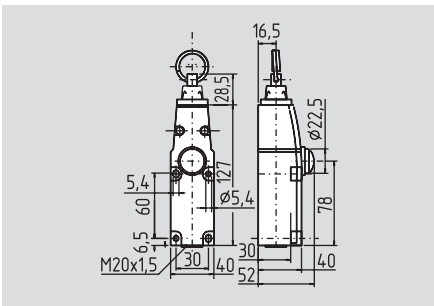


Emergency pull-wire switches

ZS 70

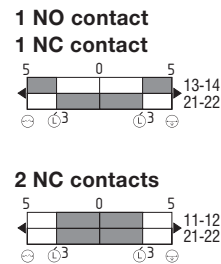


- To EN 418/IEC 60947-5-5
- Thermoplastic enclosure
- 2 contacts
- Small body
- 1 cable entry M20 x 1.5
- Wire up to 8 m long
- Reset by push button or key possible
- Twisting of towing eye not possible
- Wire pull and breakage function

Technical data

Standards:	IEC/EN 60947-5-1 IEC/EN 60947-5-5 EN 418
Certificates:	-
Enclosure:	thermoplastic
Cover:	thermoplastic
Protection class:	IP 67 push button reset; IP 54 key reset
Contact material:	silver
Contact type:	change-over contact with double break or 2 NC contacts
Switching system:	⊖ IEC 60947-5-1 snap action with positive break NC contacts
Termination:	screw terminals
Cable section:	max. 2.5 mm ² (incl. conductor ferrules)
Cable entry:	M20 x 1.5
U _{imp} :	6 kV
U _i :	400 V
I _{the} :	6 A
Utilisation category:	AC-15
I _e /U _e :	6 A/400 VAC
Max. fuse rating:	6 A gL/gG D-fuse
Positive break torque:	-
Angle for positive break travel:	-
Positive break force:	-
Actuating force:	-
Ambient temperature:	-25 °C ... +70 °C
Mechanical life:	> 1 million operations
Indicator lamp:	-
Maximum cable length:	8 m
Features:	wire pull and breakage detection

Contact variations

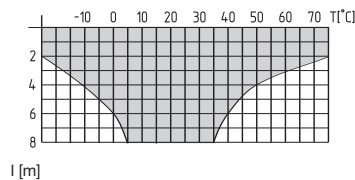


Ordering details

ZS 70 ① ②

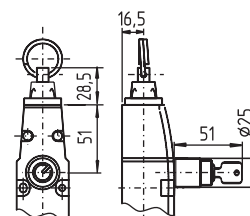
No.	Replace	Description
①	1Ö/1S 2Ö	1 NC/1 NO contact 2 NC contacts
②	VD VS	Without latching Push button reset Key reset

Note



At 2.5 m distance intermediate wire supports are required, see [Document 3845](#)
Recommended cable lengths for pull-wire emergency-stop switches in relation to the range of ambient temperature.

Note

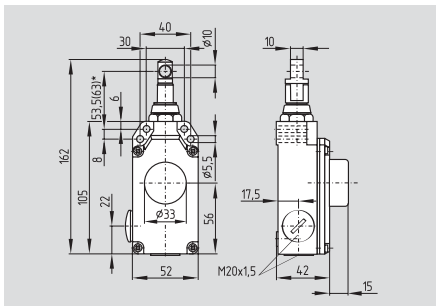


Reset by key

The data related to the pretensioning and actuating forces are indicated on [page 15](#).

Emergency pull-wire switches

ZS 71



* 63 mm for version 200 N pre-tensioning force

- To EN 418/IEC 60947-5-5
- Metal enclosure
- 2 contacts
- Small body
- 2 cable entries M20 x 1.5
- 2 various spring force variants (actuating forces)
- Wire up to 20 m long
- Reset by push button or key possible
- Twisting of towing eye not possible
- Optional position indicator
- Signalling lamp available on request for various voltages, see [Document 3845 03](#)
- Wire pull and breakage function
- Ex version available
- AS-Interface Safety at Work available

Technical data

Standards: IEC/EN 60947-5-1
IEC/EN 60947-5-5
EN 418
BIA (BG)

Certificates: BIA (BG)

Enclosure: aluminium die-cast, enamel finish

Cover: thermoplastic ultramid

Protection class: IP 65 push button reset;
IP 54 key reset

Contact material: silver

Contact type: change-over contact
with double break
or 2 NC contacts

Switching system: \ominus IEC 60947-5-1
snap action with
positive break
NC contacts

Termination: screw terminals

Cable section: max. 2.5 mm²
(incl. conductor ferrules)

Cable entry: 2 x M20 x 1.5

U_{imp} : 6 kV

U_j : 400 V

I_{the} : 6 A

Utilisation category: AC-15

I_e/U_e : 6 A/400 VAC

Max. fuse rating: 6 A gL/gG D-fuse

Positive break torque: –

Angle for positive break travel: –

Positive break force: –

Actuating force: –

Ambient temperature: –25 °C ... +70 °C

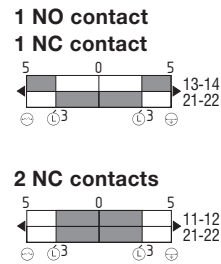
Mechanical life: > 1 million operations

Indicator lamp: as option

Maximum cable length: 20 m

Features: wire pull and
breakage detection

Contact variations



Approvals

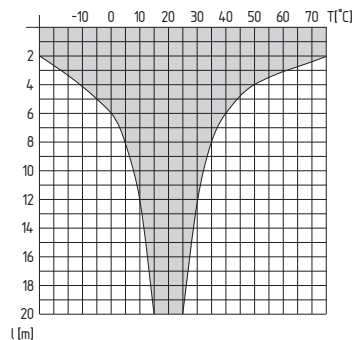


Ordering details

ZS 71 ① ②③-④-⑤/⑥

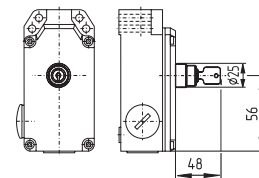
No.	Replace	Description
①	1Ö/1S 2Ö	1 NC/1 NO contact 2 NC contacts
②	W	Without watertight collar With watertight collar
③	VD VS	Without latching Push button reset Key reset
④	A	Without position indicator With position indicator
⑤	G	Without indicator lamp With indicator lamp
⑥	55 N 200 N	Pre-tensioning force: For wire length 0 - 5 m For wire length 5 - 20 m

Note



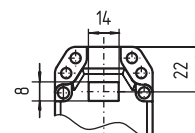
At 3 m distance intermediate wire supports are required, see [Document 3845](#)
Recommended cable lengths for pull-wire emergency-stop switches in relation to the range of ambient temperature.

