NABM...05 (S1) SERIES

VALVE AND VALVE ACTUATOR MODULATING CONTROL



NABM...05 (S1) SERIES

NABM series standard valve actuators are especially designed and produced for applications in the HVAC systems. Our wide range of standard valve actuators has been developed to operate and position ball valves of different sizes.

PRODUCT FEATURE

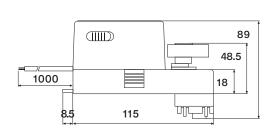
- Torque 5 Nm
- Valve size DN15(½") / DN20(¾") / DN25(1") / DN32(1¼")
- Power supply AC/DC 24V or AC 230V
- Control modulating DC 0(2)...10 V
- Shaft dimensions □ 9.0 mm (fixed)
- Selectable direction of rotation of reversing actuator
- Available in high neck and low neck
- Optional 1 adjustable SPDT auxiliary switch
- Adjustable angle of rotation
- Manual over-ride push button when required

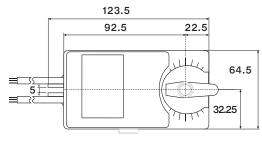
MODEL SELECTION TABLE

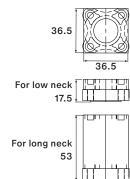
Low Neck

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NABM 1.2-05 HN	5 Nm	AC/DC 24 V ± 10%	6090 sec	-
NABM 1.2-05S1 HN	5 Nm	AC/DC 24 V ± 10%	6090 sec	1 x SPDT (Adjustable)
NABM 2.2-05 HN	5 Nm	AC 230 V ± 10%	6090 sec	-
NABM 2.2-05S1 HN	5 Nm	AC 230 V ± 10%	6090 sec	1 x SPDT (Adjustable)

DIMENSION (mm)







