

Actuators

Heating/Cooling



For switching between the heating and cooling modes of adjustable air terminal devices

Actuators for air terminal devices Types VD, VDL, VDR, QSH, ISH, TJN and DUK

- Change of the discharge direction for two different operating situations
- Supply voltage 24 V AC/DC or 230 V AC
- Control input signal: 1-wire control or 2-wire control (3-point)

Type		Page
Heating/Cooling	General information	HC – 2
	Function	HC – 3
	Technical data	HC – 4
	Variants	HC – 6
	Electrical connection	HC – 8

Application

Application

- Actuators for switching between the heating

- and cooling modes of air terminal devices
- Adjustment of the air discharge direction

Description

Parts and characteristics

- Mechanical stops for setting the discharge angle
- Rotary and linear actuators with overload protection
- Control input signal: 1-wire control or 2-wire control (3-point, open/close)

- Release button to allow for manual operation

Useful additions

- TDC temperature difference control module

Functional description

The actuator moves the blades or other air control elements of an air terminal device to the position for HEATING or to the position for COOLING.

1-wire control or 2-wire control (3-point) can be used.

1-wire control is the same as open/close control or min/max control.

Effect of actuator action in case of factory setting

Diffuser Type	Direction of action	
	1	2
VD	Cooling	Heating
VDL	Cooling	Heating
VDR	Cooling	Heating
QSH	Heating	Cooling
ISH	Heating	Cooling
TJN	Cooling	Heating
DUK 160 – 200	Heating	Cooling
DUK 250 – 400	Cooling	Heating

Actuator NM230A

Supply voltage	100 – 240 V AC –15 % +10 %, 50/60 Hz
Power rating	5.5 VA max.
Torque	10 Nm
Running time for 90°	150 s
Control input signal	1-wire control or 2-wire control (3-point)
Connecting cable	3 × 0.75 mm ² , 1 m long
IEC protection class	II (protective insulation)
Protection level	IP 54
EC conformity	EMC to 2014/30/EU, low voltage to 2014/35/EU, RoHS to 2011/65/EU
Operating temperature	–30 to 50 °C
Weight	0.75 kg

Actuator NM24A

Supply voltage (AC)	24 V AC ± 20 %, 50/60 Hz
Supply voltage (DC)	24 V DC ±20 %
Power rating (AC)	3.5 VA max.
Power rating (DC)	1.5 W max.
Torque	10 Nm
Running time for 90°	150 s
Control input signal	1-wire control or 2-wire control (3-point)
Connecting cable	3 × 0.75 mm ² , 1 m long
IEC protection class	III (protective extra-low voltage)
Protection level	IP 54
EC conformity	EMC to 2014/30/EU, RoHS to 2011/65/EU
Operating temperature	–30 to 50 °C
Weight	0.75 kg

Actuator 223E-230-150-003

Supply voltage	195 – 265 V AC, 50/60 Hz
Power rating	3.5 VA
Lifting force and thrust	150 N
Running time	26.9 mm/min
Control input signal	2-wire control (3-point)
Connecting cable	3 × 0.75 mm ² , 1.8 m long
IEC protection class	II (protective insulation)
Protection level	IP 42
EC conformity	EMC to 2014/30/EU, low voltage to 2014/35/EU
Operating temperature	–20 to 60 °C
Weight	0.230 kg

Actuator 223E-024-150-002

Supply voltage	24 V AC ± 10 %, 50/60 Hz
Power rating	3 VA
Lifting force and thrust	150 N
Running time	26.9 mm/min
Control input signal	2-wire control (3-point)
Connecting cable	3 × 0.75 mm ² , 1.8 m long
IEC protection class	III (protective extra-low voltage)
Protection level	IP 42
EC conformity	EMC according to 2014/30/EU
Operating temperature	–20 to 60 °C
Weight	0.230 kg

Actuator CM230-F

Supply voltage	100 to 240 V AC -15 % +10 %, 50/60 Hz
Power rating	3 VA
Torque	2 Nm
Running time for 90°	75 s
Control input signal	1-wire control or 2-wire control (3-point)
Connecting cable	3 × 0.75 mm ² , 1 m long
IEC protection class	II (protective insulation)
Protection level	IP 54
EC conformity	EMC to 2014/30/EU, low voltage to 2014/35/EU, RoHS to 2011/65/EU
Operating temperature	-30 to 50 °C
Weight	0.185 kg

Actuator CM24-F

Supply voltage (AC)	24 V AC ± 20 %, 50/60 Hz
Supply voltage (DC)	24 V DC ± 20 %
Power rating (AC)	1 VA max.
Power rating (DC)	0.5 W max.
Torque	2 Nm
Running time for 90°	75 s
Control input signal	1-wire control or 2-wire control (3-point)
Connecting cable	3 × 0.75 mm ² , 1 m long
IEC protection class	III (protective extra-low voltage)
Protection level	IP 54
EC conformity	EMC to 2014/30/EU, RoHS to 2011/65/EU
Operating temperature	-30 to 50 °C
Weight	0.185 kg

Actuator NM230A



Actuator NM24A



Actuator 223E-230-150-003



Actuator 223E-024-150-002



Actuator CM230-F



Actuator CM24-F



E1

Application

- Actuator NM230A
- For switching between the heating and cooling modes of air terminal devices, suitable for Types VD, VDL, VDR and DUK

