




markilux Technical Information

The installation of vertical blinds and awnings in line with EN 13561

markilux vertical blinds and awnings intended for outdoor use meet the requirements of European Standard EN 13561 for awnings and in so doing the current technical regulations with respect to their construction and fixing brackets. In accordance with this standard markilux blinds and awnings have been CE certified and fulfil the requirements of wind resistance class 2 or 3 (wind resistance class 3 is only valid for the markilux 760/860 and in part for the markilux 869, v. the table of dimensions on the page „Dimensions and specifications“). In the case of the largest sizes and those outside our specification we withhold judgement with regard to the wind resistance class. The wind resistance class describes the wind speed up to which an awning may be used. If used at wind speeds greater than those permitted under the wind resistance class, in rain or in snow dangerous situations may arise, so in these conditions the awning should not be extended. The wind resistance classes are described in the overview shown below.



markilux
Schmitz-Werke GmbH + Co. KG
Hansestrasse 87
48282 Emsdetten, Germany

DIN EN 13561
Vertical blinds and awnings for exterior applications

wind resistance class 2
markilux 710/810, 720/820, 725/825, 750/850, 730/830,
740/840, 745/845, 893, 869 (depending on the size)

wind resistance class 3
markilux 760/860, 869 (depending on the size)

Definition of wind resistance classes

wind resistance class 0



wind resistance class 0 corresponds either to a non-required or non-measured performance or to a product that does not fulfill the requirements of class 1.

The awning may not be used if there is any wind.

wind resistance class 1



The awning may remain extended up to a maximum of Beaufort force 4.

Definition according to Beaufort: **moderate breeze**
The wind moves twigs and smaller branches, lifts dust and loose paper

wind speed
20-27 km/h = 12-16 mph
= 5.5-7.4 m/s

wind resistance class 2



The awning may remain extended up to a maximum of Beaufort force 5.

Definition acc. to Beaufort: **fresh breeze**
Small trees begin to sway, white crests form on lakes

wind speed
28-37 km/h = 17-23 mph
= 7.5-10.4 m/s

wind resistance class 3



The awning may remain extended up to a maximum of Beaufort force 6.

Definition acc. to Beaufort: **strong breeze**
Large boughs move, umbrellas are difficult to keep under control, telephone wires „whistle“ in the wind

wind speed
38-48 km/h = 24-30 mph
= 10.5-13.4 m/s

The wind resistance class is only fulfilled if the blind or awning is fitted correctly.

Installation may only be carried out by qualified, professional dealers with appropriate fitting experience. The installation instructions supplied with the awning and especially the section referring to safety regulations must be read – without fail – and observed before installation of the awning.

The delivery does not include fixing materials such as bolts and rawplugs. Because different countries and regions have the most widely varying of substrates, which, because of their sheer volume cannot be detailed here, it would make sense for you to get advice from your local installation specialist so that a suitable choice of fixing materials can be made.

Our customer support both oral and written is intended to provide you with information about the best possible use of our products and services. This, however, does not release you from your obligation to convince yourself – through your own conscientious analysis – of the suitability of our

products and services for the application you intend to use them for. In particular this goes for the checking of the general composition and especially the load bearing capability of the substrate to which the blind or awning is to be fitted.

Important: the permitted fixture load must always be greater than that shown in the table! By taking suitable measures to seal around the fixing holes you should ensure that even in the long term the façade of the building cannot suffer from the ingress of damp (rain water). On the coast and in industrial areas stainless steel fixing materials must be used. Please also take note of the „Technical Advice Guidelines with Regard to the Sale and Fixture Folding-arm Awnings“ published by the IRTS (BKTex) Association.

Alterations such as additions or modifications, which diverge from our installation instructions, are not permitted.

Bespoke constructions require our prior and explicit approval in writing!

The installation of conservatory awnings in line with EN 13561

markilux conservatory awnings intended for outdoor use meet the requirements of European Standard EN 13561 for awnings and in so doing the current technical regulations with respect to their construction and fixing brackets.

markilux awnings are CE certified according to this European standard and meet the requirements of wind resistance class 2 or 3 (wind resistance class 2 applies only to the markilux 8500). In the case of the largest sizes and those outside our specification we withhold judgement with regard to the wind resistance class.

