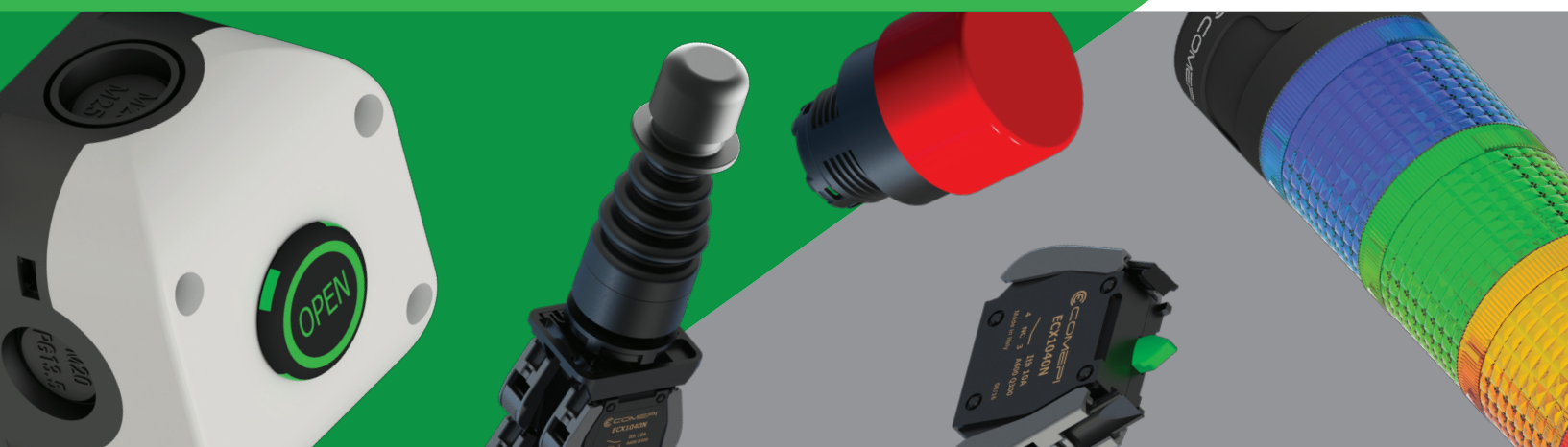




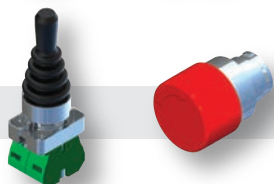
COMMAND AND SIGNALING UNIT

2024

Command Units Ø 22



ECX 4000 - Plastic body 22mm page 2



ECX 1000 - Metal body 22mm page 28



Accessories and Spare parts page 54



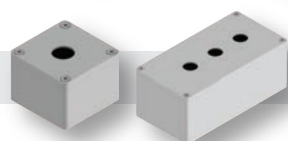
SB series polycarbonate enclosures page 62



Thermoplastic enclosures with pushbuttons page 70



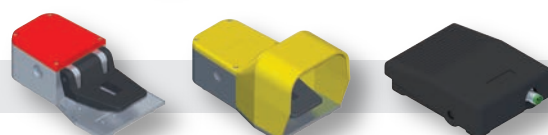
Thermoplastic enclosures with capacitive IO-Link buttons page 78



SA series ABS and SAM series aluminum enclosures page 94



Two-hand control station SCB series page 122



Foot switches page 128



Light towers page 134

Command Units Ø 22

Plastic series

APPROVALS: UL 508 / EN 60947-5-1



Declaration of conformity
DDC01 - ECX Series



APPLICATIONS

The command and signaling devices of the plastic series with 22 mm mounting holes have been designed as universal operating and display elements for all applications in the field of machine and plant construction and the automotive sector.

These devices are normally integrated into control panels or machine frames and are widely used all over the world.

DESCRIPTION

Command and control unit with thermoplastic body and ring nut fixing. FAST movements and INTUITIVE assembly thanks to the THREADED RING. The ECX 4000 series of buttons and control units guarantees evident ease of assembly, combined with the solidity that distinguishes all COMEPI production. The particularly wide range of production guarantees the possibility of satisfying any type of command and signaling requirement.

MAIN FEATURES



Installation of **4000 SERIES** is easier and faster thanks to the new **THREADED RING** and **SUPPORT BASE WITHOUT SCREWS**.

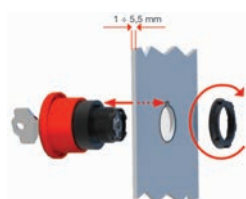


CONTACT BLOCKS and the **LED LAMP-HOLDER** can be easily installed on the support base by side levers **WITHOUT TOOLS**.

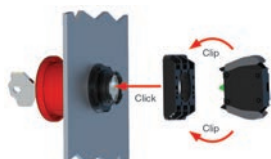


CONTACT BLOCKS must be installed either in the lateral positions of the support base or in the central position (max **TWO** contact blocks stacked on each position). LED lamp-holder must be fixed in the central position.

Quick installation and intuitive assembly

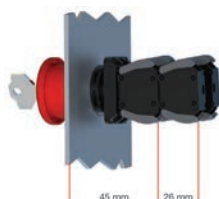


ANTI-ROTATION NOTCH on the body of the control unit.
THREADED RING easily applicable on the body.



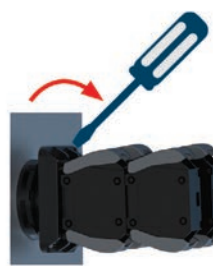
Support equipped with references that facilitate installation
All **WITHOUT TOOLS**.

Contact blocks and lamp holders equipped with **SIDE LEVERS** that allow quick fixing and removal.



Overall dimensions: only **45MM** deep from the panel.

Simple disassembly



IP protection degree

IP 65

Panel mount
If installed properly

Command Units Ø 22

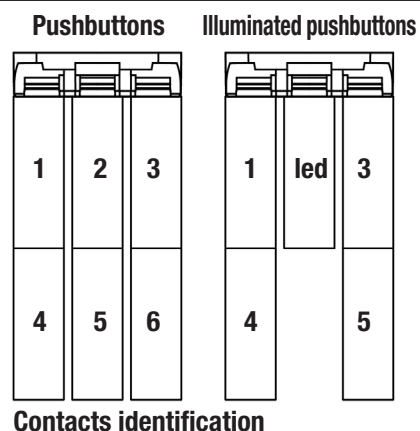
Plastic series



POSSIBILITY TO INSTALL UP TO 3 CONTACTS ON THE SAME PLAN

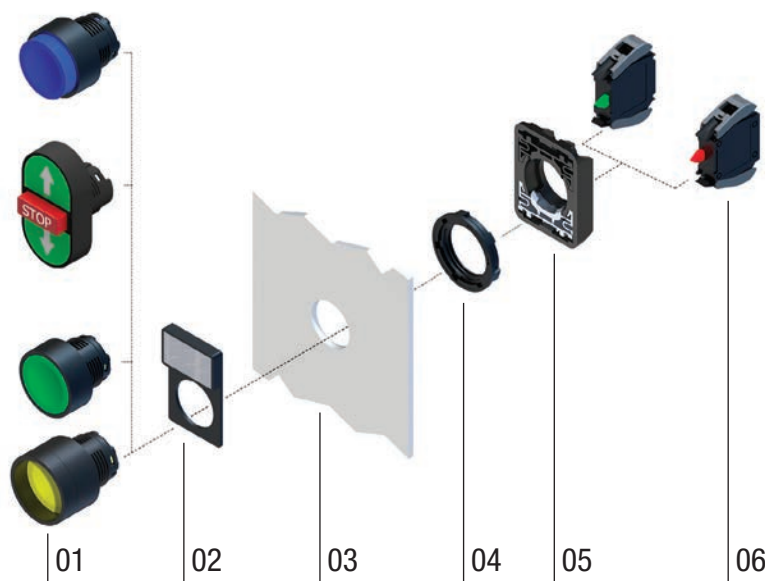


UP TO 4 CONTACTS WITH MUSHROOM PUSHBUTTONS



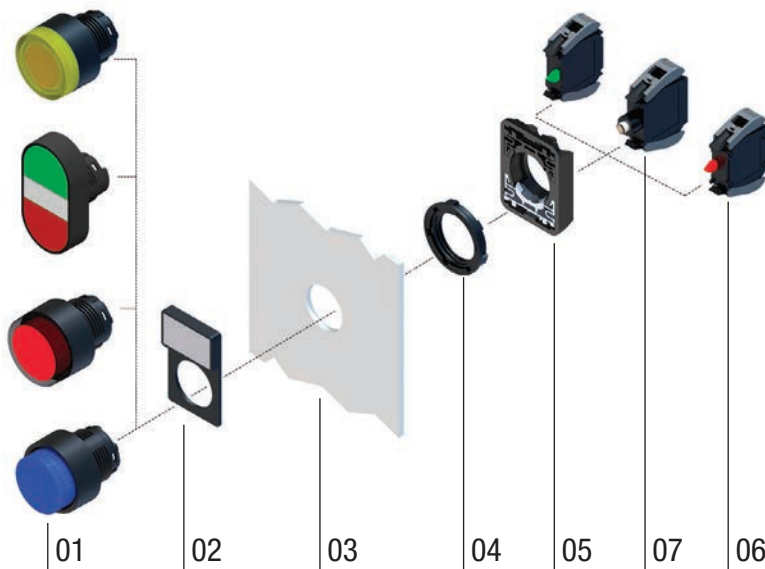
Non-illuminated pushbutton mounting

- 01 Control unit
- 02 Nameplates
- 03 Panel thickness 1÷6
- 04 Fixing ring with threaded ring
- 05 Support base
- 06 Contact elements



Illuminated pushbutton mounting

- 01 Control unit
- 02 Nameplates
- 03 Panel thickness 1÷6
- 04 Fixing ring with threaded ring
- 05 Support base
- 06 Contact elements
- 07 Led unit

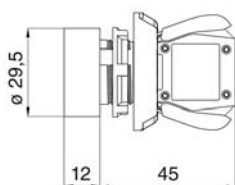


Command Units Ø 22

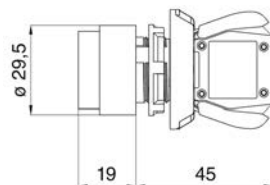
Plastic series - Non-illuminated momentary pushbuttons



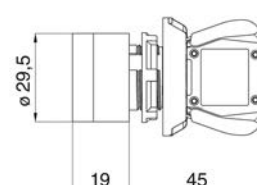
Flush pushbutton



Extended pushbutton



Plastic ring shrouded



TECHNICAL FEATURES

Mounting diameter	22 mm	22 mm	22 mm
Operator diameter	29.5 mm	29.5 mm	29.5 mm
Body material	Thermoplastic	Thermoplastic	Thermoplastic
Construction form	Flush fitting	Extended	Shrouded
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	Impulse	Impulse	Impulse
Operating temperature	-25°....+70°C	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP65	IP65
Colors			
Standards	IEC 60947-5-1	IEC 60947-5-1	IEC 60947-5-1
Approvals			
Mechanical durability	1M	1M	1M
Fixing ring	Included	Included	Included
Compatible support bases	ECX 4029	ECX 4029	ECX 4029
Compatible contacts	see page 27	see page 27	see page 27
Compatible LED units	N.A.	N.A.	N.A.

CODE

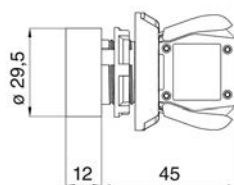
	ECX 4100	ECX 4110	ECX 4000
	ECX 4101	ECX 4111	ECX 4001
	ECX 4102	ECX 4112	ECX 4002
	ECX 4103	ECX 4113	ECX 4003
	ECX 4104	ECX 4114	ECX 4004
	ECX 4105	ECX 4115	ECX 4005

Command Units Ø 22

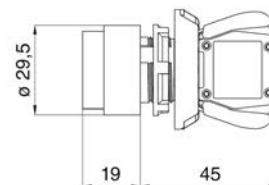
Plastic series - Non-illuminated momentary pushbuttons



Flush pushbutton



Extended pushbutton



TECHNICAL FEATURES

Mounting diameter
Operator diameter
Body material
Construction form
Mounting panel thickness
Functionality
Operating temperature
Degree of protection
Colors
Standards
Approvals
Mechanical durability
Fixing ring
Compatible support bases
Compatible contacts
Compatible LED units

22 mm
29.5 mm
Thermoplastic
Flush
Min. 1 mm - Max. 6 mm
Impulse
-25°....+70°C
IP65

IEC 60947-5-1
CE UL508 ENEC UK CA
1M
Included
ECX 4029
see page 27
N.A.

22 mm
29.5 mm
Thermoplastic
Extended
Min. 1 mm - Max. 6 mm
Impulse
-25°....+70°C
IP65

IEC 60947-5-1
CE UL508 ENEC UK CA
1M
Included
ECX 4029
see page 27
N.A.

CODE

STOP - red button
 STOP - black button
 RUN - green button
 RUN - green button
 RUN - white button
 White horizontal arrow
 Vertical white arrow
 Vertical black arrow
 START - white button
 ON - white button
 RESET - blue button
 STOP - black button
 OFF - black button

ECX 4106
ECX 4106/N
ECX 4107
ECX 4107-01
ECX 4107/B
ECX 4108
ECX 4109
ECX 4109/B
ECX 4105-01
ECX 4105-03
ECX 4104-02

ECX 4111-01

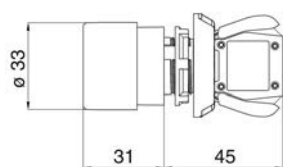
ECX 4110-01
ECX 4110-03

Command Units Ø 22

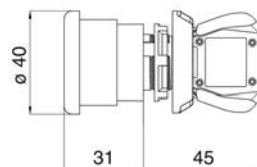
Plastic series - Mushroom pushbuttons



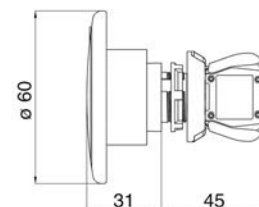
Mushroom pushbutton
Ø 33 mm



Mushroom pushbutton
Ø 40 mm



Mushroom pushbutton
Ø 60 mm



TECHNICAL FEATURES

Mounting diameter	22 mm	22 mm	22 mm
Operator diameter	33 mm	40 mm	60 mm
Body material	Thermoplastic	Thermoplastic	Thermoplastic
Construction form	Mushroom 33 mm	Mushroom 40 mm	Mushroom 60mm
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	Impulse or latch	Impulse or latch	Impulse or latch
Operating temperature	-25°....+70°C	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP65	IP65
Colors			
Standards	IEC 60947-5-1	IEC 60947-5-1	IEC 60947-5-1
Approvals			
Mechanical durability	0.3M with latch - 1M impulse	0.3M with latch - 1M impulse	0.3M with latch - 1M impulse
Fixing ring	Included	Included	Included
Compatible support bases	ECX 4029	ECX 4029	ECX 4029
Compatible contacts	see page 27	see page 27	see page 27
Compatible LED units	N.A.	N.A.	N.A.

