

ACVATIX™

## PTC conductive heating element

ASR70



**Accessory to extend the application range on modulating refrigerant valves, MVS661.. and MVL661..**

- Operating voltage AC / DC 24 V
- Direct mounting on refrigerant valve, no adjustments
- Permits refrigerant temperature below 0° C at the valve inlet

## Use

The PTC conductive heating element ASR70 is used as an accessory on modulating refrigerant valves:

- MVS661...
- MVL661...

ASR70 extends the application range of valves for refrigerant temperatures at the valve inlet below 0° C. Typical applications include pump systems with ammonia or CO<sub>2</sub> refrigerant machines.

The heating element must be under power as long as the refrigerant temperature at the valve inlet is below 0° C and is below the valve's ambient temperature.

The heating element can be switched off when a plant is switched off and the ambient temperatures are below 0° C or when operating refrigerant temperatures above 0° C at the valve inlet.

PTC conductive heating elements are not intended for use in potentially explosive atmospheres.

PTC conductive heating elements in potentially explosive atmospheres are not certified nor approved for use as per ATEX regulations.

## Functions

Dynamic heating element to heat solids in very small areas.

## Type summary

Type	Stock number	Operating voltage	Power consumption <sup>1)</sup>	Switch-on current max.	IP	Cable
ASR70	S55845-Z241	AC / DC 24 V	30...45 W	5 A	54	Fixed connecting cable 1.4 m (2 x 0.75 mm <sup>2</sup> )

<sup>1)</sup> Actual power consumption is based on the temperature of the U-bracket, see Technical data, page 4

## Delivery

S55845-Z241: PTC conductive heating element ASR70 with two-sided conductive tape and clip are included in the package.

## Order example

Type	Stock number	Designation	Number
ASR70	S55845-Z241	PTC conductive heating element	1

## Equipment combinations

Ventiltyp	
MVS661.25-016N	Modulating refrigerant valve with magnetic actuator, PN 63
MVS661.25-0.4N	
MVS661.25-1.0N	
MVS661.25-2.5N	
MVS661.25-6.3N	
MVL661.15-0.4	Modulating refrigerant valve with magnetic actuator, PS45
MVL661.15-1.0	
MVL661.20-2.5	
MVL661.25-6.3	
MVL661.32-10	
MVL661.32-12	


## Product documentation

Title	Content	Document ID
Modulating refrigerant valves with magnetic actuator MVS661..N	Data sheet: Product description MVS661..N	CE2N4717
Modulating refrigerant valves with magnetic actuator MVL661..	Data sheet: Product description MVL661..	CE2N4714
Mounting instructions ASR70	Mounting instructions: Mounting and installation instructions	A6V11858868 (A5W00049817)

Documents, including associated documents such as environmental declarations, CE declarations, etc., can be downloaded at: <http://siemens.com/bt/download>

## Notes

### Safety

	<p><b>⚠ CAUTION</b></p>
	<p><b>National safety regulations</b></p> <p>Failure to comply with national safety regulations may result in personal injury and property damage.</p> <ul style="list-style-type: none"> <li>Observe national provisions and comply with the appropriate safety regulations.</li> </ul>

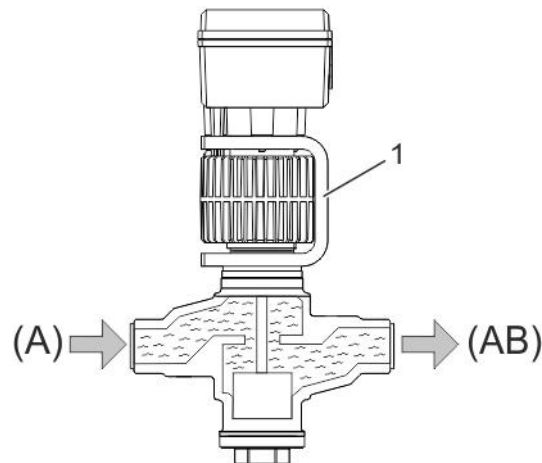
### Engineering

The PTC conductive heating element ASR70 extends the valve application range.

Temperatures at refrigerant inlet (A) for MVL661.. and MVS661..:

Without ASR70: 1 ... 120 °C <sup>1)</sup>

With ASR70: -40 ... 0 °C <sup>2)</sup>



- 1 U-bracket
- (A) Refrigerant inlet
- (AB) Refrigerant outlet

<sup>1)</sup> Temperatures above 120 °C are permitted for short periods. See Technical data in the data sheet for MVL661.. and MVS661...

<sup>2)</sup> Lower temperatures upon request

## Transformer

The selection of a transformer must consider both the power consumption during operation as well as the switch-on current when switching on the PTC conductive heating element. Check overload capacity of the transformer when selecting.

## Installation

Always use the weather shield when operating outdoors, housing protection IP54.

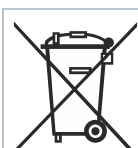
The PTC conductive heating element is attached to the refrigerant valve on a U-bracket and secured with a clip.

