



DAMPER ACTUATOR CATALOG



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CONTENT

General Damper Actuator

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3/4	2Nm Modulating
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Fast-running Damper Actuator

17/18	8Nm/16Nm ON/OFF
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Spring-return Damper Actuator

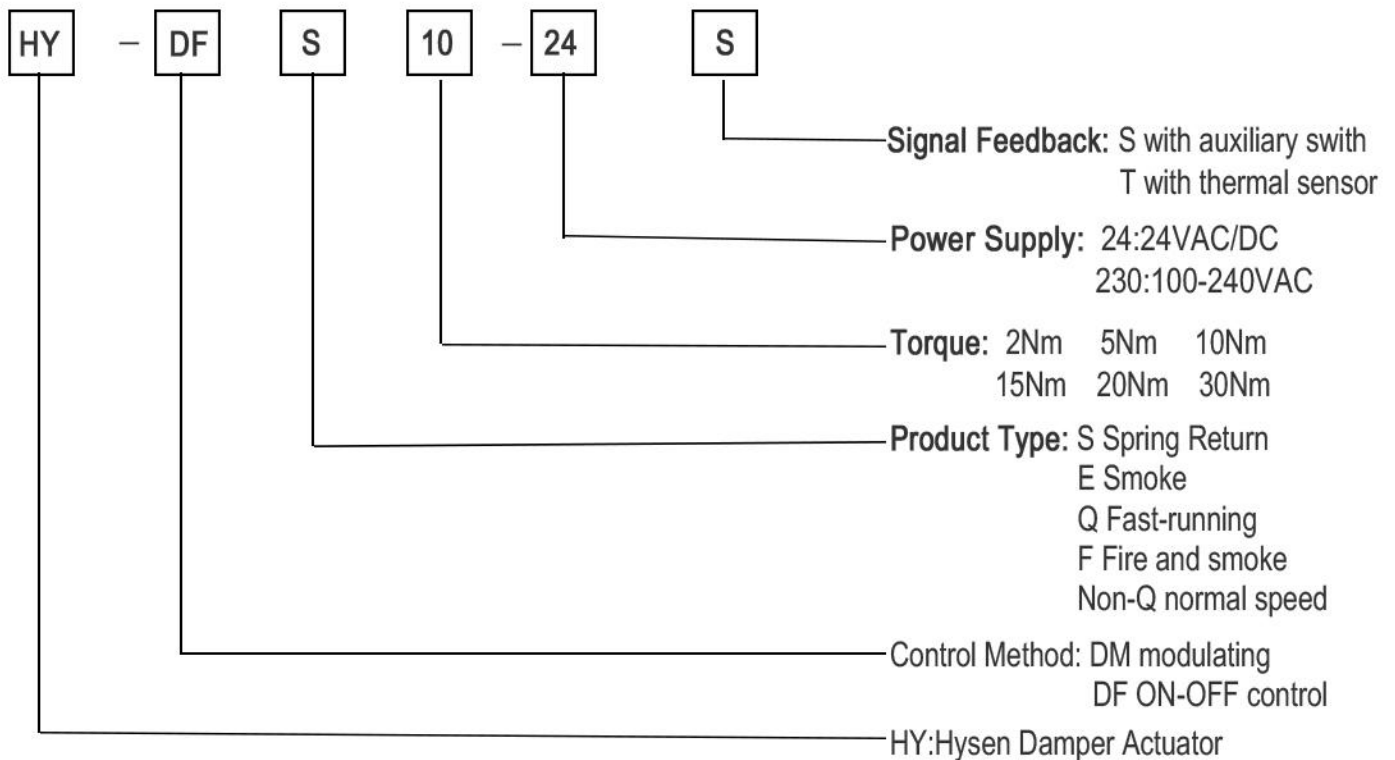
21/22	3Nm ON/OFF
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Fier and Smoke Spring-return Damper Actuator

29/30	3Nm ON/OFF
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Damper actuator type naming



Technical specification

	Torque	Runing Time	Power Supply	Control Mode	Auxiliary Switch	Type
General damper actuator	2Nm	<30s	AC/DC 24V AC 100-240V	ON/OFF and Modulating	With and without axiary switch	HY-DF(DM)02-24(230)(S)
	4Nm	<50s				HY-DF(DM)04-24(230)(S)
	6Nm	<70s				HY-DF(DM)06-24(230)(S)
	8Nm	<55s				HY-DF(DM)08-24(230)(S)
	16Nm	<100s				HY-DF(DM)16-24(230)(S)
	24Nm	<160s				HY-DF(DM)24-24(230)(S)
Fast running actuator	8Nm	8s	AC/DC 24V AC 100-240V	ON/OFF and Modulating	With and without axiary switch	HY-DF(DM)Q08-24(230)(S)
	16Nm	16s				HY-DF(DM)Q06-24(230)(S)
Spring-return actuator	3Nm	<75s/ <25s	AC/DC 24V AC 100-240V	ON/OFF	230	HY-DFS03-24(230)(S)
	5Nm	<70s/ <20s				HY-DFS05-24(230)(S)
	10Nm	<110s/ <25s				HY-DFS10-24(230)(S)
	15Nm	<150s/ <25s				HY-DFS15-24(230)(S)
	20Nm	<180s/ <30s				HY-DFS20-24(230)(S)
	5Nm	<120s/ <20s	AC/DC 24V	Modulating		HY-DMS20-24(S)
Fire and smoke actuator	3Nm	<75s/ <25s	AC/DC 24V AC 100-240V	ON/OFF	230	HY-DF-SF03-24(230)S(T)
	5Nm	<70s/ <20s				HY-DF-SF05-24(230)S(T)
	10Nm	<100s/ <25s				HY-DF-SF10-24(230)S(T)
	15Nm	<150s/ <25s				HY-DF-SF15-24(230)S(T)
	20Nm	<180s/ <30s				HY-DF-SF20-24(230)S(T)
Smoke control damper actuator	10Nm	<45s	AC/DC 24V AC 100-240V	ON/OFF	With axiary switch	HY-DF-F10-24(230)S(T)
	15Nm	<30s				HY-DF-F15-24(230)S(T)
	30Nm	<115s				HY-DF-F30-24(230)S(T)

General Damper Actuator

2Nm ON/OFF

HY-DF02-24(S)

HY-DF02-230(S)

For operation of air control dampers in HVAC system.

Torque: 4Nm/6Nm

Nominal voltage: AC/DC 24V , or AC100-240V

Control: ON/OFF, 2/3-Point

-DS type include 2 auxiliary switch.

Model Selection Table

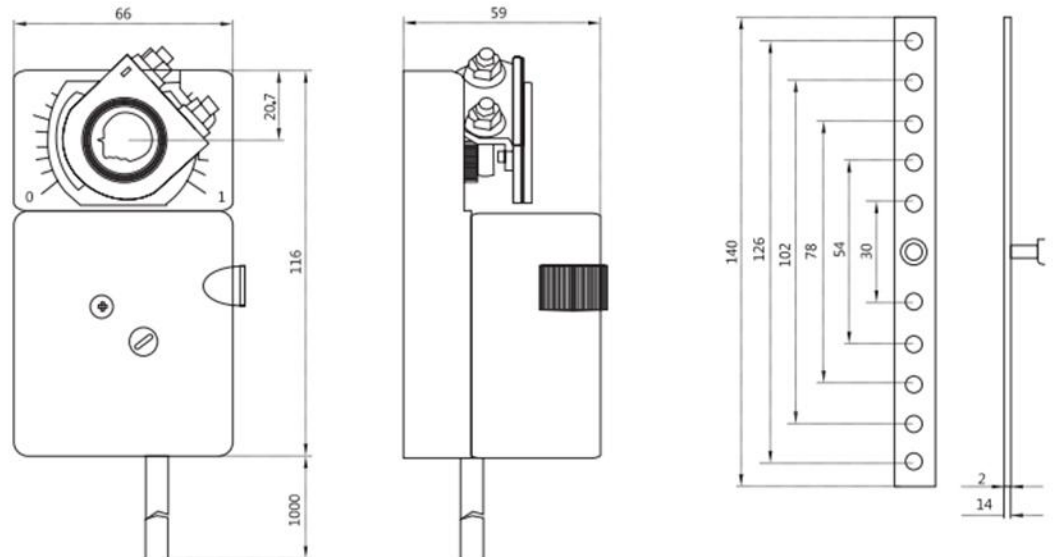
Torque	Running Time	Power Supply	Auxiliary Switch	Model/Type
2Nm	<30S	AC/DC 24V	None	HY-DF02-24
			1-SPDT	HY-DF02-24S
		AC 100-240V	None	HY-DF02-230
			1-SPDT	HY-DF02-230S



Technical specification

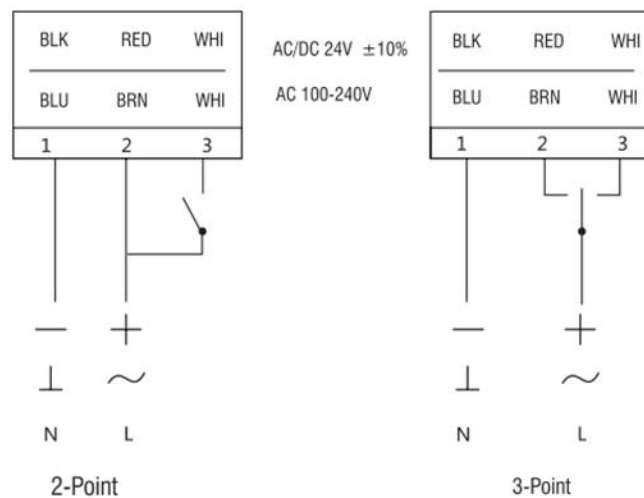
	HY-DF02-24(S)	HY-DF02-240(S)
Electrical data		
Nominal voltage	AC/DC 24V 50/60Hz	AC 100-240V 50/60Hz
Nominal voltage range	AC/DC 19.2...28.8V	AC85...265V
Power consumption	3W@Nominal toque/0.5W@holding	3W@Nominal toque/0.7W@holding
Wire sizing	0.5mm ²	
Function data		
Torque	2Nm	
Damper size	0.5m ²	
Direction of rotation	Manual regulaion	
Manual override	Gearing latch disengaged by pushbutton,self-resetting	
Angle of rotation	Max90°	
Running time	<30S(90°)	
Sound power level	45dB	
Positin indication	Mechanical	
Working/conditions		
Protection class	III (satety low voltage)	II (totally insulated)
Protection level	IP54	
Ambient temperature	-20...+50°C/IEC 721-3-3	
Inventory temperature	-30.. +80°C/IEC 721-3v-2	
Humidity test	95%RH,non condensing(EN60730-1)	
Dimensions/Weight		
Dimensions(LxWxH)	See"Dimensions"	
Shaft length	> 50mm	
Shaft diameter	A.6..16mm B.5x5...12x12mm	
Weight	< 0.5kg	

Actuator Dimensions(mm)

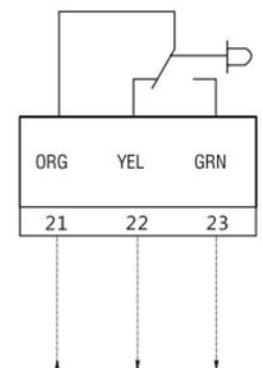


Wiring Diagram

Actuator



Auxiliary switch



Resistance load 3A, 230V
Inductive load 1.5A, 230V

General Damper Actuator

2Nm Modulating

HY-DM02-24(S)

HY-DM02-240(S)

For operation of air control dampers in HVAC system.

Torque: 2Nm

Nominal voltage: AC/DC 24V , or AC100-240V

Control: 0(2)...10VDC/0(4)...20mA

Feedback: 0(2)...10VDC/0(4)...20mA

-DS type include 2 auxiliary switch.

Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switch	Model/Type
2Nm	<30S	AC/DC 24V	None	HY-DM02-24
			2-SPDT	HY-DM02-24S
		AC 100-240V	None	HY-DM02-230
			2-SPDT	HY-DM02-230S

Technical specification

	HY-DM02-24(S)	HY-DM02-230(S)
Electrical data		
Nominal voltage	AC/DC 24V 50/60Hz	AC 100-240V 50/60Hz
Nominal voltage range	AC/DC 19.2...28.8V	AC85...265V
Power consumption	3W@Nominal toque/0.5W@holding	3W@Nominal toque/0.7W@holding
Wire sizing	0.5mm ²	
Function data		
Torque	2Nm	
Damper size	0.5m ²	
Direction of rotation	Manual regulaion	
Manual override	Gearing latch disengaged by pushbutton,self-resetting	
Angle of rotation	Max90°	
Running time	<30S(90°)	
Sound power level	45dB	
Positin indication	Mechanical	
Working/conditions		
Protection class	Ⅲ(satety low voltage)	Ⅱ (totally insulated)
Protection level	IP54	
Ambient temperature	-20...+50°C/IEC 721-3-3	
Inventory temperature	-30.. +80°C/IEC 721-3v-2	
Humidity test	95%RH,non condensing(EN60730-1)	
Dimensions/Weight		
Dimensions(LxWxH)	See"Dimensions"	
Shaft length	> 50mm	
Shaft diameter	A.6..16mm B.5x5...12x12mm	
Weight	< 0.5kg	

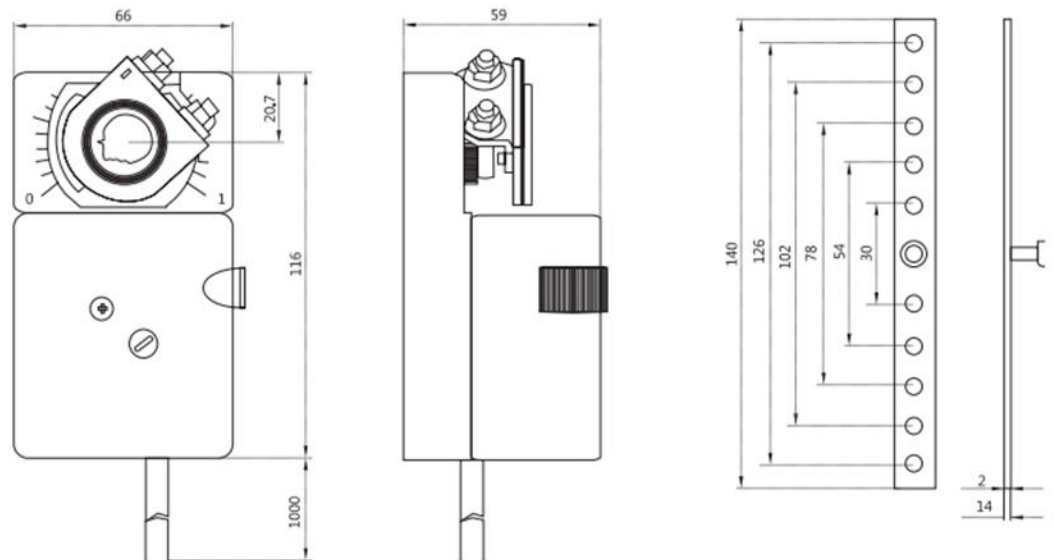


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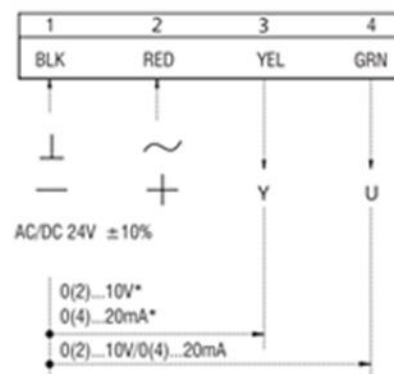
Actuator Dimensions(mm)

6...16mm

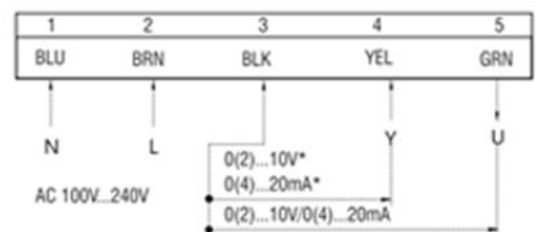


Wiring Diagram

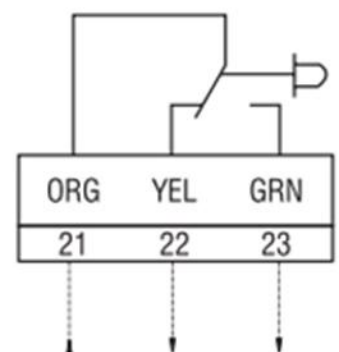
24V Actuator



230V Actuator



Auxiliary switch



General Damper Actuator

4Nm/6Nm ON/OFF

HY-DF04-24(S)

HY-DF06-24(S)

HY-DF04-230(S)

HY-DF06-230(S)

For operation of air control dampers in HVAC system.

Torque: 4Nm/6Nm

Nominal voltage: AC/DC 24V , or AC100-240V

Control: ON/OFF,2/3-Point

-DS type include 2 auxiliary switch.

Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switch	Model/Type
4Nm	<50S	AC/DC 24V	None	HY-DF04-24
			2-SPDT	HY-DF04-24S
		AC 100-240V	None	HY-DF04-230
			2-SPDT	HY-DF04-230S
6Nm	<70S	AC/DC 24V	None	HY-DF06-24
			2-SPDT	HY-DF06-24S
		AC 100-240V	None	HY-DF06-230
			2-SPDT	HY-DF06-230S

Technical specification

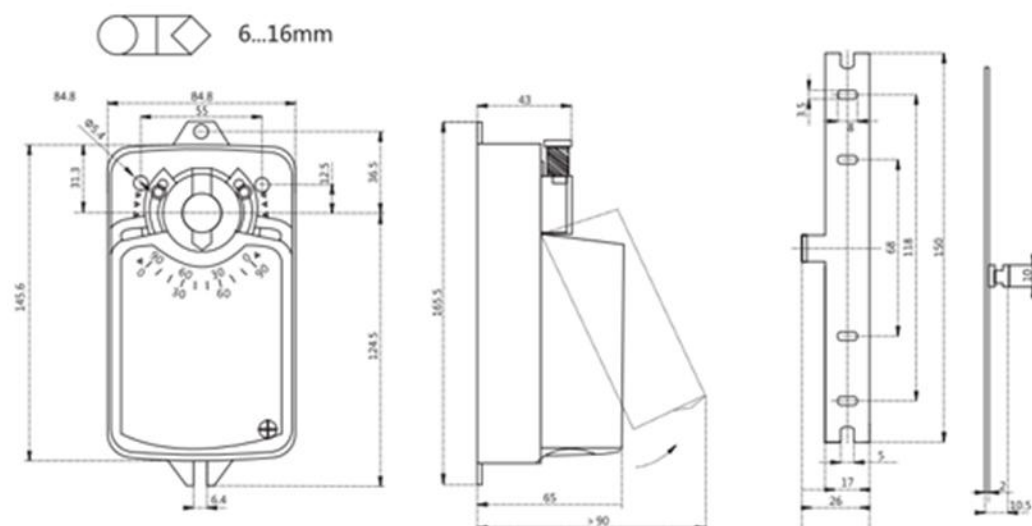
	HY-DF04/6-24(S)	HY-DF04/6-230(S)
Electrical data		
Nominal voltage	AC/DC 24V 50/60Hz	AC 100-240V 50/60Hz
Nominal voltage range	AC/DC 19.2...28.8V	AC85...265V
Power consumption	3W@Nominal toque/0.5W@holding	3W@Nominal toque/0.7W@holding
Wire sizing	0.5mm ²	
Function data		
Terminal specification	Max2.0mm ²	
Torque	4Nm/6Nm	
Damper size	0.8m ² /1.2m ²	
Direction of rotation	Manual regulation	
Manual override	Gearing latch disengaged by pushbutton, self-resetting	
Angle of rotation	Max90°	
Running time	<50S(90°)/<70S(90°)	
Sound power level	45dB	
Working/conditions		
Position indication	Mechanical	
Protection class	III (safety low voltage)	II (totally insulated)
Protection level	IP44	
Ambient temperature	-20...+50°C/IEC 721-3-3	
Inventory temperature	-30.. +80°C/IEC 721-3v-2	
Humidity test	95%RH, non condensing(EN60730-1)	
Dimensions/Weight		
Dimensions(LxWxH)	See "Dimensions"	
Shaft length	> 50mm	
Shaft diameter	A.6..16mm B.8x8...12x12mm	
Weight	< 0.75kg	



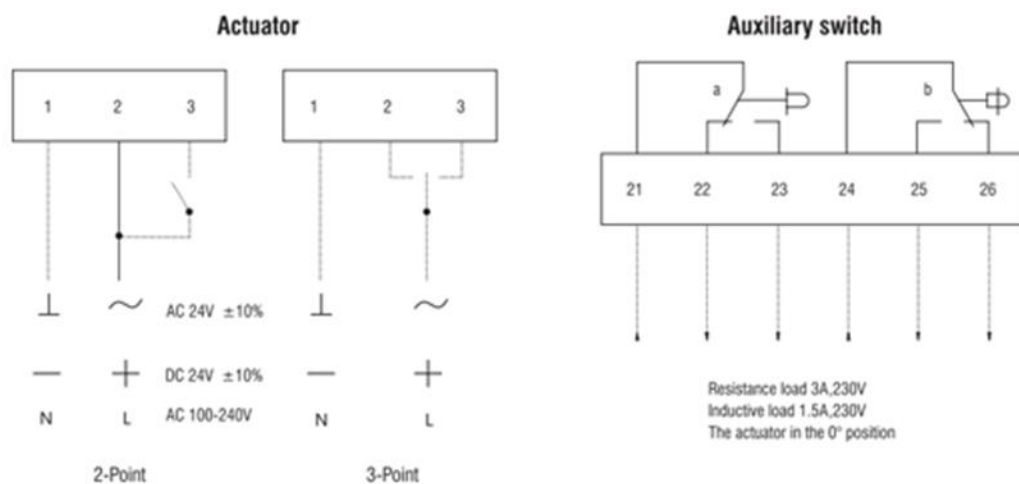
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Actuator Dimensions(mm)



Wiring Diagram



General Damper Actuator

4Nm/6Nm Modulating

HY-DM04-24(S)

HY-DM06-24(S)

HY-DM04-230(S)

HY-DM06-230(S)

For operation of air control dampers in HVAC system.

Torque: 4Nm/6Nm

Nominal voltage: AC/DC 24V , or AC100-240V

Control: 0(2)...10VDC/0(4)...20mA

Feedback: 0(2)...10VDC/0(4)...20mA

-DS type include 2 axiliary switch.

Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switch	Model/Type
4Nm	<50S	AC/DC 24V	None	HY-DM04-24
			2-SPDT	HY-DM04-24S
		AC 100-240V	None	HY-DM04-230
			2-SPDT	HY-DM04-230S
6Nm	<70S	AC/DC 24V	None	HY-DM06-24
			2-SPDT	HY-DM06-24S
		AC 100-240V	None	HY-DM06-230
			2-SPDT	HY-DM06-230S

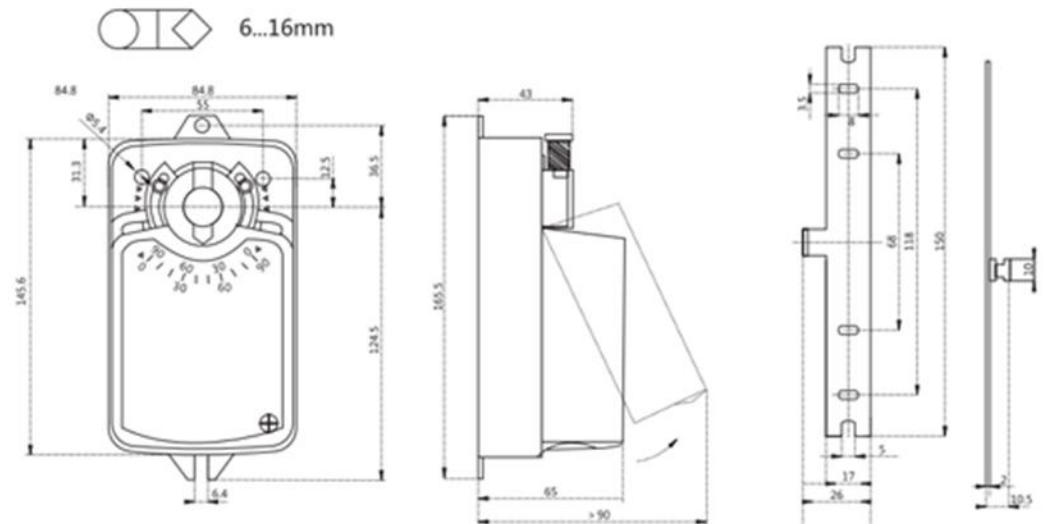
Technical specification

	HY-DM04/6-24(S)	HY-DM04/6-230(S)
Electrical data		
Nominal voltage	AC/DC 24V 50/60Hz	AC 100-240V 50/60Hz
Nominal voltage range	AC/DC 19.2...28.8V	AC85...265V
Power consumption	3W@Nominal toque/0.5W@holding	3W@Nominal toque/0.7W@holding
Wire sizing	0.5mm ²	
Function data		
Terminal specification	Max2.0mm ²	
Torque	4Nm/6Nm	
Damper size	0.8m ² /1.2m ²	
Direction of rotation	Manual regulaion	
Manual override	Gearing latch disengapped by pushbutton,self-resetting	
Angle of rotation	Max90°	
Running time	<50S(90°)/<70S(90°)	
Sound power level	45dB	
Working/conditions		
Positin indication	Mechanical	
Protection class	Ⅲ (satety low voltage)	Ⅱ (totally insulated)
Protection level	IP44	
Ambient temperature	-20...+50°C/IEC 721-3-3	
Inventory temperature	-30.. +80°C/IEC 721-3v-2	
Humidity test	95%RH,non condensing(EN60730-1)	
Dimensions/Weight		
Dimensions(LxWxH)	See"Dimensions"	
Shaft length	> 50mm	
Shaft diameter	A.6..16mm B.8x8...12x12zmm	
Weight	< 0.75kg	

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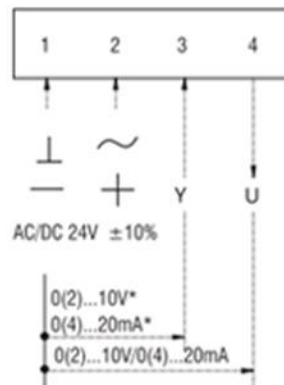
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Actuator Dimensions(mm)

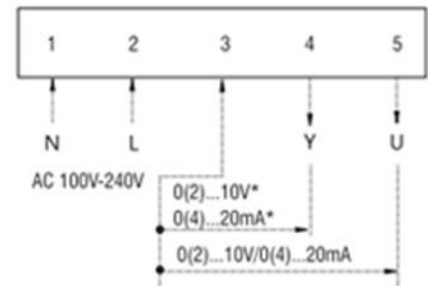


Wiring Diagram

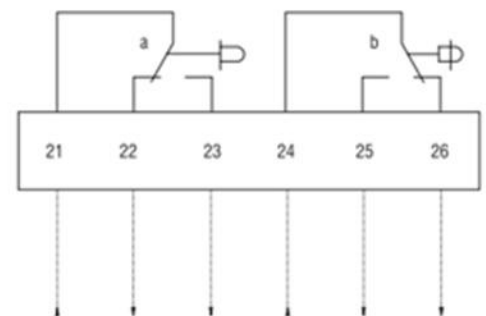
24V Actuator



230V Actuator



Auxiliary switch



Resistance load 3A, 230V
Inductive load 1.5A, 230V
The actuator in the 0° position

General Damper Actuator

8Nm/16Nm/24Nm ON/OFF

HY-DF08-24(S)

HY-DF16-24(S)

HY-DF24-24(S)

HY-DF08-230(S)

HY-DF16-230(S)

HY-DF24-230(S)

For operation of air control dampers in HVAC system.

Torque: 8Nm/16Nm/24Nm

Nominal voltage: AC/DC 24V ,

Control: ON/OFF,2/3-Point

-DS type include 2 axiliary switch.

Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switch	Model/Type
8Nm	<55S	AC/DC 24V	None	HY-DF08-24
			2-SPDT	HY-DF08-24S
16Nm	<100S		None	HY-DF16-24
			2-SPDT	HY-DF16-24S
24Nm	<160S		None	HY-DF24-24
			2-SPDT	HY-DF24-24S

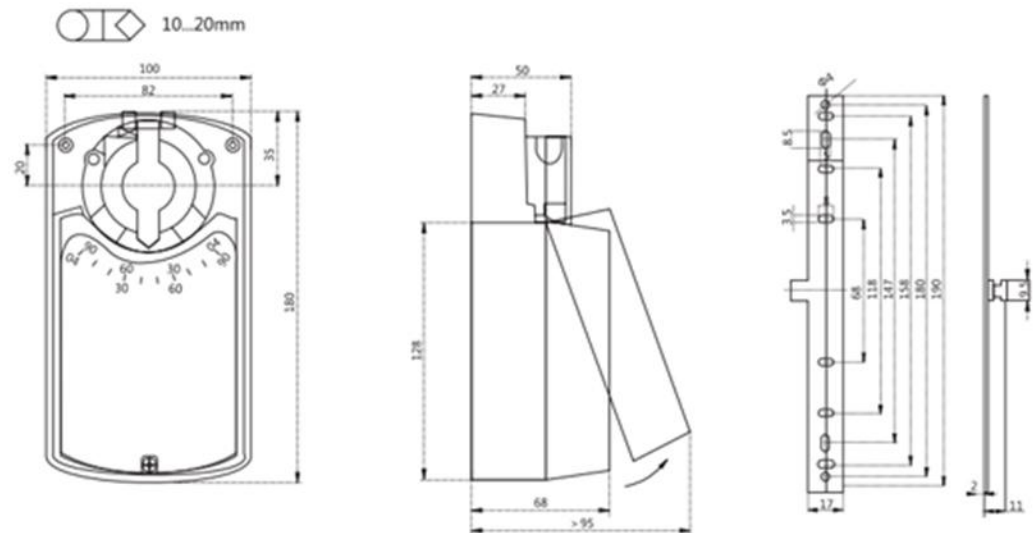
Technical specification

	HY-DF08-24(S)	HY-DF16-24(S)	HY-DF24-24(S)
Electrical data			
Nominal voltage	AC/DC 24V 50/60Hz		
Nominal voltage range	AC/DC 19.2...28.8V		
Power consumption	4.5W@Nominal toque/0.5W@holding		
Wire sizing	0.5mm ²		
Function data			
Terminal specification	Max2.0mm ²		
Torque	8Nm	16Nm	24Nm
Damper size	1.5m ²	3m ²	4.5m ²
Direction of rotation	Manual regulaion		
Manual override	Gearing latch disengagped by pushbutton,self-resetting		
Angle of rotation	Max90°		
Running time	<55S(90°)	<100S(90°)	<160S(90°)
Sound power level	45dB		
Working/conditions			
Positin indication	Mechanical		
Protection class	III (satety low voltage)		
Protection level	IP44		
Ambient temperature	-20...+50°C/IEC 721-3-3		
Inventory temperature	-30.. +80°C/IEC 721-3v-2		
Humidity test	95%RH,non condensing(EN60730-1)		
Dimensions/Weight			
Dimensions(LxWxH)	See"Dimensions"		
Shaft length	> 50mm		
Shaft diameter	A.10...12mm B.10x10...16x16mm		
Weight	<1.3kg		

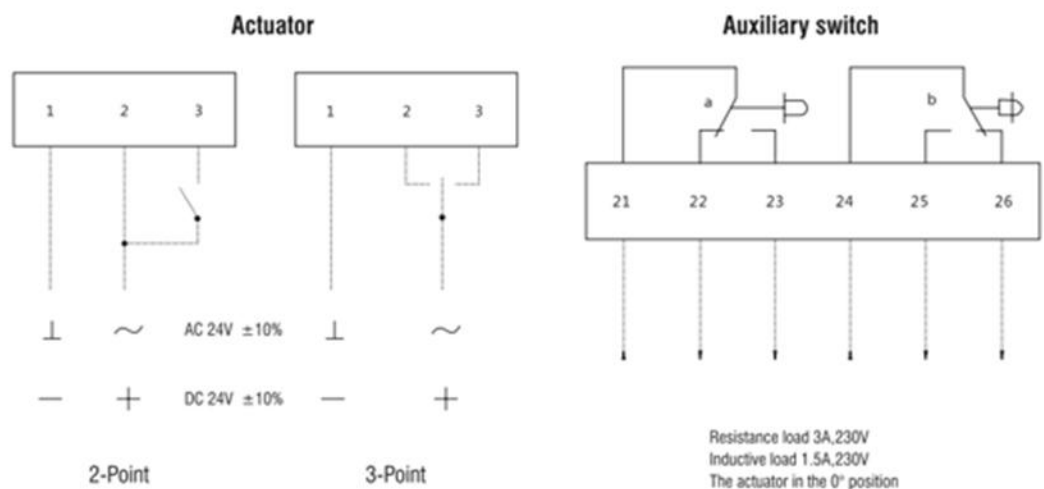
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Actuator Dimensions(mm)



Wiring Diagram



General Damper Actuator

2Nm ON/OFF

HY-DF08-230(S)

HY-DF16-230(S)

HY-DF24-230(S)

For operation of air control dampers in HVAC system.

Torque: 8Nm/16Nm/24Nm

Nominal voltage: AC/DC 24V ,

Control: ON/OFF,2/3-Point

-DS type include 2 auxiliary switch.

Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switch	Model/Type
8Nm	<55S	AC/DC 100-240V	None	HY-DF08-230
			2-SPDT	HY-DF08-230S
16Nm	<100S		None	HY-DF16-230
			2-SPDT	HY-DF16-230S
24Nm	<160S		None	HY-DF24-230
			2-SPDT	HY-DF24-230S

Technical specification

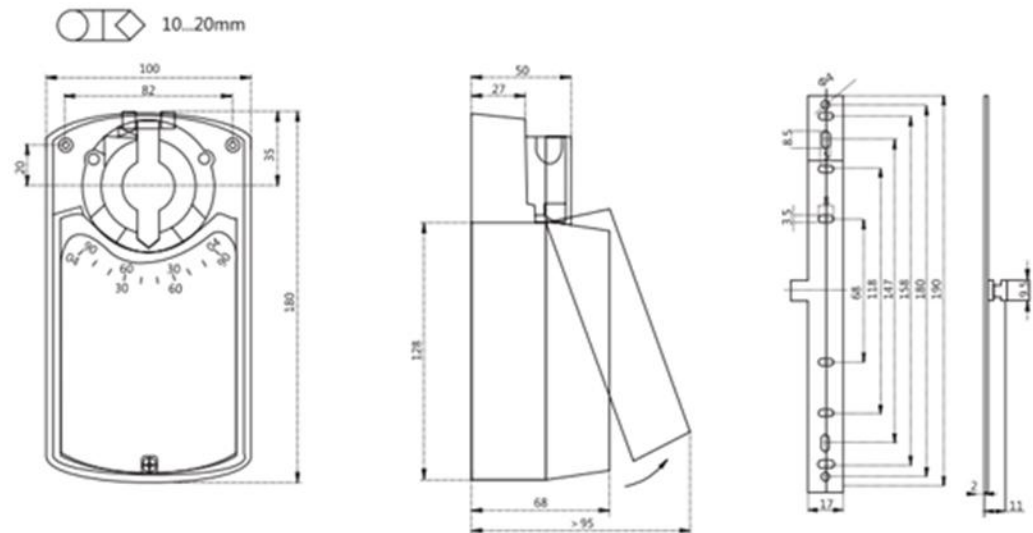
	HY-DF08-230(S)	HY-DF16-230(S)	HY-DF24-230(S)
Electrical data			
Nominal voltage	AC/DC100-240V 50/60Hz		
Nominal voltage range	AC/DC85...265V		
Power consumption	4.5W@Nominal torque/0.7W@holding		
Wire sizing	0.5mm ²		
Function data			
Terminal specification	Max2.0mm ²		
Torque	8Nm	16Nm	24Nm
Damper size	1.5m ²	3m ²	4.5m ²
Direction of rotation	Manual regulation		
Manual override	Gearing latch disengaged by pushbutton, self-resetting		
Angle of rotation	Max90°		
Running time	<55S(90°)	<100S(90°)	<160S(90°)
Sound power level	45dB		
Working/conditions			
Position indication	Mechanical		
Protection class	II (totally insulated)		
Protection level	IP44		
Ambient temperature	-20...+50°C/IEC 721-3-3		
Inventory temperature	-30.. +80°C/IEC 721-3v-2		
Humidity test	95%RH, non condensing(EN60730-1)		
Dimensions/Weight			
Dimensions(LxWxH)	See "Dimensions"		
Shaft length	> 50mm		
Shaft diameter	A.10...12mm B.10x10...16x16mm		
Weight	<1.3kg		



