





Enclosures

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Equipped Stainless Steel Enclosure

SVA

made in germany



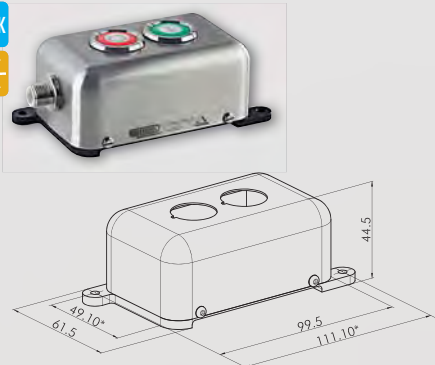
Equipped Stainless Steel Enclosure

Illustration

Dimensions

Description

Type



Stainless Steel Enclosure with 2 illuminated pushbuttons also suitable for hygienic applications

Mounting hole diameter: Ø 4.3mm
 Actuators: 2 pushbutton heads ref.RRJAFT
 Contacts: 1 ea. inverter
 Operating temperature: -30 °C ... +65 °C
 Storage temperature: -50 °C ... +85 °C
 Connection: 8-pole M12 female connector
 Rated voltage: 1 V ... 30/36 V /AC/DC
 Rated current: 0.01 mA ... 100 mA

LED rated voltage: 24 V / AC/DC
 LED rated current: 7 /15 mA

other versions on request

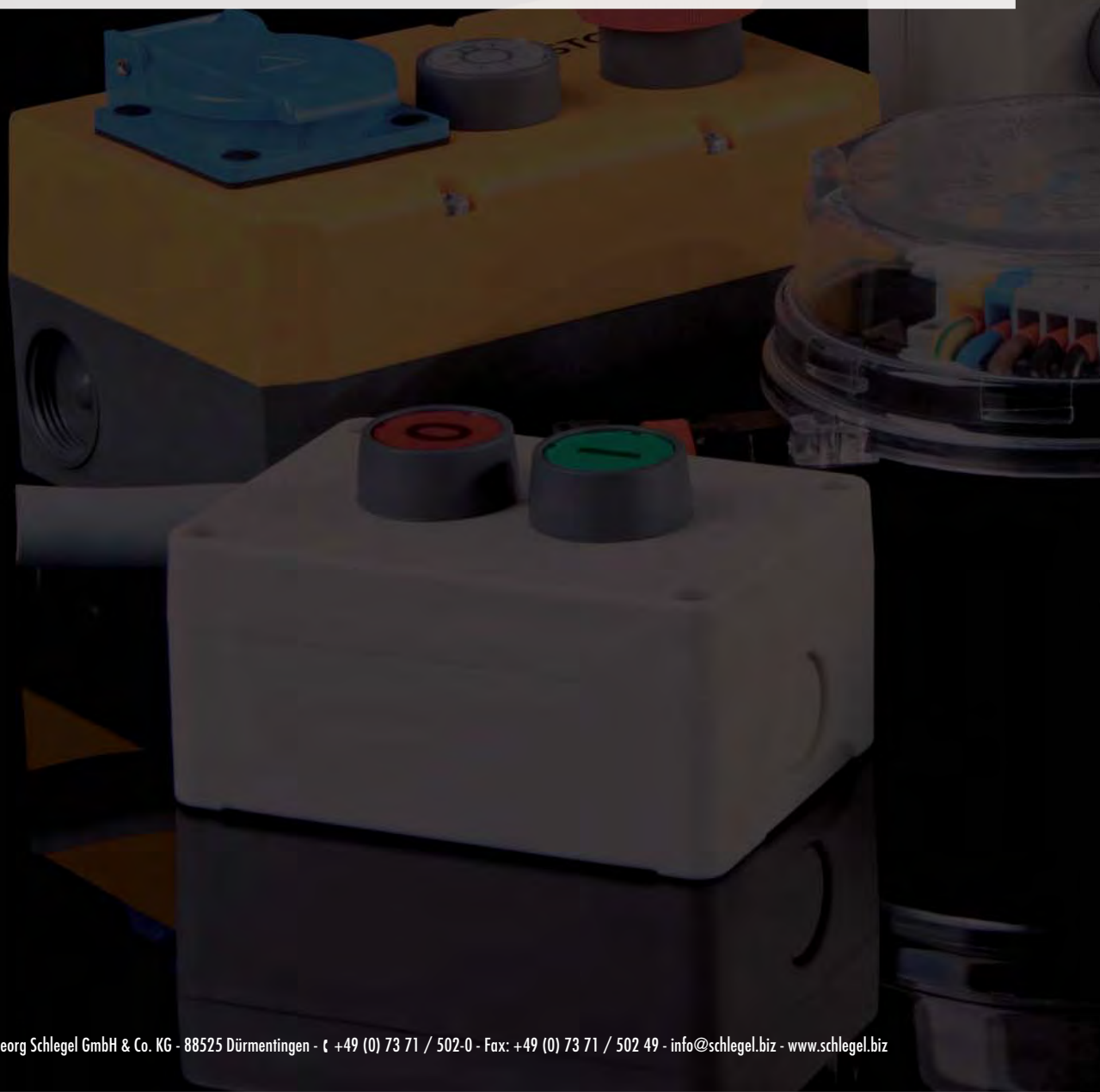
mounting holes 2
 equipped Yes

Panel cut-out Ø 22.3 mm

colour stainless steel, brushed finish



SVAB22/2_01



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General Data

Type Reference:	S41_01; S42_02; S43_03
Description:	Equipped Stainless Steel Enclosure
Approvals:	CE
Nature of contact:	emerg.stop, pos.1: 2NC pushbuttons, pos.2/3: 1NO each
Degree of protection:	IP54
Connection type:	M12 8 poles (m)emerg.stop:pin 1-2 NC1; pin 3-4: NC2 pushbutton 1:pin 5-6:NO
pushbutton 2:pin 7-8:NO	
Contact material:	AgNi, gold-plated
Max. storage temperature:	-25°C ... 80°C
Max. operating temperature:	-25°C ... 70°C
Mechanical life:	emerg.stop:50,000 pushbutton:1 m
Electrical life (rated load):	emerg.stop:50,000 pushbutton:1 m
Bouncing time NO:	< 10ms
Bouncing time NC:	< 10ms
Positive opening contact:	acc. to EN60947-5-1,appendix. K (emerg.stop)

General Data

Rated impulse voltage:	800 V (M12 connector)
Positive opening travel:	> 3 mm
Release:	twist release, left or right (E-stop)
Standards:	EN 60947-5-1, EN 60947-5-5, EN ISO 13850

Electrical Features

Operational voltage:	1 V ... 24 V (UL: 30 VDC, 50 mW max)
Operational current:	1 mA ... 250 mA

Note

S41_01:	emerg.stop in stainless steel enclosure
S42_02:	emerg.stop and 1 pushbutton in stainless steel enclosure
S43_03:	emerg.stop and 2 pushbuttons in stainless steel enclosure
Mounting:	fastening clip on top/at the bottom (incl. T-shaped sliding block)
Emerg. stop:	FRVKOO_AU (2 NC)
Pushbuttons:	SSWTI (1 NO) incl. set of lenses (all colours), without nameplate
Approvals:	emerg.stop: TÜV, UR Pushbuttons: CCC, VDE, ENEC 10

