dampers, it is essential to take into account all the data supplied by the damper manufacturer concerning the cross-section and the design, as well as the installation situation and the ventilation conditions. The recommended damper sizes are guidelines.

Special actuators, non fail-safe



















Actuator type		Nominal torque	Actuating force	Stroke range	Shaft diameter	Damper size up to approx. ¹⁾	Page
Fast running rotary actuators							31
TMC..A..		2 Nm			6...20 mm	■ 0.4 m ²	
LMC..A..		5 Nm			6...20 mm	■ 1 m ²	
NMC..A..		10 Nm			8...26.7 mm	■ 2 m ²	
SMC..A..		20 Nm			10...20 mm	■ 4 m ²	
GMC..A..		40 Nm			12...26.7 mm	■ 8 m ²	
Very fast running rotary actuators							32
LMQ..A..		4 Nm			8...26.7 mm	■ 0.8 m ²	
NMQ..A..		8 Nm			8...26.7 mm	■ 1.5 m ²	
NMD..A..		8 Nm			10...20 mm	■ 1.5 m ²	
SMQ..A..		16 Nm			12...26.7 mm	■ 3.2 m ²	
SMD..A..		16 Nm			10...20 mm	■ 3.2 m ²	
Very fast running linear actuators							33
LHQ..A..			100 N	0...100 mm		■ 0.7 m ²	
SHQ..A..			200 N	0...100 mm		■ 1.3 m ²	

Use of damper actuators from Belimo: The actuators listed in this documentation are designed for adjusting dampers in technical building installations.

¹⁾ When calculating the torque or actuating force required to operate air dampers, it is essential to take into account all the data supplied by the damper manufacturer concerning the cross-section and the design, as well as the installation situation and the ventilation conditions. The recommended damper sizes are guidelines.

Special actuators, non fail-safe / fail-safe



Actuator type	Fail-safe	Nominal torque	Shaft diameter	Damper size up to approx. ¹⁾	Page
RobustLine rotary actuators for extreme conditions, non fail-safe / fail-safe					34
NM..P.		10 Nm	10...20 mm	 2 m ²	
SM..P.		20 Nm	14...20 mm	 4 m ²	
NKQ..P.	 ■	6 Nm	10...20 mm	 1.2 m ²	
IP66/67 NEMA 4X rotary actuators for outdoor applications, non fail-safe / fail-safe					35-36
SMQ..G..		16 Nm	12...26.7 mm	 3.2 m ²	
GM..G..		40 Nm	14...26.7 mm	 8 m ²	
NF..G..	 ■	10 Nm	12...26.7 mm	 2 m ²	
SF..G..	 ■	20 Nm	12...26.7 mm	 4 m ²	
GK..G..	 ■	40 Nm	14...26.7 mm	 8 m ²	


Use of damper actuators from Belimo: The actuators listed in this documentation are designed for adjusting dampers in technical building installations.


¹⁾ When calculating the torque or actuating force required to operate air dampers, it is essential to take into account all the data supplied by the damper manufacturer concerning the cross-section and the design, as well as the installation situation and the ventilation conditions. The recommended damper sizes are guidelines.

Special actuators / RetroFIT+ actuators, non fail-safe / fail-safe



Actuator type	Fail-safe	Nominal torque	Form fit	Damper size	Page
Rotary actuators with high torque					37



PMCA..		160 Nm	17x17 mm	Special	
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PKCA..		160 Nm	17x17 mm	Special	
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Actuator type	Nominal torque	Damper blade diameter	Round duct diameter in accordance with DIN EN 1506	Page	
Actuators with damper blade					38



CM..D		2 Nm	100...160 mm	DN 100...160	
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Actuator type	Nominal torque	Shaft diameter	Control	Damper size up to approx. ¹⁾	Page
Parametrisable rotary actuators with connecting terminals					39

LM..A..		5 Nm	6...20 mm	modulating 2...10 V ²⁾	 1 m ²
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NM..A..		10 Nm	8...26.7 mm	modulating 2...10 V ²⁾	 2 m ²
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SM..A..		20 Nm	10...20 mm	modulating 2...10 V ²⁾	 4 m ²
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GM..A..		40 Nm	12...26.7 mm	modulating 2...10 V ²⁾	 8 m ²
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Use of damper actuators from Belimo: The actuators listed in this documentation are designed for adjusting dampers in technical building installations.

¹⁾ When calculating the torque or actuating force required to operate air dampers, it is essential to take into account all the data supplied by the damper manufacturer concerning the cross-section and the design, as well as the installation situation and the ventilation conditions. The recommended damper sizes are guidelines.

²⁾ Parametrisable with PC-Tool or service tool ZTH EU (e.g. for MP types, control, feedback, running time and other functions can be set).

RetroFIT+ non fail-safe actuators – configuration options



Actuator type	Nominal torque	Actuating force	Stroke range	Shaft diameter	Control	Damper size up to approx. ¹⁾	Page
Parametrisable rotary actuators with special control and connecting cable							40
SM24A-MA 	20 Nm			10...20 mm	modulating 4...20 mA ²⁾	 4 m ²	
Parametrisable linear actuators with connecting terminals							41
LH..A.. 		150 N	0...300 mm		modulating 2...10 V ²⁾	 1 m ²	
Configuration options							42–43

Use of damper actuators from BELIMO: The actuators listed in this documentation are designed for adjusting dampers in technical building installations.

¹⁾ When calculating the torque or actuating force required to operate air dampers, it is essential to take into account all the data supplied by the damper manufacturer concerning the cross-section and the design, as well as the installation situation and the ventilation conditions. The recommended damper sizes are guidelines.

²⁾ Parametrisable with PC-Tool or service tool ZTH EU (e.g. for MP types, control, feedback, running time and other functions can be set).

Bus solutions from Belimo, save costs and energy!



Bus systems can be used to exchange any volume of data from various bus participants over the same physical lines. The user has unrestricted access to control, feedback and parameters on the individual devices. Cabling expenditures are reduced by up to 90% compared with actuators with conventional wiring.

Thanks to time and material savings (cables, connecting terminals, connectors, etc.), installation work is simpler and cheaper. Additional positive selling points for bus solutions include their lower fire load and the fact that they take up less space in cable trays and control cabinets. Depending on the application and requirements, different bus systems are used.

One or two sensors can also be connected to most communicative actuators. This may be a passive resistance sensor (Pt1000, Ni1000, NTC, etc.), an active sensor (e.g. with a 0...10 V output) or a switching contact. Its signals are digitised in the Belimo actuator and transferred to the higher-level bus system.



The Belimo MP-Bus was specially developed as a single-client/multi-server system for HVAC actuators and sensors. It allows up to eight different control devices to be grouped together and connected to any higher-level system. It is very resistant to external interferences and does not need bus terminals.



Modbus is a communication protocol, which has become the de-facto standard. It is used commonly all around the globe and in a huge range of applications. Its simple implementation makes Modbus very popular with many manufacturers.



BACnet is a proven, widely used communication protocol for building automation. The standard is open, requires no licence and is used by a large number of international providers, universities and associations. Implementing the BACnet Standard Device Profiles and the associated BACnet Interoperability Building Blocks guarantees genuine compatibility between various BACnet devices.



KNX is a well-engineered building automation system used around the world to control systems spanning several maintenance groups, such as heaters, blinds and security technology in buildings. The KNX-certified actuators enable direct connection to the KNX network. Communication takes place via the integrated KNX interface (TP, S-Mode).



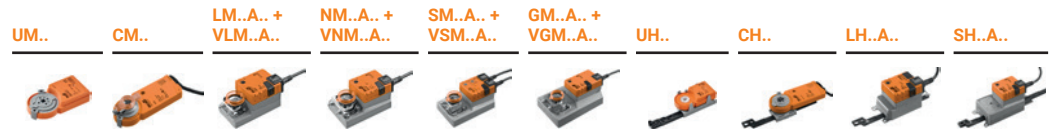
IoT actuators with Ethernet interface can exchange operating and setting data with the Belimo Cloud. It is controlled locally via an analogue signal or BACnet/Modbus. Thanks to the open client API of the Belimo Cloud, a connection to a specific cloud solution can be implemented.

Non fail-safe actuators



Rotary actuators

Linear actuators



Mechanical accessories

	UM..	CM..	LM..A.. + VLM..A..	NM..A.. + VNM..A..	SM..A.. + VSM..A..	GM..A.. + VGM..A..	UH..	CH..	LH..A..	SH..A..
Shaft extension		AV6-20	AV6-20	AV8-25	AV8-25 AV12-25-I					
End stop kit, rotary support, coupling piece							Z-AS2 Z-DS1 Z-KS2	Z-AS2 Z-DS1 Z-KS2	Z-AS1 Z-DS1 Z-KS1	
Baseplate extension				Z-NMA	Z-SMA	Z-GMA				
Angle-of-rotation limiter										
End stop clips		Z-ESCM	Z-ESCM					Z-ESCM		
End stop							Z-ESUH			
Spring clip								Z-FKCH		
Form fit inserts ¹⁾			ZF..-LMA ZFRL..-LMA	ZF..-NSA ZF8-NMA	ZF..-NSA					
Gear train disengagement magnet		Z-MA						Z-MA		
Lever for actuator drive shafts				AH-20 ²⁾ AH-25	AH-20 AH-25 ³⁾	AH-GMA				
Lever for damper shafts				KH8	KH8	KH10				
Shaft clamp, one-sided			K-ELA..	K-ENMA K-ENSA	K-ENSA K-ENSA-I					
Shaft clamp, reversible				K-NA	K-SA					
Ball joints				KG8 KG10A	KG8 KG10A	KG10A				
Mounting kit for linkage operation				ZG-NMA	ZG-SMA	ZG-GMA				
Position indicator		Z-PICM	Z-PI	Z-PI	Z-PI	Z-PI				
Anti-rotation clip		Z-ARCM	Z-ARCM							
Protective covering		Z-PCUM					Z-PCUM			

¹⁾ Form fit inserts: LM..A..: 8x8 mm, 10x10 mm, 12x12 mm; NM..A..: 8x8 mm (ZF8-NMA); NM..A.. / SM..A..: 10x10 mm, 12x12 mm, 15x15 mm, 16x16 mm.

²⁾ Only in combination with reversible shaft clamp K-NA.

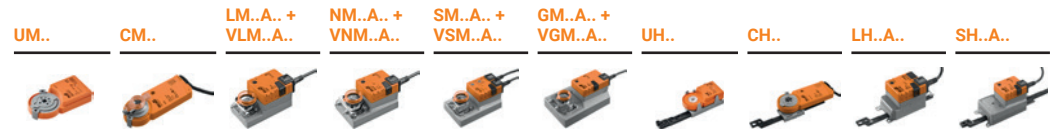
³⁾ Only in combination with one-sided shaft clamp K-ENSA.