CODE

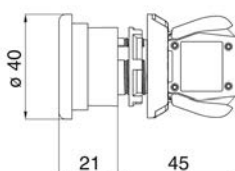
With latch / twist to release	ECX 4160	ECX 4130	ECX 4132
With latch / twist to release	ECX 4161	ECX 4131	ECX 4136
With latch / twist to release	ECX 4168	ECX 4138	
Impulse	ECX 4164	ECX 4134	ECX 4133
Impulse	ECX 4165	ECX 4135	ECX 4137
Impulse	ECX 4169	ECX 4139	

Command Units Ø 22

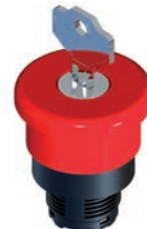
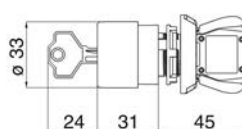
Plastic series - Illuminated mushroom pushbuttons and mushroom key operated pushbuttons



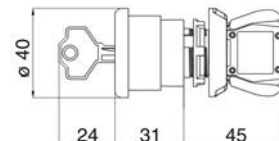
Illuminated mushroom pushbuttons



**Mushroom pushbutton
Ø 33 mm with key
(key n° G.513)**



**Mushroom pushbutton
Ø 40 mm with key
(key n° G.513)**



TECHNICAL FEATURES

Mounting diameter	22 mm	22 mm	22 mm
Operator diameter	40 mm	33 mm	40 mm
Body material	Thermoplastic	Thermoplastic	Thermoplastic
Construction form	Mushroom 40 mm	Mushroom 33mm	Mushroom 40mm
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	Impulse or latch	Impulse or latching key release	Impulse or latching key release
Operating temperature	-25°....+70°C	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP65	IP65
Colors			
Standards	IEC 60947-5-1	IEC 60947-5-1	IEC 60947-5-1
Approvals			
Mechanical durability	0.3M with latch - 1M impulse	0.3M with latch - 1M impulse	0.3M with latch - 1M impulse
Fixing ring	Included	Included	Included
Compatible support bases	ECX 4029	ECX 4029	ECX 4029
Compatible contacts	see page 27	see page 27	see page 27
Compatible LED units	see page 27	N.A.	N.A.

CODE

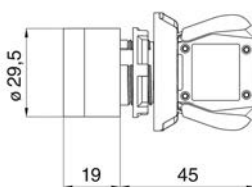
With latch / twist to release		ECX 4170	ECX 4140
With latch / twist to release	ECX 4226	ECX 4171	ECX 4141
With latch / twist to release		ECX 4174	ECX 4144
Impulse	ECX 4221	ECX 4175	ECX 4145
Impulse	ECX 4220		
Impulse	ECX 4223		
Impulse	ECX 4222		
Impulse	ECX 4224		
Impulse	ECX 4225		

Command Units Ø 22

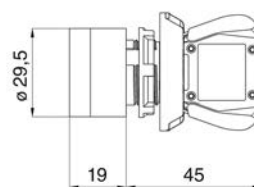
Plastic series - Simple impulse and push-push illuminated pushbuttons



Illuminated flush pushbutton



Illuminated flush push-push pushbutton



TECHNICAL FEATURES

Mounting diameter	22 mm	22 mm
Operator diameter	29.5 mm	29.5 mm
Body material	Thermoplastic	Thermoplastic
Construction form	Flush	Flush
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	Impulse	Push-push
Operating temperature	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP65
Colors		
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals		
Mechanical durability	1M	1M
Fixing ring	Included	Included
Compatible support bases	ECX 4029	ECX 4029
Compatible contacts	see page 27	ECX 1042N
Compatible LED units	see page 27	see page 27

CODE

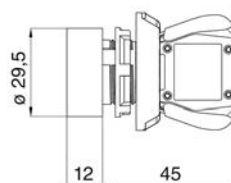
	ECX 4201	ECX 4191
	ECX 4202	ECX 4192
	ECX 4203	ECX 4193
	ECX 4204	ECX 4194
	ECX 4205	ECX 4195
	ECX 4206	ECX 4196
Not illuminated		ECX 4190

Command Units Ø 22

Plastic series - Non-illuminated momentary pushbuttons



Flush pushbutton



TECHNICAL FEATURES

Mounting diameter	22 mm
Operator diameter	29.5 mm
Body material	Thermoplastic
Construction form	Flush fitting
Mounting panel thickness	Min. 1 mm - Max. 6 mm
Functionality	Impulse
Operating temperature	-25°...+70°C
Degree of protection	IP65
Colors	
Standards	IEC 60947-5-1
Approvals	
Mechanical durability	1M
Fixing ring	Included
Support base	Included
Contacts	Included, the type of contact depends on the code
LED units 24v	Included, the color of the LED units depends on the code

CODE

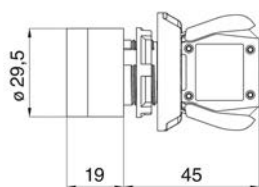
STOP 1nc	GCX 4721-01N24L
START 1no	GCX 4722-10N24L
ALARM 1no	GCX 4723-10N24L
RESET 1no	GCX 4724-10N24L
ON 1no	GCX 4725-10N24L
RUN 1no	GCX 4726-10N24L

Command Units Ø 22

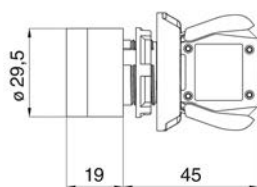
Plastic series - Illuminated pushbuttons with single impulse, push-push and with guard



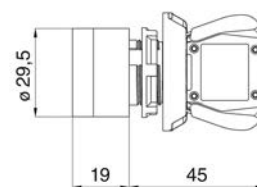
Extended illuminated pushbutton



Extended push-push illuminated pushbutton



Illuminated shrouded pushbutton



TECHNICAL FEATURES

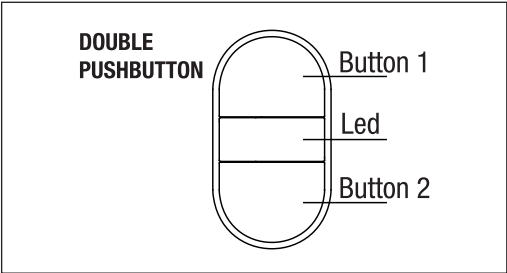
Mounting diameter	22 mm	22 mm	22 mm
Operator diameter	29.5 mm	29.5 mm	29.5 mm
Body material	Thermoplastic	Thermoplastic	Thermoplastic
Construction form	Extended	Extended	Shrouded
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	Impulse	Push-push	Impulse
Operating temperature	-25°....+70°C	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP65	IP65
Colors			
Standards	IEC 60947-5-1	IEC 60947-5-1	IEC 60947-5-1
Approvals			
Mechanical durability	1M	1M	1M
Fixing ring	Included	Included	Included
Compatible support bases	ECX 4029	ECX 4029	ECX 4029
Compatible contacts	see page 27	ECX 1042N see page 27	see page 27
Compatible LED units	see page 27	see page 27	see page 27

CODE

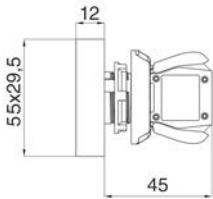
	ECX 4211	ECX 4181	EXC 4011
	ECX 4212	ECX 4182	ECX 4012
	ECX 4213	ECX 4183	ECX 4013
	ECX 4214	ECX 4184	ECX 4014
	ECX 4215	ECX 4185	ECX 4015
	ECX 4216	ECX 4186	ECX 4016
Not illuminated		ECX 4180	

Command Units Ø 22

Plastic series - Double pushbuttons



Double pushbutton



TECHNICAL FEATURES

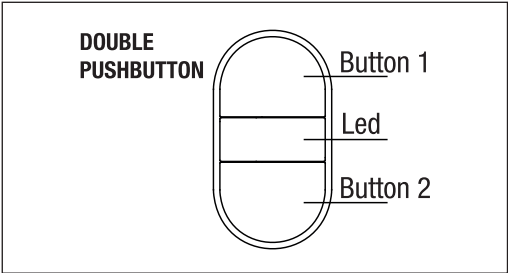
Mounting diameter	22 mm
Operator diameter	55x29.5
Body material	Thermoplastic
Construction form	Rectangular
Mounting panel thickness	Min. 1 mm - Max. 6 mm
Functionality	Impulse
Operating temperature	-25°....+70°C
Degree of protection	IP65
Colors	
Standards	IEC 60947-5-1
Approvals	CE UL508 ENEC UKCA
Mechanical durability	1M
Fixing ring	Included
Compatible support bases	ECX 4029
Compatible contacts	see page 27
Compatible LED units	see page 27

CODE

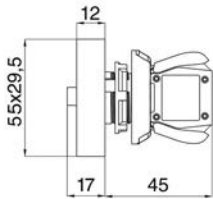
Flush	ECX 4151
Flush	ECX 4151/BN
Flush	ECX 4151/NR
Flush with I-O symbols	ECX 4153
Flush with I-O symbols	ECX 4153/BN
Flush with I-O symbols	ECX 4153/NR
Flush with the word START-STOP	ECX 4650
Flush with arrows ↓ ↑	ECX 4651

Command Units Ø 22

Plastic series - Double extended pushbuttons



Double extended pushbutton



TECHNICAL FEATURES

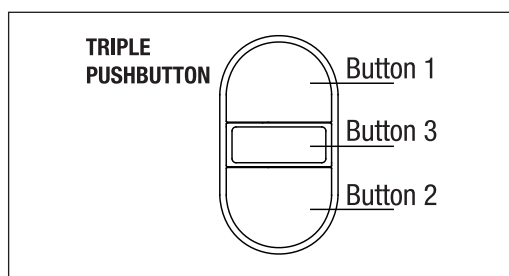
Mounting diameter	22 mm
Operator diameter	55x29.5
Body material	Thermoplastic
Construction form	Rectangular
Mounting panel thickness	Min. 1 mm - Max. 6 mm
Functionality	Impulse
Operating temperature	-25°....+70°C
Degree of protection	IP65
Colors	
Standards	IEC 60947-5-1
Approvals	CE UL508 ENEC UK
Mechanical durability	1M
Fixing ring	Included
Compatible support bases	ECX 4029
Compatible contacts	see page 27
Compatible LED units	see page 27

CODE

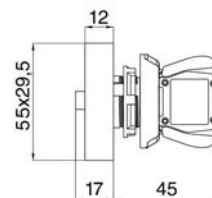
Red extended	ECX 4155
Black extended	ECX 4155/BN
Red extended	ECX 4155/NR
Red extended with I-O symbols	ECX 4157
Black extended with I-O symbols	ECX 4157/BN
Red extended with I-O symbols	ECX 4157/NR
Red extended with START-STOP	ECX 4652

Command Units Ø 22

Plastic series - Triple pushbuttons



Triple pushbutton



TECHNICAL FEATURES

Mounting diameter	22 mm
Operator diameter	55x29.5
Body material	Thermoplastic
Construction form	Rectangular
Mounting panel thickness	Min. 1 mm - Max. 6 mm
Functionality	Impulse
Operating temperature	-25°....+70°C
Degree of protection	IP65
Colors	
Standards	IEC 60947-5-1
Approvals	
Mechanical durability	1M
Fixing ring	Included
Compatible support bases	ECX 4029
Compatible contacts	see page 27
Compatible LED units	N.A.

CODICE

With symbols I STOP II	ECX 4653
With symbols ← STOP →	ECX 4654
With symbols ← STOP →	ECX 4654/BN
With symbols ↑ STOP ↓	ECX 4655
With symbols ↑ STOP ↓	ECX 4655/BN
With symbols ↑ STOP ↓	ECX 4655/NN
With symbols + STOP -	ECX 4656
With symbols + STOP -	ECX 4656/BB
With symbols ↗ STOP ↘	ECX 4657

Command Units Ø 22

Plastic series - Selector switches

Non-illuminated selector assembly

01 Selector

02 Fixing ring with threaded ring

03 Support base

04 Contact elements



OPERATING PRINCIPLES FOR SELECTOR SWITCHES - LEGEND

- ✓ 2 fixed positions
- ✓↶ 2 positions with return from the RIGHT
- ✓↷ 3 fixed positions
- ↶↷ 3 positions with return from RIGHT and LEFT
- ↶↷↶ 3 positions with return from the LEFT
- ↶↷↷ 3 positions with return from the RIGHT
- ↶ 2 fixed positions with key extraction from the LEFT
- ↶↷ 2 fixed positions with key extraction from LEFT and RIGHT
- ↶↷↶ 2 positions with return from the RIGHT and key extraction from the LEFT
- ↶↷ 3 fixed positions with key extraction in the center
- ↶↷↶ 3 fixed positions with LEFT and RIGHT key extraction
- ↶↷↶↶ 3 positions with key extraction on the LEFT
- ↶↷↶↷ 3 fixed positions with key extraction in the center, LEFT and RIGHT
- ↶↷↶↷ 3 positions with key extraction in the center and return from LEFT and RIGHT

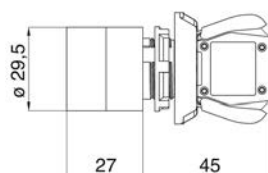
Other versions available on request: contact our sales department.