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General Data

Type Reference:	S44_04; S45_05; S46_06
Description:	Illuminated pushbuttons: S42_08; S43_07; S44_09, S45_10, S46
Approvals:	Equipped Stainless Steel Enclosure
Nature of contact:	CE
	emerg.stop, pos.1: 2NC pushbuttons, pos.2...6: 1NO each (optional: with illumination)
Degree of protection:	IP54
Connection type:	Faston terminals 2.8x0.8 mm
Contact material:	AgNi
Max. storage temperature:	-25°C ... 80°C
Max. operating temperature:	-25°C ... 70°C
Mechanical life:	emerg.stop:50,000 pushbutton:1m
Electrical life (rated load):	emerg.stop:50,000 pushbutton:1m
Bouncing time NO:	< 10ms
Bouncing time NC:	< 10ms
Positive opening contact:	acc. to EN60947-5-1, appendix. K (emerg.stop)

Electrical data acc. to IEC/EN 60947-5-1 (VDE 0660 Sect. 200)

Utilisation category:	AC15	DC13
Rated operating voltage U _e :	24V	24V
Rated operating current I _e :	3A	2 A
Breaking capacity:	10I _e	1,1I _e
Continuous thermal current:	5A	

Technical Data - Lamp

Lamp socket:	integrated 3 mm LED (applies only to illuminated types)
Max. lamp voltage:	30 V AC/DC
Max. lamp output:	14mA (at 24 V DC)
Definition:	X1...anode, X2...cathode

General Data

Positive opening travel:	> 3 mm
Release:	twist release, left or right (E-stop)
Standards:	EN 60947-5-1, EN 60947-5-5, EN ISO 13850

Note

S44_04:	emerg.stop and 3 pushbuttons in stainless steel enclosure, glanded
S45_05:	emerg.stop and 4 pushbuttons in stainless steel enclosure, glanded
S46_06:	emerg.stop and 5 pushbuttons in stainless steel enclosure, glanded
S43_07:	emerg.stop and 2 illuminated pushbuttons in stainless steel enclosure, glanded
S42_08:	emerg. stop and 1 illuminated pushbutton in stainless steel enclosure, glanded
S44_09:	emerg. stop and 3 illuminated pushbuttons in stainless steel enclosure, glanded

Mounting:	fastening clip on top/at the bottom (incl. T-shaped sliding block)
Cable gland:	M16x1.5
Emerg. stop:	FRVKOO (2 NC)
Pushbuttons:	SSWTI (1 NO) incl. set of lenses (all colours), without nameplate or SSWTII (1 NO, illuminated) incl. set of lenses (all colours), without nameplate

Approvals:	emerg.stop:	TÜV, UR
	Pushbuttons:	CCC, VDE, ENEC 10

Use partially or fully insulated Faston clamps

The user has to make sure that the contact blocks mounted in the enclosure are properly connected in order to comply with the requirements regarding clearance and creepage distances in normal use.

Data Sheet	art.no.: 615403902
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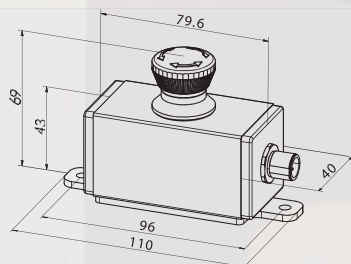
Equipped Stainless Steel Enclosure

Illustration

Dimensions

Description

Type



Equipped Stainless Steel Enclosure with M12 cable entry (8 poles) for profile rail mounting

1 emergency stop FRVKOO

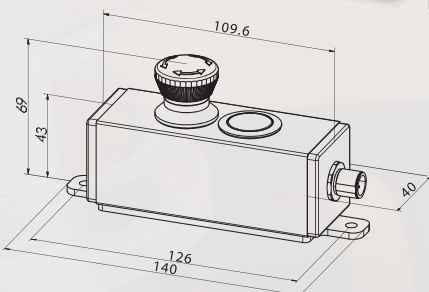
mounting holes 1

equipped Yes

colour stainless steel, brushed finish



S41_01



Equipped Stainless Steel Enclosure with M12 cable entry (8 poles) for profile rail mounting

1 emergency stop FRVKOO

1 pushbutton SSWTI

incl. lenses (clear, red, green, yellow, blue)

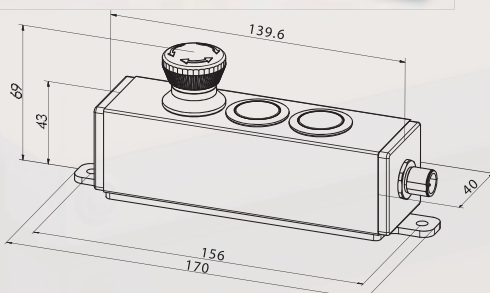
mounting holes 2

equipped Yes

colour stainless steel, brushed finish



S42_02



Equipped Stainless Steel Enclosure with M12 cable entry (8 poles) for profile rail mounting

1 emergency stop FRVKOO

2 pushbuttons SSWTI

incl. lenses (clear, red, green, yellow, blue)

mounting holes 3

equipped Yes

colour stainless steel, brushed finish



S43_03

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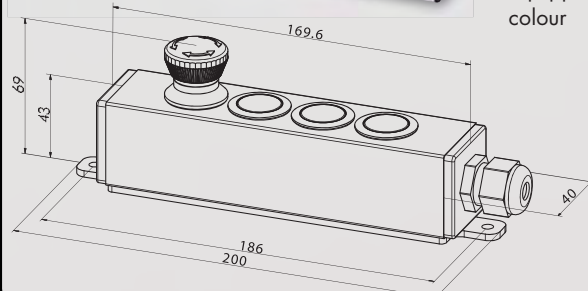
Equipped Stainless Steel Enclosure

Illustration

Dimensions

Description

Type



Equipped Stainless Steel Enclosure, glanded for profile rail mounting

- 1 emergency stop FRVKOO
- 3 pushbuttons SSWTI

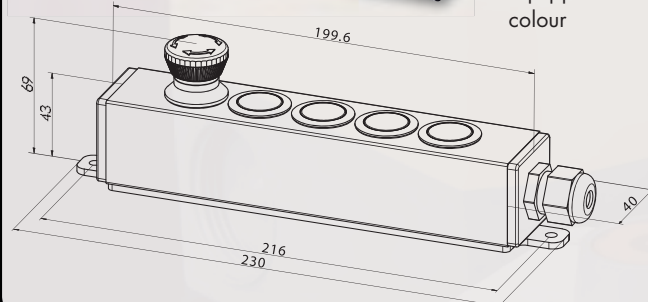
incl. lenses (clear, red, green, yellow, blue)

mounting holes 4

equipped Yes

colour stainless steel, brushed finish

S44_04



Equipped Stainless Steel Enclosure, glanded for profile rail mounting

- 1 emergency stop FRVKOO
- 4 pushbuttons SSWTI

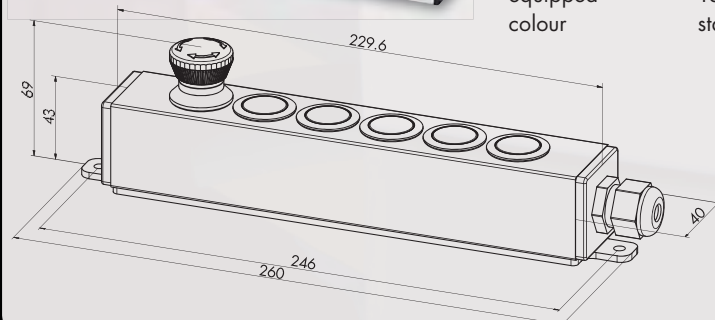
incl. lenses (clear, red, green, yellow, blue)

mounting holes 5

equipped Yes

colour stainless steel, brushed finish

S45_05



Equipped Stainless Steel Enclosure, glanded for profile rail mounting

- 1 emergency stop FRVKOO
- 4 pushbuttons SSWTI

incl. lenses (clear, red, green, yellow, blue)

mounting holes 6

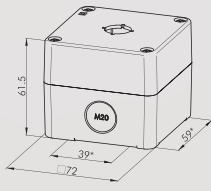
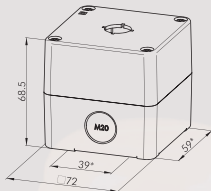
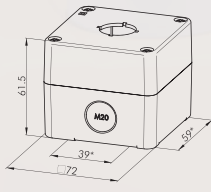
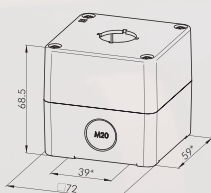
equipped Yes

colour stainless steel, brushed finish

S46_06

Insulated Plastic Enclosures

SIL... enclosures with M12 connection and special assemblies on request.