Non fail-safe actuators



Rotary actuators

Linear actuators



Electrical accessories

Auxiliary switch				S1A S2A	S1A S2A	S1A S2A	S1A S2A				
Room temperature controller for modulating actuators		CR24..	CR24..	CR24..	CR24..	CR24..	CR24..	CR24..	CR24..	CR24..	CR24..
Feedback potentiometer				P140A P1000A P10000A	P140A P1000A P10000A	P140A P1000A P10000A	P140A P1000A P10000A				
Signal converter voltage/current for modulating actuators		Z-UIC	Z-UIC	Z-UIC	Z-UIC	Z-UIC	Z-UIC	Z-UIC	Z-UIC	Z-UIC	Z-UIC
Positioner/range controller for modulating actuators		CRP24-B1	CRP24-B1	CRP24-B1	CRP24-B1	CRP24-B1	CRP24-B1	CRP24-B1	CRP24-B1	CRP24-B1	CRP24-B1
		SBG24	SBG24	SBG24	SBG24	SBG24	SBG24	SBG24	SBG24	SBG24	SBG24
		SGA24	SGA24	SGA24	SGA24	SGA24	SGA24	SGA24	SGA24	SGA24	SGA24
		SGE24	SGE24	SGE24	SGE24	SGE24	SGE24	SGE24	SGE24	SGE24	SGE24
		SGF24	SGF24	SGF24	SGF24	SGF24	SGF24	SGF24	SGF24	SGF24	

Tools

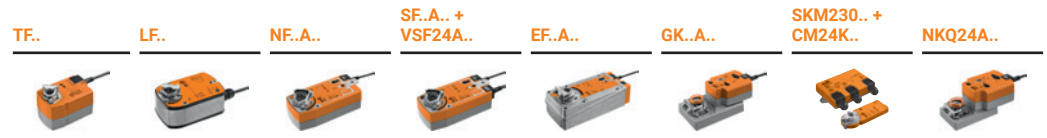
Service tool ¹⁾				ZTH EU	ZTH EU	ZTH EU	ZTH EU			ZTH EU	ZTH EU
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¹⁾ For parametrisable actuators

Fail-safe actuators



Rotary actuators



Mechanical accessories

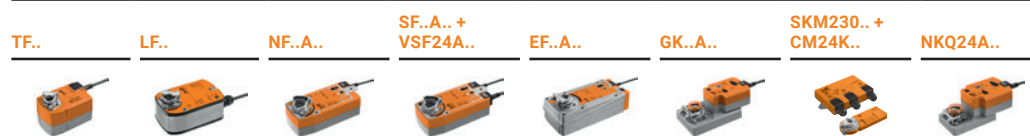
		TF.	LF.	NF.A.	SF.A.. + VSF24A..	EF.A.	GK..A.	SKM230.. + CM24K..	NKQ24A..
Shaft extension		AV6-20	AV6-20	AV8-25	AV8-25			AV6-20	AV8-25
Adapter for auxiliary switch and feedback potentiometer							Z-SPA		Z-SPA
End stop kit, rotary support, coupling piece									
Baseplate extension				Z-SF	Z-SF		Z-GMA		
Angle-of-rotation limiter		ZDB-TF	ZDB-TF						
End stop clips								Z-ESCM	
Form fit inserts ¹⁾		ZF8-TF	ZF8-TF	ZF.-NSA-F	ZF.-NSA-F				
Gear train disengagement magnet								Z-MA	
Lever for actuator drive shafts		AH-TF	KH-LF	KH-AFB	KH-AFB		AH-GMA		AH-25
Lever for damper shafts		KH8	KH8	KH8	KH8	KH10 KH-EFB	KH10		KH8
Shaft clamp, reversible			K6-1	K7-2 K7-3	K7-2 K7-3	K9-2			K-SA
Ball joints		KG8 KG10A	KG8 KG10A	KG8 KG10A	KG8 KG10A		KG10A		KG8 KG10A
Mounting kit for linkage operation		ZG-TF1	ZG-LF1 ZG-LF3	ZG-AFB	ZG-AFB	ZG-EFB	ZG-GMA		ZG-SMA
Screw fastening kit		SB-TF							
Position indicator				IND-AFB	IND-AFB	IND-EFB	Z-PI	Z-PICM	Z-PI
Anti-rotation clip								Z-ARCM	

¹⁾ Form fit inserts: TF.. / LF.: 8x8 mm; NF.. / SF.: 10x10 mm, 12x12 mm, 15x15 mm, 16x16 mm.






Fail-safe actuators



Rotary actuators



Electrical accessories

	TF..	LF..	NF..A..	SF..A. + VSF24A..	EF..A..	GK..A..	SKM230.. + CM24K..	NKQ24A..
Auxiliary switch 		S2A-F	S2A-F	S2A-F		S1A ²⁾ S2A ²⁾		S1A ¹⁾ S2A ¹⁾
Room temperature controller for modulating actuators 	CR24..	CR24..	CR24..	CR24..	CR24..	CR24..		CR24
Feedback potentiometer 		P1000A-F	P1000A-F	P1000A-F		P140A ²⁾ P1000A ²⁾ P10000A ²⁾		P140A ¹⁾ P1000A ¹⁾ P10000A ¹⁾
Signal converter voltage/current for modulating actuators 	Z-UIC	Z-UIC	Z-UIC	Z-UIC	Z-UIC	Z-UIC		Z-UIC
Positioner/range controller for modulating actuators 	CRP24-B1	CRP24-B1	CRP24-B1	CRP24-B1	CRP24-B1	CRP24-B1		CRP24-B1
	SBG24	SBG24	SBG24	SBG24	SBG24	SBG24		SBG24
	SGA24	SGA24	SGA24	SGA24	SGA24	SGA24		SGA24
	SGE24	SGE24	SGE24	SGE24	SGE24	SGE24		SGE24
	SGF24	SGF24	SGF24	SGF24	SGF24	SGF24		SGF24

Tools

Service tool ³⁾ 	ZTH EU	ZTH EU	ZTH EU	ZTH EU	ZTH EU	ZTH EU		
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¹⁾ Auxiliary switch and feedback potentiometer on NKQ..A actuators can only be used together with adapter Z-SPA.

²⁾ Auxiliary switch and feedback potentiometer on GK..A actuators in combination with a reversible shaft clamp (mounted underneath for short shaft installation) can only be used together with adapter Z-SPA.

³⁾ For parametrisable actuators

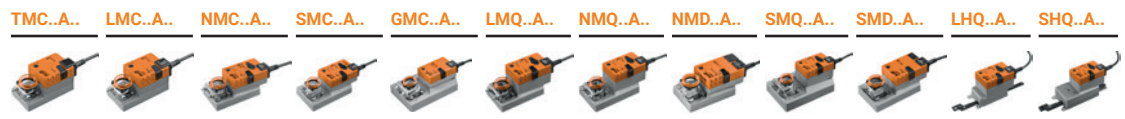
Special actuators, non fail-safe



Fast running rotary actuators

Very fast running rotary actuators

Very fast running linear actuators



Mechanical accessories

		TMC..A..	LMC..A..	NMC..A..	SMC..A..	GMC..A..	LMQ..A..	NMQ..A..	NMD..A..	SMQ..A..	SMD..A..	LHQ..A..	SHQ..A..
Shaft extension		AV6-20	AV6-20	AV8-25	AV8-25 AV12-25-I		AV8-25	AV8-25	AV8-25 AV12-25-I		AV8-25 AV12-25-I		
Adapter for auxiliary switch and feedback potentiometer							Z-SPA	Z-SPA		Z-SPA			
End stop kit, rotary support, coupling piece												Z-AS2 Z-DS1 Z-KS2	Z-AS1 Z-DS1 Z-KS1
Baseplate extension				Z-NMA	Z-SMA	Z-GMA	Z-NMA				Z-SMA		
Form fit inserts ¹⁾		ZF..LMA ZFRL..LMA	ZF..LMA ZFRL..LMA	ZF..NSA ZF8-NMA	ZF..NSA		ZF..NSA ZF8-NMA	ZF..NSA	ZF..NSA		ZF..NSA		
Lever for actuator drive shafts				AH-20 ²⁾ AH-25	AH-20 AH-25 ³⁾	AH-GMA	AH-20 ²⁾ AH-25	AH-20 ³⁾ AH-25	AH-20	AH-GMA	AH-20 AH-25 ⁴⁾		
Lever for damper shafts				KH8	KH8	KH10	KH8	KH8	KH8	KH10	KH8		
Shaft clamp, one-sided		K-ELA..	K-ELA..	K-ENMA K-ENSA	K-ENSA K-ENSA-I		K-ENMA K-ENSA	K-ENSA	K-ENSA K-ENSA-I		K-ENSA K-ENSA-I		
Shaft clamp, reversible				K-NA	K-NA		K-NA	K-NA			K-NA		
Ball joints				KG8 KG10A	KG8 KG10A	KG10A	KG8 KG10A	KG8 KG10A	KG8 KG10A	KG10A	KG8 KG10A		
Mounting kit for linkage operation				ZG-NMA	ZG-SMA	ZG-GMA	ZG-NMA	ZG-NMA		ZG-GMA	ZG-SMA		
Position indicator		Z-PI	Z-PI	Z-PI	Z-PI	Z-PI	Z-PI	Z-PI	Z-PI	Z-PI	Z-PI		

¹⁾ Form fit inserts: TMC..A.. / LMC..A..: 8x8 mm, 10x10 mm, 12x12 mm; NMC..A..: 8x8 mm, 10x10 mm, 12x12 mm, 16x16 mm; SMC..A.. / SMD..A.. / NMD..A..: 10x10 mm, 12x12 mm, 15x15 mm, 16x16 mm; LMQ..A..: 8x8 mm, 10x10 mm, 12x12 mm, 15x15 mm, 16x16 mm; NMQ..A..: 10x10 mm, 12x12 mm, 15x15 mm, 16x16 mm.

²⁾ Only in combination with reversible shaft clamp K-NA.

³⁾ Only in combination with reversible shaft clamp K-SA.

⁴⁾ Only in combination with one-sided shaft clamp K-ENSA.

Special actuators, non fail-safe



Fast running rotary actuators

Very fast running rotary actuators

Very fast running linear actuators



Electrical accessories

		TMC..A.	LMC..A.	NMC..A.	SMC..A.	GMC..A.	LMQ..A.	NMQ..A.	NMD..A.	SMQ..A.	SMD..A.	LHQ..A.	SHQ..A.
Auxiliary switch		S1A S2A	S1A S2A	S1A S2A	S1A S2A	S1A S2A	S1A ¹⁾ S2A ¹⁾	S1A ¹⁾ S2A ¹⁾	S1A S2A	S1A ¹⁾ S2A ¹⁾	S1A S2A		
Room temperature controller for modulating actuators		CR24..	CR24..	CR24..	CR24..		CR24..	CR24..		CR24..		CR24..	CR24..
Feedback potentiometer		P140A P1000A P10000A	P140A P1000A P10000A	P140A P1000A P10000A	P140A P1000A P10000A	P140A P1000A P10000A	P140A ¹⁾ P1000A ¹⁾ P10000A ¹⁾	P140A ¹⁾ P1000A ¹⁾ P10000A ¹⁾	P140A P1000A P10000A	P140A ¹⁾ P1000A ¹⁾ P10000A ¹⁾	P140A P1000A P10000A		
Signal converter voltage/current for modulating actuators		Z-UIC	Z-UIC	Z-UIC	Z-UIC		Z-UIC	Z-UIC		Z-UIC		Z-UIC	Z-UIC
Positioner/range controller for modulating actuators		CRP24-B1 SBG24 SGA24 SGE24 SGF24	CRP24-B1 SBG24 SGA24 SGE24 SGF24	CRP24-B1 SBG24 SGA24 SGE24 SGF24	CRP24-B1 SBG24 SGA24 SGE24 SGF24		CRP24-B1 SBG24 SGA24 SGE24 SGF24	CRP24-B1 SBG24 SGA24 SGE24 SGF24		CRP24-B1 SBG24 SGA24 SGE24 SGF24		CRP24-B1 SBG24 SGA24 SGE24 SGF24	CRP24-B1 SBG24 SGA24 SGE24 SGF24

Tools

Service tool ²⁾				ZTH EU	ZTH EU								
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¹⁾ Auxiliary switch and feedback potentiometer on LMQ..A, NMQ..A and SMQ..A actuators in combination with a reversible shaft clamp (mounted underneath for short shaft installation) can only be used together with adapter Z-SPA.

²⁾ For parametrisable actuators

Special actuators, non fail-safe / fail-safe



**RobustLine rotary actuators
for extreme conditions**

**IP66/67 / NEMA 4X rotary actuators
for outdoor applications**

**Actuators with
high torque**

Non fail-safe

Fail-safe

Non fail-safe

Fail-safe

**Non fail-safe /
fail-safe**

NM..P..

SM..P..

NKQ..P..

SMQ..G..

GM..G..

NF..G..

SF..G..

GK..G..

PMCA..
PKCA..