Command Units Ø 22

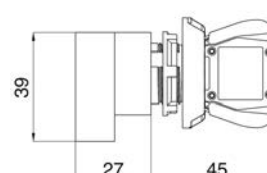
Plastic series - Selector switches



Short lever selector



Long lever selector



TECHNICAL FEATURES

Mounting diameter	22 mm	22 mm
Operator diameter	29.5 mm	39 mm
Body material	Thermoplastic	Thermoplastic
Construction form	Short lever	Long lever
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	See table on page 13	See table on page 13
Operating temperature	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP65
Colors	●	●
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK	CE ENEC UK
Mechanical durability	300.000	300.000
Fixing ring	Included	Included
Compatible support bases	ECX 4029	ECX 4029
Compatible contacts	see page 27	see page 27
Compatible LED units	N.A.	N.A.

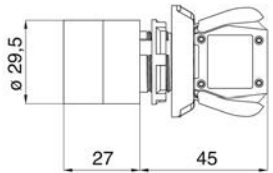
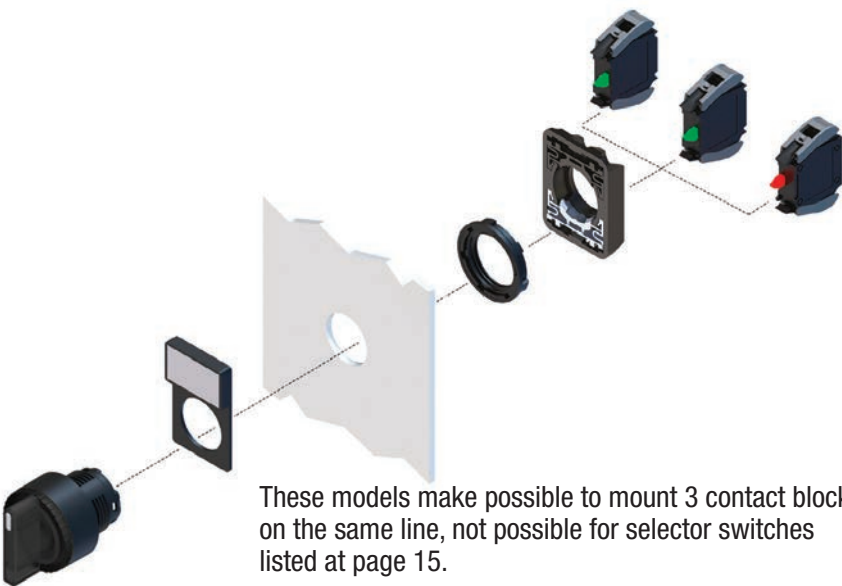
CODE

✓	ECX 4300	ECX 4350
✓	ECX 4310	ECX 4360
✓	ECX 4320 GCX 4320S*	ECX 4370 GCX 4370S*
✓	ECX 4330 GCX 4330S*	ECX 4380 GCX 4380S*
✓	ECX 4340	ECX 4390
✓	ECX 4345	ECX 4400

* Contact elements already included

Command Units $\varnothing$ 22

Plastic series - Illuminated selector switches



TECHNICAL FEATURES

Mounting diameter	22 mm
Operator diameter	29.5 mm
Body material	Thermoplastic
Construction form	Short lever
Mounting panel thickness	Min. 1 mm - Max. 6 mm
Functionality	See table on page 14
Operating temperature	-25°....+70°C
Degree of protection	IP65
Colors	●
Standards	IEC 60947-5-1
Approvals	CE ENEC UK
Mechanical durability	300.000
Fixing ring	Included
Compatible support bases	ECX4029
Compatible contacts	see page 27
Compatible LED units	see page 27

CODE

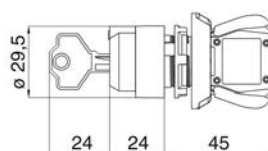
	ECX 4303
	ECX 4313
	ECX 4323
	ECX 4333
	ECX 4343
	ECX 4346

Command Units Ø 22

Plastic series - Key selectors



Key selector (key No. G. 513)



TECHNICAL FEATURES

Mounting diameter	22 mm
Operator diameter	29.5 mm
Body material	Thermoplastic
Construction form	With key
Spess. pannello montaggio	Min. 1 mm - Max. 6 mm
Functionality	See table on page 14
Operating temperature	-25°+70°C
Degree of protection	IP65
Colors	
Standards	IEC 60947-5-1
Approvals	
Mechanical durability	300.000
Fixing ring	Included
Compatible support bases	ECX 4029
Compatible contacts	see page 27
Compatible LED units	N.A.

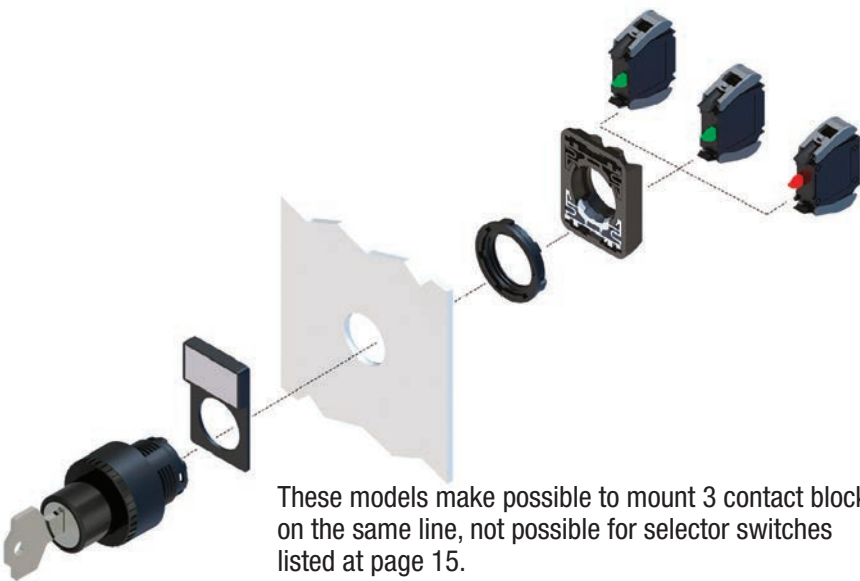
CODE

	ECX 4410
	ECX 4420
	ECX 4430
	ECX 4440 GCX 4440S*
	ECX 4450
	ECX 4460
	ECX 4470 GCX 4470S*
	ECX 4480 GCX 4480S*

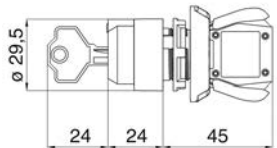
* Contact elements already included

Command Units Ø 22

Plastic series - Illuminated selector switches



These models make possible to mount 3 contact blocks on the same line, not possible for selector switches listed at page 15.



TECHNICAL FEATURES

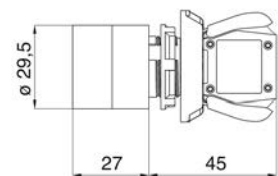
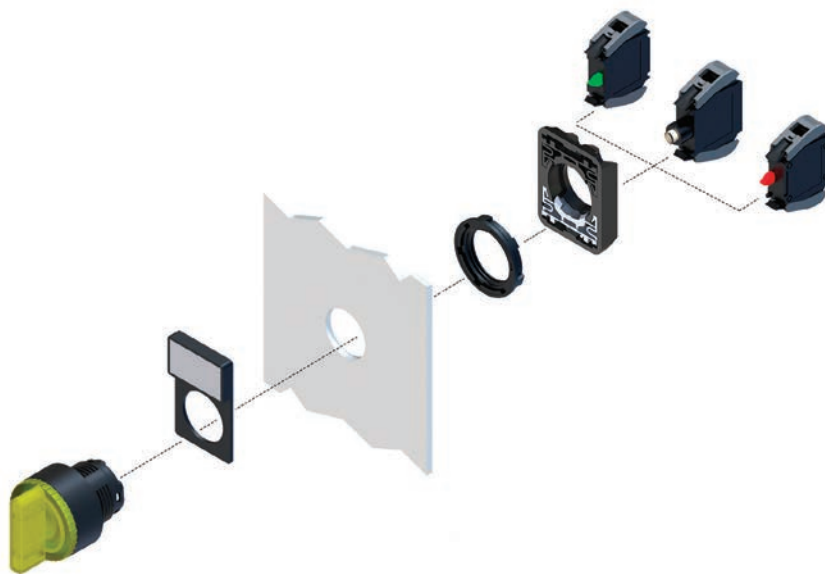
Mounting diameter	22 mm
Operator diameter	29.5 mm
Body material	Thermoplastic
Construction form	With key
Spess. pannello montaggio	Min. 1 mm - Max. 6 mm
Functionality	See table on page 14
Operating temperature	-25°....+70°C
Degree of protection	IP65
Colors	●
Standards	IEC 60947-5-1
Approvals	CE ENEC UK
Mechanical durability	300.000
Fixing ring	Included
Compatible support bases	ECX 4029
Compatible contacts	see page 27
Compatible LED units	N.A.

CODE

	ECX 4413
	ECX 4423
	ECX 4433
	ECX 4443
	ECX 4453
	ECX 4463
	ECX 4473
	ECX 4483

Command Units Ø 22

Plastic series - Illuminated selector switches



TECHNICAL FEATURES

Mounting diameter	22 mm
Operator diameter	29.5 mm
Body material	Thermoplastic
Construction form	Short lever
Mounting panel thickness	Min. 1 mm - Max. 6 mm
Functionality	See table on page 14
Operating temperature	-25°....+70°C
Degree of protection	IP65
Colors	
Standards	IEC 60947-5-1
Approvals	
Mechanical durability	300.000
Fixing ring	Included
Compatible support bases	ECX4029
Compatible contacts	see page 27
Compatible LED units	see page 27

CODE

	ECX 424•
	ECX 425•
	ECX 426•
	ECX 427•
	ECX 428•
	ECX 429•

* Included with contacts (2NO + 2NC)

(1) Replace the symbol • with the number of the desired color:

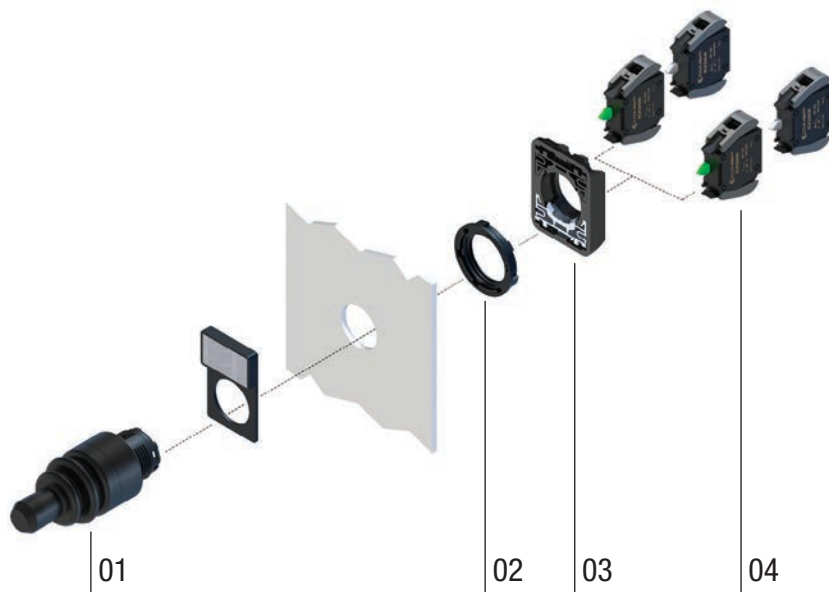
1: Red 2: Green 3: Yellow 4: Blue 5: Transparent

Command Units Ø 22

Plastic series - Joysticks

Joystick assembly

- 01 Selector
- 02 Fixing ring with threaded ring
- 03 Support base
- 04 Contact elements



JOYSTICK OPERATING PRINCIPLES LEGEND

- ○ 1 position: A with return
- ○ 1 position: A maintained
- ○ - 2 positions: A-B with return
- ○ - 2 positions: A with return / B maintained
- ○ 2 positions: A-B maintained
- ○ - 4 positions: A-B-C-D with return
- ○ - 4 positions: A maintained / B-C-D with return
- ○ - 4 positions: A-B maintained / C-D with return
- ○ - 4 positions: A-B-C maintained / D with return
- ○ - 4 positions: A-B-C-D maintained



Positions legend

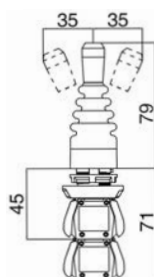
Other versions available on request: contact our sales department.

Command Units Ø 22

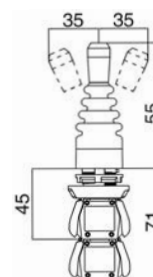
Plastic series - "Joysticks" type selector



Joystick H 79 mm



Joystick H 55 mm



TECHNICAL FEATURES

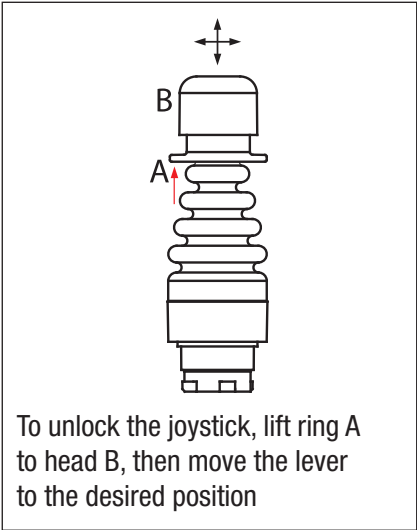
Mounting diameter	22 mm	22 mm
Operator diameter	29.5 mm	29.5 mm
Body material	Thermoplastic	Thermoplastic
Construction form	H. 79 mm	H. 55 mm
Mounting panel thickness	Joystick Min. 1 mm - Max. 6 mm	Joystick Min. 1 mm - Max. 6 mm
Functionality	See table on page 20	See table on page 20
Operating temperature	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP65
Colors	●	●
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UKA	CE ENEC UKA
Mechanical durability	300.000	300.000
Fixing ring	Included	Included
Compatible support bases	Included	Included
Compatible contacts	Included	Included
Compatible LED units	N.A.	N.A.