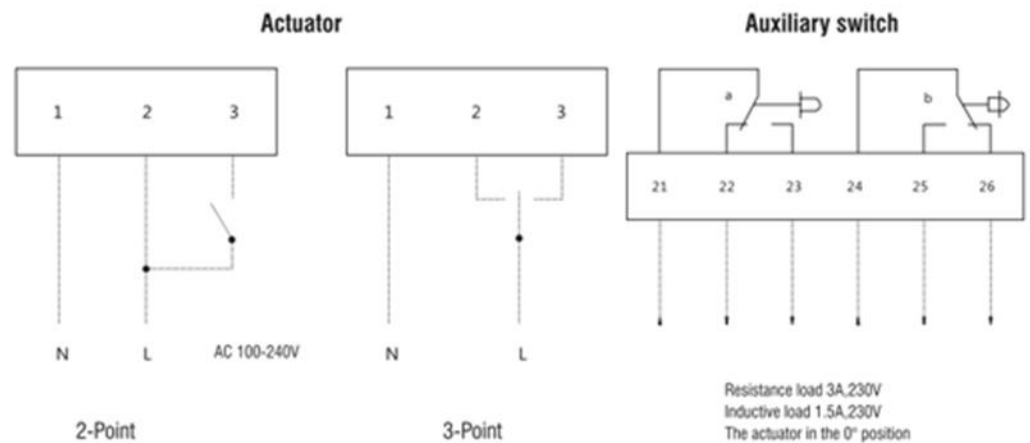
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Actuator Dimensions(mm)



Wiring Diagram



General Damper Actuator

8Nm/16Nm/24Nm Modulating

HY-DM08-24(S)

HY-DM16-24(S)

HY-DM24-24(S)

For operation of air control dampers in HVAC system.

Torque: 8Nm/16Nm/24Nm

Nominal voltage: AC/DC 24V

Control: 0(2)...10VDC/0(4)...20mA

Feedback: 0(2)...10VDC/0(4)...20mA

-AS type include 2 axiliary switch.

Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switch	Model/Type
8Nm	<50S	AC/DC 24V	None	HY-DM08-24
			2-SPDT	HY-DM08-24S
16Nm	<100S		None	HY-DM16-24
			2-SPDT	HY-DM16-24S
24Nm	<160S		None	HY-DM24-24
			2-SPDT	HY-DM24-24S

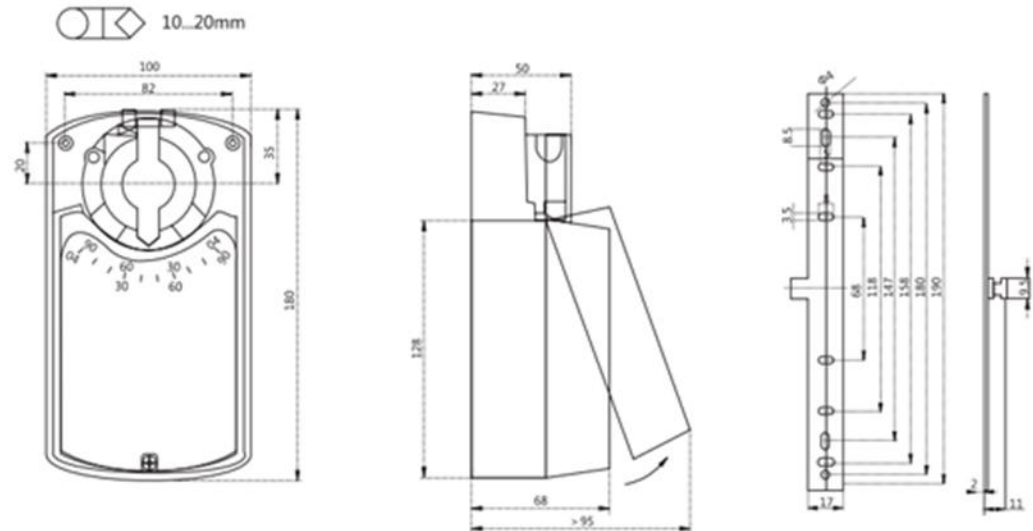
Technical specification

	HY-DM08-24(S)	HY-DM16-24(S)	HY-DM24-24(S)
Electrical data			
Nominal voltage	AC/DC 24V 50/60Hz		
Nominal voltage range	AC/DC 19.2...28.8V		
Power consumption	4.5W@Nominal toque/0.5W@holding		
Wire sizing	0.5mm ²		
Function data			
Terminal specification	Max2.0mm ²		
Torque	8Nm	16Nm	24Nm
Damper size	1.5m ²	3m ²	4.5m ²
Direction of rotation	Manual regulaion		
Manual override	Gearing latch disengagged by pushbutton,self-resetting		
Angle of rotation	Max95°		
Running time	<55S(90°)	<100S(90°)	<160S(90°)
Sound power level	45dB		
Working/conditions			
Positin indication	Mechanical		
Protection class	III (satety low voltage)		
Protection level	IP44		
Ambient temperature	-20...+50°C/IEC 721-3-3		
Inventory temperature	-30.. +80°C/IEC 721-3-2		
Humidity test	95%RH,non condensing(EN60730-1)		
Dimensions/Weight			
Dimensions(LxWxH)	See"Dimensions"		
Shaft length	> 50mm		
Shaft diameter	A.10...20mm B.10x10...16x16mm		
Weight	<1.3kg		

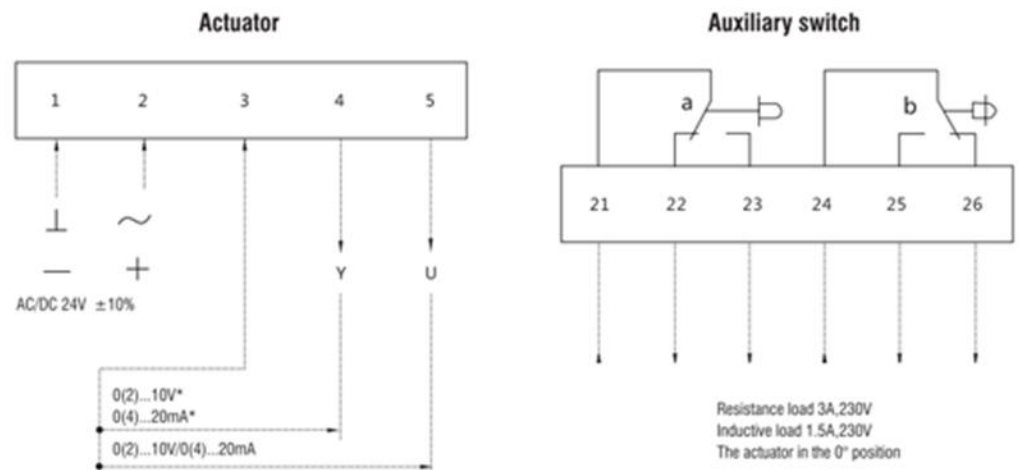
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Actuator Dimensions(mm)



Wiring Diagram



General Damper Actuator

8Nm/16Nm/24Nm Modulating

HY-DM08-230(S)

HY-DM16-230(S)

HY-DM24-230(S)

For operation of air control dampers in HVAC system.

Torque: 8Nm/16Nm/24Nm

Nominal voltage: AC 100-240V

Control: 0(2)...10VDC/0(4)...20mA

Feedback: 0(2)...10VDC/0(4)...20mA

-AS type include 2 auxiliary switch.

Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switch	Model/Type
8Nm	<50S	AC/DC100-240V	None	HY-DM08-230
			2-SPDT	HY-DM08-230S
16Nm	<100S		None	HY-DM16-230
			2-SPDT	HY-DM16-230S
24Nm	<160S		None	HY-DM24-230
			2-SPDT	HY-DM24-230S

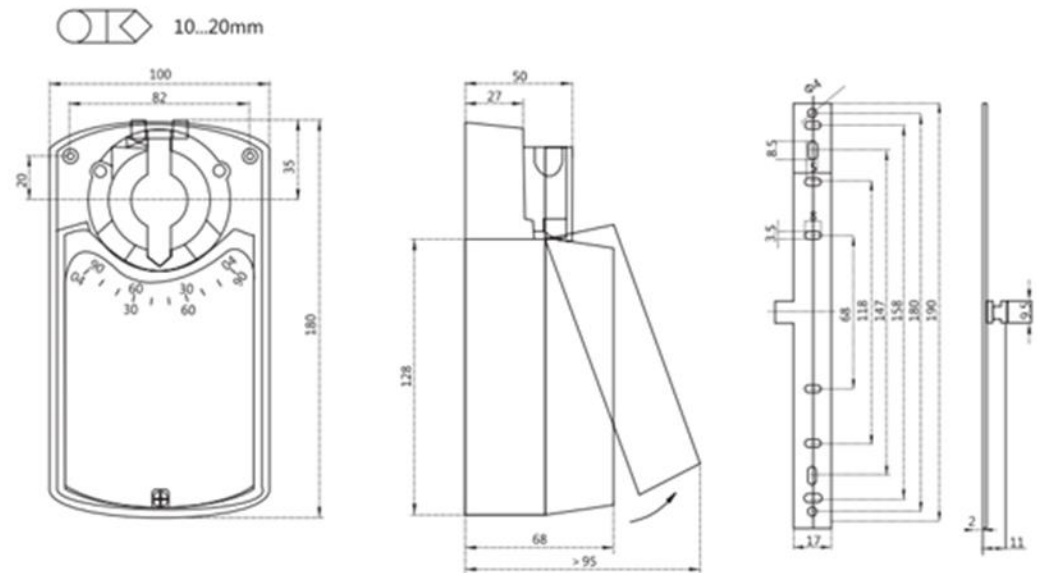
Technical specification

	HY-DM08-230(S)	HY-DM16-230(S)	HY-DM24-230(S)
Electrical data			
Nominal voltage	AC/DC100-240V 50/60Hz		
Nominal voltage range	AC/DC85...265V		
Power consumption	4.5W@Nominal torque/0.7W@holding		
Wire sizing	0.5mm ²		
Function data			
Terminal specification	Max2.0mm ²		
Torque	8Nm	16Nm	24Nm
Damper size	1.5m ²	3m ²	4.5m ²
Direction of rotation	Manual regulation		
Manual override	Gearing latch disengaged by pushbutton, self-resetting		
Angle of rotation	Max90°		
Running time	<50S(90°)	<100S(90°)	<160S(90°)
Sound power level	45dB		
Working/conditions			
Position indication	Mechanical		
Protection class	II (totally insulated)		
Protection level	IP44		
Ambient temperature	-20...+50°C/IEC 721-3-3		
Inventory temperature	-30.. +80°C/IEC 721-3-2		
Humidity test	95%RH, non condensing(EN60730-1)		
Dimensions/Weight			
Dimensions(LxWxH)	See "Dimensions"		
Shaft length	> 50mm		
Shaft diameter	A.10...20mm B.10x10...16x16mm		
Weight	<1.3kg		

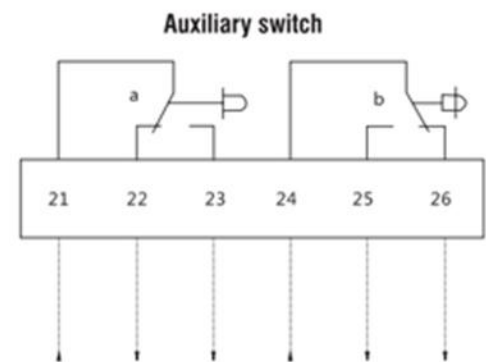
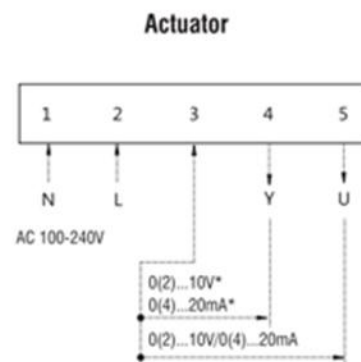
15

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Actuator Dimensions(mm)



Wiring Diagram



Resistance load 3A, 230V
Inductive load 1.5A, 230V
The actuator in the 0° position

Fast-running Damper Actuator

8Nm/16Nm ON/OFF

HY-DFQ08-24(S)

HY-DFQ16-24(S)

HY-DFQ08-24(S)

HY-DFQ16-24(S)

For operation of air control dampers in HVAC system.