Note



Reset by key

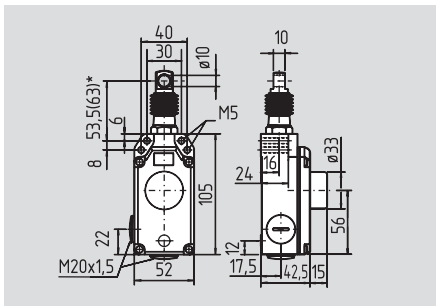
The data related to the pretensioning and actuating forces are indicated on [page 15](#).



Position indicator

Emergency pull-wire switches

ZS 71 . . . W



* 63 mm for version 200 N pre-tensioning force

- To EN 418/IEC 60947-5-5
- Metal enclosure
- 2 contacts
- Small body
- 2 cable entries M20 x 1.5
- 2 various spring force variants (actuating forces)
- Wire up to 20 m long
- Reset by push button or key possible
- Twisting of towing eye not possible
- Optional position indicator
- Equipped with external watertight collar
- Signalling lamp available on request for various voltages, see [Document 3845 03](#)
- Wire pull and breakage function
- Ex version available
- AS-Interface Safety at Work available

Approvals



Ordering details

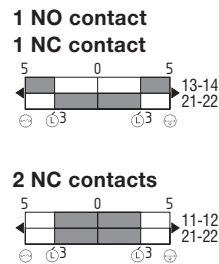
ZS 71 ① ②③-④-⑤/⑥

No.	Replace	Description
①	1Ö/1S 2Ö	1 NC/1 NO contact 2 NC contacts
②	W	Without watertight collar With watertight collar
③	VD VS	Without latching Push button reset Key reset
④	A	Without position indicator With position indicator
⑤	G	Without indicator lamp With indicator lamp
⑥	55 N 200 N	Pre-tensioning force: For wire length 0 - 5 m For wire length 5 - 20 m

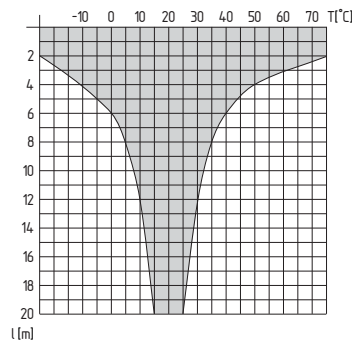
Technical data

Standards:	IEC/EN 60947-5-1 IEC/EN 60947-5-5 EN 418 BIA (BG)
Certificates:	
Enclosure:	aluminium die-cast, enamel finish
Cover:	thermoplastic ultramid
Protection class:	IP 65 push button reset; IP 54 key reset
Contact material:	silver
Contact type:	change-over contact with double break or 2 NC contacts
Switching system:	⊖ IEC 60947-5-1 snap action with positive break NC contacts
Termination:	screw terminals
Cable section:	max. 2.5 mm ² (incl. conductor ferrules)
Cable entry:	2 x M20 x 1.5
U _{imp} :	6 kV
U _i :	400 V
I _{the} :	6 A
Utilisation category:	AC-15
I _e /U _e :	6 A/400 VAC
Max. fuse rating:	6 A gL/gG D-fuse
Positive break torque:	-
Angle for positive break travel:	-
Positive break force:	-
Actuating force:	-
Ambient temperature:	-25 °C ... +70 °C
Mechanical life:	> 1 million operations
Indicator lamp:	as option
Maximum cable length:	20 m
Features:	wire pull and breakage detection

Contact variations

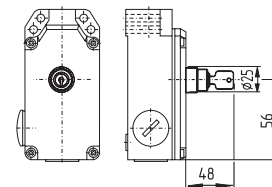


Note



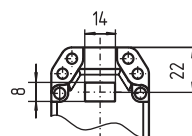
At 3 m distance intermediate wire supports are required, see [Document 3845](#)
Recommended cable lengths for pull-wire emergency-stop switches in relation to the range of ambient temperature.

Note



Reset by key

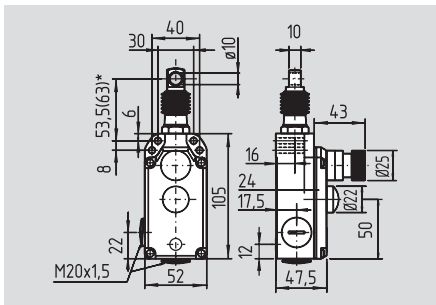
The data related to the pretensioning and actuating forces are indicated on [page 15](#).



Position indicator

Emergency pull-wire switches

ZS 71 . . . NA



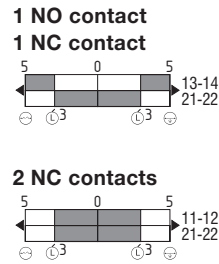
* 63 mm for version 200 N pre-tensioning force

- To EN 418/IEC 60947-5-5
- Metal enclosure
- 2 contacts
- Integrated emergency-stop button
- Small body
- 2 cable entries M20 x 1.5
- 2 various spring force variants (actuating forces)
- Wire up to 20 m long
- Reset by push button possible
- Twisting of towing eye not possible
- Available with external watertight collar
- Signalling lamp available on request for various voltages, see [Document 3845 03](#)
- Wire pull and breakage function

Technical data

Standards:	IEC/EN 60947-5-1 IEC/EN 60947-5-5 EN 418
Certificates:	-
Enclosure:	aluminium die-cast, enamel finish
Cover:	thermoplastic ultramid
Protection class:	IP 65 push button reset;
Contact material:	silver
Contact type:	change-over contact with double break or 2 NC contacts
Switching system:	⊖ IEC 60947-5-1 snap action with positive break NC contacts
Termination:	screw terminals
Cable section:	max. 2.5 mm ² (incl. conductor ferrules)
Cable entry:	2 x M20 x 1.5
U _{imp} :	6 kV
U _i :	400 V
I _{the} :	6 A
Utilisation category:	AC-15
I _e /U _e :	6 A/400 VAC
Max. fuse rating:	6 A gL/gG D-fuse
Positive break torque:	-
Angle for positive break travel:	-
Positive break force:	-
Actuating force:	-
Ambient temperature:	-25 °C ... +70 °C
Mechanical life:	> 1 million operations
Indicator lamp:	as option
Maximum cable length:	20 m
Features:	wire pull and breakage detection

Contact variations

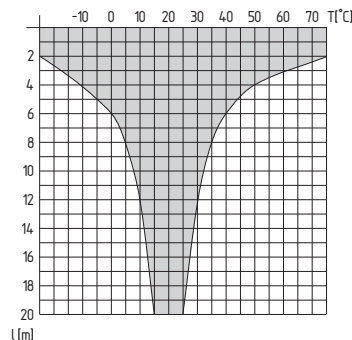


Ordering details

ZS 71 ① ② ③-④-⑤/⑥

No.	Replace	Description
①	1Ö/1S 2Ö	1 NC/1 NO contact 2 NC contacts
②	W	Without watertight collar With watertight collar
③	VD	Without latching Push button reset
④	NA	With emergency-stop
⑤	G	Without indicator lamp With indicator lamp
⑥	55 N 200 N	Pre-tensioning force: For wire length 0 - 5 m For wire length 5 - 20 m

Note



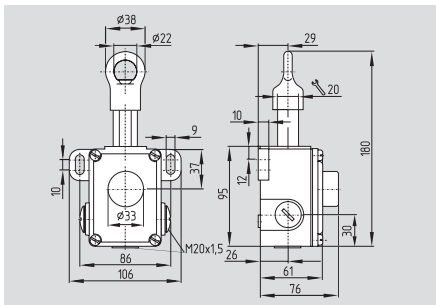
At 3 m distance intermediate wire supports are required, see [Document 3845](#)
Recommended cable lengths for pull-wire emergency-stop switches in relation to the range of ambient temperature.