CODE

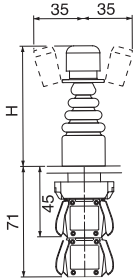
1 position: A with return	ECX 4515	ECX 4545
A maintained	ECX 4516	ECX 4546
2 positions: A-B with return	ECX 4510	ECX 4540
A with return / B maintained	ECX 4511	ECX 4541
A-B maintained	ECX 4512	ECX 4542
4 positions: A-B-C-D with return	ECX 4520	ECX 4550
A maintained / B-C-D with return	ECX 4521	ECX 4551
A-B maintained / C-D with return	ECX 4522	ECX 4552
A-B-C maintained / D with return	ECX 4523	ECX 4553
A-B-C-D maintained	ECX 4524	ECX 4554

Command Units Ø 22

Plastic series - “Joysticks with lock” type selector



Joystick H 79 mm



TECHNICAL FEATURES	
Mounting diameter	22 mm
Operator diameter	29.5 mm
Body material	Thermoplastic
Construction form	H. 79 mm
Mounting panel thickness	Joystick Min. 1 mm - Max. 6 mm
Functionality	See table on page 20
Operating temperature	-25°....+70°C
Degree of protection	IP65
Colors	
Standards	IEC 60947-5-1
Approvals	  
Mechanical durability	300.000
Fixing ring	Included
Compatible support bases	Included
Compatible contacts	Included
Compatible LED units	N.A.
CODE	
1 position: A with return	ECX 4515S
A maintained	ECX 4516S
2 positions: A-B with return	ECX 4510S
A with return / B maintained	ECX 4511S
A-B maintained	ECX 4512S
4 positions: A-B-C-D with return	ECX 4520S
A maintained / B-C-D with return	ECX 4521S
A-B maintained / C-D with return	ECX 4522S
A-B-C maintained / D with return	ECX 4523S
A-B-C-D maintained	ECX 4524S

Command Units Ø 22

Plastic series - Wooble joysticks - Wooble mushrooms

Wooble lever

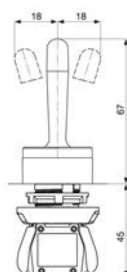
The contacts (included separately) are operated with a hand movement in any direction

Wooble mushroom

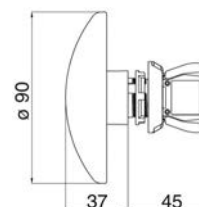
The contacts (included separately) are operated with any rocking movement



Wooble joystick



Wooble mushroom



CARATTERISTICHE TECNICHE

Diametro di montaggio

22 mm

22 mm

Diametro operatore

29.5 mm

90 mm

Materiale corpo

Termoplastico

Termoplastico

Forma costruttiva

Joystick h. 67

Fungo 90 mm

Spess. pannello montaggio

Min. 1 mm - Max. 6 mm

Min. 1 mm - Max. 6 mm

Funzionalità

Oscillante

Oscillante

Temperatura utilizzo

-25°....+70°C

-25°....+70°C

Grado di protezione

IP65

IP65

Colori



Normative

EN 60947-5-1

EN 60947-5-1

Omologazioni



Durata meccanica

1M

1M

Ghiera di fissaggio

In dotazione

In dotazione

Basette compatibili

ECX 4029

ECX 4029

Contatti compatibili

vedi pag. 27

vedi pag. 27

Unità LED compatibili

N.A.

N.A.

CODICE



ECX 4530

ECX 4570



ECX 4571



ECX 4572

Command Units Ø 22

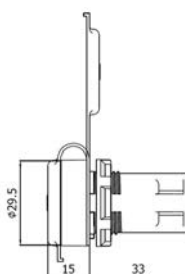
Plastic series - USB / RJ45 sockets

The Comepi USB and RJ45 sockets allow the connection of cables data and network on the machine without the need to open the electrical panel.

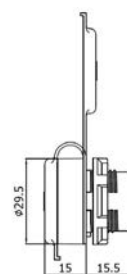
All the sockets are equipped with a female connector both on the front of the panel and on the rear.



USB sockets



RJ45 socket



TECHNICAL FEATURES

Mounting diameter	22 mm	22 mm
Operator diameter	29.5 mm	29.5 mm
Body material	Thermoplastic	Thermoplastic
Construction form	Extended	Extended
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	USB	RJ45
Operating temperature	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP65
Colors	●	●
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE EAC UK	CE EAC UK
Mechanical durability	—	—
Fixing ring	Included	Included
Compatible support bases	—	—
Compatible contacts	—	—
Compatible LED units	—	—

CODE

● USB 2.0 type "A"	ECX 4620	
● USB 3.0 type "A"	ECX 4630	
● RJ45 category 6		ECX 4645

Accessories and connection cables
on page 52

Command Units Ø 22

Plastic series - Potentiometers and pilot lights

* Potentiometer levers can be included with potentiometer included in variants:

5K Ω

10K Ω

20K Ω

To order add to the selected lever code:

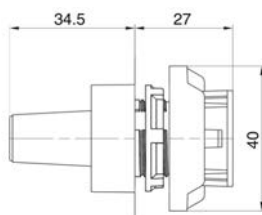
-5K

-10K

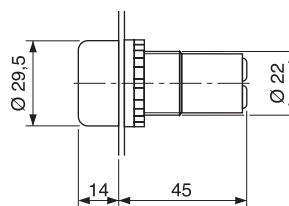
-20K



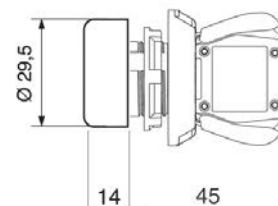
Potentiometer lever



Warning light for BA9S lamp



Pilot light

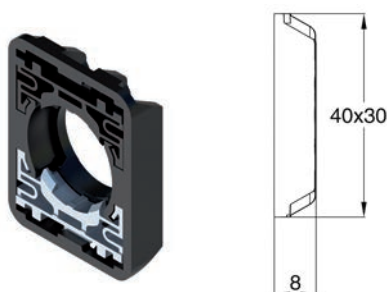


TECHNICAL FEATURES			
Mounting diameter	22 mm	22 mm	22 mm
Operator diameter	29.5 mm	29.5 mm	29.5 mm
Body material	Thermoplastic	Thermoplastic	
Construction form	Lever with height 34.5	Extended	Extended
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm	
Functionality	Potentiometer	Light signaling	Pilot light
Operating temperature	-25°....+70°C	-25°....+70°C	
Degree of protection	IP65	IP20, after installation IP65	IP65
Colors	●	● ● ● ● ⊕ ⊙	● ● ● ● ⊕ ⊙
Standards	IEC 60947-5-1	IEC 60947-5-1	IEC 60947-5-1
Approvals	—	CE c UL US ENEC UK	CE ENEC UK UL 508
Mechanical durability	—	1M	N.A.
Fixing ring	Included	Included	—
Symbology	With graduated scale - With increasing indexes	—	—
Compatible contacts	—	see page 54	see page 27
Compatible LED units	—	—	—
CODE			
●	shaft 6 - graduated scale	ECX 4560	
●	shaft 6 - index increase	ECX 4561*	
●	shaft 6.3 - graduated scale	ECX 4562*	
●	shaft 6.3	ECX 4563	
●			ECX 4231
●			ECX 4232
●			ECX 4233
●			ECX 4234
⊕			ECX 4235
⊙			ECX 4236

Command Units Ø 22

Plastic series - Fixing base, contact elements and quick coupling LED unit

Support base



TECHNICAL FEATURES

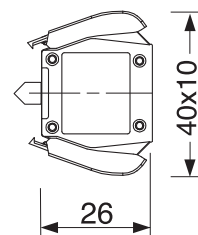
Compatibility	with ECX 4000 series operators
Dimension	40x30 mm
Thickness	8 mm
Material	thermoplastic
Ambient temperatures	-25....+70°C
Prescriptions	Manual hooking release by screwdriver
Colors	●

Assembly and use precautions on page 52

CODE

ECX 4029

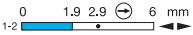
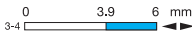
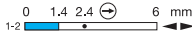
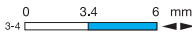
Quick latch contact elements (IP20)



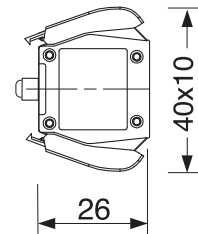
Positive opening	IEC 60947-5-1	Positive opening on all NC contacts
Rated insulation voltage U_i	IEC 60947-1 and EN 60947-1	690V (degree of pollution 3)
	UL 508 and CSA C22-2 n° 14	A600, Q300
Rated impulse withstand voltage U_{imp}	IEC 60947-1 and EN 60947-1	8 kV
Conditional short-circuit current	IEC 60947-1 and EN 60947-1	1 kA
Conventional free air thermal current I_{th}	IEC 60947-5-1 and EN 60947-5-1 $\theta < 40^\circ\text{C}$	10 A
Short-circuit protection U_e	< 500 V. a.c. – gG (gl) type fuses	10 A
Rated operational current	IEC 60947-5-1	
	I_e / AC-15:	
	24 V - 50/60 Hz	10 A
	240 V - 50/60 Hz	6 A
	400 V - 50/60 Hz	4 A
	I_e / DC-13:	
	24 V - d.c.	2,8 A
	125 V - d.c.	0,55 A
	250 V - d.c.	0,27 A
Switching frequency	3600 cycles/h	
Resistance between contacts	$\leq 25\text{ m}\Omega$	
Protection degree IEC 60529 and EN 60529	IP 20	
Connecting terminals	On screw with non loosable plate clamp	
	1 or 2 conductors - 0,5 ...2,5 mm ²	

Command Units Ø 22

Plastic series - Fixing base, contact elements and quick coupling LED unit

DESCRIPTION				
Color	Red	Green	Grey	Brown
Operation diagram				
Actuation force for positive opening	2,1N / 15N	2,6N	1,9N / 15N	2,2N
Usage			Only on Joy Stick at 4 positions	On buttons step by step
CODE	ECX 1030N	ECX 1040N	ECX 1041N	ECX 1042N

Quick latch led units



COLOR	12V AC/DC	24V AC/DC	110V AC/DC	230V AC/DC
	ECX 3051N-12L	ECX 3051N-24L	ECX 3051N-110L	ECX 3051N-230L
	ECX 3052N-12L	ECX 3052N-24L	ECX 3052N-110L	ECX 3052N-230L
	ECX 3053N-12L	ECX 3053N-24L	ECX 3053N-110L	ECX 3053N-230L
	ECX 3054N-12L	ECX 3054N-24L	ECX 3054N-110L	ECX 3054N-230L
	ECX 3055N-12L	ECX 3055N-24L	ECX 3055N-110L	ECX 3055N-230L

Command Units Ø 22

Metallic series

APPROVALS: UL 508 / EN 60947-5-1



Declaration of conformity
DDC01 - ECX Series



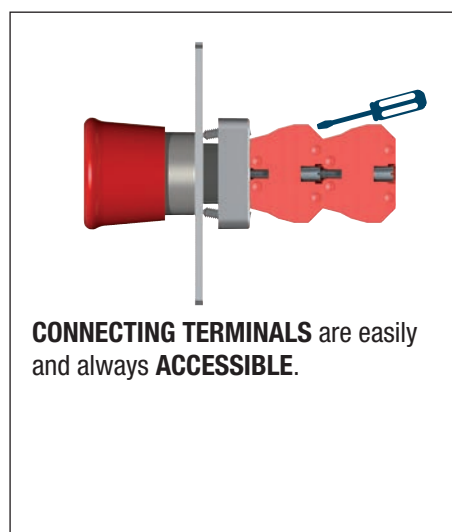
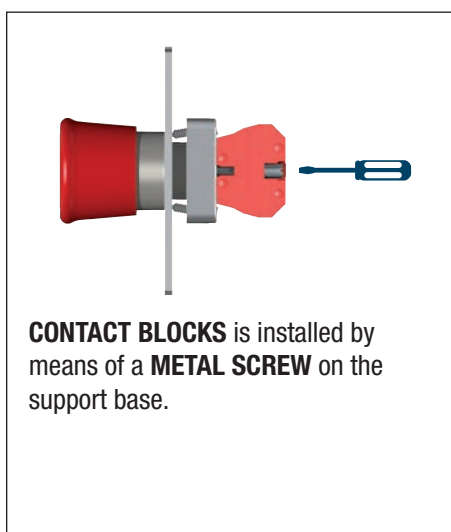
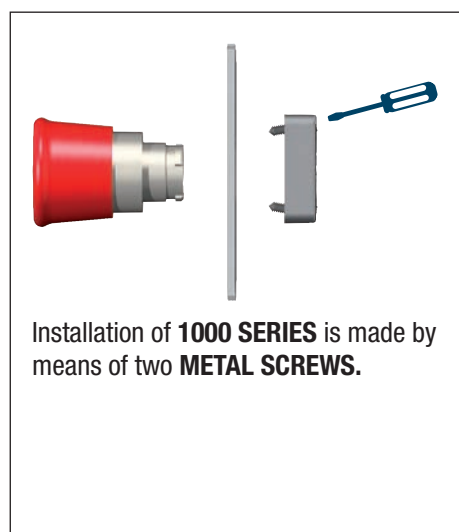
APPLICATIONS

The ECX 1000 series pushbutton panel is particularly suitable for severe work environments and represents a choice in line with the tradition of the sector.

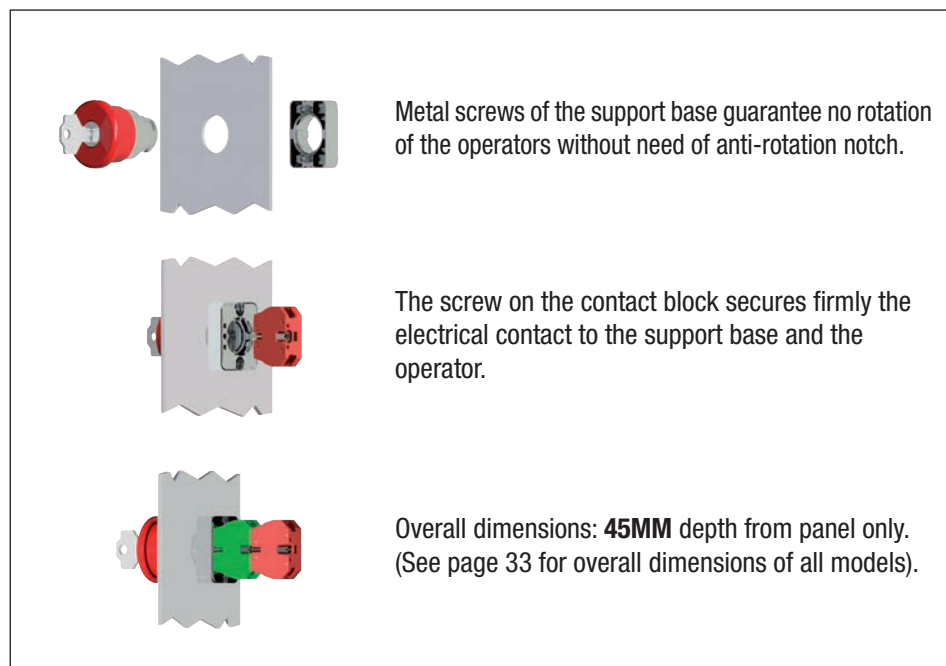
DESCRIPTION

Command and control unit with chromed metal body and screw fixing. Particularly appreciated by the market for its sturdiness and the sealing of the contact blocks.

