



**K282X022**

**Description**

K282X022 is an actuator that works both as motor and regulator, to control the delivery temperature with three way mixing valve.  
The actuator can be used on three way valves: it controls fixed delivery temperature both heating and cooling, in "stand-alone" functioning;

**Versions and product codes**

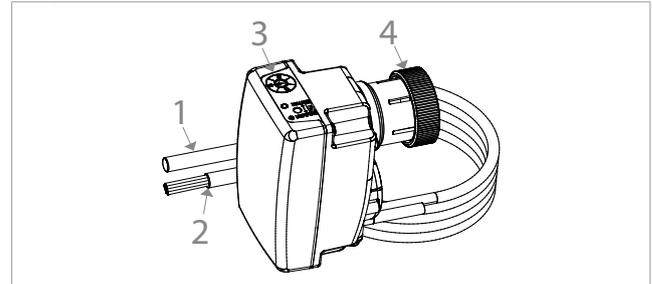
Product code	Supply	Type	Valve connection
K282X022	24 Vac	3-point floating with integrated regulator	M30 x 1,5 mm

**Technical data**

- Type of actuator: 3-point floating
- Power supply: 24 V 50/60 Hz
- Type of command: automatic only
- Propulsion force: 120 N ±20 %
- Maximum stroke: 6,5 mm
- Opening time at maximum speed: 85 sec
- Electricity absorption: 5 VA
- Protection class: IP40
- Storage temperature range: -34÷55 °C with R.H non-condensing
- Operating ambient temperature range: 0÷55 °C with R.H non-condensing
- Electric cable length: 1,5 m (7 x 0,14 mm<sup>2</sup>)
- Ring nut for fixing to valve body: M30x1,5 mm, in brass
- Delivery temperature probe:
  - NTC sensor 30 kΩ at 25 °C,
  - sensor bulb 47 mm long, external Ø 6 mm
  - 2x0,22 mm<sup>2</sup> cable, 1,5 m long, external Ø = 3 mm,
- Black external sheath, self-extinguishing
- Dual color LED (green/red), function status indicator
- Color: white/grey

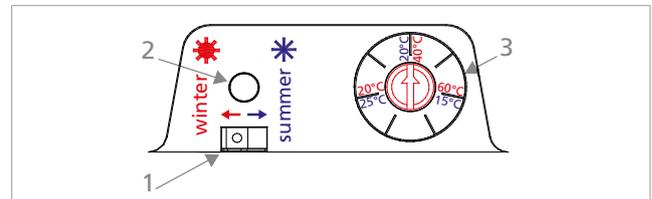
**Main features**

- M30x1,5 mm brass ring fixing to valve body.
- Immersion probe for delivery water temperature with bulb, length 47 mm and Ø 6 mm, connected to the actuator body.
- Proportional-integral (PI) digital electronic regulator inserted in the actuator body.
- Motorized manual control (open ring) of the valve by selecting the opening position (from 0% to 100%).
- Stand-alone functioning: manual selection by summer/winter mode selector.
- Stand-alone functioning: manual selection of the working set by rotating potentiometer with double adjustment scale. Winter mode from 20 °C to 60 °C; summer mode from 15 °C to 25 °C.



Legend	
1	Delivery temperature probe
2	Multipole cable for electric connections
3	Frontal side and frontal panel of the actuator
4	Ring fixing to valve body

**Control elements**



Legend	
1	SUMMER/WINTER mode selector
2	RED/GREEN signalling led
3	Rotating potentiometer with double adjustment scale

The summer/winter mode selector and the rotating potentiometer with double adjustment scale to select the fixed set for the delivery temperature control are on the frontal side of K282 actuator.

Once summer/winter switching has been made through selector, position the rotating potentiometer at the desired set according to the appropriate graduated scale: the scale working during the winter is indicated with red numbers (range from 20 °C to 60 °C ascending clockwise); the scale working during the summer is indicated with blue numbers (range from 15 °C to 25 °C ascending anticlockwise).

**Warning.**  
In stand-alone functioning of K282 actuator, after summer/winter switching through selector, position the rotating potentiometer at the desired set according to the appropriate graduated scale.

**Signalling elements**

The led on the frontal side of actuator provides status information.

- Fixed red: indicates stand-alone functioning in WINTER mode.
- Fixed green: indicates stand-alone functioning in SUMMER mode.

**Electrical connection**

Conductor colour	Function
BROWN (marrone)	24 V~ supply connection
GRAY (grigio)	24 V~ supply connection

When 24 V supply is activated to K282 actuator, the integrated electronic regulator starts a cycle of adjustment in which the stem of the actuator is led to complete by-pass position (the whole stem has gone back in the actuator body).