The wind resistance class describes the wind speed at which an awning may be used. If used at wind speeds greater than those permitted under the wind resistance class, in rain or in snow dangerous situations may arise, so in these conditions the awning should not be extended. The wind resistance classes are described in the overview shown below.



markilux
Schmitz-Werke GmbH + Co. KG
Hansestrasse 87
48282 Emsdetten, Germany

DIN EN 13561
Conservatory awnings for exterior applications

wind resistance class 2
markilux 8850

wind resistance class 3
markilux 780/880, 8800

Definition of wind resistance classes

wind resistance class 0



wind resistance class 0 corresponds either to a non-required or non-measured performance or to a product that does not fulfill the requirements of class 1.

The awning may not be used if there is any wind.

wind resistance class 1



The awning may remain extended up to a maximum of Beaufort force 4.
Definition according to Beaufort: **moderate breeze**
The wind moves twigs and smaller branches, lifts dust and loose paper

wind speed
20-27 km/h = 12-16 mph = 5.5-7.4 m/s

wind resistance class 2



The awning may remain extended up to a maximum of Beaufort force 5.
Definition acc. to Beaufort: **fresh breeze**
Small trees begin to sway, white crests form on lakes

wind speed
28-37 km/h = 17-23 mph = 7.5-10.4 m/s

wind resistance class 3



The awning may remain extended up to a maximum of Beaufort force 6.
Definition acc. to Beaufort: **strong breeze**
Large boughs move, umbrellas are difficult to keep under control, telephone wires „whistle“ in the wind

wind speed
38-48 km/h = 24-30 mph = 10.5-13.4 m/s

The wind resistance class is only fulfilled if the blind or awning is fitted correctly.

Installation may only be carried out by qualified, professional dealers with appropriate fitting experience. The installation instructions supplied with the awning and especially the section referring to safety regulations must be read – without fail – and observed before installation of the awning.

The delivery does not include fixing materials such as bolts and rawplugs. Because different countries and regions have the most widely varying of substrates, which, because of their sheer volume cannot be detailed here, it would make sense for you to get advice from your local installation specialist so that a suitable choice of fixing materials can be made.

Our customer support both oral and written is intended to provide you with information about the best possible use of our products and services. This, however, does not release you from your obligation to convince yourself – through your own conscientious analysis – of the suitability of our

products and services for the application you intend to use them for. In particular this goes for the checking of the general composition and especially the load bearing capability of the substrate to which the awning is to be fitted.

Important: by taking suitable measures to seal around the fixing holes you should ensure that even in the long term the façade of the building cannot suffer from the ingress of damp (rain water). On the coast and in industrial areas stainless steel fixing materials must be used.

Alterations such as additions or modifications, which diverge from our installation instructions, are not permitted. Bespoke constructions require our prior and explicit approval in writing!

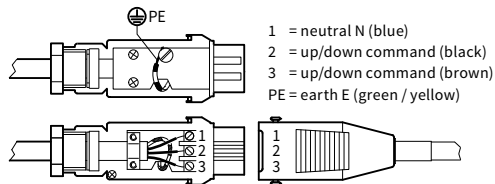
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Motors for vertical blinds & awnings

Motor drives, hard-wired

710	810	720	820	725	825	750	850	760	860	869 / 869 traefix	730	830	620 traefix	660 traefix	740	840	745	845	893	operation side	power output current (50 Hz, 230 V)	Nm / rpm
•	•	•	•	•	•	•	•													R/L	P = 120 W I = 0.50 A	10/17
••	••	••	••	••	••	••	••				•	•			•	•	•	•		R/L	P = 140 W I = 0.65 A	15/17
											• ¹ ••	• ¹ ••			••	••	••	••		R/L	P = 170 W I = 0.80 A	25/17
								•	•				•	•						R/L	P = 125 W I = 0.53 A	15/17
								••	••	•										R/L	P = 160 W I = 0.75 A	20/17
																			•	R/L	P = 240 W I = 1.10 A	35/17