MAIN FEATURES



ASSEMBLY: MAXIMUM STRENGTH



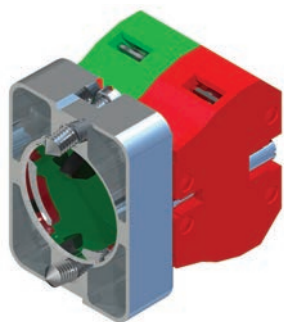
IP protection degree

IP 65

Panel mount
If installed properly

Command Units Ø 22

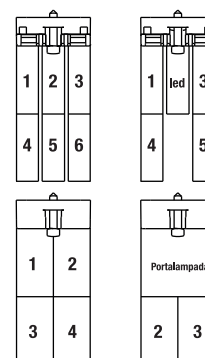
Metallic series



**METAL SUPPORT BASE AND SCREW
FIXING CONTACTS**



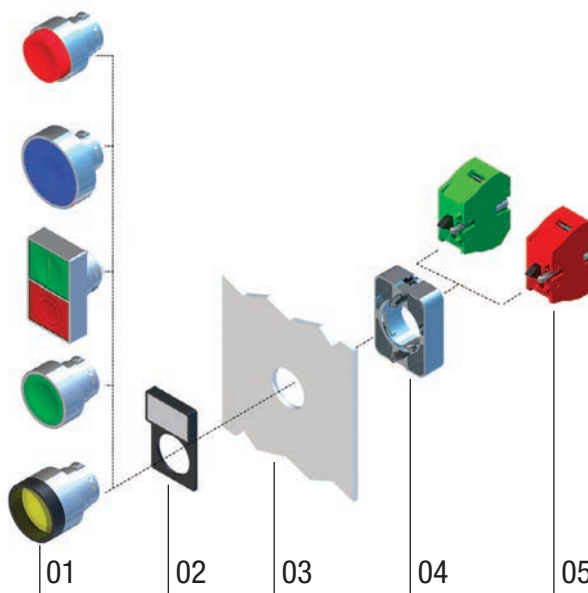
**ECX 3029A PLASTIC SUPPORT BASE
AND QUICK LATCH CONTACTS**



**CONTACT IDENTIFICATION IN THE
TWO CONFIGURATIONS**

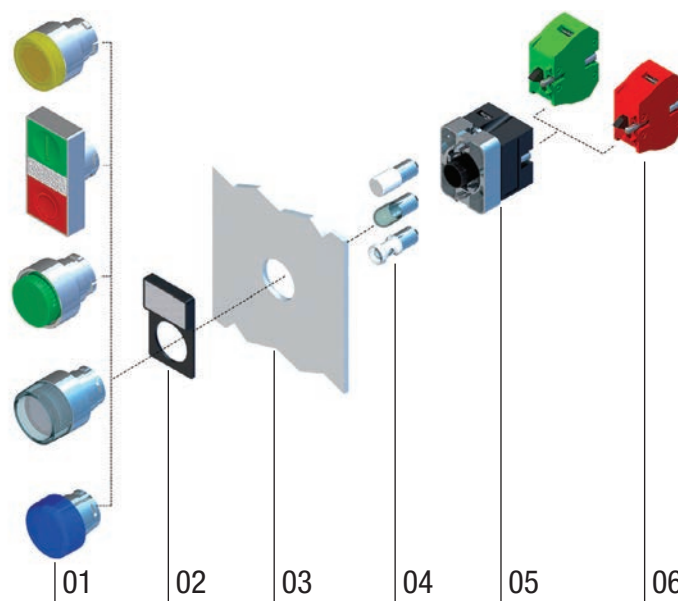
Non-illuminated pushbutton mounting

- 01 Control unit range
- 02 Nameplates
- 03 Panel thickness 1÷6
- 04 Support base
- 05 Contact elements



Illuminated pushbutton mounting

- 01 Control unit range
- 02 Nameplates
- 03 Panel thickness 1÷6
- 04 Light bulbs
- 05 Support base
- 06 Contact elements

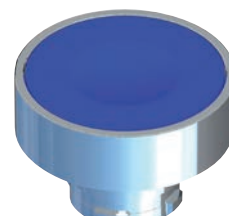
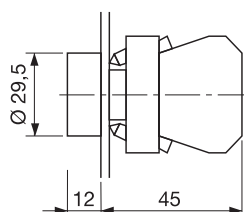


Command Units Ø 22

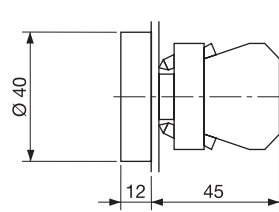
Metallic series - Non-illuminated momentary pushbuttons



Flush pushbutton
Ø 30 mm



Flush pushbutton
Ø 40 mm



TECHNICAL FEATURES

Mounting diameter	22 mm	22 mm
Operator diameter	29.5 mm	40 mm
Body material	Chrome plated zamak	Chrome plated zamak
Construction form	Wire ferrule	Wire ferrule
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	Impulse	Impulse
Operating temperature	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP65
Colors		
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals		
Mechanical durability	1M	1M
Compatible support bases	ECX 1029/P - ECX 3029A	ECX 1029/P - ECX 3029A
Compatible contacts	see pages 51-27	see pages 51-27
Compatible light units	N.A.	N.A.

CODE

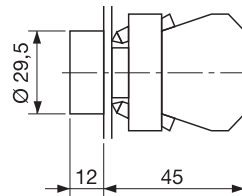
	ECX 1100	ECX 1120
	ECX 1101	ECX 1121
	ECX 1102	ECX 1122
	ECX 1103	ECX 1123
	ECX 1104	ECX 1124
	ECX 1105	ECX 1125

Command Units Ø 22

Metallic series - Non-illuminated momentary pushbuttons



**Flush pushbutton
with symbols**



TECHNICAL FEATURES

Mounting diameter	22 mm
Operator diameter	29.5 mm
Body material	Chrome plated zamak
Construction form	Wire ferrule
Mounting panel thickness	Min. 1 mm - Max. 6 mm
Functionality	Impulse
Operating temperature	-25°+70°C
Degree of protection	IP65
Colors	     
Standards	IEC 60947-5-1
Approvals	   
Mechanical durability	1M
Compatible support bases	ECX 1029/P - ECX 3029A
Compatible contacts	see pages 51-27
Compatible light units	N.A.

CODE

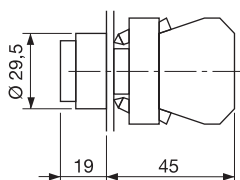
 STOP - red button	ECX 1106
 STOP - black button	ECX 1106/N
 RUN - green button	ECX 1107
 RUN - white button	ECX 1107/B
 White horizontal arrow	ECX 1108
 Vertical white arrow	ECX 1109

Command Units Ø 22

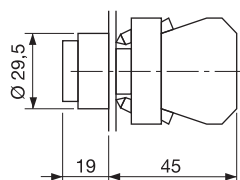
Metallic series - Non-illuminated momentary pushbuttons



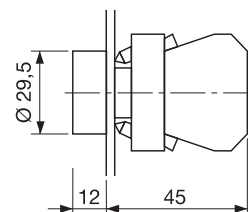
Extended pushbutton



Extended pushbutton



Plastic ring shrouded



TECHNICAL FEATURES

Mounting diameter	22 mm	22 mm	22 mm
Operator diameter	29.5 mm	29.5 mm	29.5 mm
Body material	Chrome plated zamak	Chrome plated zamak	Chrome plated zamak
Construction form	Protruding	Protruding	With guard
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	Impulse	Impulse	Impulse
Operating temperature	-25°....+70°C	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP65	IP65
Colors			
Standards	IEC 60947-5-1	IEC 60947-5-1	IEC 60947-5-1
Approvals			
Mechanical durability	1M	1M	1M
Compatible support bases	ECX 1029/P - ECX 3029A	ECX 1029/P - ECX 3029A	ECX 1029/P - ECX 3029A
Compatible contacts	see pages 51-27	see pages 51-27	see pages 51-27
Compatible light units	N.A.	N.A.	N.A.

CODE

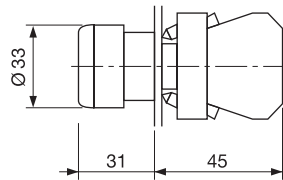
	ECX 1110		ECX 1000
	ECX 1111		ECX 1001
	ECX 1112		ECX 1002
	ECX 1113		ECX 1003
	ECX 1114		ECX 1004
	ECX 1115		ECX 1005
START - white button		ECX 1105-01	
ON - white button		ECX 1105-03	
STOP - black button		ECX 1110-01	
OFF - black button		ECX 1110-03	

Command Units Ø 22

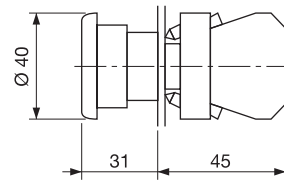
Metallic series - Mushroom pushbuttons



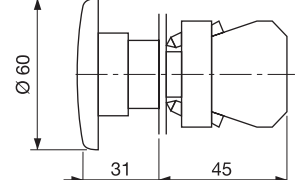
Mushroom pushbutton
Ø 33 mm



Mushroom pushbutton
Ø 40 mm



Mushroom pushbutton
Ø 60 mm



TECHNICAL FEATURES

Mounting diameter	22 mm	22 mm	22 mm
Operator diameter	33 mm	40 mm	60 mm
Body material	Chrome plated zamak	Chrome plated zamak	Chrome plated zamak
Construction form	Mushroom 33 mm	Mushroom 40 mm	Mushroom 60mm
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	Impulse or latch	Impulse or latch	Impulse or latch
Operating temperature	-25°....+70°C	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP65	IP65
Colors			
Standards	IEC 60947-5-1	IEC 60947-5-1	IEC 60947-5-1
Approvals			
Mechanical durability	0.3M with latch - 1M impulse	0.3M with latch - 1M impulse	0.3M with latch - 1M impulse
Compatible support bases	ECX 1029/P - ECX 3029A	ECX 1029/P - ECX 3029A	ECX 1029/P - ECX 3029A
Compatible contacts	see pages 51-27	see pages 51-27	see pages 51-27
Compatible light units	N.A.	N.A.	N.A.

CODE

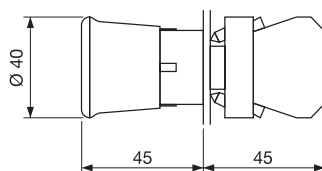
With latch / twist to release	ECX 1160	ECX 1130	ECX 1132
With latch / twist to release	ECX 1161	ECX 1131	ECX 1136
With latch / twist to release	ECX 1168	ECX 1138	
Impulse	ECX 1164	ECX 1134	ECX 1133
Impulse	ECX 1165	ECX 1135	ECX 1137
Impulse	ECX 1169	ECX 1139	

Command Units Ø 22

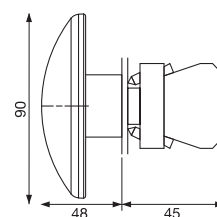
Metallic series - Non-illuminated mushroom pushbuttons



**Mushroom pushbutton Ø 40 mm
snap action**



**Mushroom pushbutton Ø 90 mm
snap action**



TECHNICAL FEATURES

Mounting diameter
Operator diameter
Body material
Construction form
Mounting panel thickness
Functionality
Operating temperature
Degree of protection
Colors
Standards
Approvals
Mechanical durability
Compatible support bases
Compatible contacts
Compatible light units

22 mm

40 mm

Chrome plated zamak

Mushroom 33 mm

Min. 1 mm - Max. 6 mm

with latch - pull to release

-25°....+70°C

IP65



IEC 60947-5-1

CE UL508 ENEC UKCA

300.000

ECX 1029/P, ECX 3029A

see pages 51-27

N.A.

22 mm

90 mm

Chrome plated zamak

Mushroom 40 mm

Min. 1 mm - Max. 6 mm

with latch - pull to release

-25°....+70°C

IP65



IEC 60947-5-1

CE UL508 ENEC UKCA

300.000

ECX 1029/P, ECX 3029A

see pages 51-27

N.A.

CODE

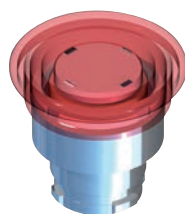
with latch - pull to release

ECX 1146

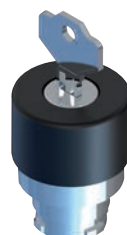
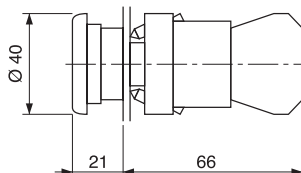
ECX 1117

Command Units Ø 22

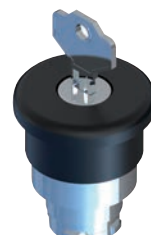
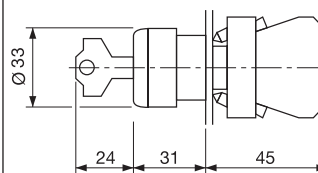
Metallic series - Illuminated mushroom pushbuttons and mushroom key operated pushbuttons



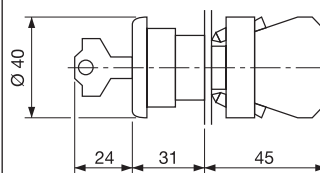
Illuminated mushroom pushbuttons Ø 40 mm



Mushroom pushbutton Ø 33 mm with key (key n° G.513)



Mushroom pushbutton Ø 40 mm with key (key n° G.513)



TECHNICAL FEATURES

Mounting diameter	22 mm	22 mm	22 mm
Operator diameter	40 mm	33 mm	40 mm
Body material	Chrome plated zamak	Chrome plated zamak	Chrome plated zamak
Construction form	Mushroom 40 mm	Mushroom 33 mm	Mushroom 40 mm
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	Impulse or latch	Impulse or latching key release	Impulse or latching key release
Operating temperature	-25°....+70°C	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP65	IP65
Colors			
Standards	IEC 60947-5-1	IEC 60947-5-1	IEC 60947-5-1
Approvals			
Mechanical durability	300.000	300.000	300.000
Compatible support bases	ECX 1050 / ECX 3029A	ECX 1029/P, ECX 3029A	ECX 1029/P, ECX 3029A
Compatible contacts	see pages 54-27	see pages 54-27	see pages 54-27
Compatible light units	see pages 54-27	N.A.	N.A.