Note

The data related to the pretensioning and actuating forces are indicated on [page 15](#).

Emergency pull-wire switches

ZS 441



- To EN 418/IEC 60947-5-2
- Metal enclosure
- 2 contacts
- 3 cable entries M20 x 1.5
- 3 various spring force variants (actuating forces)
- Wire up to 25 m long
- Twisting of towing eye not possible
- Reset by push button or key possible
- Signalling lamp available on request for various voltages, see [Document 3845 03](#)
- Wire pull and breakage function

Technical data

Standards: IEC/EN 60947-5-1
IEC/EN 60947-5-5
EN 418
BIA (BG)

Certificates: BIA (BG)

Enclosure: aluminium die-cast, enamel finish

Cover: aluminium die-cast, enamel finish

Protection class: IP 65 push button reset;
IP 54 key reset

Contact material: silver

Contact type: change-over contact
with double break
or 2 NC contacts

Switching system: \ominus IEC 60947-5-1
snap action with
positive break
NC contacts

Termination: screw terminals

Cable section: max. 2.5 mm²
(incl. conductor ferrules)

Cable entry: 3 x M20 x 1.5

U_{imp}: 6 kV

U_i: 400 V

I_{the}: 6 A

Utilisation category: AC-15

I_e/U_e: 6 A/400 VAC

Max. fuse rating: 6 A gL/gG D-fuse

Positive break torque: –

Angle for positive break travel: –

Positive break force: –

Actuating force: –

Ambient temperature: –25 °C ... +70 °C

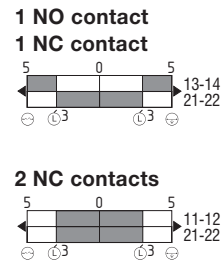
Mechanical life: > 1 million operations

Indicator lamp: as option

Maximum cable length: 25 m

Features: wire pull and
breakage detection

Contact variations



Approvals

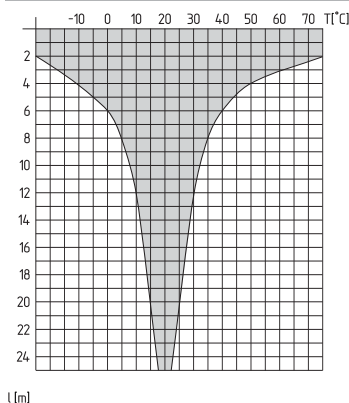


Ordering details

ZS 441 ① ②-③/④

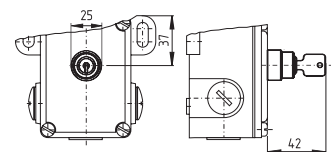
No.	Replace	Description
①	1Ö/1S 2Ö	1 NC/1 NO contact 2 NC contacts
②	VD VS	Without latching Push button reset Key reset
③	G	Without indicator lamp With indicator lamp
④	60N 150N 220N	Pre-tensioning force: For wire length 0-5 m For wire length 5-15 m For wire length 15-25 m

Note



At 5 m distance intermediate wire supports are required, see [Document 3845](#)
Recommended cable lengths for pull-wire emergency-stop switches in relation to the range of ambient temperature.

Note

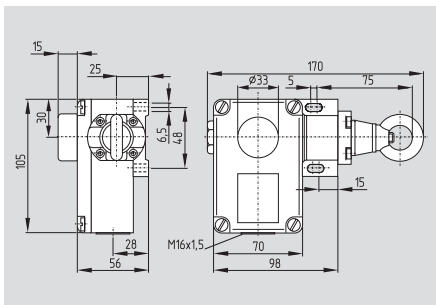


Reset by key

The data related to the pretensioning and actuating forces are indicated on [page 15](#).

Emergency pull-wire switches

ZS 73



- To EN 418/IEC 60947-5-5
- Metal enclosure
- 2 contacts
- 1 cable entry M16 x 1.5
- 2 cable entries available on request
- 4 various spring force variants (actuating forces)
- Adjustable actuating force
- Twisting of towing eye not possible
- Wire up to 50 m long
- Reset by push button or key possible
- Signalling lamp available on request for various voltages, see [Document 3845 03](#)
- Wire pull and breakage function
- Ex version available
- AS-Interface Safety at Work available

Technical data

Standards: IEC/EN 60947-5-1
IEC/EN 60947-5-5
EN 418
BIA (BG)

Certificates: BIA (BG)

Enclosure: aluminium die-cast, enamel finish

Cover: thermoplastic ultramid

Protection class: IP 65 push button reset and watertight collar;
IP 54 key reset

Contact material: silver

Contact type: change-over contact with double break or 2 NC contacts

Switching system: \ominus IEC 60947-5-1 snap action with positive break
NC contacts

Termination: screw terminals

Cable section: max. 2.5 mm² (incl. conductor ferrules)

Cable entry: 1 x M16 x 1.5

U_{imp}: 6 kV

U_i: 400 V

I_{the}: 6 A

Utilisation category: AC-15

I_e/U_e: 6 A/400 VAC

Max. fuse rating: 6 A gL/gG D-fuse

Positive break torque: –

Angle for positive break travel: –

Positive break force: –

Actuating force: –

Ambient temperature: –25 °C ... +70 °C

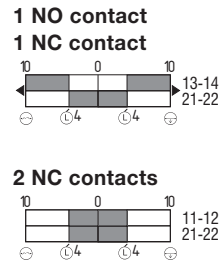
Mechanical life: > 1 million operations

Indicator lamp: as option

Maximum cable length: 50 m

Features: wire pull and breakage detection

Contact variations



Approvals

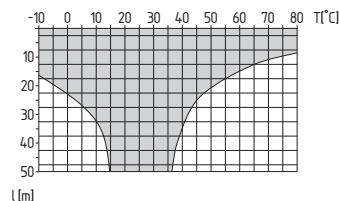


Ordering details

ZS 73 ① ② ③-④/⑤

No.	Replace	Description
①	1Ö/1S 2Ö	1 NC/1 NO contact 2 NC contacts
②	W	Without watertight collar With watertight collar
③	VD VS	Without latching Push button reset Key reset
④	G	Without indicator lamp With indicator lamp
⑤	80-100N 120-180N 195-275N 295-390N	Pre-tensioning force: For wire length 0-10 m For wire length 10-20 m For wire length 20-30 m For wire length 30-50 m

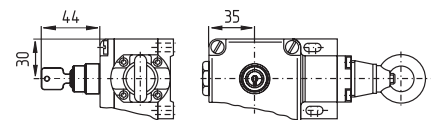
Note



At 5 m distance intermediate wire supports are required, see [Document 3845](#)

Recommended cable lengths for pull-wire emergency-stop switches in relation to the range of ambient temperature.