Mechanical accessories

Lever for actuator drive shafts					AH-GMA	AH-GMA	AH-GMA	AH-GMA	AH-GMA	
Lever for damper shafts					KH10	KH10	KH10	KH10	KH10	
Ball joints					KG10A	KG10A	KG10A	KG10A	KG10A	
Mounting kit for linkage operation					ZG-GMA	ZG-GMA	ZG-GMA	ZG-GMA	ZG-GMA	
Adapter kit										ZPR..

Electrical accessories

Heating with humidistat AC 230 V (available only fitted at the factory)		HH230	HH230		HH230-MG	HH230-MG	HH230-FG	HH230-FG	HH230-MG	
Heating with humidistat AC/DC 24 V (available only fitted at the factory)					HH24-MG	HH24-MG	HH24-FG	HH24-FG	HH24-MG	
Heating with thermostat AC 230 V (available only fitted at the factory)		HT230	HT230		HT230-MG	HT230-MG	HT230-FG	HT230-FG	HT230-MG	
Heating with thermostat AC/DC 24 V (available only fitted at the factory)					HT24-MG	HT24-MG	HT24-FG	HT24-FG	HT24-MG	

Special actuators, non fail-safe / fail-safe



RobustLine rotary actuators for extreme conditions			IP66/67 / NEMA 4X rotary actuators for outdoor applications					Actuators with high torque	Actuators with damper blade
Non fail-safe		Fail-safe	Non fail-safe		Fail-safe			Non fail-safe / fail-safe	Non fail-safe
NM..P..	SM..P..	NKQ..P..	SMQ..G..	GM..G..	NF..G..	SF..G..	GK..G..	PMCA.. PKCA..	CM..D

Electrical accessories

Auxiliary switch		S2A GR	S2A GR		S2A	S2A	(S2A-F GR) ¹⁾	(S2A-F GR) ¹⁾	(S2A) ¹⁾	
Room temperature controller for modulating actuators		CR24..	CR24..	CR24..	CR24..	CR24..	CR24..	CR24..	CR24..	CR24..
Feedback potentiometer		P..A GR ²⁾	P..A GR ²⁾		P..A GR ²⁾	P..A GR ²⁾	P..A GR ¹⁾²⁾	P..A GR ¹⁾²⁾	P..A GR ¹⁾²⁾	
Signal converter voltage/current for modulating actuators		Z-UIC	Z-UIC	Z-UIC	Z-UIC	Z-UIC	Z-UIC	Z-UIC	Z-UIC	Z-UIC
Positioner/range controller for modulating actuators		CRP24-B1	CRP24-B1	CRP24-B1	CRP24-B1	CRP24-B1	CRP24-B1	CRP24-B1	CRP24-B1	CRP24-B1
		SBG24	SBG24	SBG24	SBG24	SBG24	SBG24	SBG24	SBG24	SBG24
		SGA24	SGA24	SGA24	SGA24	SGA24	SGA24	SGA24	SGA24	SGA24
		SGE24	SGE24	SGE24	SGE24	SGE24	SGE24	SGE24	SGE24	SGE24
		SGF24	SGF24	SGF24	SGF24	SGF24	SGF24	SGF24	SGF24	SGF24

Tools

Service tool ³⁾		ZTH EU	ZTH EU		ZTH EU	ZTH EU	ZTH EU	ZTH EU	ZTH EU	ZTH EU
Belimo Assistant App										■

¹⁾ Combination only on request.


²⁾ Resistance values 140 Ω, 1 kΩ, 10 kΩ available.

³⁾ For parametrisable actuators

For form fit inserts, please get in touch with your local Belimo contact person.

Rotary actuators with connector plug

Nominal torque **1 Nm**
 Damper size up to approx. 0.2 m²

Nominal voltage	Direction of rotation	Angle of rotation	Degree of protection	
 UM..				
Open/close, 3-point				
AC/DC 24 V	↺ counterclockwise rotation	0...185°	IP20	UM24Y-L.1
	↻ clockwise rotation			UM24Y-R.1
AC 230 V	↺ counterclockwise rotation			UM230Y-L.1
	↻ clockwise rotation			UM230Y-R.1
Modulating (2...10 V)¹⁾				
AC/DC 24 V	↺ counterclockwise rotation	Max. 95°, can be limited on both sides by adjustable mechanical end stops	IP20	UM24Y-SR-L.1
	↻ clockwise rotation			UM24Y-SR-R.1

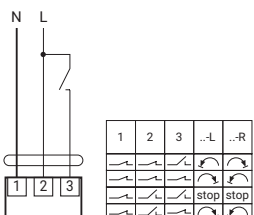
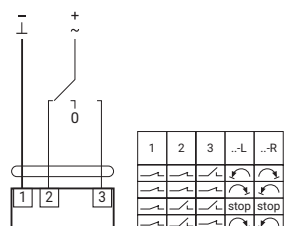
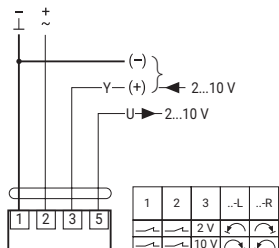
Technical data

Shaft diameter	6...12.7 mm
Sound power level	≤35 dB(A) @ 22 s
Running time motor 90°	22 s
Connection	Molex Mini-Fit Jr. connector plug
Ambient temperature	-30...50°C
Storage temperature	-40...80°C
Ambient humidity	95% RH, non-condensing
EMC	CE according to 2014/30/EU

¹⁾ Modulating actuators: Standard control signal Y = 0...10 V, 100 kΩ; operating range Y = 2...10 V / position feedback U = 2...10 V, max. 1 mA. Other versions on request. Please get in touch with your local Belimo contact person.

Electrical installation

Electrical and mechanical accessories **page 12-13**

Open/close	3-point	Modulating
UM24.., UM230..	UM24.., UM230..	UM24..-SR..
Y = 2...10 V / U = 2...10 V		
		

Rotary actuators with connecting cable

Nominal torque **2 Nm**
 Damper size up to approx. 0.4 m²



Nominal voltage	Direction of rotation	Angle of rotation	Degree of protection	
Open/close, 3-point				
AC/DC 24 V	↺ counterclockwise rotation	0...287.5° / without limits	IP54	CM24-L
	↻ clockwise rotation			CM24-R
	↺ counterclockwise rotation		IP66	CM24G-L
↻ clockwise rotation	CM24G-R			
AC 230 V	↺ counterclockwise rotation	0...287.5° / without limits	IP54	CM230-L
	↻ clockwise rotation			CM230-R
	↺ counterclockwise rotation		IP66	CM230G-L
↻ clockwise rotation	CM230G-R			
Modulating (2...10 V)¹⁾				
AC/DC 24 V	↺ counterclockwise rotation	Max. 95°, can be limited on both sides by adjustable mechanical end stops	IP54	CM24-SR-L
	↻ clockwise rotation			CM24-SR-R
	↺ counterclockwise rotation		IP66	CM24G-SR-L
↻ clockwise rotation	CM24G-SR-R			
Modulating (2...10 V) with adaptation¹⁾				
AC/DC 24 V	↺ counterclockwise rotation	Max. 95°, can be limited on both sides by adjustable mechanical end stops	IP54	CM24-SX-L
	↻ clockwise rotation			CM24-SX-R
Communicative²⁾				
AC/DC 24 V	↺ counterclockwise rotation	Max. 95°, can be limited on both sides by adjustable mechanical end stops	IP54	CM24-MPL-L
	↻ clockwise rotation			CM24-MPL-R

Technical data

Shaft diameter	6...12.7 mm
Sound power level	≤35 dB(A) @ 75 s
Running time motor 90°	75 s
Manual override	Gear train disengagement with magnet
Connection	Connecting cable 1 m
Position indication	Mechanical, add-on
Ambient temperature	-30...50°C
Storage temperature	-40...80°C
Ambient humidity	95% RH, non-condensing
EMC	CE according to 2014/30/EU

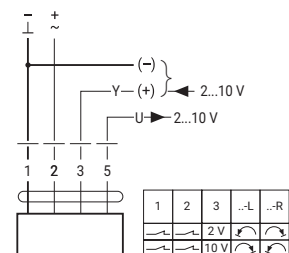
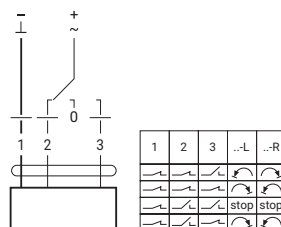
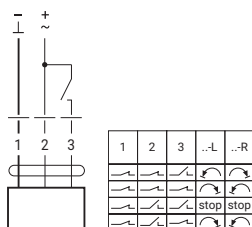
¹⁾ Modulating actuators: Standard control signal Y = 0...10 V, 100 kΩ; operating range Y = 2...10 V / position feedback U = 2...10 V, max. 1 mA.

²⁾ You can find suitable system diagrams at www.belimo.com. Other versions on request. Please get in touch with your local Belimo contact person.






Electrical installation

Electrical and mechanical accessories **page 12-13**

Open/close	3-point	Modulating
CM24.., CM230..	CM24.., CM230..	CM24..-SR.., CM24..-SX..
		Y = 2...10 V / U = 2...10 V



Rotary actuators with connecting cable

Nominal torque	5 Nm	10 Nm	20 Nm	40 Nm
Damper size up to approx.	1 m ²	2 m ²	4 m ²	8 m ²
Nominal voltage				
	 LM..A..	 NM..A..	 SM..A..	 GM..A..

Open/close, 3-point				Open/close
AC/DC 24 V		LM24A	NM24A	SM24A
	1	LM24A-S	NM24A-S	SM24A-S
AC 230 V		LM230A	NM230A	SM230A
	1	LM230A-S	NM230A-S	SM230A-S
Modulating (2...10 V) ¹⁾				
AC/DC 24 V		LM24A-SR	NM24A-SR	SM24A-SR
AC 230 V		LM230ASR	NM230ASR	SM230ASR
Communicative ²⁾, parametrisable ³⁾				
AC/DC 24 V		LM24A-MP LM24A-MOD ⁴⁾ LM24A-KNX VLM24A-LP1 ⁵⁾	NM24A-MP NM24A-MOD ⁴⁾ NM24A-KNX VNM24A-LP1 ⁵⁾	SM24A-MP SM24A-MOD ⁴⁾ VSM24A-LP1 ⁵⁾
				GM24A-MP GM24A-MOD ⁴⁾ VGM24A-LP1 ⁵⁾

Technical data				
Shaft diameter	6...20 mm	8...26.7 mm	10...20 mm	12...26.7 mm
Sound power level	≤35 dB(A) @ 150 s	≤35 dB(A) @ 150 s	≤45 dB(A) @ 150 s	≤45 dB(A) @ 150 s
Running time motor 90°	150 s			
Manual override	Gear train disengagement with push button, can be locked			
Connection	Connecting cable 1 m			
Direction of rotation	Selectable with switch			
Angle of rotation	Max. 95°, can be limited on both sides by adjustable mechanical end stops			
Position indication	Mechanical, add-on			
Degree of protection	IP54			
Ambient temperature	-30...50°C			
Storage temperature	-40...80°C			
Ambient humidity	95% RH, non-condensing			
EMC	CE according to 2014/30/EU			

¹⁾ Modulating actuators: Standard control signal Y = 0...10 V, 100 kΩ; operating range Y = 2...10 V / position feedback U = 2...10 V, max. 1 mA.

²⁾ You can find suitable system diagrams at www.belimo.com.

³⁾ Parametrisable with PC-Tool or service tool ZTH EU (e.g. for MP types, control, feedback, running time and other functions can be set).

⁴⁾ All MOD versions work with Modbus and BACnet.