CODE

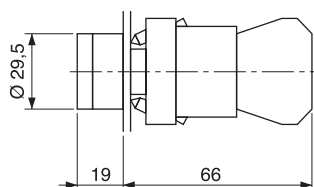
With latch / twist to release		ECX 1170	ECX 1140
With latch / twist to release	ECX 1226	ECX 1171	ECX 1141
Impulse		ECX 1174	ECX 1144
Impulse	ECX 1221	ECX 1175	ECX 1145
Impulse	ECX 1220		
Impulse	ECX 1223		
Impulse	ECX 1222		
Impulse	ECX 1224		
Impulse	ECX 1225		

Command Units Ø 22

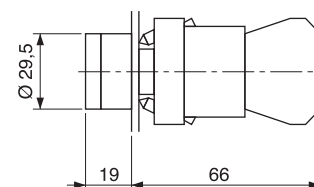
Metallic series - Simple impulse and push-push illuminated pushbuttons



Illuminated flush pushbutton



Illuminated flush push-push pushbutton



TECHNICAL FEATURES

Mounting diameter	22 mm	22 mm
Operator diameter	29.5 mm	29.5 mm
Body material	Chrome plated zamak	Chrome plated zamak
Construction form	Flush	Flush
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	Impulse	Push-push
Operating temperature	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP65
Colors		
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals		
Mechanical durability	1M	1M
Compatible support bases	ECX 1050 / ECX 3029A	ECX 1050 / ECX 3029A
Compatible contacts	see pages 51-27	see pages 51-27
Compatible light units	see pages 54-27	see pages 54-27

CODE

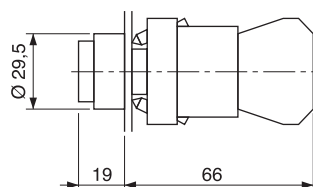
	ECX 1201	ECX 1191
	ECX 1202	ECX 1192
	ECX 1203	ECX 1193
	ECX 1204	ECX 1194
	ECX 1205	ECX 1195
	ECX 1206	ECX 1196
Not illuminated		ECX 1190

Command Units Ø 22

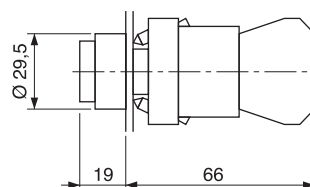
Metallic series - Illuminated pushbuttons with simple impulse, push-push and with guard



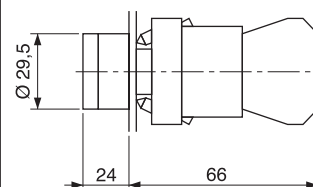
Extended illuminated pushbutton



Extended push-push illuminated pushbutton



Illuminated shrouded pushbutton



TECHNICAL FEATURES

Mounting diameter	22 mm	22 mm	22 mm
Operator diameter	29.5 mm	29.5 mm	29.5 mm
Body material	Chrome plated zamak	Chrome plated zamak	Chrome plated zamak
Construction form	Extended	Extended	Shrouded
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	Impulse	Push-push	Impulse
Operating temperature	-25°....+70°C	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP65	IP65
Colors			
Standards	IEC 60947-5-1	IEC 60947-5-1	IEC 60947-5-1
Approvals			
Mechanical durability	1M	1M	1M
Compatible support bases	ECX 1050 or ECX 3029A	ECX 1050 / ECX 3029A	ECX 1050 or ECX 3029A
Compatible contacts	see pages 51-27	see pages 51-27	see pages 51-27
Compatible light units	see pages 54-27	see pages 54-27	see pages 54-27

CODE

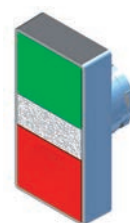
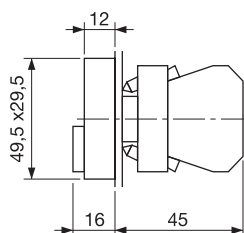
	ECX 1211	ECX 1181	EXC 1011
	ECX 1212	ECX 1182	ECX 1012
	ECX 1213	ECX 1183	ECX 1013
	ECX 1214	ECX 1184	ECX 1014
	ECX 1215	ECX 1185	ECX 1015
	ECX 1216	ECX 1186	ECX 1016
Not illuminated		ECX 1180	

Command Units Ø 22

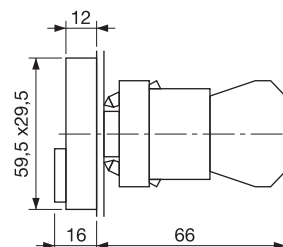
Metallic series - Double pushbuttons



Double pushbutton



Double illuminated pushbutton



TECHNICAL FEATURES

Mounting diameter	22 mm	22 mm
Operator diameter	49.5x29.5 mm	49.5x29.5 mm
Body material	Chrome plated zamak	Chrome plated zamak
Construction form	Rectangular	Rectangular
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	Impulse	Impulse
Operating temperature	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP40
Colors		
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals		
Mechanical durability	1M	1M
Compatible support bases	ECX 1029/P - ECX 3029A	ECX 1050 / ECX 3029A
Compatible contacts	see pages 51-27	see pages 51-27
Compatible light units	N.A.	see pages 54-27

CODICE

Flush fitting	ECX 1150	ECX 1151
As above with symbols	ECX 1152	ECX 1153
Protruding red button	ECX 1154	ECX 1155
As above with symbols	ECX 1156	ECX 1157
On request with w/b buttons	ECX/BN	ECX/BN

Command Units Ø 22

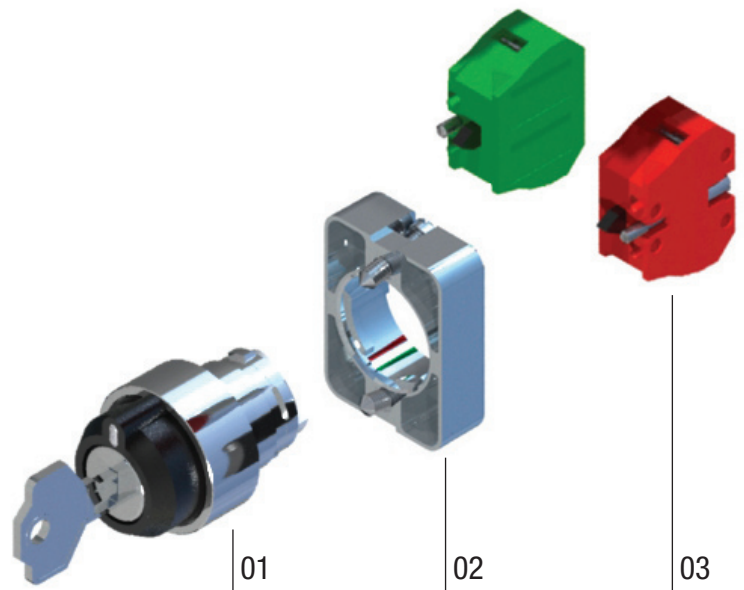
Metallic series - Selectors

Non-illuminated selector assembly

01 Selector

02 Fixing ring with threaded ring

03 Contact elements



Operating principles for selector switches - Legend

- ✓ 2 fixed positions
- ↘ 2 positions with return from the RIGHT
- ✓ 3 fixed positions
- ↔ 3 positions with return from RIGHT and LEFT
- ↘ 3 positions with return from the LEFT
- ↘ 3 positions with return from the RIGHT
- ✓ 2 fixed positions with key extraction from the LEFT
- ✓ 2 fixed positions with key extraction from LEFT and RIGHT
- ↘ 2 positions with return from the RIGHT and key extraction from the LEFT
- ✓ 3 fixed positions with key extraction in the center
- ✓ 3 fixed positions with LEFT and RIGHT key extraction
- ✓ 3 positions with key extraction on the LEFT
- ✓ 3 fixed positions with key extraction in the center, LEFT and RIGHT
- ↔ 3 positions with key extraction in the center and return from LEFT and RIGHT

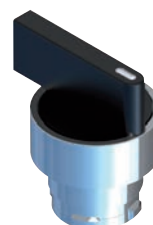
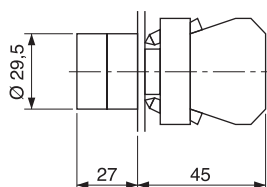
Other versions available on request: contact our sales department.

Command Units $\varnothing$ 22

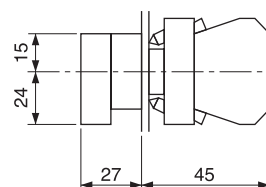
Metallic series - Selector switches



Short lever selector



Long lever selector



TECHNICAL FEATURES

Mounting diameter	22 mm	22 mm
Operator diameter	29.5 mm	39 mm
Body material	Chrome plated zamak	Chrome plated zamak
Construction form	Short lever	Long lever
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	See table on page 39	See table on page 39
Operating temperature	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP65
Colors	●	●
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK	CE ENEC UK
Mechanical durability	300.000	300.000
Compatible support bases	ECX 1029/P - ECX 3029A	ECX 1029/P - ECX 3029A
Compatible contacts	see pages 51-27	see pages 51-27
Compatible light units	N.A.	N.A.

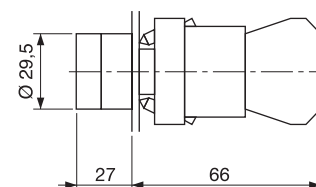
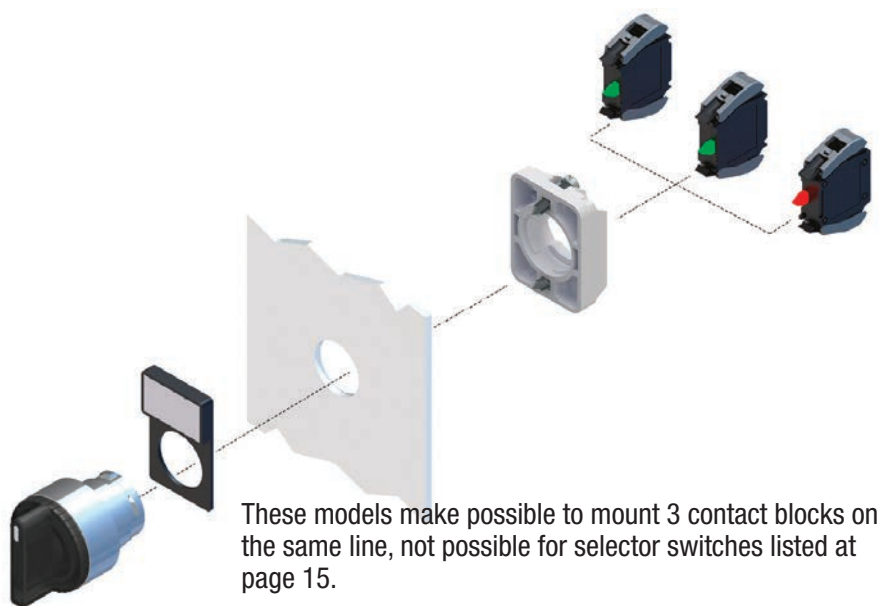
CODE

✓	ECX 1300	ECX 1350
✓	ECX 1310	ECX 1360
✓	ECX 1320 GCX 1320S*	ECX 1370 GCX 1370S*
✓	ECX 1330 GCX 1330S*	ECX 1380 GCX 1380S*
✓	ECX 1340	ECX 1390
✓	ECX 1345	ECX 1400

* Contact elements already included

Command Units Ø 22

Metallic series - Selector switches



TECHNICAL FEATURES

Mounting diameter
Operator diameter
Body material
Construction form
Mounting panel thickness
Functionality
Operating temperature
Degree of protection
Colors
Standards
Approvals
Mechanical durability
Compatible support bases
Compatible contacts

22 mm
29.5 mm
Chrome plated zamak
Short lever
Min. 1 mm - Max. 6 mm
See table on page 39
-25°....+70°C
IP65
●
IEC 60947-5-1
CE EAC UK
300.000
ECX 1050 / ECX 3029A
see pages 51-27

CODE



ECX 1303



ECX 1313



ECX 1323



ECX 1333



ECX 1343



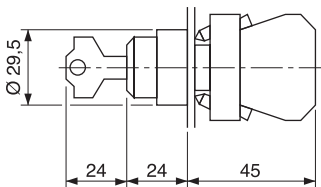
ECX 1346

Command Units Ø 22

Metallic series - Key selectors



Key selector (key No. G. 513)



TECHNICAL FEATURES

Mounting diameter	22 mm
Operator diameter	29.5 mm
Body material	Chrome plated zamak
Construction form	With key
Mounting panel thickness	Min. 1 mm - Max. 6 mm
Functionality	See table on page 39
Operating temperature	-25°....+70°C
Degree of protection	IP65
Colors	●
Standards	IEC 60947-5-1
Approvals	CE ENEC UK
Mechanical durability	300.000
Compatible support bases	ECX1029/P - ECX 3029A
Compatible contacts	see pages 51-27
Compatible light units	N.A.