Torque: 8Nm/16Nm

Nominal voltage: AC/DC 24V ,AC100-240V

Control: ON/OFF,2/3-Point

-DS type include 2 axiliary switch.

Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switch	Model/Type
8Nm	8S	AC/DC 24V	None or 2-SPDT	HY-DFQ08-24
		AC 100-240V		HY-DFQ08-24S
		AC/DC 24V	None or 2-SPDT	HY-DFQ08-230
		AC 100-240V		HY-DFQ08-230S
16Nm	16S	AC/DC 24V	None or 2-SPDT	HY-DFQ16-24
		AC 100-240V		HY-DFQ16-24S
		AC/DC 24V	None or 2-SPDT	HY-DFQ16-230
		AC 100-240V		HY-DFQ16-230S

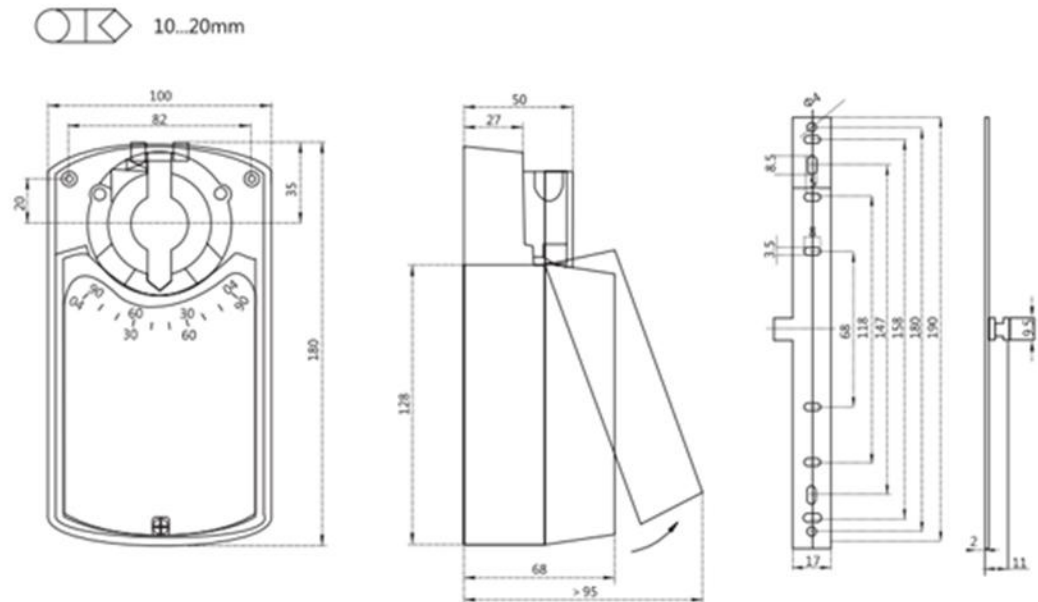
Technical specification

	HY-DFQ08/16-24(S)	HY-DFQ08/16-230(S)
Electrical data		
Nominal voltage	AC/DC 24V 50/60Hz	AC 100-240V 50/60Hz
Nominal voltage range	AC/DC 19.2...28.8V	AC85...265V
Power consumption	12W@Nominal toque/0.5W@holding	12W@Nominal toque/0.7W@holding
Wire sizing	0.5mm ²	
Function data		
Terminal specification	Max2.0mm ²	
Torque	8Nm/16Nm	
Damper size	1.5m ² /3m ²	
Direction of rotation	Manual regulaion	
Manual override	Gearing latch disengaged by pushbutton,self-resetting	
Angle of rotation	Max90°	
Running time	8S(90°)/16S(90°)	
Sound power level	65dB	
Working/conditions		
Positin indication	Mechanical	
Protection class	Ⅲ(satety low voltage)	Ⅱ (totally insulated)
Protection level	IP44	
Ambient temperature	-20...+50°C/IEC 721-3-3	
Inventory temperature	-30.. +80°C/IEC 721-3-2	
Humidity test	95%RH,non condensing(EN60730-1)	
Dimensions/Weight		
Dimensions(LxWxH)	See"Dimensions"	
Shaft length	> 50mm	
Shaft diameter	A.10..20mm B.10x10...16x16mm	
Weight	<1.3kg	

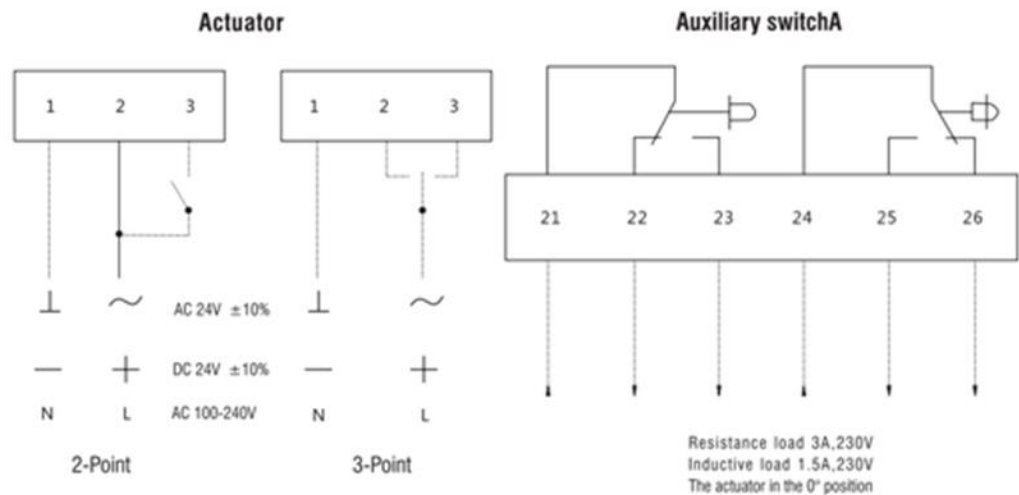
17

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Actuator Dimensions(mm)



Wiring Diagram



Fast-running Damper Actuator

8Nm/16Nm Modulating

HY-DMQ08-24(S)

HY-DMQ16-24(S)

HY-DMQ08-230(S)

HY-DMQ16-230(S)

For operation of air control dampers in HVAC system.

Torque: 8Nm/16Nm

Nominal voltage: AC/DC 24V,,AC 100-240V

Control: 0(2)...10VDC/0(4)...20mA

Feedback: 0(2)...10VDC/0(4)...20mA

-AS type include 2 axiliary switch.

Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switch	Model/Type
8Nm	8S	AC/DC 24V	None or 2-SPDT	HY-DMQ08-24(S)
		AC 100-240V		HY-DMQ08-230(S)
16Nm	16S	AC/DC 24V	None or 2-SPDT	HY-DMQ16-24(S)
		AC 100-240V		HY-DMQ16-230(S)

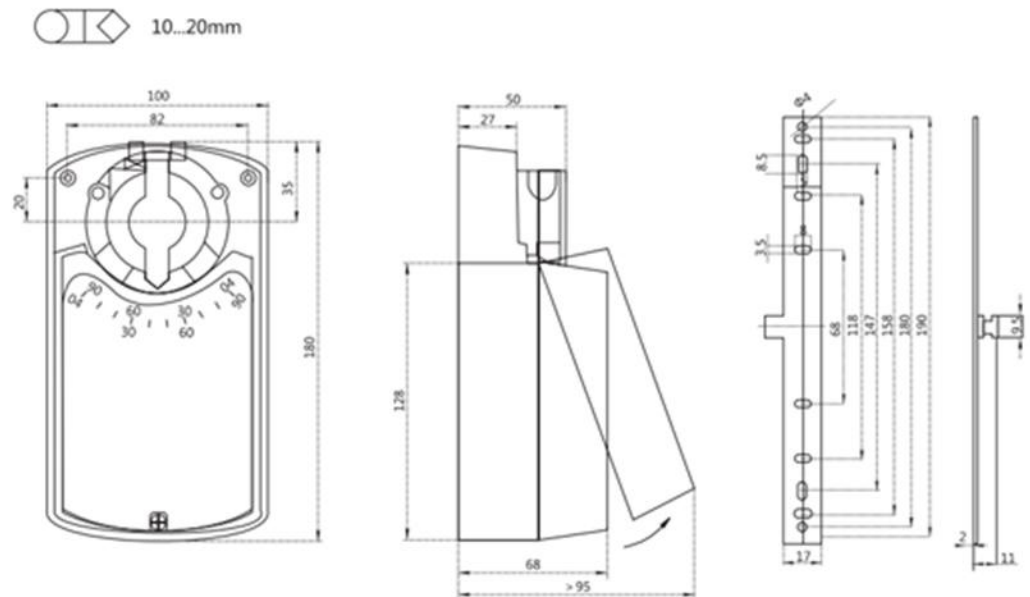
Technical specification

	HY-DMQ08/16-24(S)	HY-DMQ08/16-230(S)
Electrical data		
Nominal voltage	AC/DC 24V 50/60Hz	AC 100-240V 50/60Hz
Nominal voltage range	AC/DC 19.2...28.8V	AC85...265V
Power consumption	12W@Nominal toque/0.5W@holding	12W@Nominal toque/0.7W@holding
Wire sizing	0.5mm ²	
Function data		
Terminal specification	Max2.0mm ²	
Torque	8Nm/16Nm	
Damper size	1.5m ² /3m ²	
Direction of rotation	Manual regulaion	
Manual override	Gearing latch disengaged by pushbutton,self-resetting	
Angle of rotation	Max90°	
Running time	8S(90°)/16S(90°)	
Sound power level	65dB	
Working/conditions		
Positin indication	Mechanical	
Protection class	Ⅲ(safety low voltage)	Ⅱ (totally insulated)
Protection level	IP44	
Ambient temperature	-20...+50°C/IEC 721-3-3	
Inventory temperature	-30.. +80°C/IEC 721-3-2	
Humidity test	95%RH,non condensing(EN60730-1)	
Dimensions/Weight		
Dimensions(LxWxH)	See"Dimensions"	
Shaft length	> 50mm	
Shaft diameter	A.10..20mm B.10x10...16x16mm	
Weight	<1.3kg	