Note

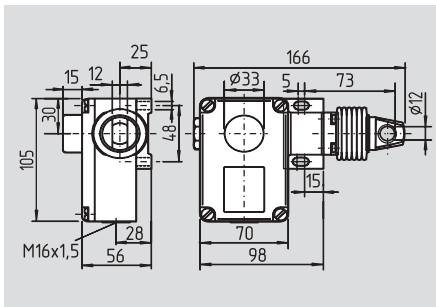


Reset by key

The data related to the pretensioning and actuating forces are indicated on [page 15](#).

Emergency pull-wire switches

ZS 73 . . . W

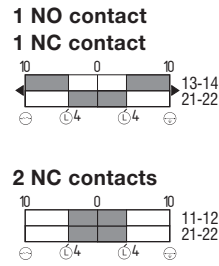


- To EN 418/IEC 60947-5-5
- Metal enclosure
- 2 contacts
- 1 cable entry M16 x 1.5
- 2 cable entries available on request
- 4 various spring force variants (actuating forces)
- Adjustable actuating force
- Twisting of towing eye not possible
- Wire up to 50 m long
- Reset by push button or key possible
- Equipped with external watertight collar
- Signalling lamp available on request for various voltages, see [Document 3845 03](#)
- Wire pull and breakage function
- Ex version available
- AS-Interface Safety at Work available

Technical data

Standards:	IEC/EN 60947-5-1 IEC/EN 60947-5-5 EN 418
Certificates:	BIA (BG)
Enclosure:	aluminium die-cast, enamel finish
Cover:	thermoplastic ultramid
Protection class:	IP 65 push button reset and watertight collar; IP 54 key reset
Contact material:	silver
Contact type:	change-over contact with double break or 2 NC contacts
Switching system:	⊖ IEC 60947-5-1 snap action with positive break NC contacts
Termination:	screw terminals
Cable section:	max. 2.5 mm ² (incl. conductor ferrules)
Cable entry:	1 x M16 x 1.5
U _{imp} :	6 kV
U _i :	400 V
I _{the} :	6 A
Utilisation category:	AC-15
I _e /U _e :	6 A/400 VAC
Max. fuse rating:	6 A gL/gG D-fuse
Positive break torque:	–
Angle for positive break travel:	–
Positive break force:	–
Actuating force:	–
Ambient temperature:	–25 °C ... +70 °C
Mechanical life:	> 1 million operations
Indicator lamp:	as option
Maximum cable length:	50 m
Features:	wire pull and breakage detection

Contact variations



Approvals

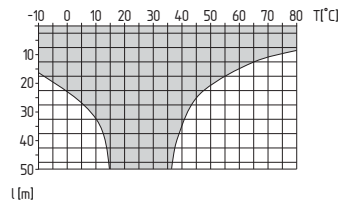


Ordering details

ZS 73 ① ② ③-④/⑤

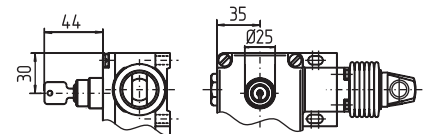
No.	Replace	Description
①	1Ö/1S 2Ö	1 NC/1 NO contact 2 NC contacts
②	W	Without watertight collar With watertight collar
③	VD VS	Without latching Push button reset Key reset
④	G	Without indicator lamp With indicator lamp
⑤	80-100N 120-180N 195-275N 295-390N	Pre-tensioning force: For wire length 0-10 m For wire length 10-20 m For wire length 20-30 m For wire length 30-50 m

Note



At 5 m distance intermediate wire supports are required, see [Document 3845](#)
Recommended cable lengths for pull-wire emergency-stop switches in relation to the range of ambient temperature.

Note

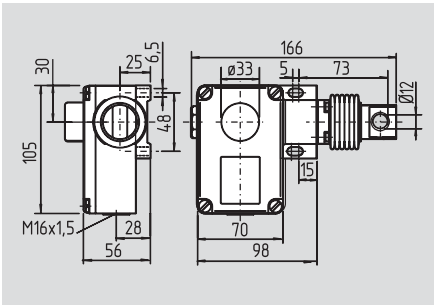


Reset by key

The data related to the pretensioning and actuating forces are indicated on [page 15](#).

Emergency pull-wire switches

ZS 73 . . . Niro



- To EN 418/IEC 60947-5-2
- Metal enclosure, hard-coated
- 2 contacts
- 1 cable entry M16 x 1.5
- 2 cable entries available on request
- 4 various spring force variants (actuating forces)
- Adjustable actuating force
- Twisting of towing eye not possible
- Wire up to 50 m long
- Reset by push button or key possible
- Available with external watertight collar
- Signalling lamp available on request for various voltages, see [Document 3845 03](#)
- Wire pull and breakage function
- Mounted components made of stainless steel
- Ex version available

Technical data

Standards: IEC/EN 60947-5-1
IEC/EN 60947-5-5
EN 418

Certificates: -

Enclosure: aluminium die-cast, hard-coated, enamel finish

Cover: thermoplastic ultramid

Protection class: IP 65 push button reset and watertight collar; IP 54 key reset

Contact material: silver

Contact type: change-over contact with double break or 2 NC contacts

Switching system: ⊖ IEC 60947-5-1 snap action with positive break NC contacts

Termination: screw terminals

Cable section: max. 2.5 mm² (incl. conductor ferrules)

Cable entry: 1 x M16 x 1.5

U_{imp}: 6 kV

U_i: 400 V

I_{the}: 6 A

Utilisation category: AC-15

I_e/U_e: 6 A/400 VAC

Max. fuse rating: 6 A gL/gG D-fuse

Positive break torque: -

Angle for positive break travel: -

Positive break force: -

Actuating force: -

Ambient temperature: -25 °C ... +70 °C

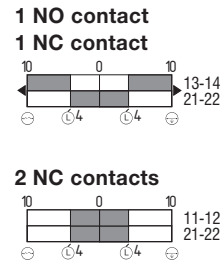
Mechanical life: > 1 million operations

Indicator lamp: as option

Maximum cable length: 50 m

Features: wire pull and breakage detection

Contact variations



Approvals

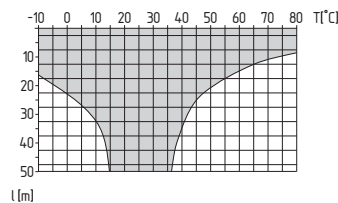


Ordering details

ZS 73 ① ② ③-④/⑤-⑥

No.	Replace	Description
①	1Ö/1S 2Ö	1 NC/1 NO contact 2 NC contacts
②	W	Without watertight collar With watertight collar
③	VD VS	Without latching Push button reset Key reset
④	G	Without indicator lamp With indicator lamp
⑤	80-100N 120-180N 195-275N 295-390N	Pre-tensioning force: For wire length 0-10 m For wire length 10-20 m For wire length 20-30 m For wire length 30-50 m
⑥	Niro	Hard-coated housing with stainless steel accessories