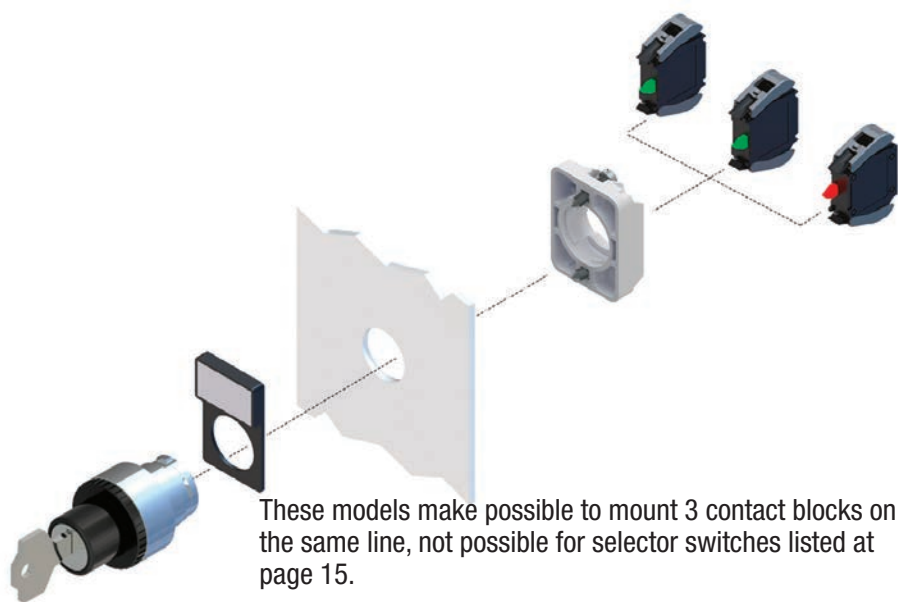
CODE

↙	ECX 1410
↘	ECX 1420
↙↘	ECX 1430
↙↘↙	ECX 1440 GCX 1440S*
↙↘↘	ECX 1450
↙↘↙↘	ECX 1460
↙↘↙↘↙	ECX 1470 GCX 1470S*
↙↘↙↘↘	ECX 1480 GCX 1480S*

* Contact elements already included

Command Units Ø 22

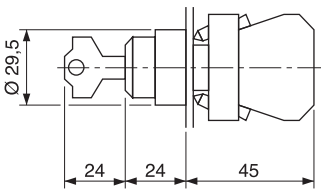
Metallic series - Key selectors



These models make possible to mount 3 contact blocks on the same line, not possible for selector switches listed at page 15.



Key selector (key No. G. 513)



TECHNICAL FEATURES

- Mounting diameter
- Operator diameter
- Body material
- Construction form
- Mounting panel thickness
- Functionality
- Operating temperature
- Degree of protection
- Colors
- Standards
- Approvals
- Mechanical durability
- Compatible support bases
- Compatible contacts
- Compatible light units

- 22 mm
- 29.5 mm
- Chrome plated zamak
- With key
- Min. 1 mm - Max. 6 mm
- See table on page 329
- 25°....+70°C
- IP65
-
- IEC 60947-5-1
- CE EAC UK
- 300.000
- ECX1029/P - ECX 3029A
- see pages 48-26
- N.A.

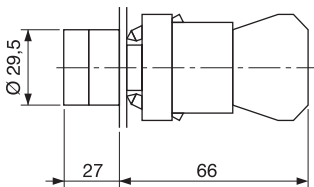
CODE

↙	ECX 1413
↘	ECX 1423
↗	ECX 1433
↘	ECX 1443
↙	ECX 1453
↘	ECX 1463
↗	ECX 1473
↘	ECX 1483

Command Units Ø 22
Metallic series - Illuminated selector switches



Illuminated selector



TECHNICAL FEATURES	
Mounting diameter	22 mm
Operator diameter	29.5 mm
Body material	Chrome plated zamak
Construction form	Short lever
Mounting panel thickness	Min. 1 mm - Max. 6 mm
Functionality	See table on page 39
Operating temperature	-25°....+70°C
Degree of protection	IP65
Colors	Ⓟ
Standards	IEC 60947-5-1
Approvals	CE EAC UK CA
Mechanical durability	300.000
Compatible support bases	ECX 1050 / ECX 3029A
Compatible contacts	see pages 51-27
Compatible light units	see pages 54-27
CODE	
	ECX 124•
	ECX 125•
	ECX 126•
	ECX 127•
	ECX 128•
	ECX 129•

Replace the symbol • with the number of the desired color:
1: Red 2: Green 3: Yellow 4: Blue 5: Trasparent

Command Units Ø 22

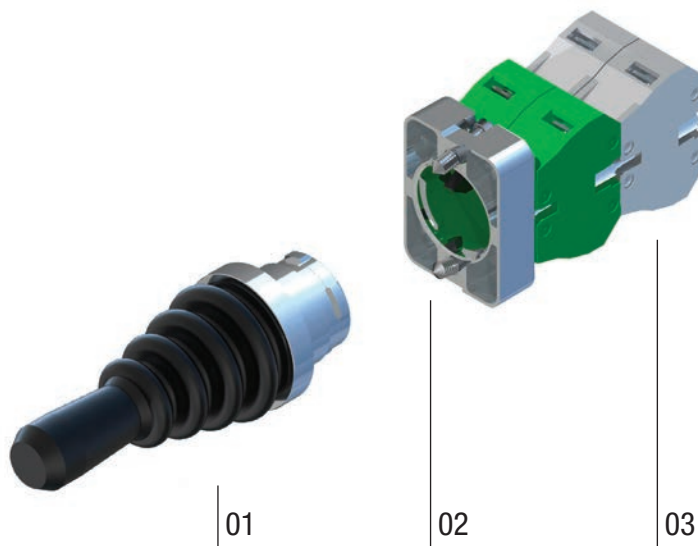
Metallic series - Joysticks

Joystick assembly

01 Selector

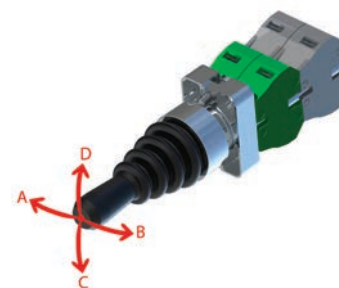
02 Support base

03 Contact elements



Joystick operating principles legend

- 1 position: A with return
- 1 position: A maintained
- 2 positions: A-B with return
- 2 positions: A with return / B maintained
- 2 positions: A-B maintained
- 4 positions: A-B-C-D with return
- 4 positions: A maintained / B-C-D with return
- 4 positions: A-B maintained / C-D with return
- 4 positions: A-B-C maintained / D with return
- 4 positions: A-B-C-D maintained



Positions legend

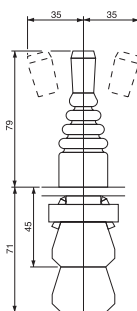
Other versions available on request: contact our sales department.

Command Units Ø 22

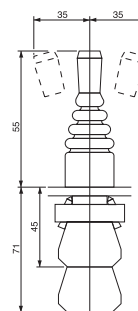
Metallic series - "Joysticks" type selector



Joystick H 79 mm



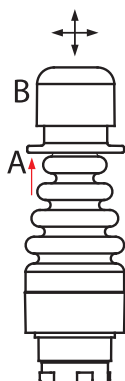
Joystick H 55 mm



TECHNICAL FEATURES		
Mounting diameter	22 mm	22 mm
Operator diameter	29.5 mm	29.5 mm
Body material	Chrome plated zamak	Chrome plated zamak
Construction form	H. 79 mm	H. 55 mm
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	See table on page 45	See table on page 45
Operating temperature	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP65
Colors	●	●
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK	CE ENEC UK
Mechanical durability	300.000	300.000
Compatible support bases	included	included
Compatible contacts	included	included
Compatible light units	N.A.	N.A.
CODE		
1 position: A with return	ECX 1515	ECX 1545
A maintained	ECX 1516	ECX 1546
2 positions: A-B with return	ECX 1510	ECX 1540
A with return / B maintained	ECX 1511	ECX 1541
A-B maintained	ECX 1512	ECX 1542
4 positions: A-B-C-D with return	ECX 1520	ECX 1550
A maintained / B-C-D with return	ECX 1521	ECX 1551
A-B maintained / C-D with return	ECX 1522	ECX 1552
A-B-C maintained / D with return	ECX 1523	ECX 1553
A-B-C-D maintained	ECX 1524	ECX 1554

Command Units Ø 22

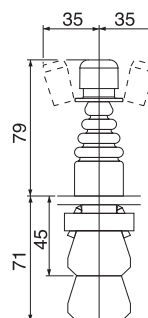
Metallic series - "Joysticks with lock" type selector



To unlock the joystick, lift ring A
o head B, then move the lever
to the desired position



Joystick H 79 mm



TECHNICAL FEATURES

Mounting diameter	22 mm
Operator diameter	29.5 mm
Body material	Chrome plated zamak
Construction form	H. 79 mm
Mounting panel thickness	Min. 1 mm - Max. 6 mm
Functionality	See table on page 45
Operating temperature	-25°+70°C
Degree of protection	IP65
Colors	●
Standards	IEC 60947-5-1
Approvals	CE ENEC UK
Mechanical durability	300.000
Compatible support bases	included
Compatible contacts	included
Compatible light units	N.A.

CODE

1 position: A with return	ECX 1515S
A maintained	ECX 1516S
2 positions: A-B with return	ECX 1510S
A with return / B maintained	ECX 1511S
A-B maintained	ECX 1512S
4 positions: A-B-C-D with return	ECX 1520S
A maintained / B-C-D with return	ECX 1521S
A-B maintained / C-D with return	ECX 1522S
A-B-C maintained / D with return	ECX 1523S
A-B-C-D maintained	ECX 1524S

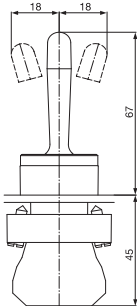
Command Units Ø 22

Metallic series - Wooble joysticks - Potentiometer

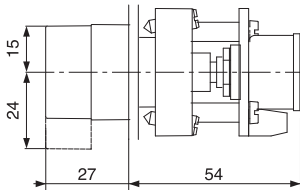
Wooble lever
 The contacts (supplied separately)
 are operated with a hand movement
 in each direction



Wooble joystick



Potentiometer with knob operator



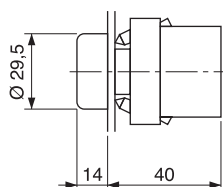
TECHNICAL FEATURES		
Mounting diameter	22 mm	22 mm
Operator diameter	29.5 mm	29.5 mm
Body material	Chrome plated zamak	Chrome plated zamak
Construction form	Joystick h. 67	Potentiometer lever
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	Wooble	Rotary linear potentiometer
Operating temperature	-25°....+70°C	-25°....+70°C
Degree of protection	IP65	IP65
Colors		
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	  	  
Mechanical durability	1M	
Compatible support bases	ECX 1029/P - ECX 3029A	Included
Compatible contacts	see pages 51-27	N.A.
Compatible light units	N.A.	N.A.
CODE		
	ECX 1530	
 1kΩ		ECX 2300-1K
 5kΩ		ECX 2300-5K
 10kΩ		ECX 2300-10K
 20kΩ		ECX 2300-20K
 25kΩ		ECX 2300-25K

Command Units Ø 22

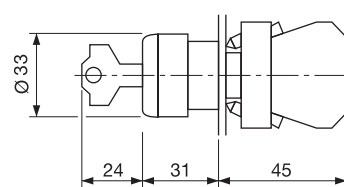
Metallic series - Pilot light - Mushroom pushbutton for special applications



Pilot light



Mushroom pushbutton
Ø 33 mm for special applications



TECHNICAL FEATURES

Mounting diameter
Operator diameter
Body material
Construction form
Mounting panel thickness
Functionality
Operating temperature
Degree of protection
Colors
Standards
Approvals
Mechanical durability
Compatible support bases
Compatible contacts
Compatible LED units
Compatible light units

22 mm
29.5 mm
Chrome plated zamak
Extended
Min. 1 mm - Max. 6 mm
Pilot light
-25°....+70°C
IP65

IEC 60947-5-1
 UL 508
N.A.
ECX 1050 / ECX 3029A
N.A.
see page 27
see page 54

22 mm
33 mm
Chrome plated zamak
Mushroom 40 mm
Min. 1 mm - Max. 6 mm
See description below (ECX1177)
-25°....+70°C
IP65

IEC 60947-5-1
 UL 508
300.000
ECX 1029/P - ECX 3029A
see pages 51-27
N.A.
N.A.

CODE

 Key operated







ECX 1231
ECX 1232
ECX 1233
ECX 1234
ECX 1235
ECX 1236

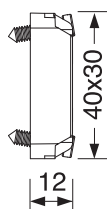
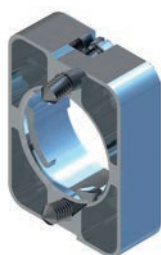
ECX 1177

This special pushbutton has been developed to fulfill all the requests coming from applications which require an intentional operation in order to consent actions (as adjustments, maintenance, inspection etc.) that may cause risks. Such an operation must be therefore carried out by authorized staff. The pushbutton working depends to the connection and rotation of the codified key; the pushbutton turns back to the free position when the operator releases the pression on the device.