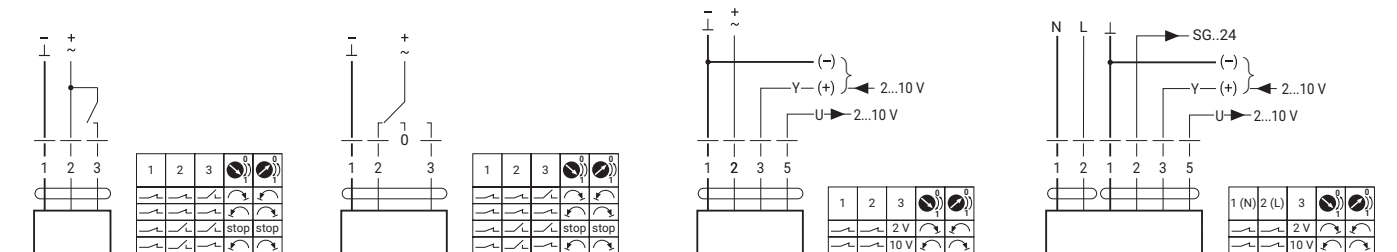
⁵⁾ All V..-LP1 versions are IoT-compatible and can exchange data with the Belimo Cloud.

Other versions on request. Please get in touch with your local Belimo contact person.

Electrical installation

Electrical and mechanical accessories **page 12-13**

Open/close	3-point	Modulating	Parametrisable	Modulating
..M24A, ..M24A-S, ..M230A, ..M230A-S	..M24A, ..M24A-S, ..M230A, ..M230A-S	..M24A-SR	..M24A-MP	..M230ASR
	(not permissible for GM..A..)	Y = 2...10 V U = 2...10 V	Y = variable U = variable	Y = 2...10 V U = 2...10 V



Rotary actuators with connecting terminals

Nominal torque **2 Nm**
Damper size up to approx. 0.4 m²

Nominal voltage	Direction of rotation	Angle of rotation	Degree of protection	
Open/close, 3-point				
AC/DC 24 V	counterclockwise rotation	0...287.5° / without limits	IP20	CM24-T-L
	clockwise rotation			CM24-T-R
Modulating (2...10 V)¹⁾				
AC/DC 24 V	counterclockwise rotation	Max. 95°, can be limited on both sides by adjustable mechanical end stops	IP20	CM24-SR-T-L
	clockwise rotation			CM24-SR-T-R
Modulating (2...10 V) with adaptation 1¹⁾				
AC/DC 24 V	counterclockwise rotation	Max. 95°, can be limited on both sides by adjustable mechanical end stops	IP20	CM24-SX-T-L
	clockwise rotation			CM24-SX-T-R



Technical data

Shaft diameter	6...12.7 mm
Sound power level	≤35 dB(A) @ 75 s
Running time motor 90°	75 s
Manual override	Gear train disengagement with magnet
Connection	Connecting terminals
Position indication	Mechanical, add-on
Ambient temperature	-30...50°C
Storage temperature	-40...80°C
Ambient humidity	95% RH, non-condensing
EMC	CE according to 2014/30/EU





¹⁾ Modulating actuators: Standard control signal Y = 0...10 V, 100 kΩ; operating range Y = 2...10 V / position feedback U = 2...10 V, max. 1 mA.
Other versions on request.

Electrical installation

Electrical and mechanical accessories **page 12–13**

Open/close	3-point	Modulating
CM24..	CM24..	CM24..-SR.., CM24..-SX..
		Y = 2...10 V U = 2...10 V

Rotary actuators with connecting terminals

Nominal torque	5 Nm	10 Nm	20 Nm	40 Nm
Damper size up to approx.	1 m ²	2 m ²	4 m ²	8 m ²
Nominal voltage	SPDT auxiliary switch			
				
	LM..A-TP	NM..A-TP	SM..A-TP	GM..A-TP
Open/close, 3-point				Open/close
AC/DC 24 V	1 LM24A-TP LM24A-S-TP	NM24A-TP NM24A-S-TP	SM24A-TP SM24A-S-TP	GM24A-TP
AC 230 V	1 LM230A-TP LM230A-S-TP	NM230A-TP NM230A-S-TP	SM230A-TP SM230A-S-TP	GM230A-TP
Modulating (2...10 V) ¹⁾				
AC/DC 24 V	LM24A-SR-TP	NM24A-SR-TP	SM24A-SR	GM24A-SR-TP
AC 230 V	LM230ASR-TP	NM230ASR-TP	SM230ASR-TP	
Communicative ²⁾, parametrisable ³⁾				
AC/DC 24 V	LM24A-MP-TP	NM24A-MP-TP	SM24A-MP-TP	GM24A-MP-TP
Technical data				
Shaft diameter	6...20 mm	8...26.7 mm	10...20 mm	12...26.7 mm
Sound power level	≤35 dB(A) @ 150 s	≤35 dB(A) @ 150 s	≤45 dB(A) @ 150 s	≤45 dB(A) @ 150 s
Running time motor 90°	150 s			
Manual override	Gear train disengagement with push button, can be locked			
Connection	Connecting terminals			
Direction of rotation	Selectable with switch			
Angle of rotation	Max. 95°, can be limited on both sides by adjustable mechanical end stops			
Position indication	Mechanical, add-on			
Degree of protection	IP54			
Ambient temperature	-30...50°C			
Storage temperature	-40...80°C			
Ambient humidity	95% RH, non-condensing			
EMC	CE according to 2014/30/EU			

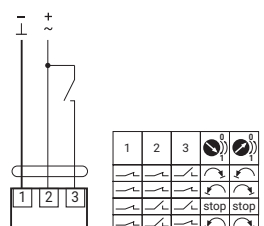
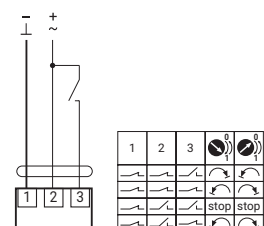
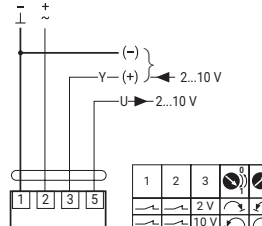
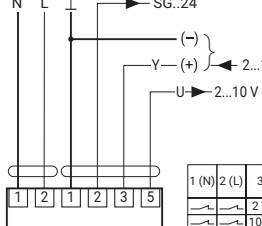

¹⁾ Modulating actuators: Standard control signal Y = 0...10 V, 100 kΩ; operating range Y = 2...10 V / position feedback U = 2...10 V, max. 1 mA.

²⁾ You can find suitable system diagrams at www.belimo.com.

³⁾ Parametrisable with PC-Tool or service tool ZTH EU (e.g. for MP types, control, feedback, running time and other functions can be set). Other versions on request. Please get in touch with your local Belimo contact person.

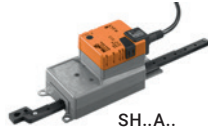
Electrical installation

Electrical and mechanical accessories [page 12-13](#)

Open/close	3-point	Modulating	Parametrisable	Modulating
..M24A-TP, ..M24A-S-TP, ..M230A-TP, ..M230A-S-TP	..M24A-TP, ..M24A-S-TP, ..M230A-TP, ..M230A-S-TP	..M24A-SR-TP	..M24A-MP-TP	..M230ASR-TP
	(not permissible for GM..A..)	Y = 2...10 V U = 2...10 V	Y = variable U = variable	Y = 2...10 V U = 2...10 V
				

Linear actuators with connecting cable

Actuating force **450 N**
 Damper size up to approx. 3 m²



Stroke (gear rod)	Nominal voltage	
Open/close, 3-point		
100 mm	AC/DC 24 V	SH24A100
200 mm		SH24A200
300 mm		SH24A300
100 mm	230 V	SH230A100
200 mm		SH230A200
300 mm		SH230A300
Modulating (2...10 V) ¹⁾		
100 mm	AC/DC 24 V	SH24A-SR100
200 mm		SH24A-SR200
100 mm	230 V	SH230ASR100
200 mm		SH230ASR200
Communicative ²⁾, parametrisable ³⁾		
100 mm	AC/DC 24 V	SH24A-MP100
200 mm		SH24A-MP200
		SH24A-MOD200 ⁴⁾
300 mm	SH24A-MP300	

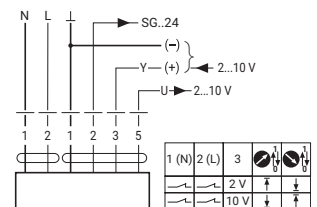
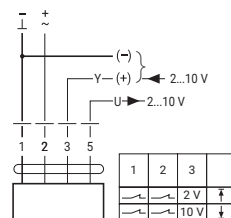
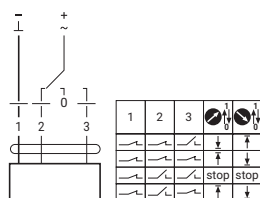
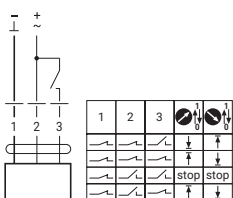
Technical data	
Running time motor 100 mm	150 s
Sound power level	≤52 dB(A) @ 150 s
Manual override	Gear train disengagement with push button, can be locked
Connection	Connecting cable 1 m
Direction of stroke	Selectable with switch
Height of stroke	Adjustable in 20 mm increments from 20...100 mm
Degree of protection	IP54
Ambient temperature	-30...50°C
Storage temperature	-40...80°C
Ambient humidity	95% RH, non-condensing
EMC	CE according to 2014/30/EU

¹⁾ Modulating actuators: Standard control signal Y = 0...10 V, 100 kΩ; operating range Y = 2...10 V / position feedback U = 2...10 V, max. 1 mA.
²⁾ You can find suitable system diagrams at www.belimo.com.
³⁾ Parametrisable with PC-Tool or service tool ZTH EU (e.g. for MP types, control, feedback, running time and other functions can be set).
⁴⁾ All MOD versions work with Modbus and BACnet.
 Other versions on request. Please get in touch with your local Belimo contact person.




Electrical installation

Electrical and mechanical accessories **page 12-13**

Open/close	3-point	Modulating	Parametrisable	Modulating
..H24A.., ..H230A..	..H24A.., ..H230A..	CH24-S.., ..H24A-SR..	..H24A-MP..	..H230ASR..
		Y = 2...10 V U = 2...10 V	Y = variable U = Y = variable	Y = 2...10 V U = 2...10 V



Rotary actuators, fail-safe

Nominal torque		2.5 Nm		4 Nm		10 Nm	
Damper size up to approx.		0.5 m ²		0.8 m ²		2 m ²	
Nominal voltage	Running time motor 90°						
		Without auxiliary switch	With 1 SPDT auxiliary switch	Without auxiliary switch	With 1 SPDT auxiliary switch	Without auxiliary switch	With 2 SPDT auxiliary switches
Open/close							
AC/DC 24 V	40...75 s			LF24	LF24-S		
	75 s	TF24	TF24-S			NF24A	NF24A-S2
AC 230 V	40...75 s			LF230	LF230-S		
	75 s	TF230	TF230-S				
AC 24...240 V DC 24...125 V	75 s					NFA	NFA-S2
Modulating (2...10 V)¹⁾							
AC/DC 24 V	150 s	TF24-SR		LF24-SR		NF24A-SR	NF24A-SR-S2
AC 230 V	150 s	TF230-SR					
Communicative²⁾, parametrisable³⁾							
AC/DC 24 V	40...75 s			LF24-MFT2			
	75 s	TF24-MFT					
	150 s					NF24A-MP NF24A-MOD⁴⁾	
Technical data							
Shaft diameter	6...12.7 mm			8...16 mm		10...25.4 mm	
Motor sound power level	≤50 dB(A) @ 75 s			≤50 dB(A) @ 75 s		≤45 dB(A) @ 75 s	
Sound power level fail-safe position	≤62 dB(A) @ 25 s			≤62 dB(A) @ 20 s		≤62 dB(A) @ 20 s	
Running time fail-safe position 90°	<25 s			20 s		<20 s	
Manual override	-			-		Hand crank	
Degree of protection	IP42			IP54		IP54	
Connection	Connecting cable 1 m, PVC						
Direction of rotation	Selectable by mounting left/right						
Angle of rotation	Max. 95°, can be limited on one side by adjustable mechanical end stops						
Position indication	Mechanical, integrated						
Ambient temperature	-30...50°C ⁵⁾						
Storage temperature	-40...80°C						
Ambient humidity	95% RH, non-condensing						
EMC	CE according to 2014/30/EU						

¹⁾ Modulating actuators: Standard control signal Y = 0...10 V, 100 kΩ; operating range Y = 2...10 V / position feedback U = 2...10 V, max. 1 mA.

