

Technical data sheet

B239VS





Type overview

Туре	DN
B239VS	40

Technical data

Functional data	Valve size [mm]	1.5" [40]	
	Fluid	chilled or hot water, up to 60% glycol, steam	
	Fluid Temp Range (water)	-22280°F [-30138°C]	
	Body Pressure Rating	600 psig WOG psi	
	Close-off pressure ∆ps	600 psi	
	Flow characteristic	modified equal percentage	
	Max Differential Pressure (Steam)	35 psi	
	Flow Pattern	2-way	
	Leakage rate	ANSI Class VI	
	Controllable flow range	90° rotation	
	Cv	84	
	Maximum Inlet Pressure (Steam)	35 psi [241 kPa]	
	Maximum Velocity	15 FPS	
Materials	Valve body	Bronze B584-C84400	
	Housing seal	PTFE	
	Spindle	316 stainless steel	
	Spindle seal	RPTFE	
	Seat	RPTFE	
	Lock nut	stainless steel	
	Pipe connection	NPT female ends	
	Retainer	B584-C84400 bronze	
	Ball	316 stainless steel	
Suitable actuators	Non-Spring	GMB(X)	
		PRB(X)	
		GRCB(X)	
		GRB(X)	
	Spring	AF	
	Electrical fail-safe	PKRB(X)	

Safety notes



• WARNING: This product can expose you to lead which is known to the State of California to cause cancer and reproductive harm. For more information go to www.p65warnings.ca.gov

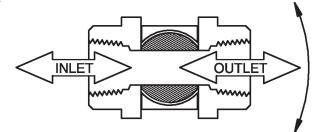


ApplicationThis valve is typically used in air handling units on heating or cooling coils, and fan coil unit
heating or cooling coils. Some other common applications include Unit Ventilators, VAV Box re-
heat coils and bypass loops. This valve is suitable for use in a hydronic system with variable flow.
This valve is designed with MFT functionally which facilitates the use of various control input.
Up to 35 psi steam

1/2" - 2" 600 PSIG WOG, Cold Non-Shock Federal Specification: WW-V-35C, Type II Composition: BZ

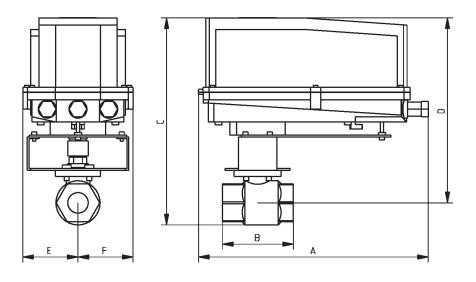
Style: 3

Flow/Mounting details



Dimensions

Туре	DN
B239VS	40



B239VS+GRC..N4

Α	В	С	D	Е	F
11.7" [297.5]	4.4" [112]	9.7" [247]	7.7" [196]	2.3" [58]	2.3" [58]



Modulating, Electrical Fail-Safe, 24...240 V, NEMA 4X with BACnet

Technical data sheet

PKRXUP-MFT-T





Technical data

Electrical data	Nominal voltage	AC 24240 V / DC 24125 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	52 W
	Power consumption in rest position	9 W
	Transformer sizing	55 VA @ AC/DC 24 V (class 2 power source), 43 VA @ AC/DC 120 V, 68 VA @ AC 230 V
	Auxiliary switch	2 x SPDT, 3 A resistive (0.5 A inductive) @ AC 250 V, 1 x 10° / 1 x 090° (default setting 85°)
	Switching capacity auxiliary switch	3 A resistive (0.5 A inductive) @ AC 250 V
	Electrical Connection	Terminal blocks, (PE) Ground-Screw
	Overload Protection	electronic thoughout 090° rotation
Functional data	Communicative control	BACnet MS/TP Modbus RTU MP-Bus
	Operating range Y	210 V
	Operating range Y note	420 mA
	Input Impedance	100 kΩ for 210 V (0.1 mA), 500 Ω for 420 mA, 1500 Ω for On/Off
	Operating range Y variable	Start point 0.530 V End point 2.532 V
	Options positioning signal	variable (VDC, on/off, floating point)
	Position feedback U	210 V
	Position feedback U note	Max. 0.5 mA
	Position feedback U variable	VDC variable
	Setting Fail-Safe Position	0100%, adjustable with Belimo Assistant App (default setting 0%)
	Bridging time (PF)	2 s
	Bridging time (PF) variable	010 s
	Pre-charging time	520 s
	Direction of motion motor	reversible with app
	Direction of motion fail-safe	reversible with app
	Manual override	7 mm hex crank, supplied
	Angle of rotation	90°
	Running Time (Motor)	35 s / 90°
	Running time motor variable	30120 s
	Running time fail-safe	<30 s
	Noise level, motor	68 dB(A)
	Noise level, fail-safe	62 dB(A)
	Position indication	top mounted domed indicator
	Passive sensor inputs	2x (Pt1000, Ni1000, NTC10k2)