4 × 1.5 mm²



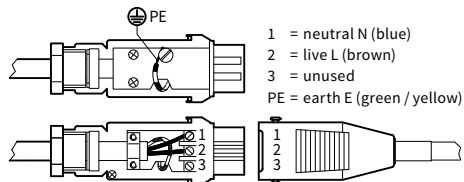
wiring diagram for Hirschmann connector, hard-wired motor

- = single unit
- = coupled unit
- ¹ = unit width > 400 cm
- R/L = right and left

Motor drives, radio-controlled, 433 MHz technology

710	810	720	820	725	825	750	850	760	860	869 / 869 traefix	730	830	620 traefix	660 traefix	740	840	745	845	893	operation side	power output current (50 Hz, 230 V)	Nm / rpm
								•	•											R/L	P = 140 W I = 0.65 A	15/17
								••	••	•										R/L	P = 170 W I = 0.80 A	25/17
••	••	••	••	••	••	••	••				•	•	•	•	•	•	•	•		R/L	P = 140 W I = 0.65 A	15/17
											• ¹ ••	• ¹ ••			••	••	••	••		R/L	P = 170 W I = 0.80 A	25/17
•	•	•	•	•	•	•	•													R/L	P = 140 W I = 0.65 A	10/17
																			•	R/L	P = 240 W I = 1.10 A	30/17

3 × 1.5 mm²



wiring diagram for Hirschmann connector, radio-controlled motor

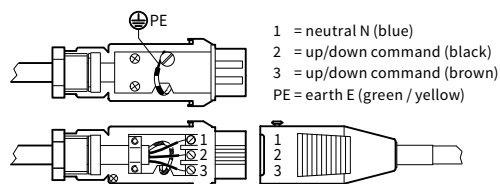
- = single unit
- = coupled unit
- ¹ = unit width > 400 cm
- R/L = right and left

Motor drives for conservatory awnings

Motor drives, hard-wired

8800	8800 tracfix	780	880	889 / 889 tracfix	8850	operation side	power output current (50 Hz, 230 V)	Nm / rpm
		•	•			R/L	P = 125 W I = 0.53 A	15/17
		••	••	•		R/L	P = 160 W I = 0.75 A	20/17
					•	R/L	P = 260 W I = 1.15 A	50/11
•	•					R/L	P = 246 W I = 1.20 A	40/17
••	••					R/L	P = 260 W I = 1.15 A	60/11

4 × 1.5 mm²



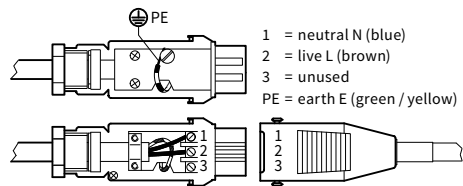
wiring diagram for Hirschmann connector, hard-wired motor

- = single unit
- = coupled unit
- R/L = right and left

Motor drives, radio-controlled, 433 MHz technology

8800	8800 tracfix	780	880	889 / 889 tracfix	8850	operation side	power output current (50 Hz, 230 V)	Nm / rpm
				•		R/L	P = 170 W I = 0.80 A	25/17
						R/L	P = 320 W I = 1.50 A	55/17
		•	•			R/L	P = 140 W I = 0.65 A	15/17
•	•					R/L	P = 240 W I = 1.10 A	35/17
••	••				•	R/L	P = 290 W I = 1.25 A	55/17

3 × 1.5 mm²



wiring diagram for Hirschmann connector, radio-controlled motor

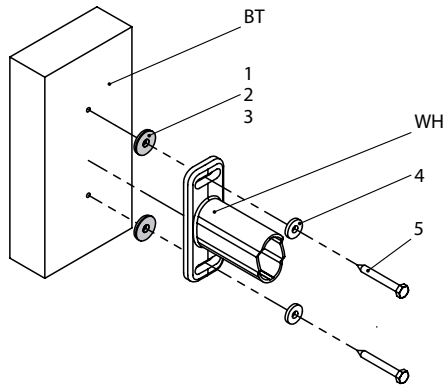
- = single unit
- = coupled unit
- R/L = right and left