²⁾ You can find suitable system diagrams at www.belimo.com.

³⁾ Parametrisable with PC-Tool or service tool ZTH EU (e.g. for MP types, control, feedback, running time and other functions can be set).

⁴⁾ All MOD versions work with Modbus and BACnet.

⁵⁾ Heating for ambient temperatures to -40°C on request.

Other versions on request. Please get in touch with your local Belimo contact person.

Rotary actuators, fail-safe

Nominal torque **20 Nm**

Damper size up to approx. 4 m²

30 Nm

6 m²

Nominal voltage	Running time motor 90°	SF..A..		EF..A..	
		Without auxiliary switch	With 2 SPDT auxiliary switches	Without auxiliary switch	With 2 SPDT auxiliary switches
Open/close					
AC/DC 24 V	75 s	SF24A	SF24A-S2	EF24A	EF24A-S2
AC 230 V	75 s			EF230A	EF230A-S2
AC 24...240 V DC 24...125 V	75 s	SFA	SFA-S2		
Modulating (2...10 V)¹⁾					
AC/DC 24 V	150 s	SF24A-SR	SF24A-SR-S2	EF24A-SR	EF24A-SR-S2
Communicative²⁾, parametrisable³⁾					
AC/DC 24 V	150 s	SF24A-MP SF24A-MOD⁴⁾ VSF24A-LP1⁵⁾		EF24A-MP	
Technical data					
Shaft diameter	10...25.4 mm			12...26.7 mm	
Motor sound power level	≤45 dB(A) @ 75 s			≤50 dB(A) @ 75 s	
Sound power level fail-safe position	≤62 dB(A) @ 20 s			≤62 dB(A) @ 20 s	
Running time fail-safe position 90°	<20 s			<20 s	
Manual override	Hand crank			Hand crank	
Degree of protection	IP54			IP54 / IP66 ⁶⁾	
Connection	Connecting cable 1 m, PVC				
Direction of rotation	Selectable by mounting left/right				
Angle of rotation	Max. 95°, can be limited on one side by adjustable mechanical end stops				
Position indication	Mechanical (integrated)				
Ambient temperature	-30...50°C ⁷⁾				
Storage temperature	-40...80°C				
Ambient humidity	95% RH, non-condensing				
EMC	CE according to 2014/30/EU				

¹⁾ Modulating actuators: Standard control signal Y = 0...10 V, 100 kΩ; operating range Y = 2...10 V / position feedback U = 2...10 V, max. 1 mA.

²⁾ You can find suitable system diagrams at www.belimo.com.

³⁾ Parametrisable with PC-Tool or service tool ZTH EU (e.g. for MP types, control, feedback, running time and other functions can be set).

⁴⁾ All MOD versions work with Modbus and BACnet.

⁵⁾ All V.-LP1 versions are IoT-compatible and can exchange data with the Belimo Cloud.

⁶⁾ IP66 version on request.

⁷⁾ Heating for ambient temperatures to -40°C on request.

Other versions on request. Please get in touch with your local Belimo contact person.

Rotary actuators, fail-safe

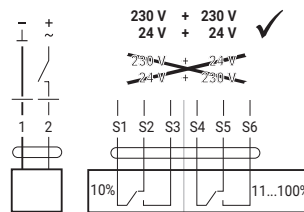
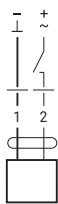
Electrical installation

Electrical and mechanical accessories **page 14-15**

Open/close

..F24, ..F24-S, ..F230, ..F230-S

..F24, ..F24-S2, ..F230A, ..F230A-S2, ..FA, ..FA-S2

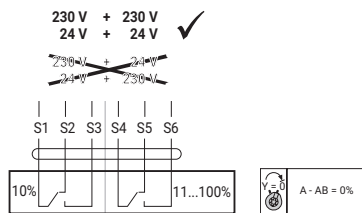
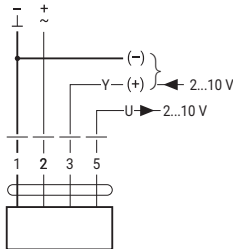


Modulating

TF24-SR, TF230-SR, ..F24A-SR, ..F24A-SR-S2

Y = 2...10 V

U = 2...10 V

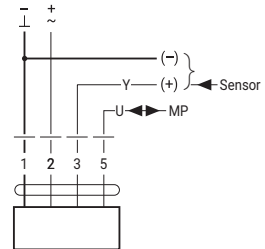


Parametrisable

..F24-MFT., ..F24A-MP

Y = variable

U = variable



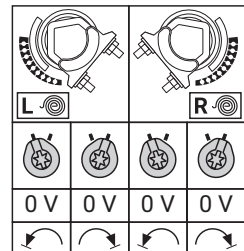
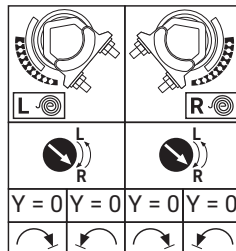
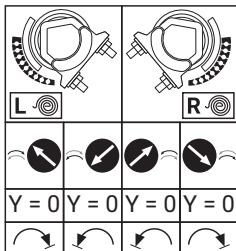
Direction of rotation

Modulating




TF24-SR, TF230-SR

LF24-SR

..F24A-SR, ..F24A-SR-S2



Rotary actuators and very fast running rotary actuators, fail-safe

Nominal torque	40 Nm	2 Nm	6 Nm
Damper size up to approx.	8 m ²	0.4 m ²	1.2 m ²
Nominal voltage			
	GK..A..	CM24K..	SKM230-T-B12



Open/close	GK24A-1	CM24K-T-L.2	CM24K-T-R.2	NKQ24A-1
External power module	SKM230-T-B12.1			
Modulating (2...10 V)¹⁾	GK24A-SR			NKQ24A-SR
Communicative²⁾, parametrisable³⁾	GK24A-MP GK24A-MOD⁴⁾			
AC/DC 24 V				

Technical data			
Shaft diameter	12...26.7 mm	6...12.7 mm	8...26.7 mm
Motor sound power level	≤52 dB(A) @ 150 s	≤35 dB(A) @ 75 s	≤60 dB(A) @ 4 s
Sound power level fail-safe position	≤61 dB(A) @ 35 s	≤55 dB(A) @ 15 s	≤60 dB(A) @ 4 s
Running time motor 90°	150 s	75 s	4 s
Running time fail-safe 90°	35 s	15 s	4 s
Degree of protection	IP54	IP20 (CM24..) / IP40 (SKM..)	IP54
Manual override	Gear train disengagement with push button	Gear train disengagement with magnet	Gear train disengagement with push button
Connection	Connecting cable 1 m	Connecting terminals	Connecting cable 1 m
Direction of rotation	Selectable with switch	Selectable via actuator	Selectable with switch
Angle of rotation	Max. 95°, can be limited on both sides by adjustable mechanical end stops		
Position indication	Mechanical, add-on		
Ambient temperature	-30...50°C		
Storage temperature	-40...80°C		
Ambient humidity	95% RH, non-condensing		
EMC	CE according to 2014/30/EU		

¹⁾ Modulating actuators: Standard control signal Y = 0...10 V, 100 kΩ; operating range Y = 2...10 V / position feedback U = 2...10 V, max. 0.5 mA.

²⁾ You can find suitable system diagrams at www.belimo.com.

³⁾ Parametrisable with PC-Tool or service tool ZTH EU (e.g. for MP types, control, feedback, running time and other functions can be set).

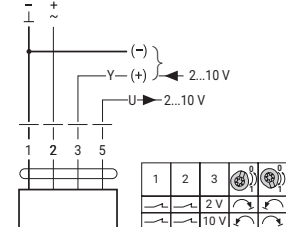
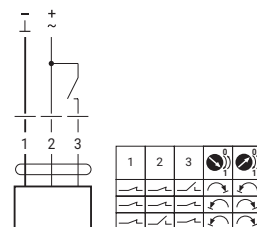
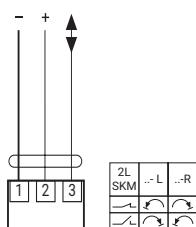
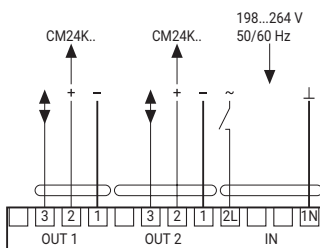
⁴⁾ All MOD versions work with Modbus and BACnet.

Other versions on request. Please get in touch with your local Belimo contact person.







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Electrical and mechanical accessories **page 14-15**

Open/close	Open/close	Modulating	Parametrisable
SKM230-T-B12.1	CM24K-T..	..24A-SR	GK24A-MP
		Y = 2...10 V U = 2...10 V	Y = variable U = variable



Fast running rotary actuators

Nominal torque	2 Nm	5 Nm	10 Nm	20 Nm	40 Nm
Damper size up to approx.	0.4 m ²	1 m ²	2 m ²	4 m ²	8 m ²
Nominal voltage					
	 TMC..A..	 LMC..A..	 NMC..A..	 SMC..A..	 GMC..A..

Open/close, 3-point					
AC/DC 24 V	1	TMC24A	LMC24A		
		TMC24A-S			
AC 230 V	1	TMC230A	LMC230A		GMC230A
		TMC230A-S	LMC230A-S		
Modulating (2...10 V) ¹⁾					
AC/DC 24 V		TMC24A-SR	LMC24A-SR		
AC 230 V		TMC230ASR			
Communicative ²⁾, parametrisable ³⁾					
AC/DC 24 V			NMC24A-MP	SMC24A-MP SMC24A-MOD ⁴⁾	

Technical data					
Shaft diameter	6...20 mm	6...20 mm	8...26.7 mm	10...20 mm	12...26.7 mm
Motor sound power level	≤40 dB(A) @ 35 s	≤45 dB(A) @ 35 s	≤45 dB(A) @ 35 s	≤55 dB(A) @ 35 s	≤45 dB(A) @ 35 s
Running time motor 90°	35 s				
Manual override	Gear train disengagement with push button, can be locked				
Connection	Connecting cable 1 m				
Direction of rotation	Selectable with switch				
Angle of rotation	Max. 95°, can be limited on both sides by adjustable mechanical end stops				
Position indication	Mechanical, add-on				
Degree of protection	IP54				
Ambient temperature	-30...50°C				
Storage temperature	-40...80°C				
Ambient humidity	95% RH, non-condensing				
EMC	CE according to 2014/30/EU				

¹⁾ Modulating actuators: Standard control signal Y = 0...10 V, 100 kΩ; operating range Y = 2...10 V / position feedback U = 2...10 V, max. 1 mA.

²⁾ You can find suitable system diagrams at www.belimo.com.

³⁾ Parametrisable with PC-Tool or service tool ZTH EU (e.g. for MP types, control, feedback, running time and other functions can be set).