TECHNICAL SPECIFICATION

MODEL NUMBER NABM 1.2-05 (S1) NABM 2.2-05 (S1) TORQUE 5 Nm 5 Nm DAMPER SIZE DN15(½")/DN20(¾")/DN25(1") DN15(½")/DN20(¾")/DN25(1") SHAFT DIMENSION □ 9.0 mm (fixed)* □ 9.0 mm (fixed)* POWER SUPPLY AC/DC 24 V ± 10% AC 230 V ± 10% FREQUENCY 5060 Hz 5060 Hz CONTROL SIGNAL (INPUT) DC 010 V DC 0(2)10 V CONTROL SIGNAL (OUTPUT) DC 010 V DC 010 V POWER CONSUMPTION 3.0 W 3.0 W • OPERATING 3.0 W 3.0 W • END POSITION 2.0 W 2.0 W FOR WIRE SIZING 6.0 VA 6.0 VA ELECTRICAL CONNECTION 1 m Cable 1 m Cable AUXILIARY SWITCH RATING 2 (1.5) A, AC 250 V 2 (1.5) A, AC 250 V PROTECTION CLASS Class III ∅ 0.55 Kg LIFE CYCLE 60,000 Rotation 60,000 Rotation SOUND LEVEL 40 dB 40 dB IPPATECTION IPPS4 IPPS4 OPERATING TEMPERATURE -20°50° as per IEC			
DAMPER SIZE	MODEL NUMBER	NABM 1.2-05 (S1)	NABM 2.2-05 (S1)
### PANSIZE* 7.DN32(11/4") 7.DN32(11/4")	TORQUE	5 Nm	5 Nm
POWER SUPPLY AC/DC 24 V ± 10% AC 230 V ± 10% FREQUENCY 5060 Hz 5060 Hz CONTROL SIGNAL (INPUT) DC 0(2)10 V DC 0(2)10 V CONTROL SIGNAL (OUTPUT) DC 010 V DC 010 V POWER CONSUMPTION	DAMPER SIZE		
FREQUENCY 5060 Hz 5060 Hz	SHAFT DIMENSION	☐ 9.0 mm (fixed)*	□ 9.0 mm (fixed)*
CONTROL SIGNAL (INPUT) CONTROL SIGNAL (OUTPUT) DC 010 V DC 010 V DC 010 V POWER CONSUMPTION OPERATING DC 0(2)10 V DC 010 V DC 0	POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
CONTROL SIGNAL (OUTPUT) DC 010 V DC 010 V POWER CONSUMPTION 3.0 W 3.0 W • END POSITION 2.0 W 2.0 W FOR WIRE SIZING 6.0 VA 6.0 VA ELECTRICAL CONNECTION 1 m Cable 1 m Cable AUXILIARY SWITCH RATING 2 (1.5) A, AC 250 V 2 (1.5) A, AC 250 V PROTECTION CLASS Class III	FREQUENCY	5060 Hz	5060 Hz
POWER CONSUMPTION • OPERATING • OPERATING • END POSITION 2.0 W 2.0 W FOR WIRE SIZING 6.0 VA ELECTRICAL CONNECTION 1 m Cable 1 m Cable AUXILIARY SWITCH RATING 2 (1.5) A, AC 250 V Class II □ ANGLE OF ROTATION 90° (95° mechanical) WEIGHT 0.55 Kg 0.55 Kg LIFE CYCLE 60,000 Rotation 60,000 Rotation SOUND LEVEL 40 dB 1P54 OPERATING TEMPERATURE -20°50° as per IEC 721-3-3 NON-OPERATING TEMPERATURE -30°+60° C / IEC 721-3-2 AMBIENT HUMIDITY 5%95% rH non condensing / EN	CONTROL SIGNAL (INPUT)	DC 0(2)10 V	DC 0(2)10 V
• OPERATING • END POSITION 2.0 W 2.0 W 2.0 W FOR WIRE SIZING 6.0 VA 6.0 VA 6.0 VA ELECTRICAL CONNECTION 1 m Cable AUXILIARY SWITCH RATING 2 (1.5) A, AC 250 V 2 (1.5) A, AC 250 V PROTECTION CLASS Class III ○ Do (95° mechanical) WEIGHT 0.55 Kg 0.55 Kg 0.55 Kg 1 Class III ○	CONTROL SIGNAL (OUTPUT)	DC 010 V	DC 010 V
• END POSITION 2.0 W 2.0 W ELECTRICAL CONNECTION 1 m Cable 1 m Cable 1 m Cable AUXILIARY SWITCH RATING 2 (1.5) A, AC 250 V 2 (1.5) A, AC 250 V PROTECTION CLASS Class II ANGLE OF ROTATION 90° (95° mechanical) WEIGHT 0.55 Kg 0.55 Kg LIFE CYCLE 60,000 Rotation 60,000 Rotation SOUND LEVEL 40 dB 40 dB IP PROTECTION IP54 OPERATING TEMPERATURE -20°50° as per IEC 721-3-3 NON-OPERATING TEMPERATURE -30°+60° C / IEC 721-3-2 AMBIENT HUMIDITY 2.0 W 2.0 W 6.0 VA	POWER CONSUMPTION		
FOR WIRE SIZING 6.0 VA 6.0 VA 6.0 VA 6.0 VA ELECTRICAL CONNECTION 1 m Cable 1 m Cable 2 (1.5) A, AC 250 V 2 (1.5) A, AC 250 V Class II □ ANGLE OF ROTATION 90° (95° mechanical) 90° (95° mechanical) WEIGHT 0.55 Kg 0.55 Kg LIFE CYCLE 60,000 Rotation 60,000 Rotation 50UND LEVEL 40 dB 1P54 IP54 OPERATING TEMPERATURE -20°50° as per IEC 721-3-3 NON-OPERATING TEMPERATURE -30°+60° C / IEC 721-3-2 AMBIENT HUMIDITY 6.0 VA 6.	• OPERATING	3.0 W	3.0 W
ELECTRICAL CONNECTION 1 m Cable 1 m Cable AUXILIARY SWITCH RATING 2 (1.5) A, AC 250 V 2 (1.5) A, AC 250 V PROTECTION CLASS Class III ⊕ Class II □ ANGLE OF ROTATION 90° (95° mechanical) 90° (95° mechanical) WEIGHT 0.55 Kg 0.55 Kg LIFE CYCLE 60,000 Rotation 60,000 Rotation SOUND LEVEL 40 dB 40 dB IP PROTECTION IP54 IP54 OPERATING TEMPERATURE -20°50° as per IEC 721-3-3 -20°50° as per IEC 721-3-3 NON-OPERATING TEMPERATURE -30°+60° C / IEC 721-3-2 -30°+60° C / IEC 721-3-2 AMBIENT HUMIDITY 5%95% rH non condensing / EN 5%95% rH non condensing / EN	END POSITION	2.0 W	2.0 W