**Connection to bus**

**Warning.**  
The connection to the Bus conductor is compatible only with the Giacoklima thermoregulation (KPM20 regulator and accessories)

**Warning.**  
Before connecting K282 actuator, make sure that network tension IS NOT CONNECTED and that it corresponds to the one written on the back of the device (24 V~). The device must be installed by qualified staff only.

Conductor color	Function
YELLOW (giallo)	RT+ Signal (RS485 standard)
GREEN (verde)	RT- Signal (RS485 standard)
WHITE (bianco)	Com Common (signal + supply)
BLUE (blu)	V SELV supply

**Addressing**

Legend	
1	Jumper for manual control (open ring) of the actuator
2	8 way microswitch for actuator addressing

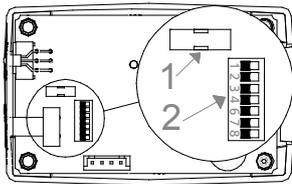
The addressing through microswitch with several ways is not relevant when K282 actuator is used as single device (stand-alone configuration): it is not necessary to make any configuration in this application.

All microswitch sliders are positioned on "OFF" (side with 1-8 numbers) on delivery. K282 actuator uses selectors from 1 to 6 to assign an address between 0 and 31: check the address to assign on the design documentation of the system.

Addr.	Position of microswitch ways					
	1	2	3	4	5	6
0	OFF	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF
17	ON	OFF	OFF	OFF	ON	OFF
18	OFF	ON	OFF	OFF	ON	OFF
19	ON	ON	OFF	OFF	ON	OFF
20	OFF	OFF	ON	OFF	ON	OFF
21	ON	OFF	ON	OFF	ON	OFF
22	OFF	ON	ON	OFF	ON	OFF
23	ON	ON	ON	OFF	ON	OFF
24	OFF	OFF	OFF	ON	ON	OFF
25	ON	OFF	OFF	ON	ON	OFF
26	OFF	ON	OFF	ON	ON	OFF
27	ON	ON	OFF	ON	ON	OFF
28	OFF	OFF	ON	ON	ON	OFF
29	ON	OFF	ON	ON	ON	OFF
30	OFF	ON	ON	ON	ON	OFF
31	ON	ON	ON	ON	ON	OFF

**Warning.**  
Make sure that the assigned address is correct: it is not possible to have two devices with the same address in the same system.

**Motorized manual control of the valve**



Legend

1	Jumper for manual control (open ring) of the actuator
2	8 way microswitch for actuator addressing

The manual positioning (open ring) of the mixing valve is useful when starting a system or in order to check the functioning. This operation can be made with K282 actuator by extracting the apposite jumper on the board, after removing the upper shell: the rotating potentiometer position represents the required opening for the mixing valve in this manual state of functioning. The opening of the direct way from the boiler of the valve increases by rotating the potentiometer clockwise when Giacomini mixing valves are used. The stem of the actuator is completely retracted (0%) and the mixing valve closes the direct way completely (by-pass position), when the rotating potentiometer is completely rotated anticlockwise; the stem of the actuator is protruding (100%) and the mixing valve opens the direct way completely, when potentiometer is completely rotated clockwise.

For the manual positioning:

- 1) Remove 24 V~ supply to K282 actuator.
- 2) Loosen the actuator ring fixing to valve body and unscrew the actuator completely.
- 3) Remove the upper shell of the actuator by removing the 4 fixing screws.
- 4) Extract the jumper placed on the electronic board as shown in the picture.
- 5) Position the upper shell of the actuator again through the 4 fixing screws.
- 6) Assemble K282X022 actuator on the valve body again.
- 7) Activate 24 V~ supply. The actuator resets completely until it closes the direct way completely (0%). The actuator positions at the indicated opening through the rotating potentiometer.

When the functioning test is finished, follow the instructions and insert the jumper placed on the electronic board.



**Warning.**  
Manual positioning tests of the valve must be carried out once the jumper on the electronic board has been extracted and after assembling again and fixing with the 4 apposite screws the upper shell of the actuator. Do not activate 24 V~ supply before assembling the upper shell again. The manual positioning of the valve must be carried out by qualified staff only.