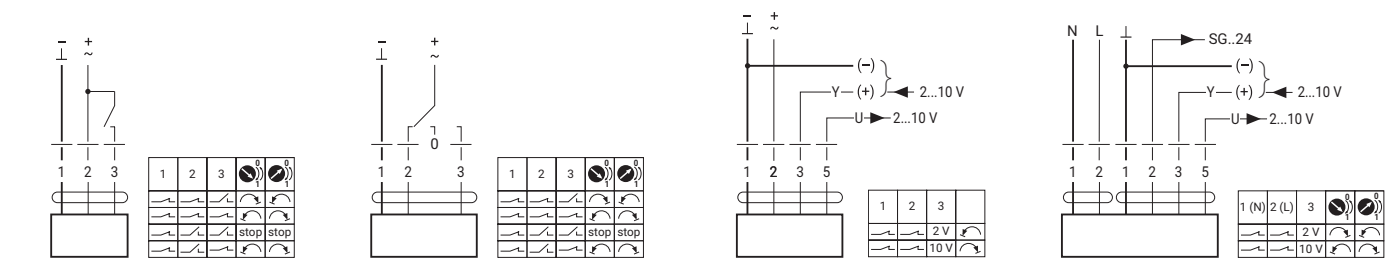
⁴⁾ All MOD versions work with Modbus and BACnet.

Other versions on request. Please get in touch with your local Belimo contact person.

Electrical installation

Electrical and mechanical accessories [page 16-17](#)

Open/close	3-point	Modulating	Parametrisable	Modulating
..MC24A, TMC24A-S, ..MC230A, TMC230A-S	..MC24A, TMC24A-S, ..MC230A, TMC230A-S	..MC24A-SR	..MC24A-MP	TMC230ASR
		Y = 2...10 V U = 2...10 V	Y = variable U = variable	Y = 2...10 V U = 2...10 V



Very fast running rotary actuators

Nominal torque	4 Nm	8 Nm	8 Nm	16 Nm	16 Nm
Damper size up to approx.	0.8 m ²	1.5 m ²	1.5 m ²	3.2 m ²	3.2 m ²
Nominal voltage					

Open/close	LMQ24A		NMQ24A		SMQ24A
Open/close, 3-point					
AC/DC 24 V					
AC/DC 24 V					
AC 230 V					SMD24A
AC 230 V					SMD230A
Modulating (2...10 V) ¹⁾	LMQ24A-SR		NMQ24A-SR		SMQ24A-SR
AC/DC 24 V					
Technical data					
Shaft diameter	8...26.7 mm	8...26.7 mm	10...20 mm	12...26.7 mm	10...20 mm
Sound power level	≤54 dB(A) @ 2.5 s	≤56 dB(A) @ 4 s	≤55 dB(A) @ 20 s	≤63 dB(A) @ 7 s	≤55 dB(A) @ 20 s
Running time motor 90°	2.5 s	4 s	20 s	7 s	20 s
Ambient temperature	-30...40°C (40...50°C limited) ²⁾	-30...40°C (40...50°C limited) ²⁾	-30...50°C	-30...40°C (40...50°C limited) ²⁾	-30...50°C
Manual override	Gear train disengagement with push button, can be locked				
Connection	Connecting cable 1 m				
Direction of rotation	Selectable with switch				
Angle of rotation	Max. 95°, can be limited on both sides by adjustable mechanical end stops				
Position indication	Mechanical, add-on				
Degree of protection	IP54				
Storage temperature	-40...80°C				
Ambient humidity	95% RH, non-condensing				
EMC	CE according to 2014/30/EU				

¹⁾ Modulating actuators: Standard control signal Y = 0...10 V, 100 kΩ; operating range 2...10 V / position feedback U = 2...10 V, max. 0.5 mA for LMQ..A, NMQ..A, SMQ..A.
²⁾ Please get in touch with your local Belimo contact person.
 Other versions on request.

Electrical installation

Electrical and mechanical accessories **page 16-17**

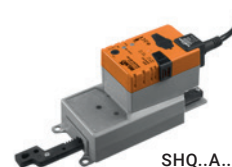
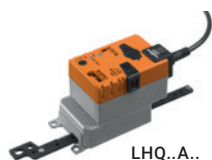
Open/close	3-point	Modulating
..MQ24A	NMD..A / SMD..A	..MQ24A-SR
		Y = 2...10 V U = 2...10 V

Very fast running linear actuators

Actuating force **100 N**
Damper size up to approx. 0.7 m²

Actuating force **200 N**
Damper size up to approx. 1.3 m²

Nominal voltage



Open/close

AC/DC 24 V **LHQ24A100** **SHQ24A100**

Modulating (2...10 V)¹⁾

AC/DC 24 V **LHQ24A-SR100** **SHQ24A-SR100**

Technical data

Stroke range	0...100 mm	0...100 mm
Sound power level	≤56 dB(A) @ 3.5 s	≤56 dB(A) @ 7 s
Running time motor 100 mm	3.5 s	7 s
Manual override	Gear train disengagement with push button, can be locked	
Connection	Connecting cable 1 m	
Direction of stroke	Selectable with switch	
Height of stroke	Adjustable in 20 mm increments from 40...100 mm	
Degree of protection	IP54	
Ambient temperature	-30...40°C (40...50°C limited) ²⁾	
Storage temperature	-40...80°C	
Ambient humidity	95% RH, non-condensing	
EMC	CE according to 2014/30/EU	

¹⁾ Modulating actuators: Standard control signal Y = 0...10 V, 100 kΩ; operating range Y = 2...10 V / position feedback U = 2...10 V, max. 0.5 mA.

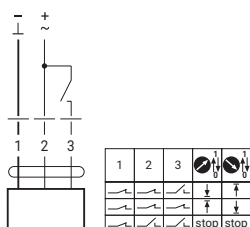
²⁾ Please get in touch with your local Belimo contact person.
Other versions on request.

Electrical installation

Electrical and mechanical accessories **page 16–17**

Open/close

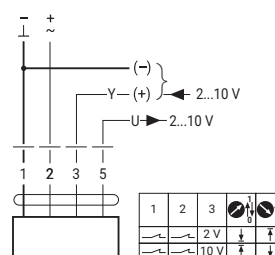
..HQ24A100





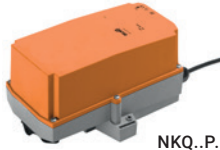
Modulating

..HQ24A-SR

Y = 2...10 V / U = 2...10 V



RobustLine rotary actuators for extreme conditions, non fail-safe / fail-safe

Nominal torque	10 Nm	20 Nm	6 Nm
Damper size up to approx.	2 m ²	4 m ²	1.2 m ²
Open/close	  		
3-point			
Modulating (2...10 V)			
Parametrisable			
Nominal voltage			

	Without auxiliary switch	With 1 SPDT auxiliary switch	Without auxiliary switch	With 1 SPDT auxiliary switch	Without auxiliary switch
Open/close, 3-point					
■ ■ AC/DC 24 V	NM24P	NM24P-S	SM24P	SM24P-S	
■ AC/DC 24 V					NKQ24P-1
■ ■ AC 230 V	NM230P⁴⁾	NM230P-S⁴⁾	SM230P⁴⁾	SM230P-S⁴⁾	
Modulating (2...10 V)¹⁾					
■ AC/DC 24 V	NM24P-SR		SM24P-SR		NKQ24P-SR
■ AC 230 V	NM230PSR		SM230PSR		
Communicative²⁾, parametrisable³⁾					
■ AC/DC 24 V	NM24P-MP		SM24P-MP		

Technical data

Fail-safe	-	-	■
Shaft diameter	10...20 mm	14...20 mm	10...20 mm
Running time motor 90°	150 s	150 s	4 s
Running time fail-safe 90°	-	-	4 s
Manual override	Gear train disengagement with push button, can be locked	Gear train disengagement with push button, can be locked	Gear train disengagement with push button
Motor sound power level	≤35 dB(A) @ 150 s	≤45 dB(A) @ 150 s	≤60 dB(A) @ 4 s
Sound power level fail-safe position	-	-	≤60 dB(A) @ 4 s
Ambient temperature	-30...50°C (with heating to -40°C) ⁴⁾	-30...50°C (with heating to -40°C) ⁴⁾	-30...50°C
Connection	Connecting cable 1 m, FRNC		
Direction of rotation	Selectable with switch		
Angle of rotation	Max. 95°, can be limited on both sides by adjustable mechanical end stops		
Position indication	Mechanical, add-on		
Degree of protection	IP66/67 / NEMA 4X		
Storage temperature	-40...80°C		
Ambient humidity	100% RH		
EMC	CE according to 2014/30/EU		

¹⁾ Modulating actuators: Standard control signal Y = 0...10 V, 100 kΩ; operating range 2...10 V / position feedback U = 2...10 V, max. 1 mA for NM..P and SM..P, max. 0.5 mA for NKQ..P.

²⁾ You can find suitable system diagrams at www.belimo.com.

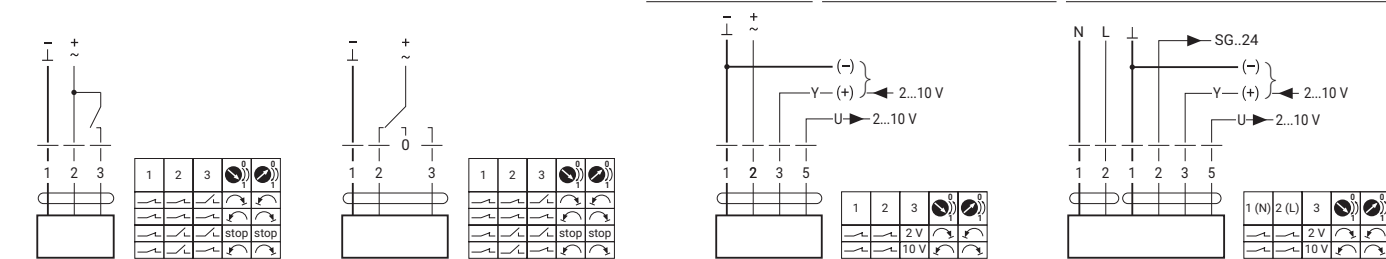
³⁾ Parametrisable with PC-Tool or service tool ZTH EU (e.g. for MP types, control, feedback, running time and other functions can be set).

⁴⁾ Available with heating and thermostat AC 230 V or with heating and humidistat AC 230 V for ambient temperatures down to -40°C (see overview of accessories **page 18-19**). Other versions on request. Please get in touch with your local Belimo contact person.

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Electrical and mechanical accessories **page 18-19**

Open/close	3-point	Modulating	Parametrisable	Modulating
..M24P, ..M24P-S, ..M230P, ..M230P-S, NKQ24P-1	..M24P, ..M24P-S, ..M230P, ..M230P-S	..24P-SR	..24P-MP	..M230PSR
		Y = 2...10 V U = 2...10 V	Y = variable U = variable	Y = 2...10 V U = 2...10 V



IP66/67 / NEMA 4X rotary actuators for outdoor applications

Nominal torque	16 Nm		40 Nm		
	Damper size up to approx. 3.2 m ²		8 m ²		
Nominal voltage	Running time motor 90°	SMQ..G		GM..G..	
		Without auxiliary switch		Without auxiliary switch	
Open/close					
AC/DC 24 V	7 s	SMQ24G			
	150 s			GM24G-T	
AC 230 V	150 s			GM230G-T	
Modulating (2...10 V) ¹⁾					
AC/DC 24 V	7 s	SMQ24G-SR			
	150 s			GM24G-SR-T	
Communicative ²⁾, parametrisable ³⁾					
AC/DC 24 V	150 s			GM24G-MP-T	
Technical data					
Shaft diameter	12...26.7 mm		14...26.7 mm		
Manual override	Gear train disengagement with push button, can be locked		Gear train disengagement with push button, can be locked		
Motor sound power level	≤63 dB(A) @ 7 s		≤45 dB(A) @ 150 s		
Ambient temperature	-30...40°C ⁴⁾ (40...50°C limited) ⁵⁾		-30...50°C (with heating to -40°C) ⁴⁾		
Connection	Connecting cable 1 m, FRNC		Connecting terminals		
Direction of rotation	Selectable with switch				
Angle of rotation	Max. 95°, can be limited on both sides by adjustable mechanical end stops				
Position indication	Mechanical, add-on				
Degree of protection	IP66/67 / NEMA 4X				
Storage temperature	-40...80°C				
Ambient humidity	100% RH				
EMC	CE according to 2014/30/EU				

¹⁾ Modulating actuators: Standard control signal Y = 0...10 V, 100 kΩ; operating range 2...10 V / position feedback U = 2...10 V, max. 1 mA for GM..G, NF..G and SF..G, max. 0.5 mA for SMQ..G and GK..G.