Illustration	Dimensions	Description	Type
		Insulated Plastic Enclosure with 1 mounting hole cUL US mounting holes 1 equipped No weight 96 g cable entry break-through wall M20 mounting depth 59 mm Panel cut-out Ø 16.2 mm colour black bottom part/yellow cover	SIL16/1
		High Insulated Plastic Enclosure with 1 mounting hole cUL US mounting holes 1 equipped No weight 104 g cable entry break-through wall M20 mounting depth 66 mm Panel cut-out Ø 16.2 mm colour black bottom part/yellow cover	SILH16/1
		Insulated Plastic Enclosure with 1 mounting hole mounting holes 1 equipped No weight 96 g cable entry break-through wall M20 mounting depth 59 mm Panel cut-out Ø 22.3 mm colour black bottom part/yellow cover	SIL22/1
		High Insulated Plastic Enclosure with 1 mounting hole cUL US mounting holes 1 equipped No weight 104 g cable entry break-through wall M20 mounting depth 66 mm Panel cut-out Ø 22.3 mm colour black bottom part/yellow cover	SILH22/1

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General Data

Type Reference:	MT...
Description:	Modular Contact Block
Approvals:	CCC, CSA, ENEC05, KEMA, CE, TÜV_Süd, UL
Protection class:	II (protective insulation)
Operation travel:	6 mm
Connection type:	screw connection 2x2.5mm ²
Contact material:	AgNi
Max. storage temperature:	-50°C ... 85°C
Max. operating temperature:	-30°C ... 85°C, without illumination -30°C ... 55°C, using incandescent lamps -30°C ... 65°C, using LED's
Mechanical life:	1 m switching cycles
Electrical life (rated load):	1m operations at rated load
Contact resistance NO:	< 20 mOhm
Contact resistance NC:	< 20 mOhm
Min. current:	1 mA (under laboratory conditions)
Min. voltage:	5 V
Bouncing time NO:	< 10ms
Bouncing time NC:	< 10ms
Positive opening contact:	acc. to EN60947-5-1, appendix. K

Electrical data acc. to IEC/EN 60947-5-1 (VDE 0660 Sect. 200)

Utilisation category:	alternate current	direct current
Rated insulation voltage Ui:	AC15 A600	DC13 Q600
Rated operating voltage Ue:	600 V	600 V
Rated operating current Ie:	240V / 440V	440V / 250V / 125V / 60V / 24V
Breaking capacity:	3A / 1.6A	0.12A / 0.2A / 0.4A / 1A / 2A
Continuous thermal current:	10Ie	1,1Ie
	16 A	

Electrical data acc. to IEC/EN 61058-1 (VDE 0630 Sect. 1)

Rated voltage Ue:	250 V~ / 440 V~
Rated current Ie:	16(10) A / 10(6) A

Technical Data - Lamp

Lamp socket:	BA9s
Max. lamp voltage:	250 V / (CSA max. 150V)
Max. lamp output:	2 W
Definition:	X1...anode, X2...cathode

Electrical Features - 5µm gold-plating, type addition ...AU

Switching voltage:	20mV ... 42V AC/DC
Switching current:	1mA ... 250mA
Contact resistance (new state):	< 50 mOhm

General Data

Tightening torque (screw terminal):	0.8...1.0 Nm
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Note

Min. operating temperature when assembled with KRJ...actuators: -40°C ...;
Data Sheet does not apply to the following type: MTOSFE

Electrical Data acc. to UL 508

Ratings:	A600, 600 V AC
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Equipped Insulated Plastic Enclosures

SIL...enclosures with M12 connection and special assemblies on request

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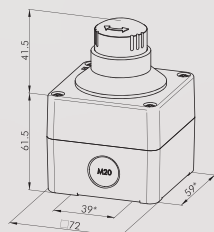
Illustration

Dimensions

Description

Type

IP65
IP69K



Emergency-stop Control Station

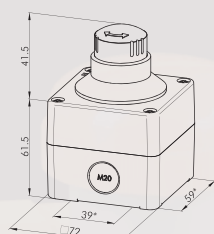
with switching position indicator and yellow anti-lock collar, twist release, acc. to EN ISO 13850, VDE 0660, sect.200, IEC/EN 60947-5-1 and IEC/EN 60947-5-5
For technical data on the appropriate contact blocks refer to previous page.

Mounting hole dia. 4.2 mm

equipped Yes
cable entry break-through wall M20
Contact equipment 2NC
colour black bottom part/yellow cover

SIL_QRBUVOO

IP65



Emergency-stop Control Station, illuminated

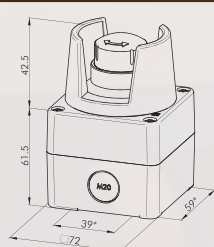
with switching position indicator and yellow illuminated anti-lock collar, twist release, acc. to EN ISO 13850, VDE 0660, sect.200, IEC/EN 60947-5-1 and IEC/EN 60947-5-5
For technical data on the appropriate contact blocks refer to previous page.

Mounting hole dia. 4.2 mm

equipped Yes
cable entry break-through wall M20
Contact equipment 2NC
colour black bottom part/yellow cover

SIL_QRBLUVOO

IP65
IP69K



Emergency-stop Control station

with switching position indicator and yellow protective shroud, twist release, acc. to EN ISO 13850, VDE 0660, sect.200, IEC/EN 60947-5-1 and IEC/EN 60947-5-5
For technical data on the appropriate contact blocks refer to previous page.

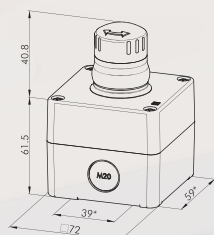
Mounting hole dia. 4.2 mm

NOTE: The user must ensure the emergency stop with protective shroud to be easy accessible!

equipped Yes
cable entry break-through wall M20
Contact equipment 2NC
colour black bottom part/yellow cover

SIL_QRSKUVOO

IP69K



Emergency-stop Control Station for hygienic application

twist release E-stop, compliant to BG acc. to DIN EN 1672-2 and GS-FW 01/01
For technical data on the appropriate contact blocks refer to previous page.