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Installation examples

Fixture of the bracket with an additional gasket

For brackets please consult the section „Fixtures, fittings and accessories“

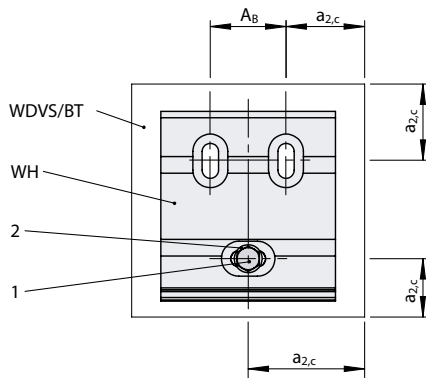


- WH = wall bracket / fixture bracket / spreader plate
- BT = component / fixture substrate
- 1 = gasket 5.2 × 14 WS9260 (part no. 789851)
- 2 = gasket 6.8 × 22 WS9260 (part no. 790281)
- 3 = gasket 8.4 × 16 WS9260 (part no. 790291)
- 4 = washer (not supplied)
- 5 = bolt (not supplied)

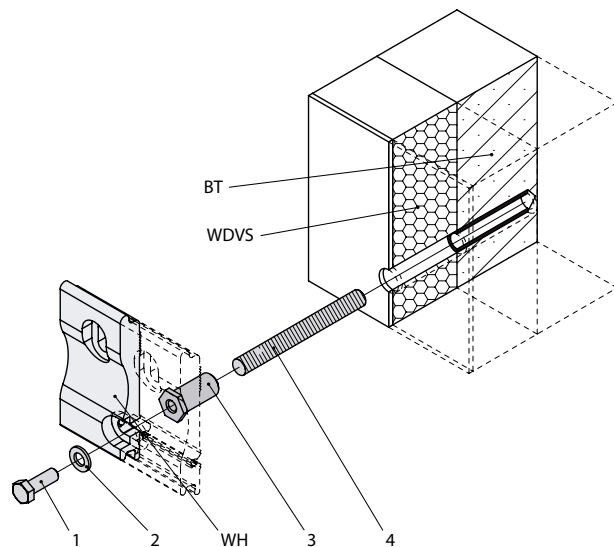
„Reducing bolt assembly“

For „reducing bolt assemblies“ please consult the section „Fixtures, fittings and accessories“

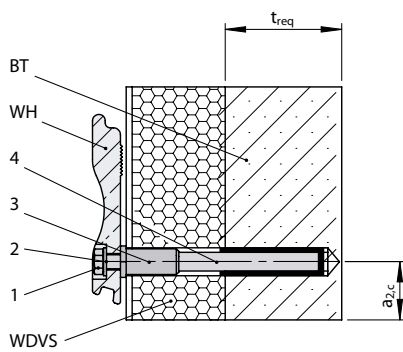
View from the front



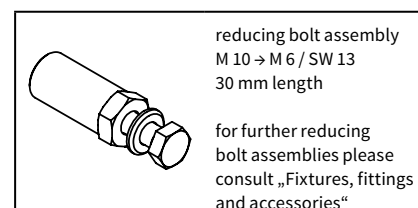
Overview



In cross section



- $a_{2,c}$ = minimum distance from the edge
(in relation to the fixture substrate BT, and is valid also for solid building substrates)
- t_{req} = required minimal thickness of the substrate (e.g. wall thickness of the load-bearing wall)
- AB = minimum centre to centre separation between the pair of rawlplugs
- WH = wall bracket / fixture bracket / spreader plate
- BT = component / fixture substrate
- WDVS = external insulation cladding
- 1 = hexagonal bolt M 6 (not supplied)
- 2 = washer (not supplied)
- 3 = reducing bolt assembly e.g. M 10 → M 6 / SW 13 (part no. 753211)
- 4 = studding (not supplied)



Tolerances

Tolerances in the cover width and length

from	to	tolerances
0	2000	+ 5 / - 5
2010	4000	+ 8 / - 8
4010	6000	+ 12 / - 12
6010	7000	+ 15 / - 15

Tolerances in the unit height / extension of vertical blinds and conservatory awnings

from	to	tolerances
0	1500	+ 2 / - 2
1510	2500	+ 3 / - 3
2510	6500	+ 4 / - 4
6010	7000	+ 15 / - 15

dimensions in mm

markilux Quick-fit spline

makes it possible to change an awning cover quickly on site

The markilux quick-fit spline makes it possible to change the cover of all the current folding-arm awning models easily and quickly on site.