²⁾ You can find suitable system diagrams at www.belimo.com.

³⁾ Parametrisable with PC-Tool or service tool ZTH EU (e.g. for MP types, control, feedback, running time and other functions can be set).

⁴⁾ Available with heating and thermostat AC 230 V or with heating and humidistat AC 230 V for ambient temperatures down to -40°C (see overview of accessories **page 18-19**).

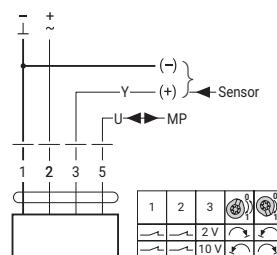
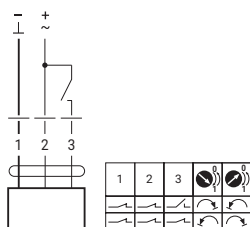
⁵⁾ Please get in touch with your local Belimo contact person.

Other versions on request.

Electrical installation

Electrical and mechanical accessories **page 18-19**

Open/close	Modulating	Parametrisable
GM..G, SMQ24G	..24G-SR..	..24G-MP..
	Y = 2...10 V U = 2...10 V	Y = variable U = variable



IP66/67 / NEMA 4X rotary actuators for outdoor applications, fail-safe

Nominal torque		10 Nm		20 Nm		40 Nm	
Damper size up to approx.		2 m ²		4 m ²		8 m ²	
Nominal voltage	Running time motor 90°	NF..G..		SF..G..		GK..G..	
		Without auxiliary switch	With 2 SPDT auxiliary switches	Without auxiliary switch	With 2 SPDT auxiliary switches	Without auxiliary switch	
Open/close							
AC/DC 24 V	150 s					GK24G-1	
AC 24...240 V	<75 s	NFG-L	NFG-S2-L	SFG-L	SFG-S2-L		
DC 24...125 V							
Modulating (2...10 V) ¹⁾							
AC/DC 24 V	150 s	NF24G-SR-L	NF24G-SR-S2-L	SF24G-SR-L	SF24G-SR-S2-L	GK24G-SR	
Communicative ²⁾, parametrisable ³⁾							
AC/DC 24 V	<75 s	NF24G-MP-L		SF24G-MP-L			
	150 s					GK24G-MP	
Technical data							
Fail-safe		■		■		■	
Shaft diameter		12...26.7 mm		12...26.7 mm		14...26.7 mm	
Running time fail-safe 90°		<20 s		<20 s		35 s	
Manual override		Hand crank		Hand crank		Gear train disengagement with push button	
Sound power level		≤45 dB(A) @ 150 s		≤45 dB(A) @ 150 s		≤52 dB(A) @ 150 s	
Sound power level fail-safe position		≤62 dB(A) @ 20 s		≤62 dB(A) @ 20 s		≤61 dB(A) @ 35 s	
Ambient temperature		-30...50°C (with heating to -40°C) ⁴⁾		-30...50°C (with heating to -40°C) ⁴⁾		-30...50°C	
Connection		Connecting cable 1 m, FRNC		Connecting cable 1 m, FRNC		Connecting cable 1 m, FRNC	
Direction of rotation		↺ counterclockwise rotation		↺ counterclockwise rotation		Selectable with switch	
Angle of rotation		Max. 95°, can be limited on one side by adjustable mechanical end stops					
Position indication		Mechanical, add-on					
Degree of protection		IP66/67 / NEMA 4X					
Storage temperature		-40...80°C					
Ambient humidity		100% RH					
EMC		CE according to 2014/30/EU					

¹⁾ Modulating actuators: Standard control signal Y = 0...10 V, 100 kΩ; operating range 2...10 V / position feedback U = 2...10 V, max. 1 mA for GM..G, NF..G and SF..G, max. 0.5 mA for SMQ..G and GK..G.

²⁾ You can find suitable system diagrams at www.belimo.com.

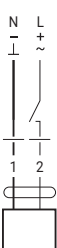
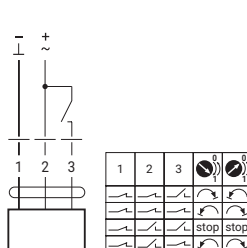
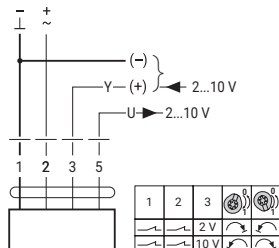
³⁾ Parametrisable with PC-Tool or service tool ZTH EU (e.g. for MP types, control, feedback, running time and other functions can be set).

⁴⁾ Available with heating and thermostat/humidistat for ambient temperatures down to -40°C (see overview of accessories **page 18-19**).

Other versions on request. Please get in touch with your local Belimo contact person.

Electrical installation

Electrical and mechanical accessories **page 18-19**

Open/close	Modulating	Parametrisable
..FG..-L	..24G-SR..	..24G-MP..
	Y = 2...10 V U = 2...10 V	Y = variable U = variable
		

Actuators with high torque, non fail-safe / fail-safe

Nominal torque

160 Nm

Damper size up to approx.

Special

Nominal voltage



PMCA..



PKCA..

Communicative, parametrisable

	PMCA-S2-T	PMCA-BAC-S2-T	PKCA-BAC-S2-T
AC 24...240 V DC 24...125 V			
Control	Open/close 3-point	Modulating (2...10 V) Modulating (4...20 mA) BACnet MS/TP Modbus RTU MP-Bus Open/close 3-point	Modulating (2...10 V) Modulating (4...20 mA) BACnet MS/TP Modbus RTU MP-Bus Open/close 3-point

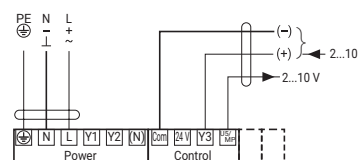
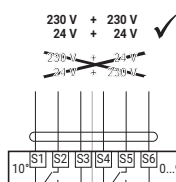
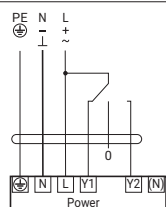
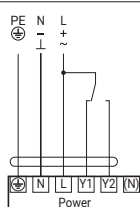
Technical data

Fail-safe	-	-	■
Form fit	17x17 mm	17x17 mm	17x17 mm
Running time motor 90°	35 s (30...120 s variable)	35 s (30...120 s variable)	35 s (30...120 s variable)
Running time fail-safe 90°	-	-	30 s
Motor sound power level	68 dB(A)	68 dB(A)	68 dB(A)
Sound power level fail-safe position	-	-	68 dB(A)
Parametrisation, commissioning, maintenance	Belimo Assistant App (NFC), ZTH EU		
Manual override	Hand crank		
Auxiliary switches	2x SPDT		
Connection	Connecting terminals		
Direction of rotation	Selectable with tool		
Position indication	Mechanical (integrated)		
Degree of protection	IP66/67 / NEMA 4X		
Ambient temperature	-30...40°C		
Storage temperature	-40...80°C		
Ambient humidity	100% RH		
EMC	CE according to 2014/30/EU		

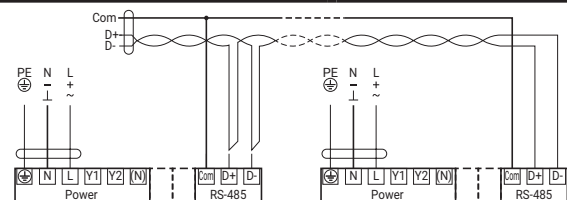
Electrical installation

Electrical and mechanical accessories **page 18-19**

Open/close	3-point	Modulating
PMCA-S2-T / PMCA-BAC-S2-T / PKCA-BAC-S2-T		PMCA-BAC-S2-T / PKCA-BAC-S2-T



Communicative (BACnet, Modbus)



Actuators with damper blade

Nominal torque	2 Nm		2 Nm		2 Nm		2 Nm	
Round duct diameter in accordance with DIN EN 1506	DN 100		DN 125		DN 150		DN 160	
Nominal voltage								
	CM...-100D		CM...-125D		CM...-150D		CM...-160D	

Open/close, 3-point				
AC/DC 24 V	CM24-L-100D.2	CM24-L-125D.2	CM24-L-150D.2	CM24-L-160D.2
AC 230 V	CM230-L-100D.2	CM230-L-125D.2	CM230-L-150D.2	CM230-L-160D.2
Modulating (2...10 V)¹⁾				
AC/DC 24 V	CM24-SR-L-100D.2	CM24-SR-L-125D.2	CM24-SR-L-150D.2	CM24-SR-L-160D.2

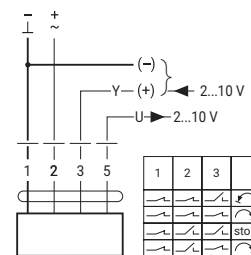
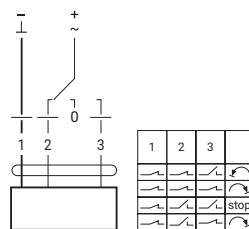
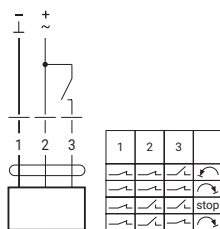
Technical data				
Round duct diameter	100 mm	125 mm	150 mm	160 mm
Running time motor 90°	58 s	58 s	58 s	58 s
Air tight in accordance with DIN EN 1751	Class 3	Class 2	Class 2	Class 2
Resistance coefficient ζ in open position	0.48	0.3	0.3	0.3
Static differential pressure Δp above the damper	≤1000 Pa	≤1000 Pa	≤1000 Pa	≤1000 Pa
Manual override	Gear train disengagement with magnet			
Connection	Connecting cable 1 m			
Direction of rotation	↺ counterclockwise rotation, position closed			
Damper blade angle range	70° (open/close)			
Motor sound power level	≤35 dB(A) @ 58 s			
Degree of protection	IP54			
Ambient temperature	-30...50°C			
Storage temperature	-40...80°C			
Ambient humidity	95% RH, non-condensing			
EMC	CE according to 2014/30/EU			

¹⁾ Modulating actuators: Standard control signal Y = 0...10 V, 100 kΩ; operating range Y = 2...10 V / position feedback U = 2...10 V, max. 1 mA.





Electrical installation

Electrical and mechanical accessories **page 18-19**

Open/close	3-point	Modulating
CM24-L-..., CM230-L-...	CM24-L-..., CM230-L-...	CM24-SR-L-...
		Y = 2...10 V U = 2...10 V



Parametrisable rotary actuators with connecting terminals

	5 Nm	10 Nm	20 Nm	40 Nm
Nominal torque	5 Nm	10 Nm	20 Nm	40 Nm
Damper size up to approx.	1 m ²	2 m ²	4 m ²	8 m ²
Nominal voltage				
	LM..A-TP	NM..A-TP	SM..A-TP	GM..A-TP

Communicative ¹⁾ , parametrisable ²⁾				
AC/DC 24 V	LM24A-MP-TP	NM24A-MP-TP	SM24A-MP-TP	GM24A-MP-TP

Technical data				
Shaft diameter	6...20 mm	8...26.7 mm	10...20 mm	12...26.7 mm
Sound power level	≤35 dB(A) @ 150 s	≤35 dB(A) @ 150 s	≤45 dB(A) @ 150 s	≤45 dB(A) @ 150 s
Running time motor 90°	150 s			
Manual override	Gear train disengagement			
Connection	Connecting terminals			
Direction of rotation	Selectable with switch			
Angle of rotation	Max. 95°, can be limited on both sides by adjustable mechanical end stops			
Position indication	Mechanical, add-on			
Degree of protection	IP54			
Ambient temperature	-30...50°C			
Storage temperature	-40...80°C			
Ambient humidity	95% RH, non-condensing			
EMC	CE according to 2014/30/EU			

¹⁾ You can find suitable system diagrams at www.belimo.com.