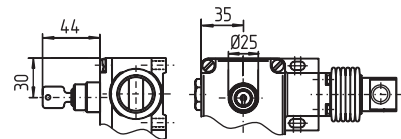
Note



At 5 m distance intermediate wire supports are required, see [Document 3845](#)

Recommended cable lengths for pull-wire emergency-stop switches in relation to the range of ambient temperature.

Note

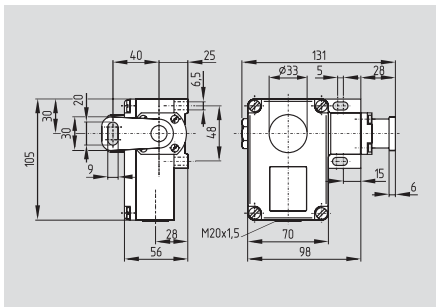


Reset by key

The data related to the pretensioning and actuating forces are indicated on [page 15](#).

Emergency pull-wire switches

ZS 73 S

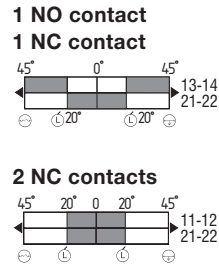


- To EN 418/IEC 60947-5-5
- Metal enclosure
- 2 contacts
- 1 cable entry M20 x 1.5
- 2 cable entries available on request
- Wire up to 2 x 50 m long, two-side operation
- Reset by push button or key possible
- Signalling lamp available on request for various voltages, see [Document 3845 03](#)
- Wire pull and breakage function
- Ex version available

Technical data

Standards:	IEC/EN 60947-5-1 IEC/EN 60947-5-5 EN 418
Certificates:	-
Enclosure:	aluminium die-cast, enamel finish
Cover:	thermoplastic ultramid
Protection class:	IP 65 push button reset; IP 54 key reset
Contact material:	silver
Contact type:	change-over contact with double break or 2 NC contacts
Switching system:	⊖ IEC 60947-5-1 snap action with positive break NC contacts
Termination:	screw terminals
Cable section:	max. 2.5 mm ² (incl. conductor ferrules)
Cable entry:	1 x M20 x 1.5
U _{imp} :	6 kV
U _i :	400 V
I _{the} :	6 A
Utilisation category:	AC-15
I _e /U _e :	6 A/400 VAC
Max. fuse rating:	6 A gL/gG D-fuse
Positive break torque:	-
Angle for positive break travel:	-
Positive break force:	-
Actuating force:	-
Ambient temperature:	-25 °C ... +70 °C
Mechanical life:	> 1 million operations
Indicator lamp:	as option
Maximum cable length:	2 x 50 m
Features:	wire pull and breakage detection

Contact variations



Approvals



Ordering details

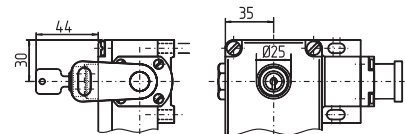
ZS 73 S ① ②-③

No.	Replace	Description
①	1Ö/1S 2Ö	1 NC/1 NO contact 2 NC contacts
②	VD VS	Without latching Push button reset Key reset
③	G	Without indicator lamp With indicator lamp

Note

At 4 m distance intermediate wire supports are required, see [Document 3845](#)

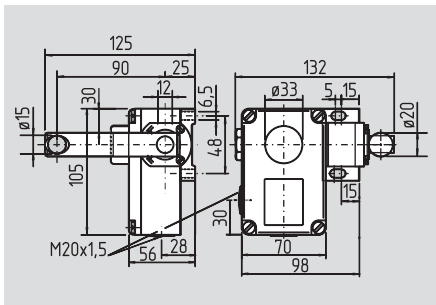
Note



Reset by key

Emergency pull-wire switches

ZS 73 S . . . Niro



- To EN 418/IEC 60947-5-5
- Metal enclosure, hard-coated
- 2 contacts
- 1 cable entry M20 x 1.5
- 2 cable entries available on request
- Wire up to 2 x 50 m long, two-side operation
- Reset by push button or key possible
- Signalling lamp available on request for various voltages, see [Document 3845 03](#)
- Wire pull and breakage function
- Mounted components made of stainless steel
- Ex version available

Technical data

Standards: IEC/EN 60947-5-1
IEC/EN 60947-5-5
EN 418

Certificates: -

Enclosure: aluminium die-cast, hard-coated, enamel finish

Cover: thermoplastic ultramid

Protection class: IP 65 push button reset;
IP 54 key reset

Contact material: silver

Contact type: change-over contact with double break or 2 NC contacts

Switching system: ☉ IEC 60947-5-1 snap action with positive break
NC contacts

Termination: screw terminals

Cable section: max. 2.5 mm² (incl. conductor ferrules)

Cable entry: 1 x M20 x 1.5

U_{imp}: 6 kV

U_i: 400 V

I_{the}: 6 A

Utilisation category: AC-15

I_e/U_e: 6 A/400 VAC

Max. fuse rating: 6 A gL/gG D-fuse

Positive break torque: -

Angle for positive break travel: -

Positive break force: -

Actuating force: -

Ambient temperature: -25 °C ... +70 °C

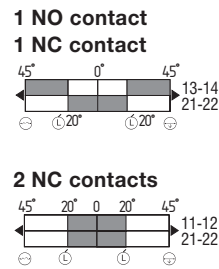
Mechanical life: > 1 million operations

Indicator lamp: as option

Maximum cable length: 2 x 50 m

Features: wire pull and breakage detection

Contact variations



Approvals



Ordering details

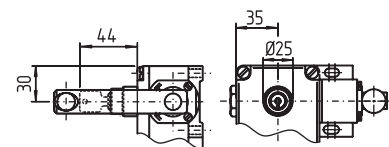
ZS 73 S ① ②-③-④

No.	Replace	Description
①	1Ö/1S 2Ö	1 NC/1 NO contact 2 NC contacts
②	VD VS	Without latching Push button reset Key reset
③	G	Without indicator lamp With indicator lamp
④	Niro	Hard-coated housing with stainless steel accessories

Note

At 4 m distance intermediate wire supports are required, see [Document 3845](#)