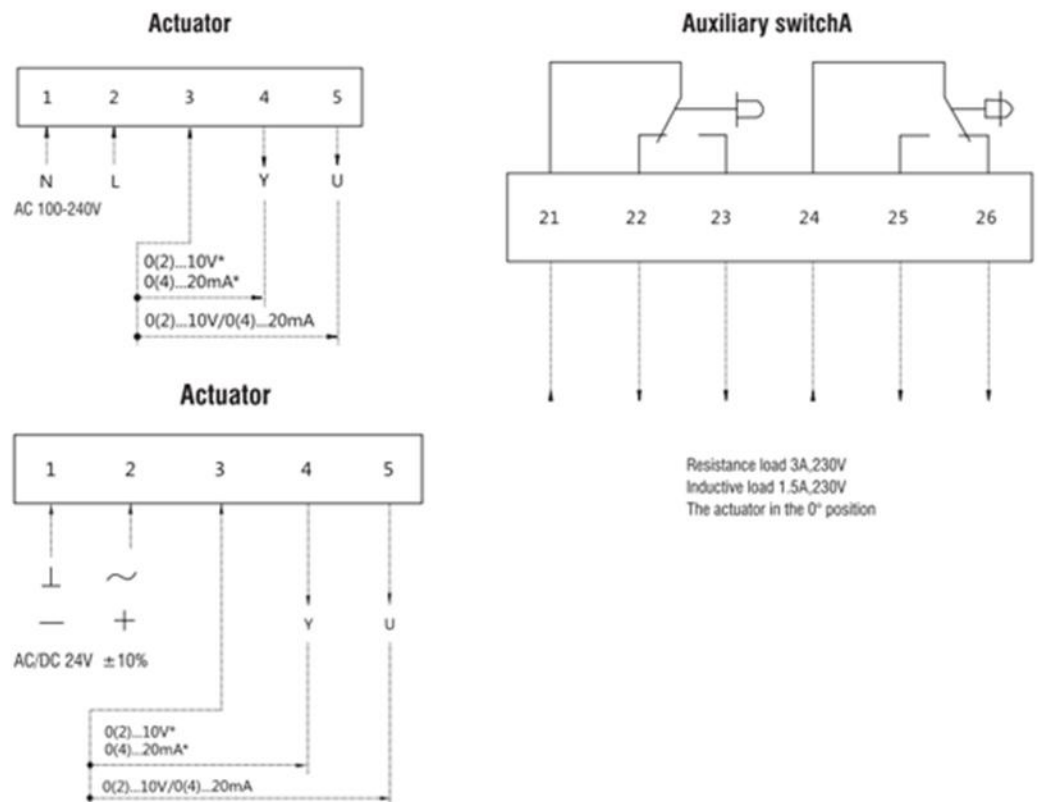
19

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Actuator Dimensions(mm)



Wiring Diagram



Spring-return Damper Actuator

3Nm ON/OFF

HY-DFS03-24(S)

HY-DFS03-230(S)

For operation of air control dampers in HVAC system.

Torque: 3Nm

Nominal voltage: AC/DC 24V ,AC100-240V

Control: ON/OFF

-DS type include 2 axiliary switch.

Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switch	Model/Type
3Nm	<100S/<25S	AC/DC 24V	None or 2-SPDT	HY-DFS03-24
				HY-DFS03-24S
	<100S/<25S	AC 100-240V	None or 2-SPDT	HY-DFS03-230
				HY-DFS03-230S

Technical specification

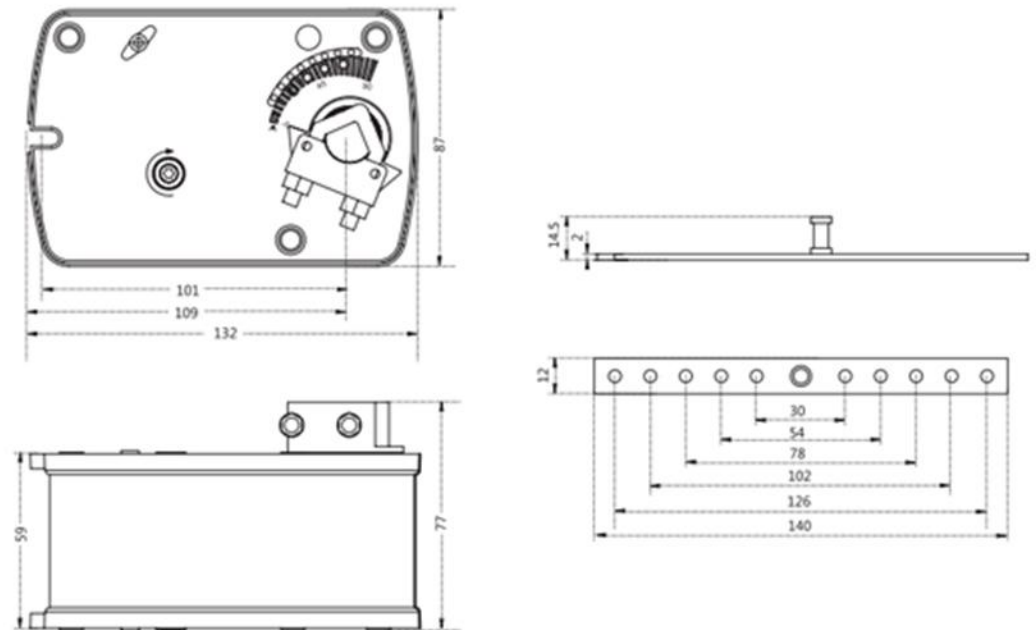
	HY-DFS03-24(S)	HY-DFS03-230(S)
Electrical data		
Nominal voltage	AC/DC 24V 50/60Hz	AC 100-240V 50/60Hz
Nominal voltage range	AC/DC 19.2...28.8V	AC85...265V
Power consumption	5W@Nominal toque/3W@holding	5W@Nominal toque/3W@holding
Wire sizing	0.5mm ²	
Function data		
Torque	3Nm	
Damper size	0.6m ²	
Direction of rotation	Selected by mounting L/R	
Manual override	Yes	
Angle of rotation	Max95°,adjustable by mechanical stop	
Running time	<75S/ <25S(Spring reset)	
Sound power level	45dB	
Working/conditions		
Positin indication	Mechanical	
Protection class	Ⅲ(satety low voltage)	Ⅱ (totally insulated)
Protection level	IP54	
Ambient temperature	-20...+50°C/IEC 721-3-3	
Inventory temperature	-30.. +80°C/IEC 721-3-2	
Humidity test	95%RH,non condensing(EN60730-1)	
Dimensions/Weight		
Dimensions(LxWxH)	See"Dimensions"	
Shaft length	> 90mm	
Shaft diameter	A.6..16mm B.5x5...12x12mm	
Weight	<1.3kg	



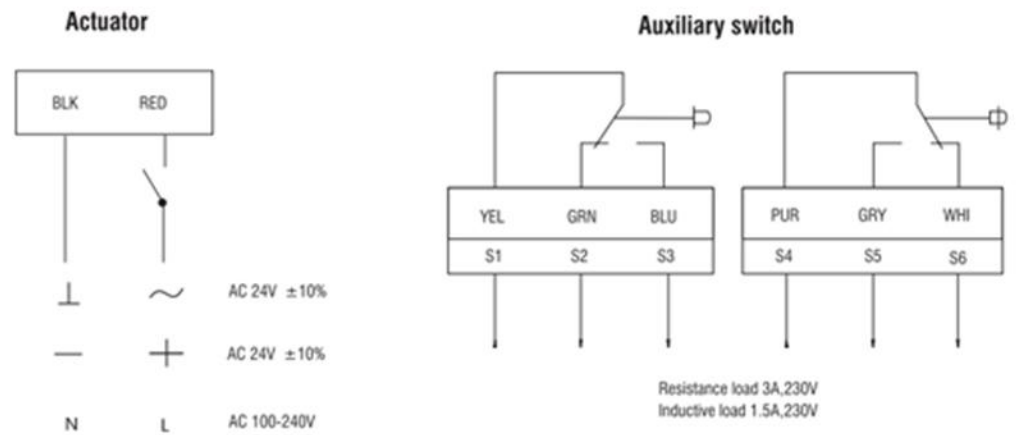
21

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Actuator Dimensions(mm)



Wiring Diagram



Spring-return Damper Actuator

5Nm ON/OFF

HY-DFS05-24(S)

HY-DFS05-230(S)

For operation of air control dampers in HVAC system.

Torque: 5Nm

Nominal voltage: AC/DC 24V ,AC100-240V

Control: ON/OFF

-DS type include 2 axiliary switch.



Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switch	Model/Type
5Nm	<70S/<20S	AC/DC 24V	None	HY-DFS05-24
			2-SPDT	HY-DFS05-24S
		AC 100-240V	None	HY-DFS05-230
			2-SPDT	HY-DFS05-230S

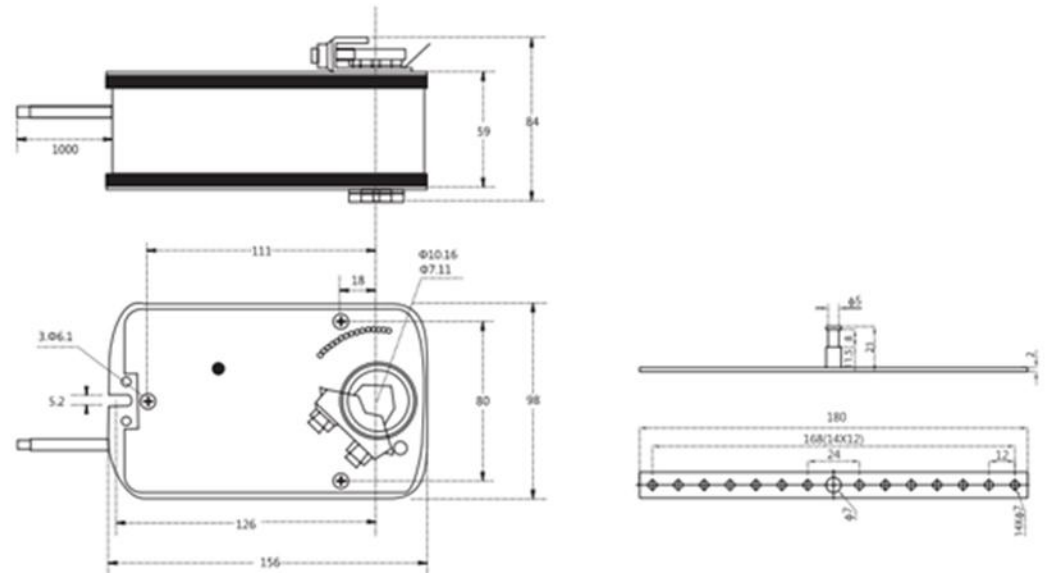
Technical specification

	HY-DFS05-24(S)	HY-DFS05-230(S)
Electrical data		
Nominal voltage	AC/DC 24V 50/60Hz	AC 100-240V 50/60Hz
Nominal voltage range	AC/DC 19.2...28.8V	AC85...265V
Power consumption	5W@Nominal toque/3W@holding	5W@Nominal toque/3W@holding
Wire sizing	0.5mm ²	
Function data		
Torque	5Nm	
Damper size	1m ²	
Direction of rotation	Selected by mounting L/R	
Manual override	None	
Angle of rotation	Max95°,adjustable by mechanical stop	
Running time	<70S/<20S(Spring reset)	
Sound power level	45dB	
Working/conditions		
Positin indication	Mechanical	
Protection class	Ⅲ(satety low voltage)	Ⅱ (totally insulated)
Protection level	IP54	
Ambient temperature	-20...+50°C/IEC 721-3-3	
Inventory temperature	-30.. +80°C/IEC 721-3-2	
Humidity test	95%RH,non condensing(EN60730-1)	
Dimensions/Weight		
Dimensions(LxWxH)	See"Dimensions"	
Shaft length	> 90mm	
Shaft diameter	A.10..16mm B.7x7...11x11mm	
Weight	<1.9kg	

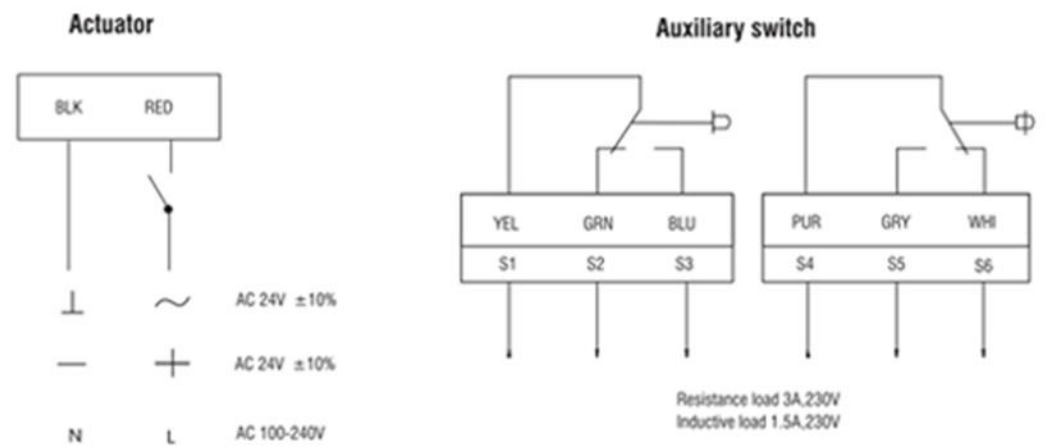
23

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Actuator Dimensions(mm)



Wiring Diagram



Spring-return Damper Actuator

10Nm/15Nm/20Nm ON/OFF

HY-DFS10-24(S)

HY-DFS15-24(S)

HY-DFS20-24(S)

HY-DFS10-230(S)

HY-DFS15-230(S)

HY-DFS20-230(S)

For operation of air control dampers in HVAC system.