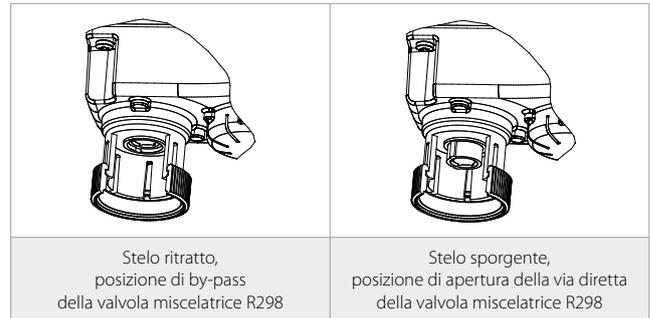
**Warning.**  
The reading of immersion delivery temperature probe is not taken into account during the manual positioning test of the valve. Make sure that the delivery temperature is not over or under the safety limits according to the kind of system. The manual positioning of the valve must be carried out by qualified staff only.

**Installation**

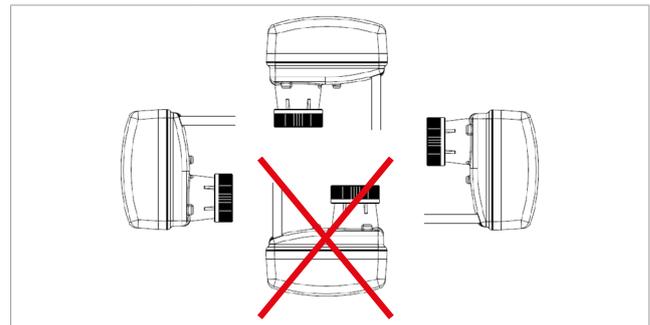
- 1) Unscrew the handwheel protecting body before assembling and adjust the shutter manually on R298 or R298N valve.
- 2) Fix K282X022 actuator through its apposite brass fixing ring: the ring must be screwed to the valve body up to end stroke in order to ensure max. stroke to the shutter.
- 3) Insert the immersion probe in a R227 pit, downstream of the secondary circulator, and block by means of the fixing screw.

**Positions of the linear stem of the actuator**

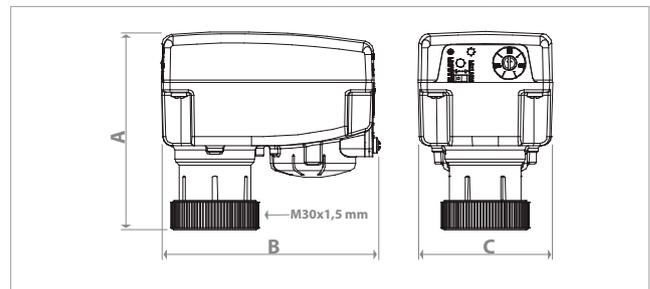
The action of the digital regulator integrated in K282X022 actuator associates the stem completely retracted to the position of complete closure (0%) as shown in the picture; the stem completely protruding from the actuator body is associated to the position of complete opening (100%).



**Correct installation positions of K282 actuator**



**Dimensions**



Codice	A [mm]	B [mm]	C [mm]
K282X022	70	78	48

**Reference standards**

- CE marked
- EMC 2004/108/CE
- Low voltage directive 2006/95/CE

**(IT) AVVERTENZE PER IL CORRETTO SMALTIMENTO DEL PRODOTTO**

Questo prodotto rientra nel campo di applicazione della Direttiva 2012/19/UE riguardante la gestione dei rifiuti di apparecchiature elettriche ed elettroniche (RAEE). L'apparecchio non deve essere eliminato con gli scarti domestici in quanto composto da diversi materiali che possono essere riciclati presso le strutture adeguate. Informarsi attraverso l'autorità comunale per quanto riguarda l'ubicazione delle piattaforme ecologiche atte a ricevere il prodotto per lo smaltimento ed il suo successivo corretto riciclaggio. Si ricorda, inoltre, che a fronte di acquisto di apparecchio equivalente, il distributore è tenuto al ritiro gratuito del prodotto da smaltire. Il prodotto non è potenzialmente pericoloso per la salute umana e l'ambiente, ma se abbandonato nell'ambiente impatta negativamente sull'ecosistema. Leggere attentamente le istruzioni prima di utilizzare l'apparecchio per la prima volta. Si raccomanda di non usare assolutamente il prodotto per un uso diverso da quello a cui è stato destinato, essendoci pericolo di shock elettrico se usato impropriamente.



Il simbolo del bidone barrato, presente sull'etichetta posta sull'apparecchio, indica la rispondenza di tale prodotto alla normativa relativa ai rifiuti di apparecchiature elettriche ed elettroniche.