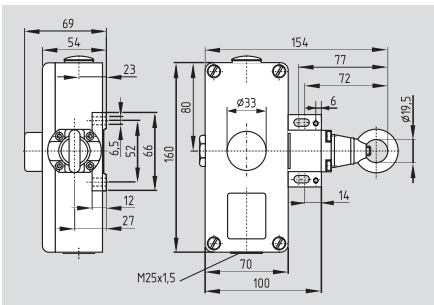
Note



Reset by key

Emergency pull-wire switches

ZS 75



- To EN 418/IEC 60947-5-5
- Metal enclosure
- 2 or 4 contacts
- 2 cable entries M25 x 1.5
- 4 various spring force variants (actuating forces)
- Adjustable actuating force
- Twisting of towing eye not possible
- Wire up to 50 m long
- Reset by push button or key possible
- Signalling lamp available on request for various voltages, see [Document 3845 03](#)
- Wire pull and breakage function
- Ex version available
- AS-Interface Safety at Work available

Technical data

Standards: IEC/EN 60947-5-1
IEC/EN 60947-5-5
EN 418

Certificates: BIA (BG)

Enclosure: aluminium die-cast, enamel finish

Cover: aluminium die-cast, enamel finish

Protection class: IP 65 push button reset and watertight collar;
IP 54 key reset

Contact material: silver

Contact type: change-over contact with double break or 2 NO and 2 NC or 4 NC contacts

Switching system: \ominus IEC 60947-5-1 snap action with positive break NC contacts

Termination: screw terminals

Cable section: max. 2.5 mm² (incl. conductor ferrules)

Cable entry: 2 x M25 x 1.5

U_{imp} : 6 kV

U_i : 400 V

I_{the} : 6 A

Utilisation category: AC-15

I_e/U_e : 6 A/400 VAC

Max. fuse rating: 6 A gL/gG D-fuse

Positive break torque: –

Angle for positive break travel: –

Positive break force: –

Actuating force: –

Ambient temperature: –25 °C ... +70 °C

Mechanical life: > 1 million operations

Indicator lamp: as option

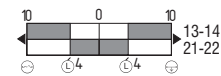
Maximum cable length: 50 m

Features: wire pull and breakage detection

Contact variations

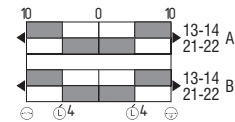
1 NO contact

1 NC contact

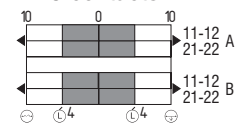


2 NO contacts

2 NC contacts



4 NC contacts



Approvals

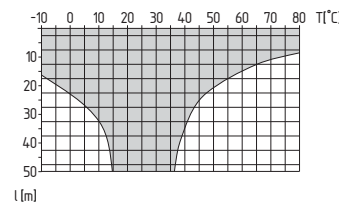


Ordering details

ZS 75 ① ② ③-④/⑤

No.	Replace	Description
①	1Ö/1S 2Ö/2S 4Ö	1 NC/1 NO contact 2 NC/2 NO contacts 4 NC contacts
②	W	Without watertight collar
③	VD VS	With watertight collar Without latching Push button reset Key reset
④	G	Without indicator lamp With indicator lamp
⑤	80-100N 120-180N 195-275N 295-390N	Pre-tensioning force: For wire length 0-10 m For wire length 10-20 m For wire length 20-30 m For wire length 30-50 m

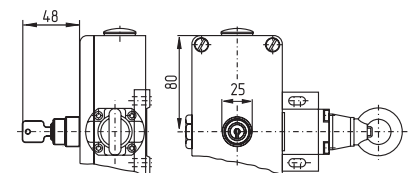
Note



At 5 m distance intermediate wire supports are required, see [Document 3845](#)

Recommended cable lengths for pull-wire emergency-stop switches in relation to the range of ambient temperature.

Note

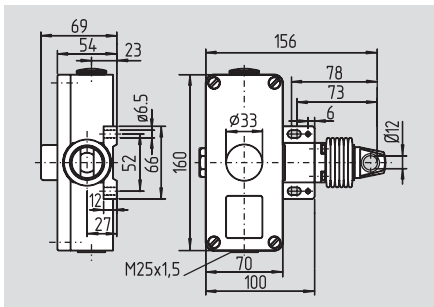


Reset by key

The data related to the pretensioning and actuating forces are indicated on [page 15](#).

Emergency pull-wire switches

ZS 75 . . . W



- To EN 418/IEC 60947-5-2
- Metal enclosure
- 2 or 4 contacts
- 2 cable entries M25 x 1.5
- 4 various spring force variants (actuating forces)
- Adjustable actuating force
- Twisting of towing eye not possible
- Wire up to 50 m long
- Reset by push button or key possible
- Equipped with external watertight collar
- Signalling lamp available on request for various voltages, see [Document 3845 03](#)
- Wire pull and breakage function
- Ex version available
- AS-Interface Safety at Work available

Technical data

Standards: IEC/EN 60947-5-1
IEC/EN 60947-5-5
EN 418
BIA (BG)

Certificates: BIA (BG)

Enclosure: aluminium die-cast, enamel finish

Cover: aluminium die-cast, enamel finish

Protection class: IP 65 push button reset and watertight collar;
IP 54 key reset

Contact material: silver

Contact type: change-over contact with double break or 2 NO and 2 NC or 4 NC contacts

Switching system: ☉ IEC 60947-5-1 snap action with positive break NC contacts screw terminals max. 2.5 mm² (incl. conductor ferrules)

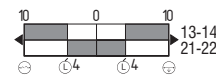
Termination: 2 x M25 x 1.5

Cable section: U_{imp}: 6 kV
U_i: 400 V
I_{the}: 6 A
Utilisation category: AC-15
I_e/U_e: 6 A/400 VAC
Max. fuse rating: 6 A gL/gG D-fuse
Positive break torque: -
Angle for positive break travel: -
Positive break force: -
Actuating force: -
Ambient temperature: -25 °C ... +70 °C
Mechanical life: > 1 million operations
Indicator lamp: as option
Maximum cable length: 50 m
Features: wire pull and breakage detection

Contact variations

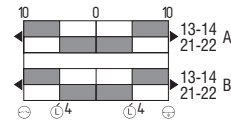
1 NO contact

1 NC contact

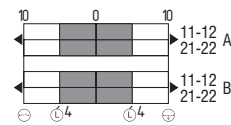


2 NO contacts

2 NC contacts



4 NC contacts



Approvals

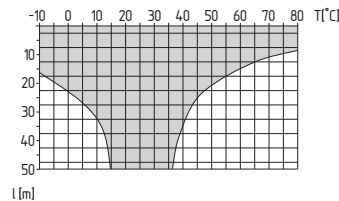


Ordering details

ZS 75 ① ② ③-④/⑤

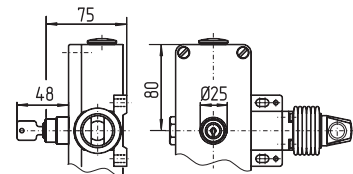
No.	Replace	Description
①	1Ö/1S 2Ö/2S 4Ö	1 NC/1 NO contact 2 NC/2 NO contacts 4 NC contacts
②	W	Without watertight collar With watertight collar
③	VD VS	Without latching Push button reset Key reset
④	G	Without indicator lamp With indicator lamp
⑤	80-100N 120-180N 195-275N 295-390N	Pre-tensioning force: For wire length 0-10 m For wire length 10-20 m For wire length 20-30 m For wire length 30-50 m

Note



At 5 m distance intermediate wire supports are required, see [Document 3845](#)
Recommended cable lengths for pull-wire emergency-stop switches in relation to the range of ambient temperature.