Mounting hole dia. 4.2 mm

equipped Yes
cable entry break-through wall M20
Contact equipment 2NC
colour black bottom part/yellow cover

SIL_QRUVPOO

General Data

Type Reference: ASI_SAW16A, ASI_SAW16E, ASI_SAW22A, ASI_SAW22E,
Description: AS-Interface Slave (Safety at Work)
Approvals: ASI, cCSAus, TÜV_Süd, TÜV_SÜD, CE

Note

Communication
- AS-Interface specification: V 2.1
- Slave profile: ASI_SAWxxA S-7.B.E
ASI_SAWxxE S-0.B.E
- Standby delay time: < 1s
- Input delay: < 5ms
- Connection: via 2-pole IDC connector(3.96mm) with lock mechanism and strain relief
type ref.: "ASI_SL2AWG18"
- Addressing: via integrated connector or separate addressing connector *)

Ambient Conditions

- Operating temperature: -25 °C ...+70 °C
- Humidity: up to 95%, non-condensing
- Degree of protection /slave:IP20
- Pollution degree: 2 (acc. to IEC 60947-1)

Electrical Data

- Operating voltage: 26.5...3.6 V, through the AS-Interface line
- Total power consumption: ASI_SAWxxA: <= 60 mA
ASI_SAWxxE: <= 50 mA
- Reverse polarity protection: available
- Contacts: two positive opening contacts acc. to IEC60947-5-5
- Safety integrity level: SIL 3
- Output (not safe): for the control of a LED *)
Rated voltage: 24 V DC (+10%)
Max. power consumption: approx. 15mA
Short circuit/overload: LED output
Connection cable: type ref.: "VK_JST025BKL", "VK_JST034"

Norms and Standards

- Complete AS-Interface Specification, Version 2.11 Rev.1, V3.0 Rev. 0
- IEC 62026-2, IEC 60204-1, IEC 61508, EN 13850, IEC 60947-5-5
- TÜV Type Approval, UL/CSA Approval
- AS-Interface Certificate 62801

- The Schlegel ASi slaves comply with the specification
AS-Interface POWER24 and can also be operated at 24 V.

*) refers only to types ASI_SAW16A, ASI_SAW22A (with additional addressing connector)

Equipped Insulated Plastic Enclosures



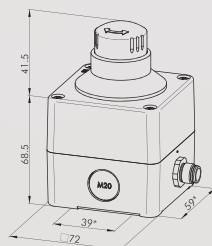
Illustration

Dimensions

Description

Type

IP65



AS-Interface Emergency-stop Control Station - Safety at Work -

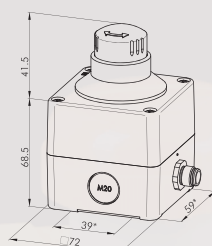


ASI slave: ASI_SAW22E
actuator: QRBUV, foolproof acc. to EN ISO 13850
Connection: M12 (4 poles)

equipped Yes
Contact equipment bus-compatible
colour black bottom part/yellow cover

SILH_ASI_QRBUV

IP65



AS-Interface Emergency-stop Control Station, illuminated - Safety at Work -

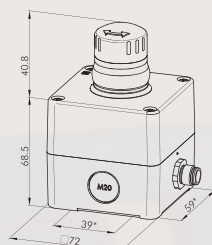


ASI slave: ASI_SAW22A
actuator: QRBLUV, foolproof acc. to EN ISO 13850
connection: M12 (4 poles)

equipped Yes
Contact equipment bus-compatible
colour black bottom part/yellow cover

SILH_ASI_QRBLUV

IP69K



AS-Interface Emergency-stop Control Station - Safety at Work -

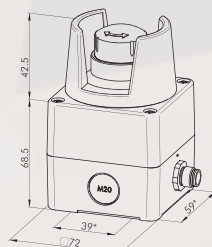


ASI slave: ASI_SAW22E
actuator: QRUPV for hygienic application, (compliant with BG acc. to DIN EN 1672-2 and GS-FW 01/01)
foolproof acc. to EN ISO 13850
Connection: M12 (4 poles)

equipped Yes
Contact equipment bus-compatible
colour black bottom part/yellow cover

SILH_ASI_QRUPV

IP65



AS-Interface Emergency-stop Control Station - Safety at Work -



ASI slave: ASI_SAW22E
actuator: QRSKUV, foolproof acc. to EN ISO 13850
Connection: M12 (4 poles)

equipped Yes
Contact equipment bus-compatible
colour black bottom part/yellow cover

SILH_ASI_QRSKUV

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Minibox with Cable Entry M16/M20 for profile rail or wall mounting

General Data - Contact Module

- > Operating temperature: -25°C ... 70°C
- > Storage temperature: -40°C ... 85°C
- > Vibration / shock resistance: acc. to EN 60068-2-6/-27
- > Environmental conditions: acc. to EN 60068-2

Technical Data - Switch Element

- > Ratings (gold-plated contacts): 20mV...42V AC/DC
1mA...250mA
non-illuminated AC15 B300 250V/1.5A, lth 5A DC13 Q300, 250V/0.27A
illuminated SELV
- > Ratings (silver contacts) acc. to EN 60947-5-1: 50,000
- > Electrical life (rated load): EN 60947-5-1, app. K
- > Positive opening contact:

Technical Data - LED

- > Operating voltage: 24V DC
- > Power consumption: max. 15 mA (at 24 V DC)

Using the fastening clip, the minibox can be mounted both on a profile rail or on a wall.

Assembly sequence using the example of profile rail mounting with lateral cable entry (not M12 version)



- > screw down mounting clip

1



- > attach lower box part
- > insert cable
- > contact wire ends
- > snap in PC board

2



- > snap on upper box part

3



- > ready

4

Equipped Insulated Plastic Enclosures

Illustration	Dimensions	Description	Type
IP65		minibox with lateral cable entry M16 illuminated emergency-stop pushbutton equipped Yes Contact equipment 2NC colour dark-grey bottom part/yellow cover	MBP_FRVKLOO
IP65		minibox with lateral cable entry M16 equipped Yes Contact equipment 2NC colour dark-grey bottom part/yellow cover	MBP_FRVKOO
IP65		minibox with bottom-side cable entry M20 illuminated emergency-stop pushbutton equipped Yes Contact equipment 2NC colour dark-grey bottom part/yellow cover	MBW_FRVKLOO
IP65		minibox with bottom-side cable entry M20 equipped Yes Contact equipment 2NC colour dark-grey bottom part/yellow cover	MBW_FRVKOO

Equipped Insulated Plastic Enclosures

ready-to-connect, M12 connection

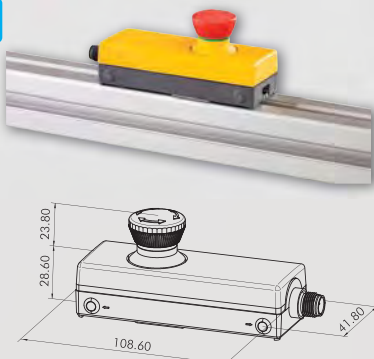
Illustration

Dimensions

Description

Type

IP65



minibox with M12 cable entry (4 poles)



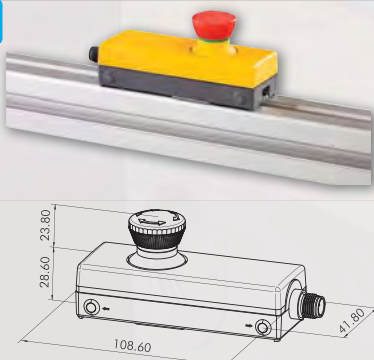
Operating temperature: -25 °C...+70 °C
Storage temperature: -25°C...+85 °C
Connection: M12, 4 poles (m)
Pin 1,2: NC 1; Pin 3,4: NC 2
Contact material: AgNi
Electrical life: 50.000 at rated load
Positive opening: acc. to EN 60947-5-1, appendix K
Test voltage M12 plug: 2.0 kV

Electrical Data acc. to IEC/EN 60947-5-1 (VDE 0660 sect. 200)

	alternating current	direct current
Utilisation category :	AC15	DC13
Rated operating voltage U_e :	240V	250V
Rated operating current I_e :	1.5A	0.27A
equipped	Yes	
colour	dark-grey bottom part/yellow cover	