AUXILIARY SWITCH RATING 2 (1.5) A, AC 250 V 2 (1.5) A, AC 250 V PROTECTION CLASS Class III ⊕ Class II □ ANGLE OF ROTATION 90° (95° mechanical) 90° (95° mechanical) WEIGHT 0.55 Kg 0.55 Kg LIFE CYCLE 60,000 Rotation 60,000 Rotation SOUND LEVEL 40 dB 40 dB IP PROTECTION IP54 IP54 OPERATING TEMPERATURE -20°50° as per IEC 721-3-3 -20°50° as per IEC 721-3-3 NON-OPERATING TEMPERATURE -30°+60° C / IEC 721-3-2 -30°+60° C / IEC 721-3-2 AMBIENT HUMIDITY 5%95% rH non condensing / EN	FOR WIRE SIZING	6.0 VA	6.0 VA
PROTECTION CLASS Class III ⊕ Class II 回 ANGLE OF ROTATION 90° (95° mechanical) 90° (95° mechanical) WEIGHT 0.55 Kg 0.55 Kg LIFE CYCLE 60,000 Rotation 60,000 Rotation SOUND LEVEL 40 dB 40 dB IP PROTECTION IP54 IP54 OPERATING TEMPERATURE -20°50° as per IEC 721-3-3 -20°50° as per IEC 721-3-3 NON-OPERATING TEMPERATURE -30°+60° C / IEC 721-3-2 -30°+60° C / IEC 721-3-2 AMBIENT HUMIDITY 5%95% rH non condensing / EN	ELECTRICAL CONNECTION	1 m Cable	1 m Cable
ANGLE OF ROTATION 90° (95° mechanical) 90° (95° mechanical) WEIGHT 0.55 Kg 0.55 Kg LIFE CYCLE 60,000 Rotation 60,000 Rotation SOUND LEVEL 40 dB 40 dB IP PROTECTION IP54 IP54 OPERATING TEMPERATURE -20°50° as per IEC 721-3-3 -20°50° as per IEC 721-3-3 NON-OPERATING TEMPERATURE -30°+60° C / IEC 721-3-2 -30°+60° C / IEC 721-3-2 AMBIENT HUMIDITY 5%95% rH non condensing / EN 5%95% rH non condensing / EN	AUXILIARY SWITCH RATING	2 (1.5) A, AC 250 V	2 (1.5) A, AC 250 V
WEIGHT 0.55 Kg 0.55 Kg LIFE CYCLE 60,000 Rotation 60,000 Rotation SOUND LEVEL 40 dB 40 dB IP PROTECTION IP54 IP54 OPERATING TEMPERATURE -20°50° as per IEC 721-3-3 -20°50° as per IEC 721-3-3 NON-OPERATING TEMPERATURE -30°+60° C / IEC 721-3-2 -30°+60° C / IEC 721-3-2 AMBIENT HUMIDITY 5%95% rH non condensing / EN 5%95% rH non condensing / EN	PROTECTION CLASS	Class III 🐠	Class II 🗆
LIFE CYCLE 60,000 Rotation 60,000 Rotation SOUND LEVEL 40 dB 40 dB IP PROTECTION IP54 IP54 OPERATING TEMPERATURE -20°50° as per IEC 721-3-3 -20°50° as per IEC 721-3-3 NON-OPERATING TEMPERATURE -30°+60° C / IEC 721-3-2 -30°+60° C / IEC 721-3-2 AMBIENT HUMIDITY 5%95% rH non condensing / EN 5%95% rH non condensing / EN	ANGLE OF ROTATION	90° (95° mechanical)	90° (95° mechanical)
SOUND LEVEL 40 dB 40 dB IP PROTECTION IP54 IP54 OPERATING TEMPERATURE -20°50° as per IEC 721-3-3 -20°50° as per IEC 721-3-3 NON-OPERATING TEMPERATURE -30°+60° C / IEC 721-3-2 -30°+60° C / IEC 721-3-2 AMBIENT HUMIDITY 5%95% rH non condensing / EN 5%95% rH non condensing / EN	WEIGHT	0.55 Kg	0.55 Kg
IP PROTECTION IP54 IP54 OPERATING TEMPERATURE -20°50° as per IEC 721-3-3 -20°50° as per IEC 721-3-3 NON-OPERATING TEMPERATURE -30°+60° C / IEC 721-3-2 -30°+60° C / IEC 721-3-2 AMBIENT HUMIDITY 5%95% rH non condensing / EN 5%95% rH non condensing / EN	LIFE CYCLE	60,000 Rotation	60,000 Rotation
OPERATING TEMPERATURE -20°50° as per IEC 721-3-3 -20°50° as per IEC 721-3-3 NON-OPERATING TEMPERATURE -30°+60° C / IEC 721-3-2 -30°+60° C / IEC 721-3-2 AMBIENT HUMIDITY 5%95% rH non condensing / EN 5%95% rH non condensing / EN	SOUND LEVEL	40 dB	40 dB
NON-OPERATING TEMPERATURE -30°+60° C / IEC 721-3-2 -30°+60° C / IEC 721-3-2 AMBIENT HUMIDITY 5%95% rH non condensing / EN 5%95% rH non condensing / EN	IP PROTECTION	IP54	IP54
AMBIENT HUMIDITY 5%95% rH non condensing / 5%95% rH non condensing / EN	OPERATING TEMPERATURE	-20°50° as per IEC 721-3-3	-20°50° as per IEC 721-3-3
AMBIENT HOMIDITY EN EN	NON-OPERATING TEMPERATURE	-30°+60° C / IEC 721-3-2	-30°+60° C / IEC 721-3-2
	AMBIENT HUMIDITY		
MAINTENANCE Maintenance Free Maintenance Free	MAINTENANCE	Maintenance Free	Maintenance Free
MODE OF OPERATIONType I / EN 60730-1Type I / EN 60730-1	MODE OF OPERATION	Type I / EN 60730-1	Type I / EN 60730-1
EMC CE & ISO 9000 EN / EEC CE & ISO 9000 EN / EEC	EMC	CE & ISO 9000 EN / EEC	CE & ISO 9000 EN / EEC