See Mounting instructions A6V11858868.

## Maintenance

The PTC conductive heating element ASR70 is maintenance free.

## Disposal



The device is considered an electronic device for disposal in terms of the European Directive and may not be disposed of as domestic waste

- Use only designated channels for disposing the devices.
- Comply with all local and currently applicable laws and regulations.

## Warranty

Comply with all technical data relating to the application.

**Siemens denies any and all warranty claims arising from a failure to comply.**

## Technical data

Power supply	ASR70
Operating voltage	AC 24 V -10% / +20 % DC 24 V -10% / +20 %
Frequency	50 / 60 Hz
Switch-on current	Max. 5 A
Current consumption	1.9 A (at the lowest U-bracket temperatures) <sup>1)</sup> 1.2 A (at the highest U-bracket temperatures) <sup>1)</sup>
Power consumption	45 W (at the lowest U-bracket temperatures) <sup>1)</sup> 30 W (at the highest U-bracket temperatures) <sup>1)</sup>
External fusing of mains (EU)	Fuse slow 6 A...10 A or circuit breaker max. 13 A, tripping characteristic B, C, D to EN 60898. Power supply with current limitation of max. 10 A

Connecting cable	
Cable inputs	Fixed connecting cable: 1,4 m Number of wires: 2 x 0.75 mm <sup>2</sup>

Protection class	
Degree of protection of housing	IP 54 to EN 60529 <sup>2)</sup>

Standards	
Product standard	EN60335-1
Electromagnetic compatibility (field of use)	For residential, commercial, and industrial environments
Climatic conditions	Class 3K6 to EN 60721-3-3

<b>Standards</b>	
EU conformity (CE)	A5W00085567 <sup>3)</sup>

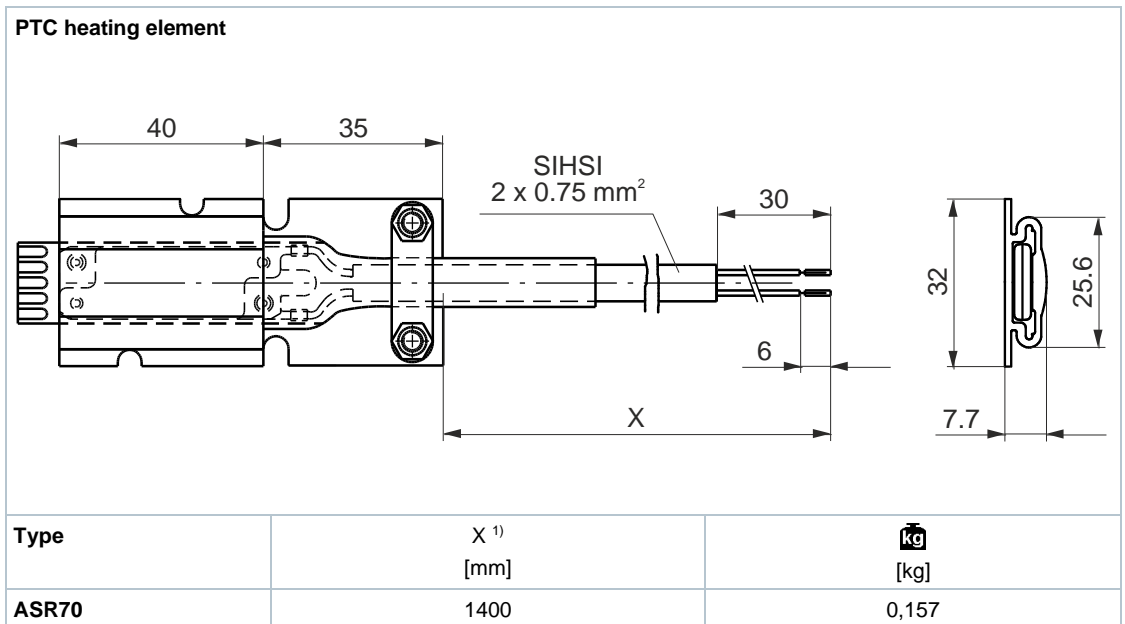
<b>Environmental compatibility</b>	
	Product environmental declarations A5W00085692 <sup>3)</sup> contain data on environmentally compatible product design and assessments (RoHS compliance, material composition, packaging, environmental benefit, and disposal).

<b>Dimensions / Weights</b>	
	See "Dimensions"

<b>Accessories</b>	
Clip	Included in delivery

- 1) The U-bracket temperature is primarily based on the ambient and refrigerant temperatures on the valve, see section Engineering, page 3
- 2) Ensure sufficient protection against the elements when operating outdoors.
- 3) The documents can be downloaded via the Internet address, see section 'Product documentation'.

## Dimensions



<sup>1)</sup> Device has a fixed connecting cable, X = Minimum length

Dimensions in mm

## Revision numbers

Type	Valid as of rev. number
ASR70	..A

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