In the case of older models and those of our competitors, the roller tube dimensions should be compared with those in Fig. 2 before attempting to exchange a cover using the quick-fit spline.

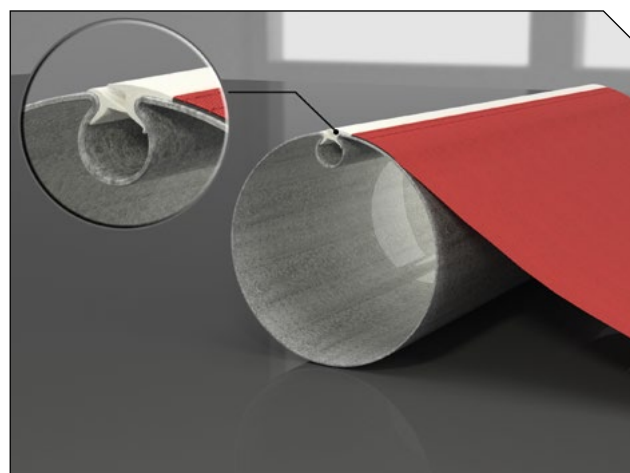
After the old cover has been removed, the markilux quick-fit spline is pressed into the keyway (Ø 10 mm) in the roller along with the cover. It is not necessary to pull the old spline out to the side.

Please consult the section „Housing tolerances and awning cover dimensions“ to find out the sizes of a replacement cover.

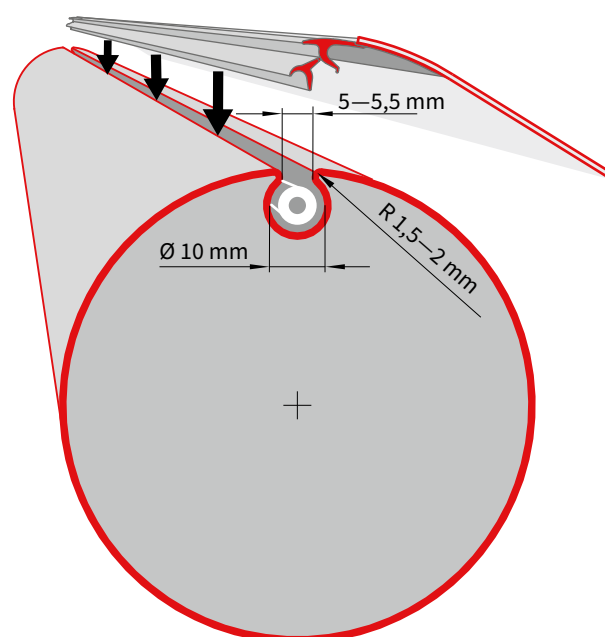
In the case of new covers please note that the length of the cover should be such, that the roller tube is covered even when the awning is fully extended i.e. the circumference of the roller tube is added to the length of the cover.

Roller tube dimensions suitable for the markilux quick-fit spline

round keyway Ø 10 mm for markilux quick-fit spline
 radius at the corners of the keyway approx. 1.5 mm to 2 mm
 keyway opening min. 5 mm to max. 5.5 mm



Roller tube with markilux quick-fit spline and cover



Important advice!

Electrical safety instructions

The power supply cables for electrical connections must be laid and installed by a qualified electrician (acc. to VDE 0100). Installation must be carried out in accordance with the instructions provided by the manufacturer (e.g. for motor drives and automatic controls).

Modifications – especially with regard to electrical components or the power supply cables – require our explicit authorisation in writing. Make sure that the power supply cables, that have already been laid, are disconnected from the power supply during installation.

Planning permission

N.B! This system may be subject to planning permission depending on the laws and regulations as specified by local authorities.

N.B!

Smooth operation of vertical blinds and conservatory awnings will depend on their having been installed horizontally and the brackets having been fitted plumb.