Torque: 10Nm/15Nm/20Nm

Nominal voltage: AC/DC 24V ,AC100-240V

Control: ON/OFF

-DS type include 2 axiliary switch.



Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switch	Model/Type
10Nm	<100S/<25S	AC/DC 24V	None or 2-SPDT	HY-DFS10-24(S)
		AC 100-240V		HY-DFS10-230(S)
15Nm	<150S/<25S	AC/DC 24V	None or 2-SPDT	HY-DFS15-24(S)
		AC 100-240V		HY-DFS15-230(S)
20Nm	<180S/<30S	AC/DC 24V	None or 2-SPDT	HY-DFS20-24(S)
		AC 100-240V		HY-DFS20-230(S)

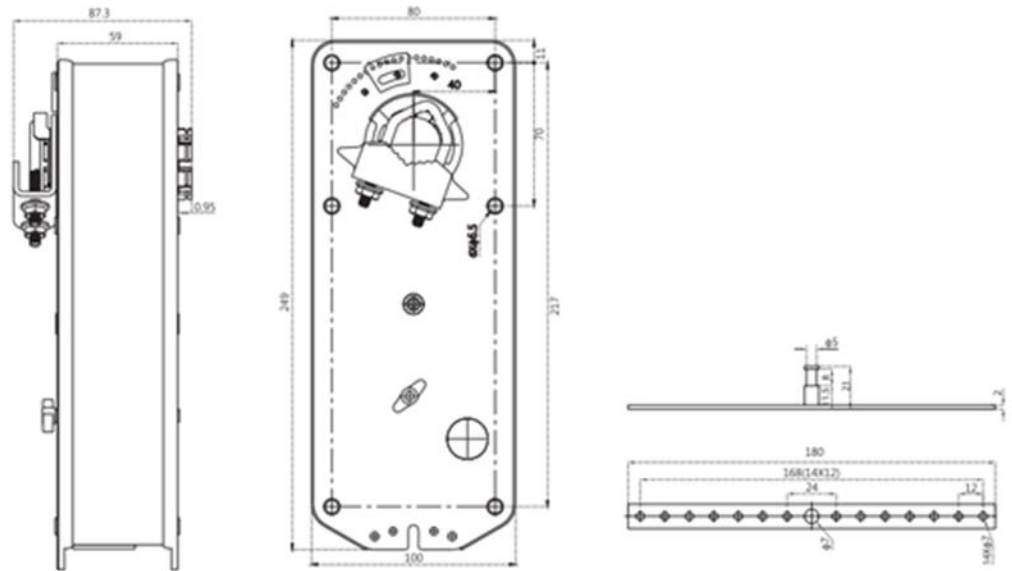
Technical specification

	HY-DFS10/15/20-24(S)	HY-DFS10/15/20-230(S)
Electrical data		
Nominal voltage	AC/DC 24V 50/60Hz	AC 100-240V 50/60Hz
Nominal voltage range	AC/DC 19.2...28.8V	AC85...265V
Power consumption	5W//10W//10W@Nominal toque/3W@holding	5W//10W//10W@Nominal toque/3W@holding
Wire sizing	0.5m ²	
Function data		
Torque	10Nm/15Nm/20Nm	
Damper size	1.5m ² /3m ² /4m ²	
Direction of rotation	Selected by mounting L/R	
Manual override	Yes	
Angle of rotation	Max95°,adjustable by mechanical stop	
Running time	<100S/ <150S/ <180S/	<25S/ <25S/ <30S/ (Spring reset)
Sound power level	45dB	
Working/conditions		
Positin indication	Mechanical	
Protection class	III (satety low voltage)	II (totally insulated)
Protection level	IP54	
Ambient temperature	-20...+50°C/IEC 721-3-3	
Inventory temperature	-30.. +80°C/IEC 721-3-2	
Humidity test	95%RH,non condensing(EN60730-1)	
Dimensions/Weight		
Dimensions(LxWxH)	See"Dimensions"	
Shaft length	> 90mm	
Shaft diameter	A.21..21mm B.6x6...15x15mm	
Weight	<2.3kg(DA10FU)/ <2.6Kg(DA15/20FU)	

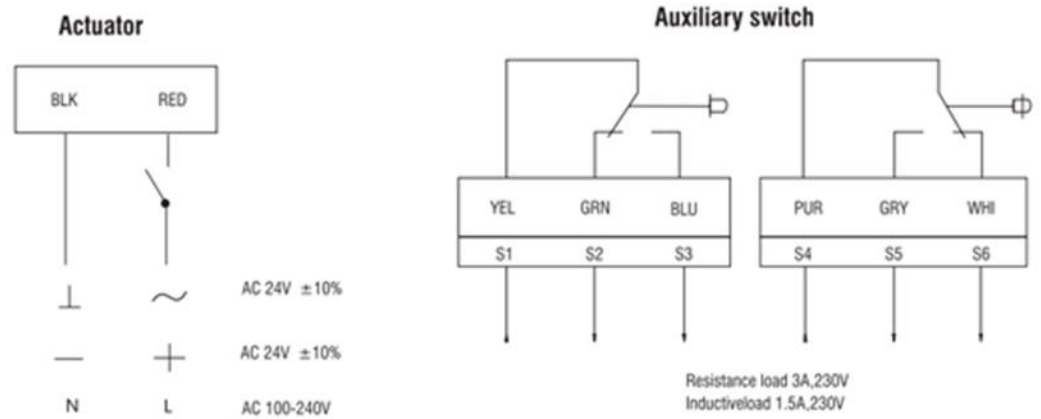
25

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Actuator Dimensions(mm)



Wiring Diagram



Spring-return Damper Actuator

5Nm Modulating

HY-DMS05-24(S)

For operation of air control dampers in HVAC system.

Torque: 5Nm

Nominal voltage: AC/DC 24V

Control: 0(2)...10VDC/0(4)...20mA

Feedback: 0(2)...10VDC/0(4)...20mA

-DS type include 2 axiliary switch.

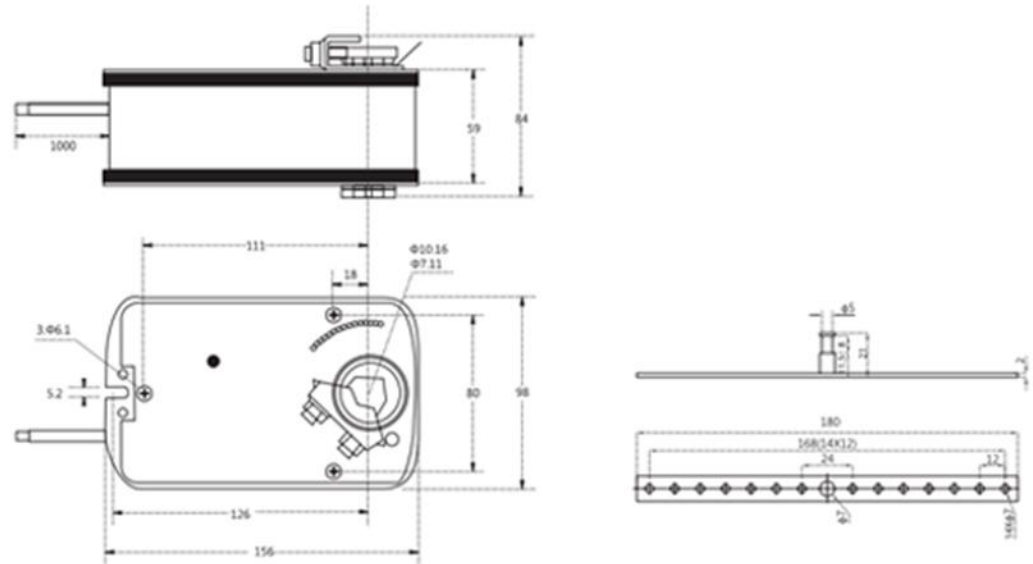
Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switch	Model/Type
5Nm	<120S/<20S	AC/DC 24V	None or 2-SPDT	HY-DMS05-24(S)

Technical specification

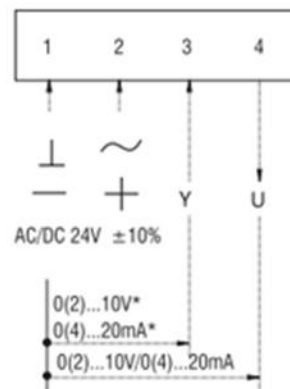
	HY-DMS05-24(S)
Electrical data	
Nominal voltage	AC/DC 24V 50/60Hz
Nominal voltage range	AC/DC 19.2...28.8V
Power consumption	5W@Nominal toque/3W@holding
Wire sizing	0.5m ²
Function data	
Torque	5Nm
Damper size	1.5m ²
Direction of rotation	Selected by mounting L/R
Manual override	None
Angle of rotation	Max95°, adjustable by mechanical stop
Running time	<120S/<20S/(Spring reset)
Sound power level	45dB
Working/conditions	
Positin indication	Mechanical
Protection class	III (satety low voltage)
Protection level	IP54
Ambient temperature	-20...+50°C/IEC 721-3-3
Inventory temperature	-30.. +80°C/IEC 721-3-2
Humidity test	95%RH,non condensing(EN60730-1)
Dimensions/Weight	
Dimensions(LxWxH)	See"Dimensions"
Shaft length	> 90mm
Shaft diameter	A.10..16mm B.7x7...11x11mm
Weight	<1.9kg

Actuator Dimensions(mm)

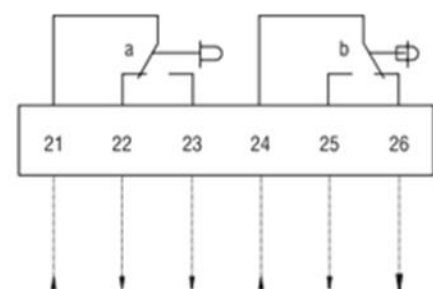


Wiring Diagram

24V Actuator



Auxiliary switch



Resistance load 3A, 230V
Inductive load 1.5A, 230V
The actuator in the 0° position

Fire and Smoke Spring-return Damper Actuator

3Nm ON/OFF

HY-DF-SF03-24S(T)

HY-DF-SF03-230S(T)

For operation of air control dampers in HVAC system.