Parts and characteristics

- Supply voltage 100 – 240 V AC
- 1-wire control or 2-wire control (3-point)
- Mechanical stops for setting the discharge angle
- Direction of action can be reversed
- Release button to allow for manual operation

E2

Application

- Actuator NM24A
- For switching between the heating and cooling modes of air terminal devices, suitable for Types VD, VDL, VDR and DUK

Parts and characteristics

- Supply voltage 24 V AC/DC
- 1-wire control or 2-wire control (3-point)
- Mechanical stops for setting the discharge angle
- Direction of action can be reversed
- Release button to allow for manual operation

E4

air terminal devices; preferred solution for air terminal devices installed exposed

Application

- Actuator Type 223E-230-150-003
- For switching between the heating and cooling modes of air terminal devices, suitable for Types QSH, ISH and DUK
- Linear actuator for concealed installation inside

Parts and characteristics

- Supply voltage 230 V AC
- 2-wire control (3-point)
- Mechanical stops for setting the discharge angle

E5

air terminal devices; preferred solution for air terminal devices installed exposed

Application

- Actuator Type 223E-24-150-002
- For switching between the heating and cooling modes of air terminal devices, suitable for Types QSH, ISH and DUK
- Linear actuator for concealed installation inside

Parts and characteristics

- Supply voltage 24 V AC
- 2-wire control (3-point)
- Mechanical stops for setting the discharge angle

E7

- Supply voltage 230 V AC
- 1-wire control or 2-wire control (3-point)
- Mechanical stops for setting the discharge angle
- Positive lock connection with the nozzle shaft
- Gear release magnet

Application

- Actuator Type CM230-F
- For switching between the heating and cooling modes of air terminal devices, suitable for Type TJN

Parts and characteristics

E8

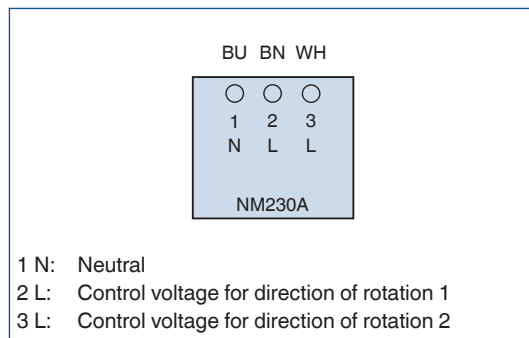
- Supply voltage 24 V AC/DC
- 1-wire control or 2-wire control (3-point)
- Mechanical stops for setting the discharge angle
- Positive lock connection with the nozzle shaft
- Gear release magnet

Application

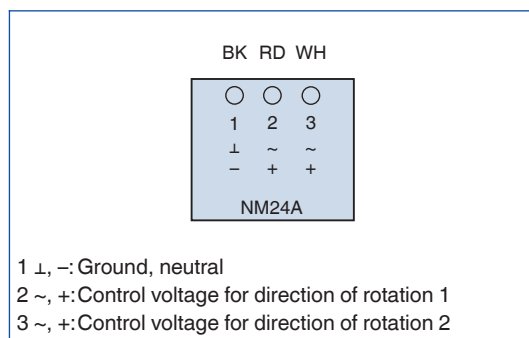
- Actuator Type CM24-F
- For switching between the heating and cooling modes of air terminal devices, suitable for Type TJN

Parts and characteristics

NM230A, connecting cable core identification

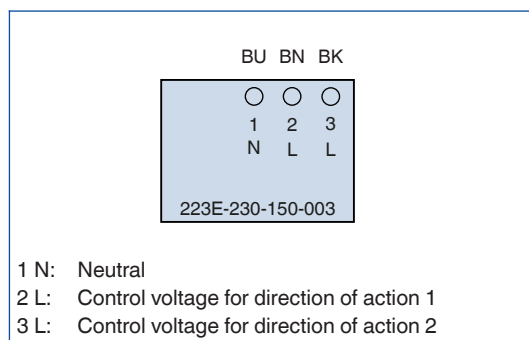


NM24A, connecting cable core identification

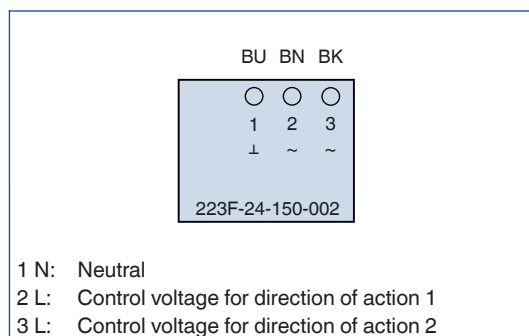


NM24A and NM24A-F

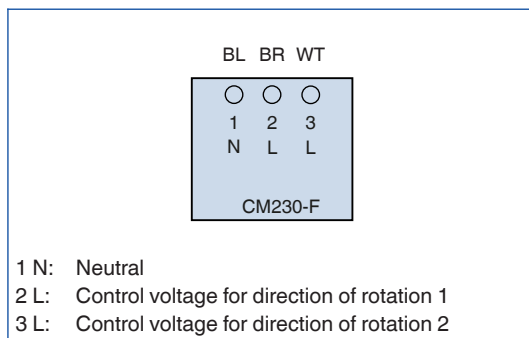
223E-230-150-003, connecting cable core identification



223F-24-150-002, connecting cable core identification



CM230-F connecting cable core identification



CM24-F, connecting cable core identification