Safety data	Degree of protection IEC/EN	IP66/67
	Degree of protection NEMA/UL	NEMA 4X
	Enclosure	UL Enclosure Type 4X
	Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU and 2014/35/EU
	Quality Standard	ISO 9001
	Ambient temperature	-22122°F [-3050°C]
	Ambient humidity	Max. 100% RH
	Servicing	maintenance-free
Materials	Housing material	Die cast aluminium and plastic casing
Product features		
Default/Configuration	manufacturing. If required, different par parameters are variable and can be mod	ations of the PKRMFT actuator are assigned during ameters of the actuator can be ordered. These ified by factory pre-set, the handheld ZTH US or using ear Field Communications (NFC) programming.
Application	For outdoor applications, the installed valve must be mounted with the actuator at or above horizontal. For indoor applications the actuator can be in any location including directly und the valve.	
Operation		
Bridging time	Electrical interruptions can be bridged up	o to a maximum of 10 s.
	In the event of a power failure, the actua	tor will remain stationary in accordance with the set ater than the set bridging time, then the actuator will
	The bridging time set ex-works is 2 s. This the Belimo service tool MFT-P.	s can be modified on site in operation with the use of
	Settings: The rotary knob must not be set	t to the "PROG FAIL-SAFE" position!
	For retroactive adjustments of the bridgin ZTH EU adjustment and diagnostic device	ng time with the Belimo service tool MFT-P or with the e only the values need to be entered.
Factory settings	manufacturing. If required, different par	ations of the PKRMFT actuator are assigned during ameters of the actuator can be ordered. These

Accessories

Gateways	Description	Туре	
	Gateway MP to BACnet MS/TP	UK24BAC	
	Gateway MP to Modbus RTU	UK24MOD	
	Gateway MP to LonWorks	UK24LON	

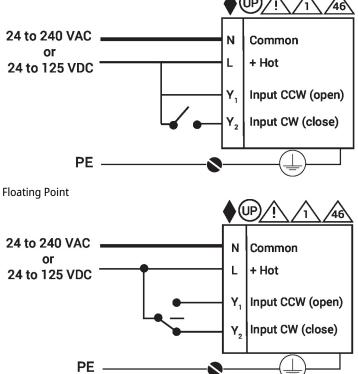
parameters are variable and can be modified by factory pre-set, the handheld ZTH US or using the Belimo App on a smart phone with Near Field Communications (NFC) programming.



Technical data sheet

PKRXUP-MFT-T

Electrical accessories	Description	Туре
	Service Tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US
Mechanical accessories	Description	Туре
	Hand crank for PR, PKR, PM	ZG-HND PR
Service tools	Description	Туре
	Connection cable 10 ft [3 m], A: RJ11 6/4 ZTH EU, B: 3-pin Weidmüller and supply connection	ZK4-GEN
	Service Tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US
Electrical installation		
	Meets cULus requirements without the need of an electrical ground conne	ection.
	P) Universal Power Supply (UP) models can be supplied with 24 V up to 240 V Disconnect power.	<i>!</i> .
$\overline{\Lambda}$	${\overline{\Delta}}$ Provide overload protection and disconnect as required.	
4	Two built-in auxiliary switches (2x SPDT), for end position indication, inter startup, etc.	ock control, fan
<u>/</u> 5	Δ Only connect common to negative (-) leg of control circuits.	
	Actuators may be controlled in parallel. Current draw and input impedanc Warning! Live electrical components!	e must be observed.
	During installation, testing, servicing and troubleshooting of this product, to work with live electrical components. Have a qualified licensed electrical who has been properly trained in handling live electrical components perf Failure to follow all electrical safety precautions when exposed to live elec could result in death or serious injury.	an or other individua form these tasks.
Wiring diagrams		
On/Off		
	(UP) (1) (1) (46)	





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