Torque: 3Nm

Nominal voltage: AC/DC 24V ,AC100-240V

Control: ON/OFF

-DST type include SAF72 thermal sensor

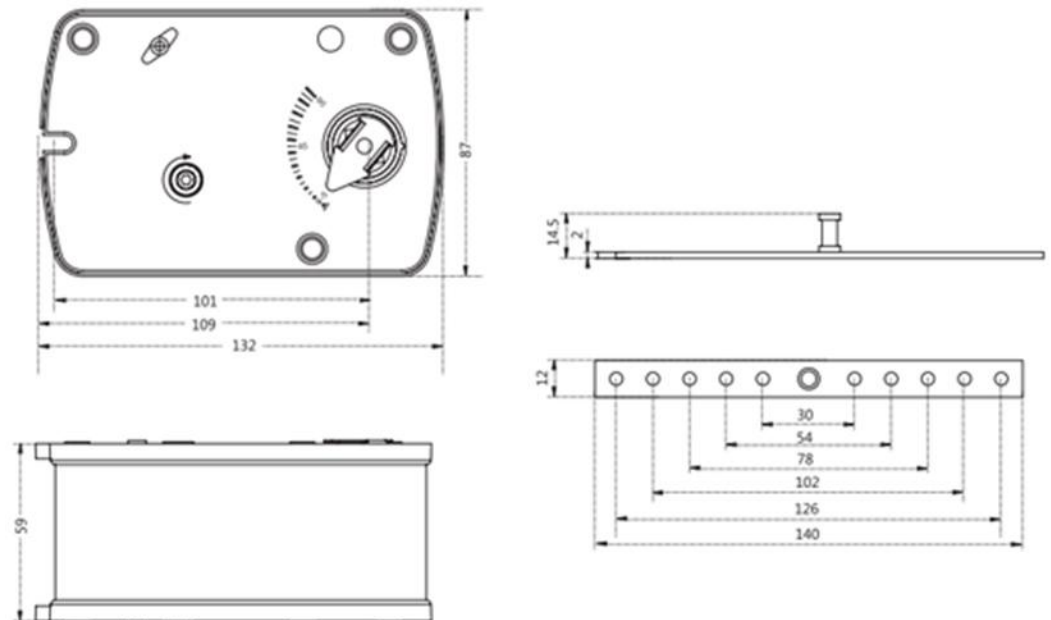
Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switch	SAF72 Thermal Sensor	Model/Type
3Nm	<75S/<25S	AC/DC 24V	2-SPDT	None	HY-DF-SF03-24
				Yes	HY-DF-SF03-24ST
		AC 100-240V		None	HY-DF-SF03-230
				Yes	HY-DF-SF03-230ST

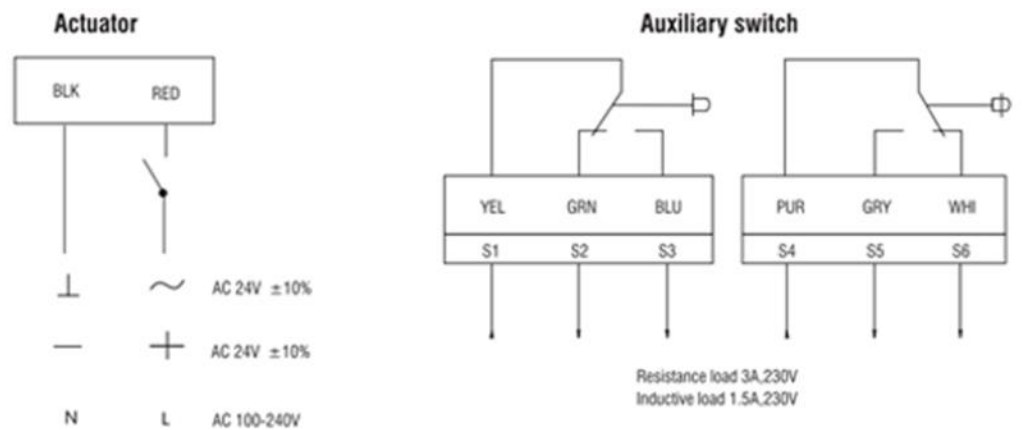
Technical specification

	HY-DF-SF03-24S(T)	HY-DF-SF03-230S(T)
Electrical data		
Nominal voltage	AC/DC 24V 50/60Hz	AC 100-240V 50/60Hz
Nominal voltage range	AC/DC 19.2...28.8V	AC85...265V
Power consumption	5W@Nominal toque/3W@holding	5W@Nominal toque/3W@holding
Wire sizing	0.5m ²	
Function data		
Torque	3Nm	
Damper size	0.6m ²	
Direction of rotation	Selected by mounting L/R	
Manual override	Yes	
Angle of rotation	Max95°	
Running time	<75S/<25S/(Spring reset)	
Sound power level	45dB	
Working/conditions		
Positin indication	Mechanical	
Protection class	Ⅲ (satety low voltage)	Ⅱ (totally insulated)
Protection level	IP54	
Ambient temperature	-20...+50°C/IEC 721-3-3	
Inventory temperature	-30.. +80°C/IEC 721-3-2	
Humidity test	95%RH,non condensing(EN60730-1)	
Dimensions/Weight		
Dimensions(LxWxH)	See"Dimensions"	
Shaft length	> 90mm	
Shaft diameter	12x12mm B.Can provide 8x8 ,10x10 shaft sleeve	
Weight	<1.3kg	

Actuator Dimensions(mm)

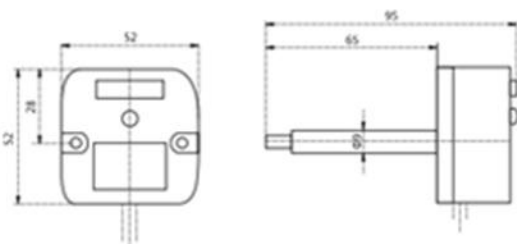


Wiring Diagram



Thermal Sensor SAF72

Thermal Sensor SAF72 Consist of both Ambient(TS1) and Duct sensor(TS2). TS1 will trip open when the ambient temperature rise above 72°. TS2 will trip open when the duct temperature rise above 72°.



Fire and Smoke Spring-return Damper Actuator

5Nm ON/OFF

HY-DF-SF05-24S(T)

HY-DF-SF05-230S(T)

For operation of air control dampers in HVAC system.

Torque: 5Nm

Nominal voltage: AC/DC 24V ,AC100-240V

Control: ON/OFF

-DST type include SAF72 thermal sensor

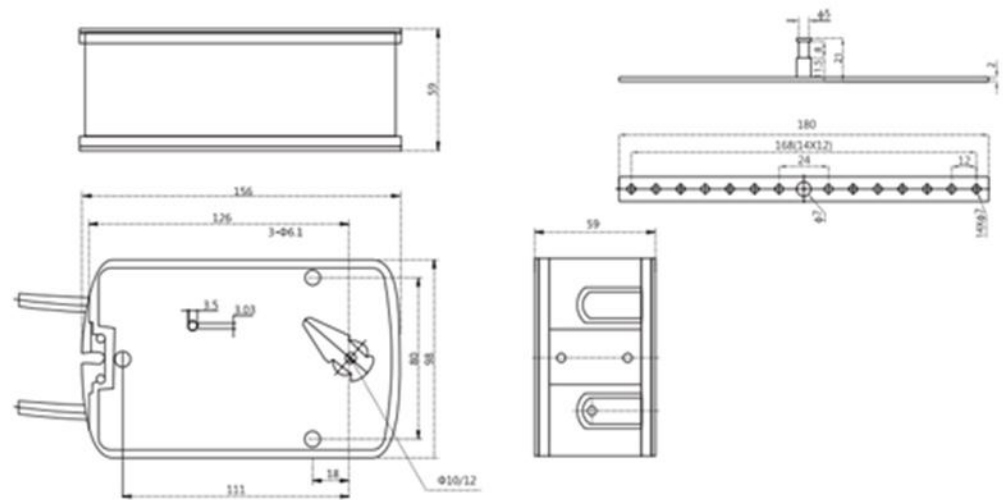
Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switch	SAF72 Thermal Sensor	Model/Type
5Nm	<70S/<20S	AC/DC 24V	2-SPDT	None	HY-DF-SF05-24S
				Yes	HY-DF-SF05-24S(T)
		AC 100-240V		None	HY-DF-SF05-230S
				Yes	HY-DF-SF05-230S(T)

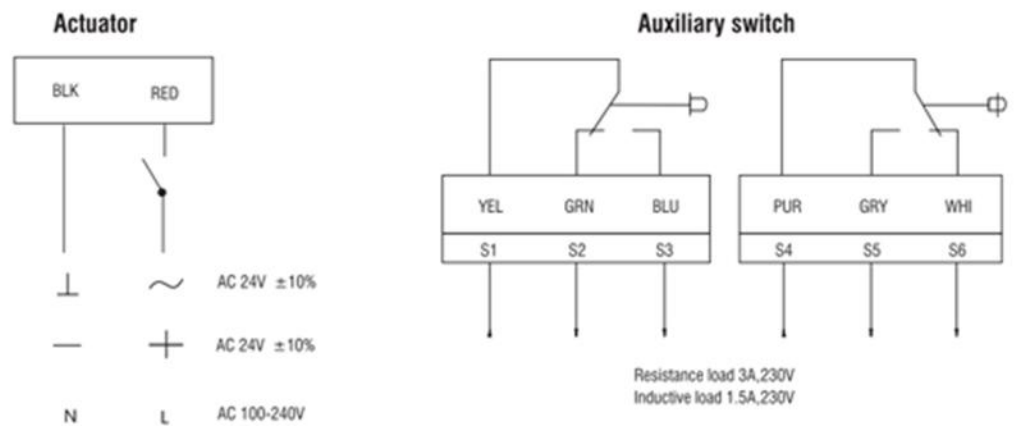
Technical specification

	HY-DF-SF05-24S(T)	HY-DF-SF05-230S(T)
Electrical data		
Nominal voltage	AC/DC 24V 50/60Hz	AC 100-240V 50/60Hz
Nominal voltage range	AC/DC 19.2...28.8V	AC85...265V
Power consumption	5W@Nominal toque/3W@holding	5W@Nominal toque/3W@holding
Wire sizing	0.5m ²	
Function data		
Torque	5Nm	
Damper size	1m ²	
Direction of rotation	Selected by mounting L/R	
Manual override	Yes	
Angle of rotation	Max95°	
Running time	<70S/<20S/(Spring reset)	
Sound power level	45dB	
Working/conditions		
Positin indication	Mechanical	
Protection class	Ⅲ (satety low voltage)	Ⅱ (totally insulated)
Protection level	IP54	
Ambient temperature	-20...+50°C/IEC 721-3-3	
Inventory temperature	-30.. +80°C/IEC 721-3-2	
Humidity test	95%RH,non condensing(EN60730-1)	
Dimensions/Weight		
Dimensions(LxWxH)	See"Dimensions"	
Shaft length	> 90mm	
Shaft diameter	12x12mm B.Can provide 8x8 ,10x10 shaft sleeve	
Weight	<2.0kg	

Actuator Dimensions(mm)

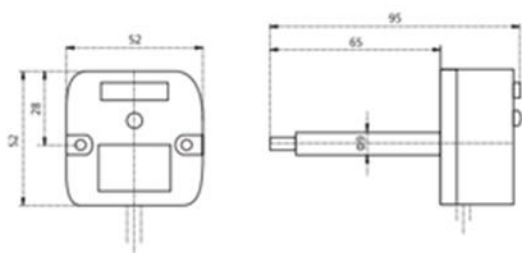


Wiring Diagram



Thermal Sensor SAF72

Thermal Sensor SAF72 Consist of both Ambient(TS1) and Duct sensor(TS2). TS1 will trip open when the ambient temperature rise above 72°. TS2 will trip open when the duct temperature rise above 72°.



XIAMEN HYSEN CONTROL TECHNOLOGY CO.,LTD

Tel:0086-592-6083512

Email:sales2@cn-hysen.com

Add:No.888 Yangming Road,Xinyang Industrial Park,
Haicang District,Xiamen,China