Note

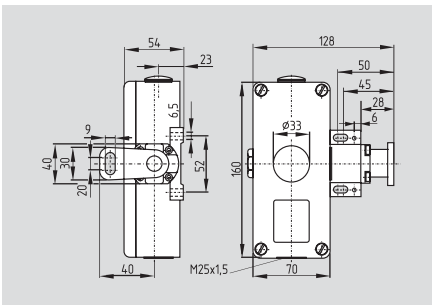


Reset by key

The data related to the pretensioning and actuating forces are indicated on [page 15](#).

Emergency pull-wire switches

ZS 75 S



- To EN 418/IEC 60947-5-5
- Metal enclosure
- 4 contacts
- 2 cable entries M25 x 1.5
- Wire up to 2 x 50 m long, two-side operation
- Reset by push button or key possible
- Signalling lamp available on request for various voltages, see [Document 3845 03](#)
- Wire pull and breakage function
- Ex version available

Technical data

Standards: IEC/EN 60947-5-1
IEC/EN 60947-5-5
EN 418

Certificates: -

Enclosure: aluminium die-cast, enamel finish

Cover: aluminium die-cast, enamel finish

Protection class: IP 65 push button reset;
IP 54 key reset

Contact material: silver

Contact type: change-over contact with double break or 2 NO and 2 NC or 4 NC contacts

Switching system: \ominus IEC 60947-5-1 snap action with positive break
NC contacts

Termination: screw terminals

Cable section: max. 2.5 mm² (incl. conductor ferrules)

Cable entry: 2 x M25 x 1.5

U_{imp} : 6 kV

U_i : 400 V

I_{the} : 6 A

Utilisation category: AC-15

I_e/U_e : 6 A/400 VAC

Max. fuse rating: 6 A gL/gG D-fuse

Positive break torque: -

Angle for positive break travel: -

Positive break force: -

Actuating force: -

Ambient temperature: -25 °C ... +70 °C

Mechanical life: > 1 million operations

Indicator lamp: as option

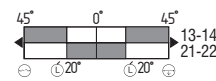
Maximum cable length: 2 x 50 m

Features: wire pull and breakage detection

Contact variations

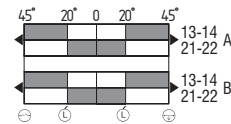
1 NO contact

1 NC contact

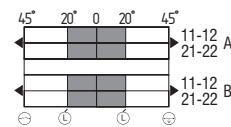


2 NO contacts

2 NC contacts



4 NC contacts



Approvals



Ordering details

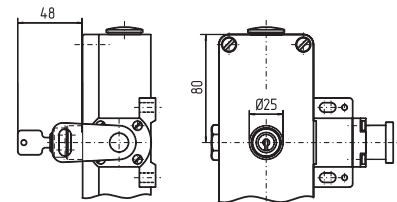
ZS 75 S ① ②-③

No.	Replace	Description
①	1Ö/1S 2Ö/2S 4Ö	1 NC/1 NO contact 2 NC/2 NO contacts 4 NC contacts
②	VD VS	Without latching Push button reset Key reset
③	G	Without indicator lamp With indicator lamp

Note

At 4 m distance intermediate wire supports are required, see [Document 3845](#)

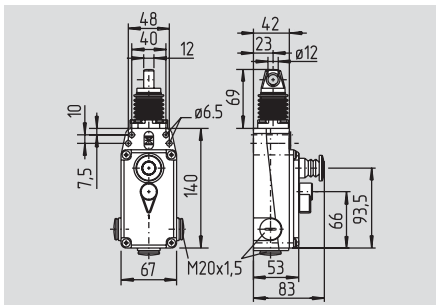
Note



Reset by key

Emergency pull-wire switches

ZS 80



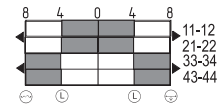
- To EN 418/IEC 60947-5-5
- Metal enclosure
- 4 contacts
- Integrated emergency-stop button
- Position indicator
- 3 cable entries M20 x 1.5
- Twisting of towing eye not possible
- Wire up to 50 m long
- Lever for reset and position indication
- Equipped with external watertight collar
- Signalling lamp available on request for various voltages, see [Document 3845 03](#)
- Wire pull and breakage function

Technical data

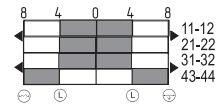
Standards:	IEC/EN 60947-5-1 IEC/EN 60947-5-5 EN 418
Certificates:	-
Enclosure:	aluminium die-cast, enamel finish
Cover:	thermoplastic ultramid
Protection class:	IP 67
Contact material:	silver
Contact type:	2 NC/2 NO, 3 NC/1 NO or 4 NC contacts, double break
Switching system:	⊖ IEC 60947-5-1 slow action with positive break NC contacts
Termination:	2 x 4-pole terminal block
Cable section:	max. 2.5 mm ² (incl. conductor ferrules)
Cable entry:	3 x M20 x 1.5
U _{imp} :	-
U _i :	250 V
I _{the} :	2 A
Utilisation category:	AC-15
I _e /U _e :	2 A/250 VAC
Max. fuse rating:	2 A gL/gG D-fuse
Positive break torque:	-
Angle for positive break travel:	-
Positive break force:	-
Actuating force:	-
Ambient temperature:	-20 °C ... +70 °C
Mechanical life:	> 1 million operations
Indicator lamp:	as option
Maximum cable length:	50 m
Features:	wire pull and breakage detection