²⁾ Parametrisable with PC-Tool or service tool ZTH EU (e.g. for MP types, control, feedback, running time and other functions can be set). Other versions on request. Please get in touch with your local Belimo contact person.

Electrical installation

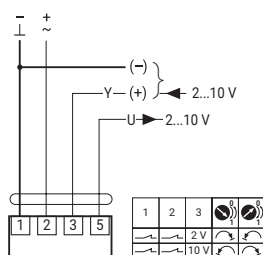
Electrical and mechanical accessories **page 12–13**

Parametrisable

..M24A-MP-TP

Y = variable

U = variable



Parametrisable rotary actuators with special control and connecting cable

Nominal torque **20 Nm**
 Damper size up to approx. **4 m²**

Nominal voltage

Control



SM..A..

Parametrisable ¹⁾

AC/DC 24 V	Modulating 4...20 mA	SM24A-MA
------------	----------------------	-----------------

Technical data

Shaft diameter	10...20 mm
Running time motor 90°	150 s (86...346 s)
Manual override	Gear train disengagement with push button, can be locked
Connection	Connecting cable 1 m
Direction of rotation	Selectable with switch
Angle of rotation	Max. 95°, can be limited on both sides by adjustable mechanical end stops
Position indication	Mechanical, add-on
Sound power level	≤45 dB(A) @ 150 s
Degree of protection	IP54
Ambient temperature	-30...50°C
Storage temperature	-40...80°C
Ambient humidity	95% RH, non-condensing
EMC	CE according to 2014/30/EU

¹⁾ Running time and other functions are adjustable with PC-Tool or service tool ZTH EU. Other versions on request. Please get in touch with your local Belimo contact person.

Electrical installation

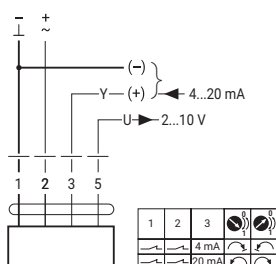
Electrical and mechanical accessories **page 12-13**

Modulating

SM24A-MA

Y = 4...20 mA

U = 2...10 V



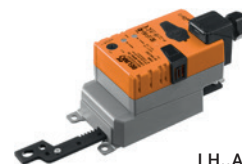
Parametrisable linear actuators with connecting terminals

Actuating force **150 N**

Damper size up to approx. 1 m²

Stroke (gear rod)

Nominal voltage



LH...A...-TP

Communicative ¹⁾, parametrisable ²⁾

Stroke (mm)	Nominal voltage	Model
60 mm	AC/DC 24 V	LH24A-MP60-TP
100 mm		LH24A-MP100-TP
200 mm		LH24A-MP200-TP
300 mm		LH24A-MP300-TP

Technical data

Running time motor 100 mm	150 s
Manual override	Gear train disengagement with push button, can be locked
Connection	Connecting terminals
Direction of stroke	Selectable with switch
Height of stroke	Adjustable in 20 mm increments from 20...100 mm
Motor sound power level	≤45 dB(A) @ 150 s
Degree of protection	IP54
Ambient temperature	-30...50°C
Storage temperature	-40...80°C
Ambient humidity	95% RH, non-condensing
EMC	CE according to 2014/30/EU

¹⁾ You can find suitable system diagrams at www.belimo.com.

²⁾ Parametrisable with PC-Tool or service tool ZTH EU (e.g. for MP types, control, feedback, running time and other functions can be set).

Electrical installation

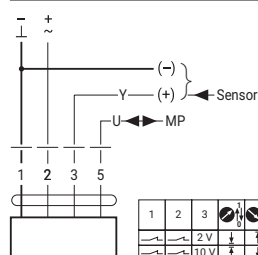
Electrical and mechanical accessories **page 12–13**

Parametrisable

..H24A-MP..

Y = variable

U = variable

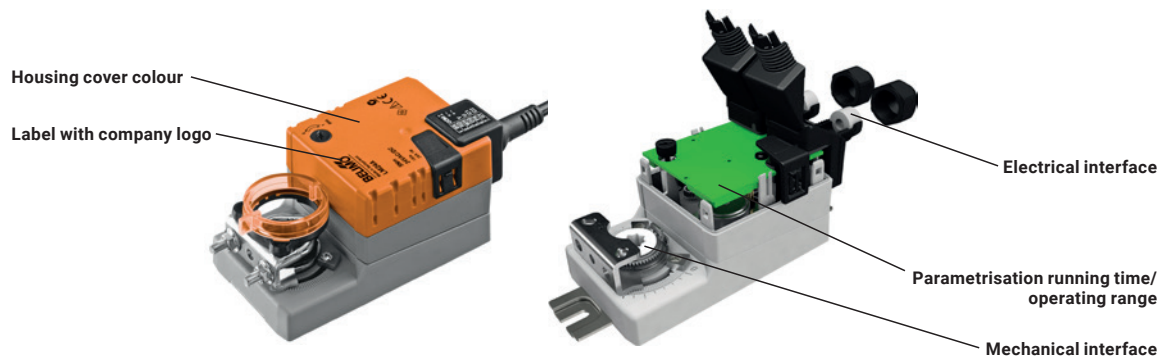


Configuration options

Some actuator product ranges permit adaptation to special customer preferences. These allow - on the basis of existing components - a selection of different cable lengths, mechanical interfaces, running times and operating ranges. Please get in touch with your local Belimo contact person.






Example

LM..A..



Numeration is not exhaustive.

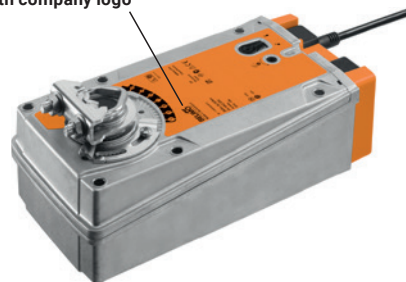
Rotary actuators

	CM..	LM..A..	NM..A..	SM..A..	GM..A..
Configuration					
Housing cover colour	orange grey	orange grey	orange grey	orange grey	orange grey
Label with company logo, colour	Label: transparent Font: black	Label: transparent Font: black Label: blue Font: white	Label: transparent Font: black Label: blue Font: white	Label: transparent Font: black Label: blue Font: white	Label: transparent Font: black Label: blue Font: white
Mechanical interface	Shaft clamp, one-sided 6...12.7 mm Form fit 6x6 mm Form fit 8x8 mm Form fit 10x10 mm	Shaft clamp, one-sided 6...20 mm Form fit 8x8 mm Form fit 10x10 mm Form fit 12x12 mm	Shaft clamp, one-sided 8...26.7 mm Shaft clamp, reversible 8...20 mm Form fit 8x8 mm Form fit 10x10 mm Form fit 12x12 mm Form fit 16x16 mm	Shaft clamp, one-sided 8...26.7 mm Shaft clamp, reversible 10...20 mm Form fit 10x10 mm Form fit 12x12 mm Form fit 16x16 mm	Shaft clamp, reversible 12...26.7 mm
Electrical interface	Terminal connection IP20 Cable 1 m, PVC Cable 1 m, FRNC Cable 3 m, FRNC Cable 5 m, FRNC	Terminal connection IP20 Terminal connection IP54 Cable 1 m, PVC Cable 1 m, FRNC Cable 3 m, FRNC Cable 5 m, FRNC	Terminal connection IP20 Terminal connection IP54 Cable 1 m, PVC Cable 1 m, FRNC Cable 3 m, FRNC Cable 5 m, FRNC	Terminal connection IP20 Terminal connection IP54 Cable 1 m, PVC Cable 1 m, FRNC Cable 3 m, FRNC Cable 5 m, FRNC	Terminal connection IP20 Terminal connection IP54 Cable 1 m, PVC Cable 1 m, FRNC Cable 3 m, FRNC Cable 5 m, FRNC
Parametrisation running time	35 s 45 s 75 s	35 s 45 s 90 s 150 s	45 s 90 s 150 s	90 s 150 s	90 s 150 s
Parametrisation operating range	2...10 V 0.5...10 V Adaptation option	2...10 V 0.5...10 V Adaptation option	2...10 V 0.5...10 V Adaptation option	2...10 V 0.5...10 V Adaptation option	2...10 V 0.5...10 V Adaptation option
Packaging	Single pack Multipack at 20 pieces	Single pack Multipack at 20 pieces	Single pack Multipack at 20 pieces	Single pack Multipack at 20 pieces	Single pack Multipack at 20 pieces
General	Feasibility of the combinations on request Minimum order quantity with coloured label or customer logo: 20 pieces.				





Configuration options

Some actuator product ranges permit adaptation to special customer preferences. These allow - on the basis of existing components - a selection of different cable lengths, mechanical interfaces, running times and operating ranges. Please get in touch with your local Belimo contact person.

Example

EF..A
EF..G
Label with company logo

**Parametrisation running time/
operating range**
Electrical interface
Heating
Mechanical interface

Numeration is not exhaustive.

	Rotary actuators, fail-safe		Very fast running rotary actuators		Linear actuators			
	NF..A.. / SF..A..		EF..A / EF..G		LMQ..A..		LH.A..	
Configuration								
Housing cover colour	orange grey				orange grey		orange grey	
Label with company logo, colour	Label: orange blue grey	Font: black white black	Label: orange grey	Font: black	Label: transparent blue black	Font: black white white	Label: transparent blue black	Font: black white white
Mechanical interface	Shaft clamp, reversible 10...25.4 mm Form fit 10x10 mm Form fit 12x12 mm Form fit 16x16 mm		Shaft clamp, reversible 12...26.7 mm		Shaft clamp, one-sided 8...26.7 mm Shaft clamp, reversible Form fit 8x8 mm Form fit 10x10 mm Form fit 12x12 mm Form fit 16x16 mm		Without stroke limitation With stroke limitation	
Electrical interface	Terminal connection IP20 Terminal connection IP54 Cable 1 m, PVC Cable 1 m, FRNC Cable 3 m, FRNC Cable 5 m, FRNC		Terminal connection IP66 Cable 1 m, FRNC Cable 3 m, FRNC Cable 5 m, FRNC		Cable 1 m, PVC Cable 1 m, FRNC Cable 3 m, FRNC Cable 5 m, FRNC		Terminal connection IP20 Terminal connection IP54 Cable 1 m, PVC Cable 1 m, FRNC Cable 3 m, FRNC Cable 5 m, FRNC	
Parametrisation running time	45 s 75 s 90 s 150 s		75 s 90 s 150 s		2.5 s 4 s 5 s 7 s 10 s		75 s/100 mm 90 s/100 mm 120 s/100 mm 150 s/100 mm	
Parametrisation operating range	2...10 V 0.5...10 V Adaptation option		2...10 V 0.5...10 V Adaptation option		2...10 V 0.5...10 V Adaptation option		2...10 V 0.5...10 V Adaptation option	
Packaging	Single pack Multipack at 20 pieces		Single pack Multipack at 20 pieces		Single pack Multipack at 20 pieces		Single pack Multipack at 20 pieces	
Special			Heating					
General	Feasibility of the combinations on request Minimum order quantity with coloured label or customer logo: 20 pieces							

Subject to technical modifications

All inclusive.

Belimo as a global market leader develops innovative solutions for the controlling of heating, ventilation and air-conditioning systems. Damper actuators, control valves, sensors and meters represent our core business.

Always focusing on customer value, we deliver more than only products. We offer you the complete product range for the regulation and control of HVAC systems from a single source. At the same time, we rely on tested Swiss quality with a five-year warranty. Our worldwide representatives in over 80 countries guarantee short delivery times and comprehensive support through the entire product life. Belimo does indeed include everything.

The "small" Belimo devices have a big impact on comfort, energy efficiency, safety, installation and maintenance

In short: Small devices, big impact.



5-year warranty



On site around the globe



Complete product range



Tested quality



Short delivery times



Comprehensive support



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