MBM124_
FRVKOO

IP65



minibox with M12 cable entry (8 poles)



Operating temperature: -25 °C...+70 °C
Storage temperature: -25°C...+85 °C
Connection: M12, 8 poles (m)
pin 1,2: NC 1; pin 3,4: NC 2
pin 5,6: NO ; pin 7,8: NC.
Contact material: AgNi, gold-plating 5µm
Electrical life: 50.000 at rated load
Positive opening: acc. to EN 60947-5-1, appendix K
Test voltage M12 plug: 1.5 kV

Electrical Data

Operating voltage:	1V... 36V
Operating current:	1mA ... 250mA
equipped	Yes
Contact equipment	1 NO + 2 NC (positive opening contacts)
colour	dark-grey bottom part/yellow cover

MBM128_
FRVKOOI

Equipped Insulated Plastic Enclosures

ready-to-connect, M12 connection

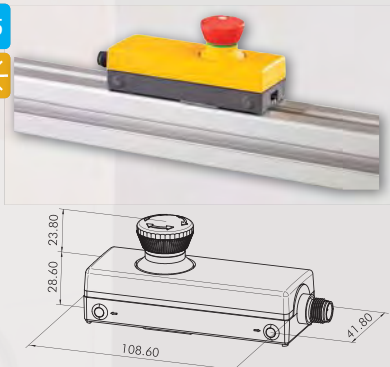
Illustration

Dimensions

Description

Type

IP65



minibox with M12 cable entry (8 poles) illuminated emergency-stop pushbutton



Operating temperature: -25 °C...+70 °C
Storage temperature: -25°C...+85 °C
Connection: M12, 8 poles (m)
Pin 1,2: NC 1; Pin 3,4: NC 2
Pin 5 (X1/+), Pin6 (X2/-): LED; Pin 7,8: n.c.
Contact material: AgNi, gold-plated 5µm
Electrical life: 50.000 at rated load
Positive opening: acc. to EN 60947-5-1, appendix K
Test voltage M12 plug: 1.5 kV

Electrical Data

Operating voltage: 1V... 36V
Operating current: 1mA ... 250mA
LED lighting: max. 30 V AC/DC, type 4 mA (at 24 V DC)

equipped Yes
Contact equipment 2NC, positive opening contact
colour dark-grey bottom part/yellow cover

MBM128
FRVKLOO

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ready-to-connect, M12 connection

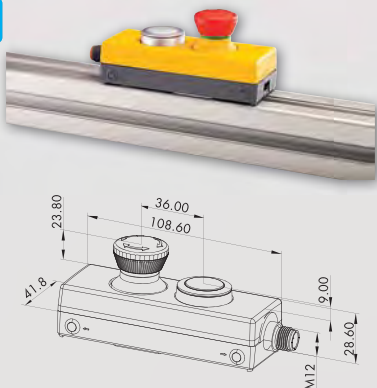
Illustration

Dimensions

Description

Type

IP65



minibox with M12 cable entry (8 poles) incl. E-stop and pushbutton



Lenses and nameplates to be ordered separately.

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

Storage temperature: -25°C...+85 °C

Switch type: emergency stop:
2 NC (positive opening), 1 NO

Pushbutton: 1 NO

Fixation: with fastening clip on the rear

Connection: M12 8 poles (m)

Pos.1 (emergency stop)

NC 1, pin 1-2; NC 2, pin 3-4;

NO, pin 5-6

Pos.2: (pushbutton)

NO, Pin 7-8

AgNi, gold-plated 5µm

Contact material:

Electr./mech. life:

emergency stop: 50.000 at rated load (ambient temp. = 20°C)

pushbutton: 1 million (ambient temp. = 20°C)

Positive opening: opening contact acc. to EN 60947-5-1,
appendix K

Test voltage M12 plug: 1.5kV

Electrical Data

Operating voltage: 1V... 36V

Operating current: 1mA ... 250mA

equipped Yes

colour dark-grey bottom part/yellow cover

MBM128_NOOITI

Equipped Insulated Plastic Enclosures

ready-to-connect, M12 connection

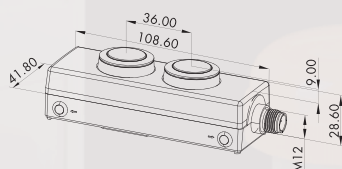
Illustration

Dimensions

Description

Type

IP65



minibox with 2 pushbuttons and M12 cable entry (8 poles)



Lenses and nameplates to be ordered separately.

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

Storage temperature: -25°C...+85 °C

Pushbutton type: 1 NO and 1 NC (positive opening)

Fixation: with fastening clip on the rear

Connection: M12 8 poles (m)

Pos.1 (pushbutton)

NO, pin 1-2; lamp, pin 3-4;

Pos.2 (pushbutton); NC, pin 5-6;

lamp, pin 7-8

Contact material: AgNi, gold-plated 5µm

Electrical life: 1 million at rated load (ambient temp. = 20°C)

Mechanical life: 1 million operations (ambient temp. = 20°C)

Positive opening: NC contact acc. to EN 60947-5-1, appendix K

Test voltage M12 plug: 1.5 kV

Electrical Data

Operating voltage: 1V... 36V

Operating current: 1mA ... 250mA

LED illumination: max. 30 V AC/DC, typ. 4 mA (at 24 V DC)

equipped Yes

colour dark-grey bottom part/yellow cover

dark-grey bottom part/light-grey cover

MBM128_TLITLO

MBM128_GR_
TLITLO

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ready-to-connect, M12 connection

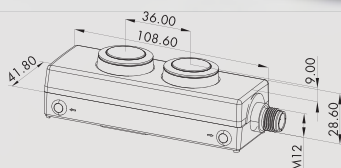
Illustration

Dimensions

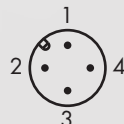
Description

Type

IP65



minibox with 2 pushbuttons and M12 cable entry (4 poles)



Lenses and nameplates to be ordered separately.

Operating temperature:	-25 °C...+70 °C
Storage temperature:	-25°C...+85 °C
Pushbutton type:	1 NO and 1 NC (positive opening)
Fixation:	with rear mounting clip
Connection:	M12 4 poles (m)
	Pos.1 (pushbutton 1) NO, pin 1-2
	Pos. 2 (pushbutton 2) NC, pin 3-4
Contact material:	AgNi
Mechanical life:	1 million (ambient temp. = 20°C)
Positive opening:	NC contact, acc. to EN 60947-5-1, appendix K
Test voltage M12 plug:	2.0kV

Electrical Data acc. to IEC/EN 60947-5-1 (VDE 0660 sect. 200)

	alternating current	direct current
Utilisation category:	AC15	DC13
Rated operating voltage U_e :	240V	250V
Rated operating current I_e :	1.5A	0.27A
equipped	Yes	
colour	dark-grey bottom part/yellow cover	

MBM124_TITO

Equipped Insulated Plastic Enclosures

ready-to-connect, M12 connection

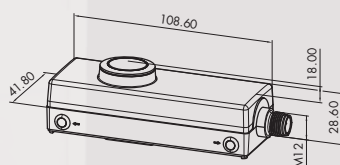
Illustration

Dimensions

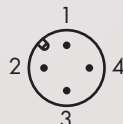
Description

Type

IP65



minibox with pushbutton and M12 cable entry (4 poles)



Lenses and nameplates to be ordered separately.