L'abbandono nell'ambiente dell'apparecchiatura o lo smaltimento abusivo della stessa sono puniti dalla legge.

**(EN) IMPORTANT INFORMATION FOR CORRECT DISPOSAL OF THE PRODUCT**

This product falls into the scope of the Directive 2012/19/EU concerning the management of Waste Electrical and Electronic Equipment (WEEE). This product shall not be disposed in to the domestic waste as it is made of different materials that have to be recycled at the appropriate facilities. Inquire through the municipal authority regarding the location of the ecological platforms to receive the product for disposal and its subsequent correct recycling. Furthermore, upon purchase of an equivalent appliance, the distributor is obliged to collect the product for disposal free of charge. The product is not potentially dangerous for human health and the environment, but if abandoned in the environment can have negative impact on the environment. Read carefully the instructions before using the product for the first time. It is recommended that you do not use the product for any purpose rather than those for which it was intended, there being a danger of electric shock if used improperly.



The crossed-out wheeled dustbin symbol, on the label on the product, indicates the compliance of this product with the regulations regarding Waste Electrical and Electronic Equipment.

Abandonment in the environment or illegal disposal of the product is punishable by law.

**(FR) AVERTISSEMENTS POUR L'ÉLIMINATION CORRECTE DU PRODUIT**

Ce produit entre dans le champ d'application de la directive 2012/19 / UE relative à la gestion des déchets équipements électriques et électroniques (DEEE). L'appareil ne doit pas être jeté avec les ordures ménagères car il est fait de différents matériaux pouvant être recyclés dans des centres appropriés. Renseignez-vous auprès de l'autorité locale concernant l'emplacement des plates-formes écologiques appropriées pour recevoir le produit pour sa destruction et son recyclage correct ultérieur. Il convient également de rappeler que, en cas d'achat d'un appareil équivalent, le distributeur est tenu de collecter le produit à détruire. Le produit n'est potentiellement pas dangereux pour la santé humaine et l'environnement, mais s'il est abandonné dans l'environnement, il a un impact négatif sur l'écosystème. Lisez attentivement les instructions avant d'utiliser l'appareil pour la première fois. Il est interdit d'utiliser le produit pour un usage différent de celui auquel il était destiné, il y a risque de choc électrique si utilisé incorrectement.



Le symbole de la poubelle barrée sur l'étiquette de l'appareil indique sa correspondance produit à la législation relative aux déchets d'équipements électriques et électroniques.

L'abandon dans l'environnement de l'équipement ou l'élimination illégale de l'équipement est punissable par la loi.

**(DE) WICHTIGE HINWEISE ZUR KORREKTEN ENTSORGUNG DES PRODUKTS**

Dieses Produkt fällt in den Anwendungsbereich der Richtlinie 2012/19/EU über die Entsorgung von Elektro- und Elektronik - Altgeräten (WEEE). Dieses Produkt darf nicht in den Hausmüll entsorgt werden, da es aus verschiedenen Materialien besteht, die in entsprechenden Einrichtungen recycelt werden müssen. Erkundigen Sie sich bei Ihrer Gemeinde nach dem Standort des nächsten Recyclinghofs bzw. der nächsten Annahmestelle, um das Produkt dem Recycling zuzuführen bzw. fachgerecht zu entsorgen. Darüber hinaus ist der Händler verpflichtet, das Produkt beim Kauf eines gleichwertigen Geräts kostenlos zu entsorgen. Das Produkt ist für die menschliche Gesundheit und die Umwelt potenziell nicht gefährlich. Diese können sich aber, falls sie in der Umwelt gelangen, negativ auf diese auswirken. Lesen Sie daher vor dem ersten Gebrauch des Produkts die Inbetriebnahme-, Bedienungs- und Entsorgungsanweisungen sorgfältig durch. Es wird empfohlen, dass Sie das Produkt nur für den vorgesehenen Zweck verwenden. Bei unsachgemäßer Verwendung bzw. Fehlgebrauch besteht die Gefahr eines elektrischen Schlags.



Das Symbol der durchgestrichenen Mülltonne auf dem Etikett des Produkts weist auf die Konformität dieses Produkts zu den Vorschriften für Elektro- und Elektronik-Altgeräte hin. Das Ablagern in der Umwelt oder die illegale Entsorgung des Produkts ist strafbar.

**Additional information**

For more information, go to [www.giacomini.com](http://www.giacomini.com) or contact our technical assistance service: ☎ +39 0322 923372 📠 +39 0322 923255 ✉ [consulenza.prodotti@giacomini.com](mailto:consulenza.prodotti@giacomini.com)

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