Contact variations

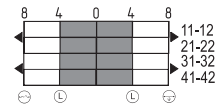
2 NO contacts
2 NC contacts



3 NC contacts
1 NO contact



4 NC contacts



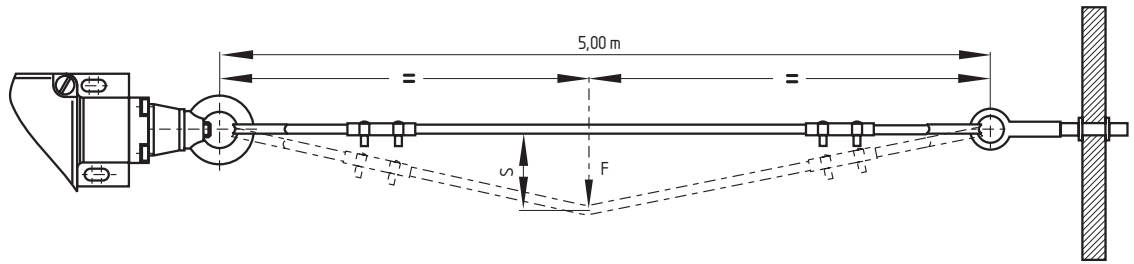
Ordering details

ZS 80 ① ② ③-④

No.	Replace	Description
①	2Ö/2S	2 NC/2 NO contacts
	3Ö/1S	3 NC/1 NO contacts
	4Ö	4 NC contacts
②	W	With watertight collar
③	VD	With lever reset
④		Without indicator lamp
	G	With indicator lamp

Emergency pull-wire switches

Pre-stress and actuating forces



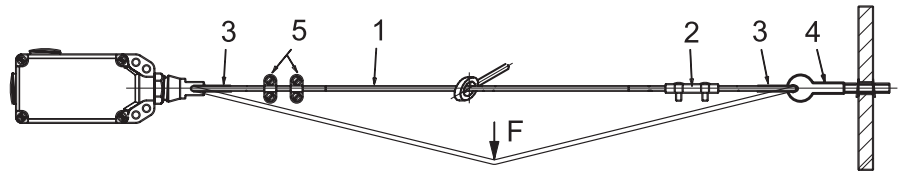
Pull-wire emergency-stop switch	Pre-stress force [N]	Travel S [cm]	Actuating force F [N]	Recommended wire length [m]	Ordering suffix
ZS 70	50	12	8	<8	-
ZS 71	200 55	11 11	25 6	5-20 <5	/200N /55N
ZS 73	295-390 195-275 120-180 80-100	13 13 13 13	38-60 33-41 19-25 5-8	30-50 20-30 10-20 <10	/295-390N /195-275N /120-180N /80-100N
ZS 75	295-390 195-275 120-180 80-100	13 13 13 13	38-60 33-41 19-25 5-8	30-50 20-30 10-20 <10	/295-390N /195-275N /120-180N /80-100N
ZS 441	220 150 60	10 10 10	23 14 6	15-25 5-15 <5	/220N /150N /60N
ZS 80					

The values are indicated for an ambient temperature of 20 °C.
 The linear expansion of the wire due to strain and deformation of the wire thimble is not considered.
 The actuating forces are only approximate values, due to the spring forces being subject to tolerances.
 Actuating force and travel are indicated for a wire length of 5 m.

Emergency pull-wire switches

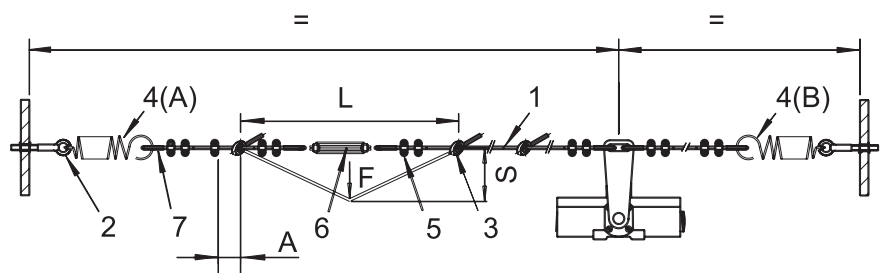
Mounting notes

One-side operation



- 1 = Wire rope
- 2 = DUPLEX wire clamp
- 3 = Wire thimble
- 4 = Eye bolt
- 5 = Wire clamp

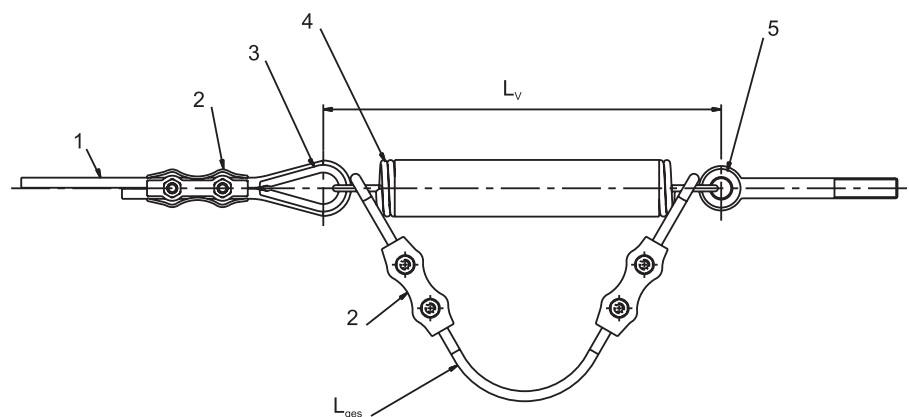
Two-side operation



- 1 = Wire rope
 - 2 = Eye bolt
 - 3 = Wire support
 - 4 = Tension spring
 - 5 = Wire clamp
 - 6 = Tensioner
 - 7 = Wire thimble
- A = Travel limit 70 mm
 L = Wire support max. 4 m
 S = Switching/actuating travel max. 400 mm (L = 4 m)

Note : Always mount emergency pull-wire switch in middle position.

Spring pretensioning and travel limitation



- 1 = Wire rope
 - 2 = DUPLEX wire clamp
 - 3 = Wire thimble
 - 4 = Tension spring
 - 5 = Eye bolt
- L_{ges} = Total length for limitation of spring 270 mm
 L_v = Pre-stress 200 mm

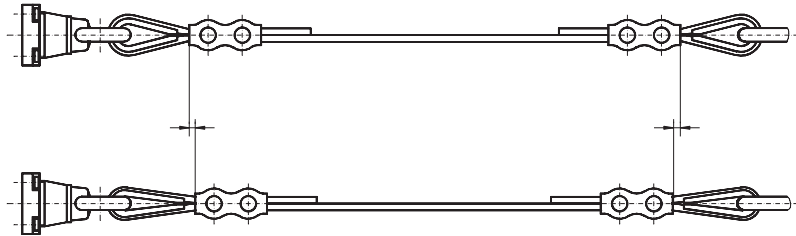
Note:

In order to guarantee safe operation, observe the enclosed mounting and wiring instructions. Before mounting the pull-wire, the red PVC sheath must be removed from the pull-wire in the clamping range of the pull-wire!

Emergency pull-wire switches

Mounting notes

Wire thimble deformation

**Note:**

After fitting the wire, pull strongly on it several times, as the pull-wire and the wire thimble will deform. Subsequently, retense the wire using the Duplex clamp, eye-bolt or tensioner.