Operating temperature: -25 °C...+70 °C
Storage temperature: -25°C...+85 °C
Pushbutton type: 1 NO
Degree of protection: IP65
Fixation: with rear mounting clip
Connection: M12 4 poles (m)
NO, Pin 1-2
lamp, Pin 3 (X1 +) - Pin 4 (X2 -)

Contact material: AgNi
Mechanical life: 1m (ambient temp. 20°C)
Bouncing time: < 10ms
Test voltage M12 plug: 2.0 kV

Electrical Data - Contact Element acc. to IEC/EN 60947-5-1
(VDE 0660 sect. 200)

	alternating current	direct current
Utilisation category:	AC15	DC13
Rated operating voltage U _e :	240V / 120V	250V / 125V / 60V / 24V
Rated operating current I _e :	1.5A / 3A 0.27A /	0.55A / 1A / 2A
Breaking capacity:	10I _e	1.1I _e
Continuous thermal current:	4A (40°C)	2.5A

Electrical Data - diode

LED: max. 30 V AC/DC, typ. 14 mA (at 24 V DC)

equipped Yes
colour dark-grey bottom part/light-grey cover

MBM124_GR_TLI

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Insulated Plastic Enclosures

The degree of protection depends on the type of control units that are mounted.
other enclosure colours on request

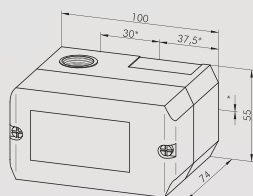
Illustration

Dimensions

Description

Type

IP65



*Dimensions for fastening holes

Insulated Plastic Enclosure, 1 mounting hole

made of polyamide 6, empty or equipped, with front plate (engraving, printing or laser marking on request)

mounting holes 0
equipped No
weight 165 g
material polyamide 6
cable entry M20x1.5
mounting depth 69 mm
Panel cut-out without mounting hole
colour dark-grey bottom part/light-grey cover
colour dark-grey bottom part/yellow cover

DIRL1V
DIRL1VGB

mounting holes 1
Panel cut-out Ø 16.2 mm
colour dark-grey bottom part/light-grey cover
colour dark-grey bottom part/yellow cover

DIRL1V-R16
DIRL1VGB-R16

mounting holes 1
Panel cut-out Ø 22.3 mm
colour dark-grey bottom part/light-grey cover
colour dark-grey bottom part/yellow cover

DIRL1V-R22
DIRL1VGB-R22

mounting holes 1
Panel cut-out Ø 30.5 mm
colour dark-grey bottom part/light-grey cover
colour dark-grey bottom part/yellow cover

DIRL1VDGHHG-R30
DIRL1VDGGB-R30

mounting holes 1
Panel cut-out 23 x 23 mm
colour dark-grey bottom part/light-grey cover
colour dark-grey bottom part/yellow cover

DIRL1V-Q23
DIRL1VGB-Q23

mounting holes 1
Panel cut-out 24 x 24 mm
colour dark-grey bottom part/light-grey cover
colour dark-grey bottom part/yellow cover

DIRL1V-Q24
DIRL1VGB-Q24

mounting holes 1
Panel cut-out 26 x 26 mm
colour dark-grey bottom part/light-grey cover
colour dark-grey bottom part/yellow cover

DIRL1V-Q26
DIRL1VGB-Q26

Insulated Plastic Enclosures

The degree of protection depends on the type of control units that are mounted.
other enclosure colours on request

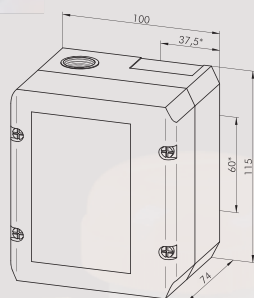
Illustration

Dimensions

Description

Type

IP65



*Dimensions for fastening holes

Insulated Plastic Enclosure, 2 mounting holes

made of polyamide 6, empty or equipped, with front plate
(engraving, printing or laser marking on request)

equipped No
weight 270 g
material polyamide 6
cable entry M20x1.5
mounting depth 69 mm
Panel cut-out without mounting hole
colour dark-grey bottom part/light-grey cover

DIRL2-3V

mounting holes 2
Panel cut-out Ø 16.2 mm
colour dark-grey bottom part/light-grey cover

DIRL2V-R16

mounting holes 2
Panel cut-out Ø 22.3 mm
colour dark-grey bottom part/light-grey cover

DIRL2V-R22

mounting holes 2
Panel cut-out Ø 30.5 mm
colour dark-grey bottom part/light-grey cover

DIRL3VDGHG-2R30

mounting holes 2
Panel cut-out 23 x 23 mm
colour dark-grey bottom part/light-grey cover

DIRL2V-Q23

mounting holes 2
Panel cut-out 24 x 24 mm
colour dark-grey bottom part/light-grey cover

DIRL2V-Q24

mounting holes 2
Panel cut-out 26 x 26 mm
colour dark-grey bottom part/light-grey cover

DIRL2V-Q26

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The degree of protection depends on the type of control units that are mounted.
other enclosure colours on request

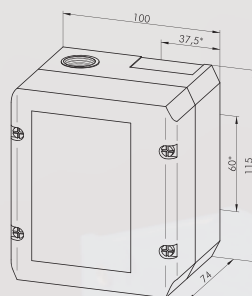
Illustration

Dimensions

Description

Type

IP65



*Dimensions for fastening holes

Insulated Plastic Enclosure, 3 mounting holes

made of polyamide 6, empty or equipped, with front plate (engraving, printing or laser marking on request)

mounting holes 3
equipped No
weight 270 g
material PA6
cable entry M20x1.5
mounting depth 69 mm
Panel cut-out Ø 16.2 mm
colour dark-grey bottom part/light-grey cover

DIRL3V-R16

mounting holes 3
Panel cut-out Ø 22.3 mm
colour dark-grey bottom part/light-grey cover

DIRL3V-R22

mounting holes 3
Panel cut-out 23 x 23 mm
colour dark-grey bottom part/light-grey cover

DIRL3V-Q23

mounting holes 3
Panel cut-out 24 x 24 mm
colour dark-grey bottom part/light-grey cover

DIRL3V-Q24

mounting holes 3
Panel cut-out 26 x 26 mm
colour dark-grey bottom part/light-grey cover

DIRL3V-Q26

Insulated Plastic Enclosures

The degree of protection depends on the type of control units that are mounted.
other enclosure colours on request

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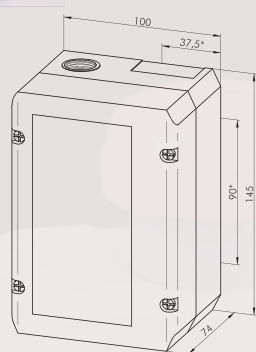


Insulated Plastic Enclosure, 3 resp. 4 mounting holes

made of polyamide 6, empty or equipped, with front plate (engraving, printing or laser marking on request)

equipped No
weight 310 g
material polyamide 6
cable entry M25x1.5
mounting depth 69 mm
Panel cut-out without mounting hole
colour dark-grey bottom part/light-grey cover

DIRL4V



mounting holes 4
Panel cut-out Ø 16.2 mm
colour dark-grey bottom part/light-grey cover

DIRL4V-R16

mounting holes 4
Panel cut-out Ø 22.3 mm
colour dark-grey bottom part/light-grey cover

DIRL4V-R22

mounting holes 3
Panel cut-out Ø 30.5 mm
colour dark-grey bottom part/light-grey cover

DIRL4VDGHH-3R30

mounting holes 4
Panel cut-out 23 x 23 mm
colour dark-grey bottom part/light-grey cover

DIRL4V-Q23

mounting holes 4
Panel cut-out 24 x 24 mm
colour dark-grey bottom part/light-grey cover