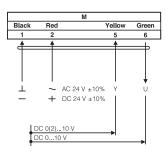
^{*}Note that shaft dimension has a tolerance offset of \pm 0.2mm.

NABM...05 (S1) SERIES

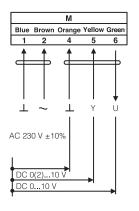
VALVE AND VALVE ACTUATOR MODULATING CONTROL

WIRING DIAGRAM NABM...05 (S1) POWER SUPPLY AC/DC 24V OR AC 230V

AC/DC 24V



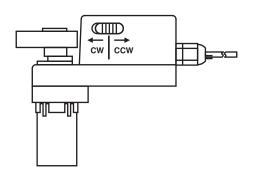
AC 230V



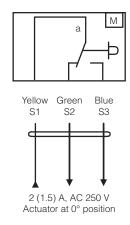
DIRECTION OF ROTATION NABM...05 (S1)

Default factory setting: CW.

Direction of rotation can be change by toggling between CW/CCW switch on the actuator's housing.



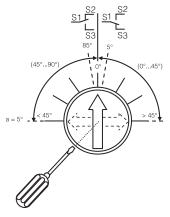
WIRING DIAGRAM NABM...05 (S1) AUXILIARY SWITCH



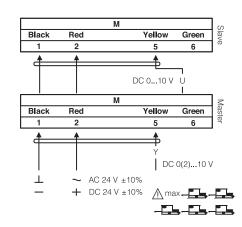
AUXILIARY SWITCH NABM...05 (S1)

Switch a factory-set at 5°.

The auxiliary switch can be optimally adjusted between 0°...90°.



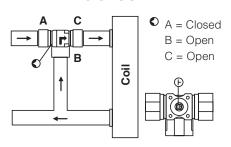
WIRING DIAGRAM NABM...05 (S1) PARALLEL CONNECTION



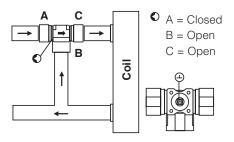
REMARK

During parallel operation, the output signal (terminal 6, DC 0...10 V) of the master actuator must be connected to terminal 5 of the next slave actuator

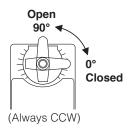
MIXING CLOSED



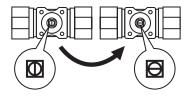
MIXING OPEN



ACTUATOR POSITION

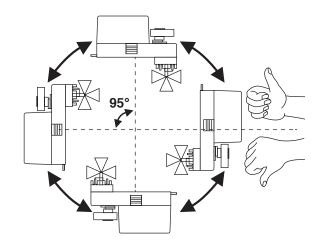






3-way Closed 3-way Open





IMPORTANT REMARK

For special requirement, consult your local Nenutec's representative.



This actuator includes electrical and electronic components and may not be disposed as household garbage. Please consider the local valid legislation.



AC / DC 24 V: AC 230 V:

Connect via safety isolating transformer.

To isolate from the main power supply, the system must incorporate a device which disconnects the phase conductor (with at least a 3mm contact gap.)

The performance specifications are nominal and conform to acceptable industry standards. NENUTEC shall not be liable for damages resulting from misapplication or misuse of its