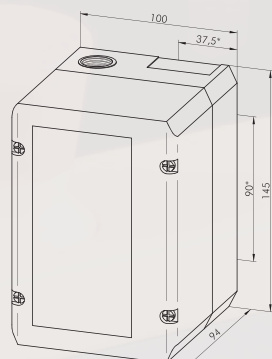
DIRL4V-Q24

mounting holes 4
Panel cut-out 26 x 26 mm
colour dark-grey bottom part/light-grey cover

DIRL4V-Q26

*Dimensions for fastening holes

IP65



High Insulated Plastic Enclosure, 4 mounting holes

same as DIRL4V-R22 but with high lid, accepting 4 control units, each with two contact levels

mounting holes 4
material polyamide 6
cable entry M25x1.5
mounting depth 89 mm
Panel cut-out Ø 22.3 mm
colour dark-grey bottom part/light-grey cover

DIRL4V-R22-H

Equipped Insulated Plastic Enclosures

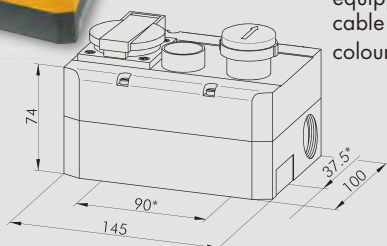
Illustration

Dimensions

Description

Type

IP54



Elevator Safety Control Station

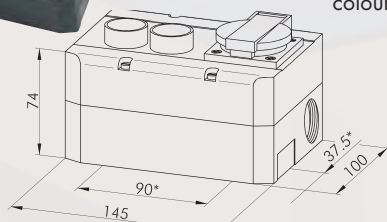
Insulated plastic enclosure made of polyamide 6, printed „STOP“, including 1 emergency-stop pushbutton with yellow arrow marking which clearly defines the switching position, 1 illuminated pushbutton for the hoistway lighting and a Schuko socket

equipped
cable entry
colour

Yes
M25x1.5
dark-grey bottom part/yellow cover

DIR/GRU-I

IP54



Elevator Safety Control Station

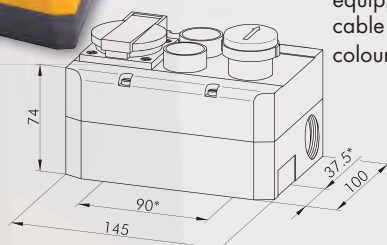
Insulated plastic enclosure made of polyamide 6, including 1 illuminated pushbutton for the hoistway lighting, 1 alarm pushbutton and a Schuko socket

equipped
cable entry
colour

Yes
M25x1.5
dark-grey bottom part/light-grey cover

DIR/GRU-II

IP54



Elevator Safety Control Station

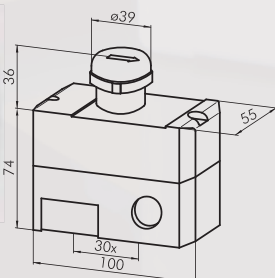
Insulated plastic enclosure made of polyamide 6, printed „STOP“, including 1 emergency-stop pushbutton with yellow arrow marking which clearly defines the switching position, 1 illuminated pushbutton for the hoistway lighting, 1 alarm pushbutton and a Schuko socket

equipped
cable entry
colour

Yes
M25x1.5
dark-grey bottom part/yellow cover

DIR/GRU-III

IP65



Emergency-stop Station for the elevator cage roof

Insulated plastic enclosure marked STOP. The yellow arrow on the E-stop clearly defines the switching position. The standard version includes 1 NC (screw connection).

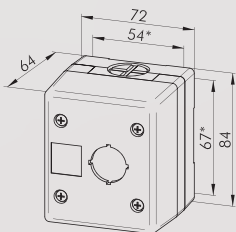
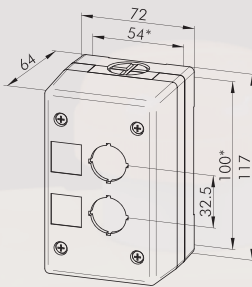
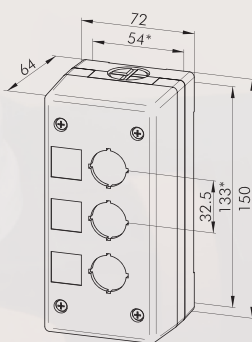
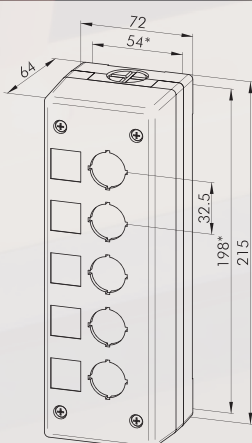
Acc. to the EN81 regulations new lifts have to be equipped with an emergency-stop switch with switching position indicator.

equipped
cable entry
Panel cut-out
colour

Yes
M20x1.5
Ø 22.3 mm
dark-grey bottom part/yellow cover

DIRB1GB_OS

Insulated Plastic Enclosures

Illustration	Dimensions	Description	Type
IP65 		Insulated Plastic Enclosure Fastening holes: Ø 5.2mm mounting holes 1 equipped No weight 165 g material ABS cable entry with PVC cable entry on the top: 22.6 mm dia. break-through wall at the bottom: 22.6 mm dia. mounting depth 52 mm Panel cut-out Ø 22.3 mm colour light-grey colour yellow	IRL1M IRL1M_GELB
		* Fastening hole dimensions	
IP65 		Insulated Plastic Enclosure Fastening holes: Ø 5.2mm mounting holes 2 equipped No weight 195 g material ABS cable entry with PVC cable entry on the top: 22.6 mm dia. break-through wall at the bottom: 22.6 mm dia. mounting depth 52 mm Panel cut-out Ø 22.3 mm colour light-grey	IRL2M
		* Fastening hole dimensions	
IP65 		Insulated Plastic Enclosure Fastening holes: Ø 5.2mm mounting holes 3 equipped No weight 230 g material ABS cable entry with PVC cable entry on the top: 22.6 mm dia. break-through wall at the bottom: 22.6 mm dia. mounting depth 52 mm Panel cut-out Ø 22.3 mm colour light-grey	IRL3M
		* Fastening hole dimensions	
IP65 		Insulated Plastic Enclosure Fastening holes: Ø 5.2mm mounting holes 5 equipped No weight 300 g material ABS cable entry with PVC cable entry on the top: 22.6 mm dia. break-through wall at the bottom: 22.6 mm dia. mounting depth 52 mm Panel cut-out Ø 22.3 mm colour light-grey	IRL5M
		* Fastening hole dimensions	

General Data

Type Reference:	FT...
Description:	Contact Block for base-plate mounting, with positive opening contact
Approvals:	CE
Protection class:	II (protective insulation)
Operation travel:	6 mm
Connection type:	screw connection 2x2.5mm ²
Contact material:	AgNi
Max. storage temperature:	-50°C ... 80°C
Max. operating temperature:	-30°C ... 70°C
Mechanical life:	1 m switching cycles
Electrical life (rated load):	1 m at 250 V/10(6) A 250,000 at 250 V/16(10) A 500,000 at 250 V/5 A (AC15)
Contact resistance NO:	< 20 mOhm (new state)
Contact resistance NC:	< 20 mOhm (new state)
Min. current:	1 mA (under laboratory conditions)
Min. voltage:	5 V
Bouncing time NO:	< 10ms
Bouncing time NC:	< 10ms
Positive opening contact:	acc. to EN60947-5-1, appendix. K

Electrical data acc. to IEC/EN 60947-5-1 (VDE 0660 Sect. 200)

Utilisation category:	alternate current	direct current
Rated insulation voltage Ui:	AC15	DC13
Rated operating voltage Ue:	400V	400V
Rated operating current Ie:	250V / 400V	400V / 250V / 125V / 60V / 24V
Breaking capacity:	5A / 3A	0.12A / 0.2A / 0.4A / 1A / 2A
Continuous thermal current:	10Ie	1,1Ie
	10A	

Electrical data acc. to IEC/EN 61058-1 (VDE 0630 Sect. 1)

Rated voltage Ue:	250 V~ / 400 V~
Rated current Ie:	10(6) A / 6(3) A

Note

Note for emergency-stop contact blocks:

In case of inverters of the Za form (in terms of EN 60947-5-1), only the NC contact must be used for the remotely controlled safety circuit.

Only for IRF enclosures

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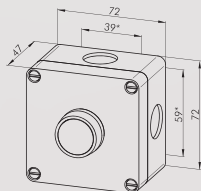
Illustration

Dimensions

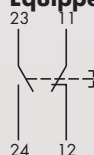
Description

Type

IP65



Equipped Insulated Plastic Enclosure



Technical data of the appropriate contact blocks see previous page

Fastening holes: Ø 4.2mm

mounting holes 1

equipped Yes

weight 115 g

material ABS

cable entry on the top/bottom: 21 mm dia.

on the side/back: 21 mm dia./19 mm dia.

Contact equipment 1NC + 1NO

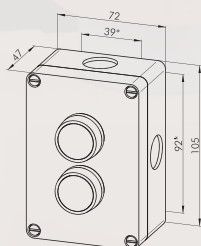
Switching function momentary action

colour light-grey

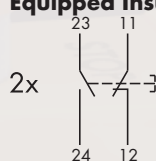
 **IRF1**

* Fastening hole dimensions

IP65



Equipped Insulated Plastic Enclosure



Technical data of the appropriate contact blocks see previous page

Fastening holes: Ø 4.2mm

mounting holes 2

equipped Yes

weight 171 g

material ABS

cable entry on the top/bottom: 21 mm dia.

on the side/back: 21 mm dia./19 mm dia.

Contact equipment 1NC + 1NO (per switching point)

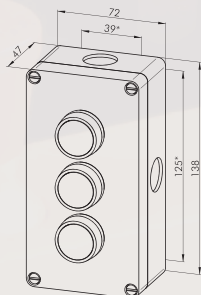
Switching function momentary action

colour light-grey

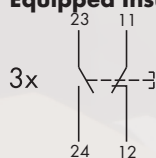
 **IRF2**

* Fastening hole dimensions

IP65



Equipped Insulated Plastic Enclosure



Technical data of the appropriate contact blocks see previous page

Fastening holes: Ø 4.2mm

mounting holes 3

equipped Yes

weight 217 g

material PA6

cable entry on the top/bottom: 21 mm dia.

on the side/back: 21 mm dia./19 mm dia.

Contact equipment 1NC + 1NO (per switching point)

Switching function momentary action

colour light-grey

 **IRF3**

* Fastening hole dimensions

Equipped Insulated Plastic Enclosures

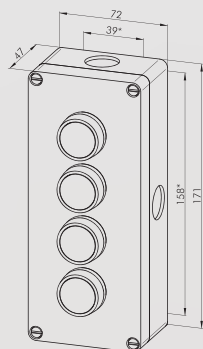
Illustration

Dimensions

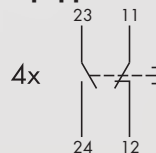
Description

Type

IP65



Equipped Insulated Plastic Enclosure



Technical data of the appropriate contact blocks see previous page

Fastening holes: Ø 4.2mm

mounting holes 4

equipped Yes

weight 269 g

material PA6

cable entry on the top/bottom: 21 mm dia.

on the side/back: 21 mm dia./19 mm dia.

Contact equipment 1NC + 1NO (per switching point)

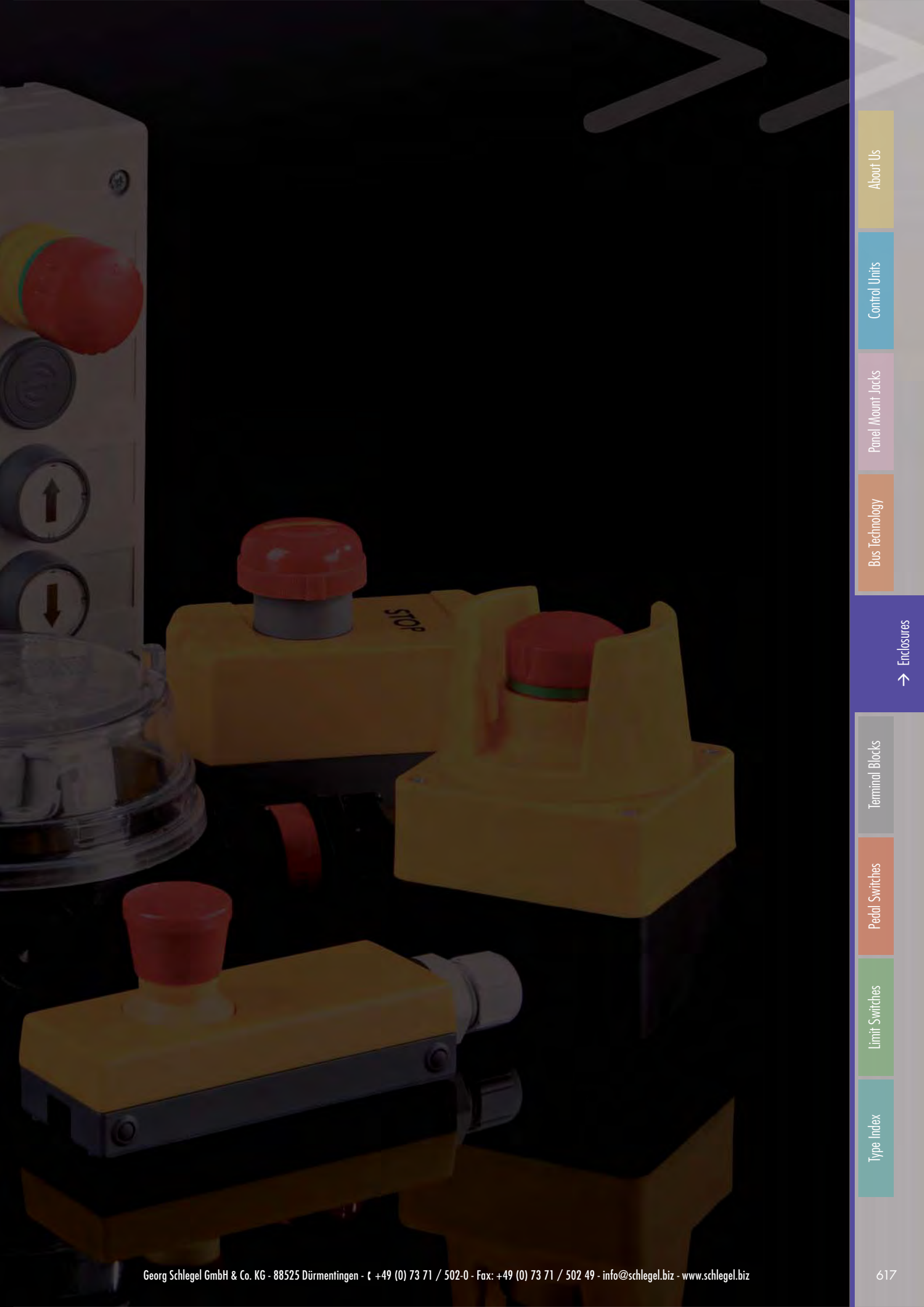
Switching function momentary action

colour light-grey

* Fastening hole dimensions

IRF4





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