Command Units Ø 22

Metallic series - Contact elements and BA9s lampholder with screw fixing

Support base



TECHNICAL FEATURES

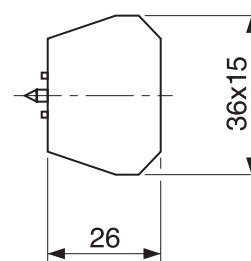
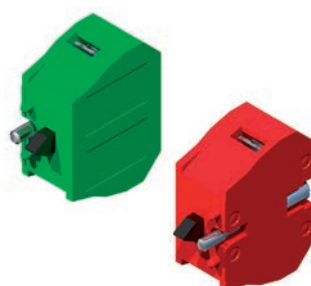
Compatibility	With ECX 1000 operators
Size	40x30 mm
Thickness	12 mm
Material	Zamak galvanized
Ambient temperatures	-25....+70°C
Prescriptions	Fixing by screws

Assembly and use precautions on page 50

CODE

ECX 1029/P

Screw fixing contact blocks (IP20)



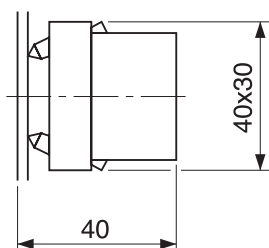
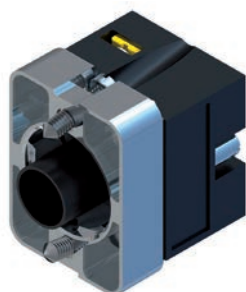
Positive opening	IEC 60947-5-1	The "NC" contacts have a positive opening operation
Rated insulation voltage U_i	IEC 60947-1 and EN 60947-1 UL 508 and CSA C22-2 n° 14	660V (pollution degree 3) A300, Q300
Rated impulse voltage U_{imp}	IEC 60947-1 and EN 60947-1	6 kV
Conventional thermal current in free air I_{th}	IEC 60947-5-1 and EN 60947-5-1 $\theta < 40^\circ C$	10 A
Short circuit protection U_e	< 500 V. a.c. – gG (gl) type fuses	10 A
Rated operating current	IEC 60947-5-1	
	I_e / AC-15:	
	24 V - 50/60 Hz	10 A
	240 V - 50/60 Hz	6 A
	400 V - 50/60 Hz	4 A
	I_e / DC-13:	
	24 V - d.c.	2,8 A
	125 V - d.c.	0,55 A
	250 V - d.c.	0,27 A
Operating frequency cycles	3600 cycles / hour	
Initial contact resistance	$\leq 25 \text{ m}\Omega$	
Degrees of protection IEC 60529 and EN 60529	IP 20	
Connection terminals	Screw with captive cable clamp 1 or 2 conductors - 0.5 ... 2.5 mm ²	

Command Units Ø 22

Metallic series - Contact elements and BA9s lampholder with screw fixing

DESCRIPTION				
Color	Red	Green	Grey	Brown
Operation diagram	EN 01 	EN 10 	EN 10 	EN 10 
Usage			Only on Joy Stick with 4 positions	On buttons step by step
CODE	ECX 1030N	ECX 1040N	ECX 1041N	ECX 1042N

BA9s lampholder with fixing base (IP20)



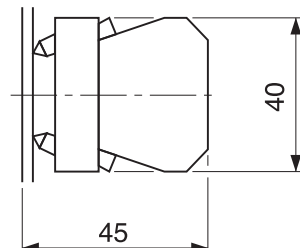
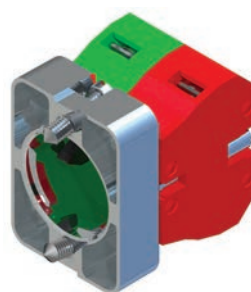
DESCRIPTION

BA9 direct power supply
400V - (Max)
(bulb not included)



ECX 1050

Contact block with support base (IP 20)



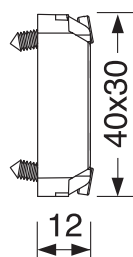
OPERATION DIAGRAM

COLOR

CODE

EN 01		1 Rosso	ECX 1031
EN 10		1 Verde	ECX 1032
EN 10		1 Marrone	ECX 1036
EN 02		2 Rosso	ECX 1033
EN 20		2 Verde	ECX 1034
EN 20		2 Marrone	ECX 1037
EN 11		1 Rosso + 1 Verde	ECX 1035

Support base



TECHNICAL FEATURES

Compatibility
Size
Thickness
Material
Ambient temperatures
Prescriptions

Compatible with contact and light blocks
N series, see page 27

with ECX series operators 1 ...
40x30 mm
12 mm
Metal
-25....+70°C
Fixing by screw

Assembly and use precautions on page 49

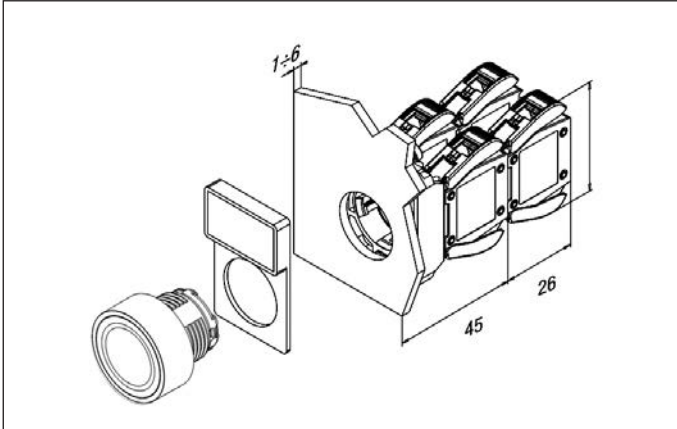
CODE

ECX 3029-A

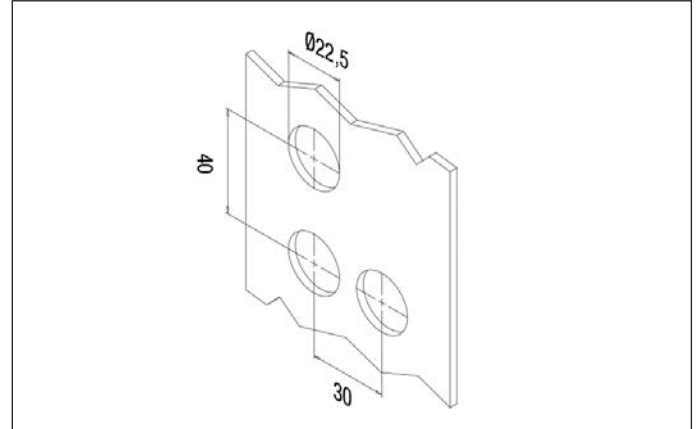
Command Units $\varnothing$ 22

Plastic series - Assembly and use precautions

APPLICATIONS



PANEL DRILLING



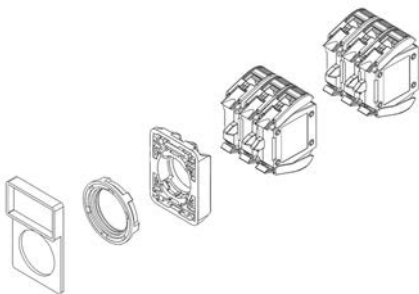
ASSEMBLY DATA

- Insert the operating device into the panel hole and fix it through the provided fixing ring; use the optionally provided tool (ECX 1608) to optimize the operation.
- Depending on necessity, assemble the contact blocks to the support base according to the instructions shown below.
- Apply the contact group on the installed operating device.
- Contact blocks and led units can be easily removed from their support by acting on the side levers (figure 2).
This makes circuit wiring and control operations easier.

NON-ILLUMINATED MOMENTARY PUSHBUTTONS
(ECX4000-4005, ECX 4100-4115)

NON-ILLUMINATED MUSHROOM PUSHBUTTONS
(ECX 4130-4177)

WOBBLE DEVICES
(ECX 4530, ECX 4570-4572)



MAX 2 contact blocks stacked on each position.

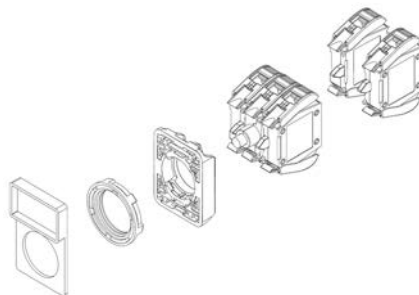
ILLUMINATED MOMENTARY PUSHBUTTONS
(ECX 4011-4016, ECX 4201-4216)

PUSH/PUSH PUSHBUTTONS
(ECX 4180-4196)

TWO-WAY PUSHBUTTONS WITH PILOT LIGHT
(ECX 4151-4157)

ILLUMINATED MUSHROOM PUSHBUTTONS
(ECX 4220-4226)

ILLUMINATED SELECTORS
(ECX 4241-4295)



Contact blocks must be installed in the lateral positions of the support base.

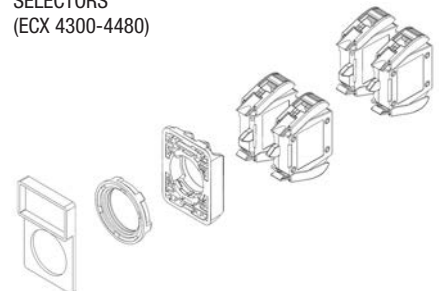
MAX 2 contact blocks stacked on each position.

LED lamp-holder must be fixed in the central position.

TWO-WAY PUSHBUTTONS

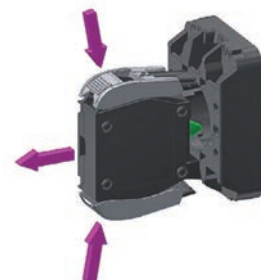
(ECX 4150-4156)

SELECTORS
(ECX 4300-4480)



MAX 2 contact blocks stacked on each position.

Figure 2

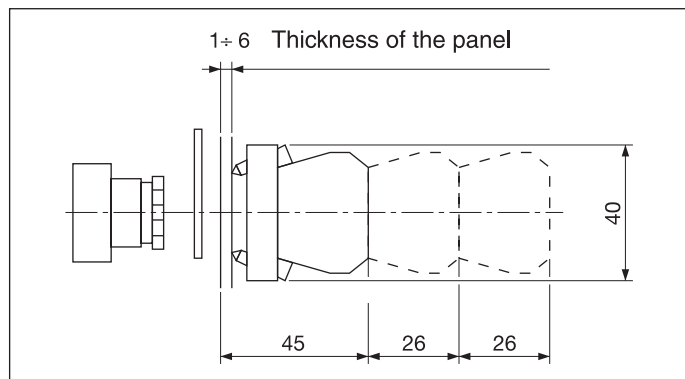


Command Units Ø 22

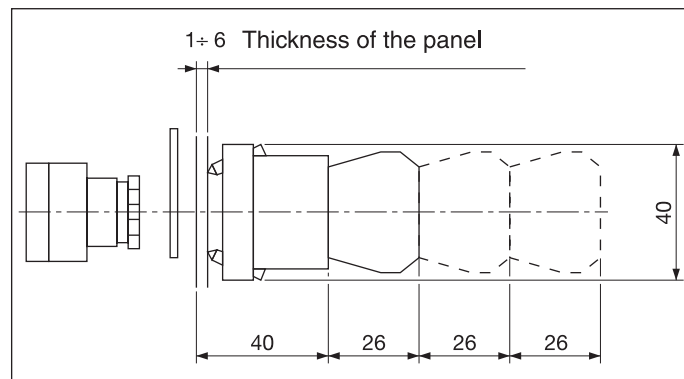
Metallic series - Assembly and precautions for use

ASSEMBLY DATA

Pushbuttons and selector switches

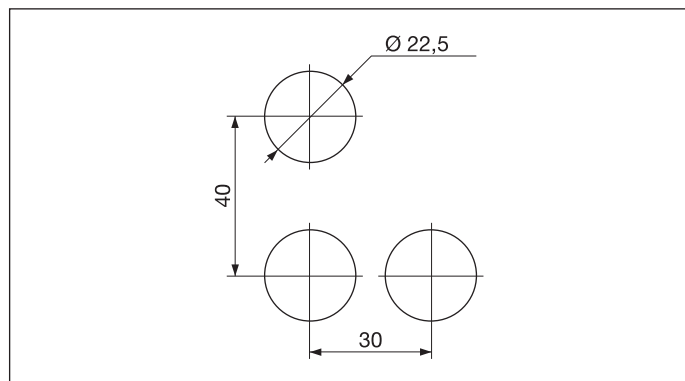


Illuminated pushbuttons and selector switches - Pilot lights

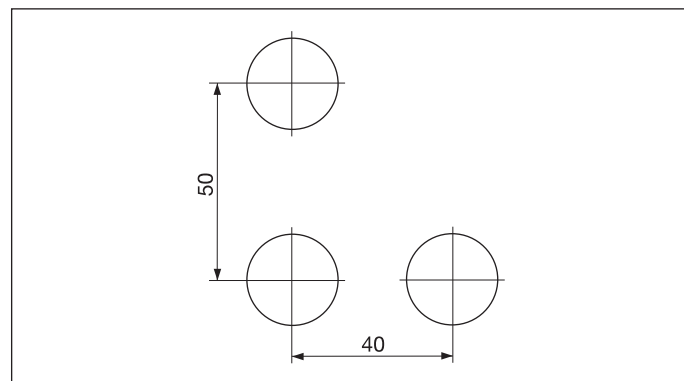


PANEL DRILLING

Suitable up to 230V and same polarity

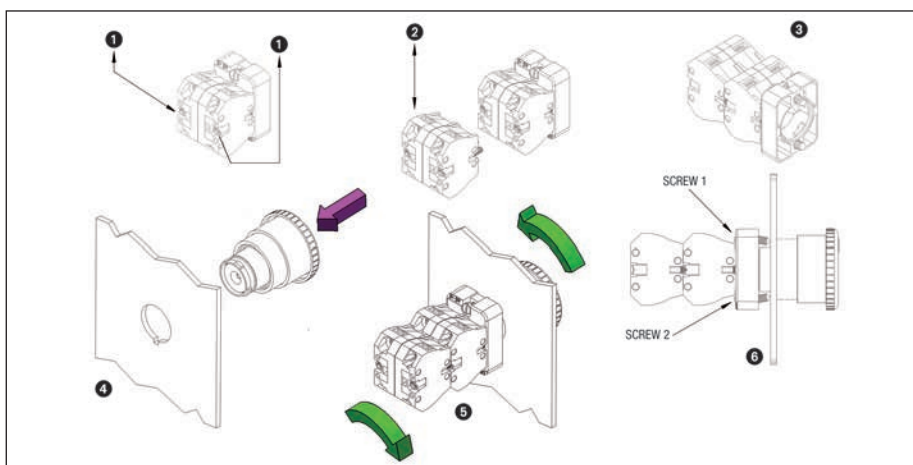


Suitable up to 400V and different polarity



INSTALLATION PRECAUTIONS

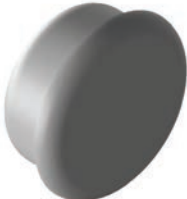
- 1 Assemble the contacts block on the support base tightening the screws as shown in picture 1.
- 2 Assemble others eventual switches depending on necessity.
- 3 Assembled switch-support base group.
- 4 Insert the operating device into the panel hole.
- 5 Assemble the switch-support base group on the operating device engaging the bayonets and rotating the two groups in contrasting directions till to the reaching of the correct positioning.
- 6 Draw near the screw 1 till to the contact with the panel, tighten the screw 2 and at last tighten the screw 1. Make sure that the groups are fixed and straight.
Avoid unnecessary forcings to not damage the components (see tab. 1).



	METAL SERIES	
	Recommended	Maximum
	Nm	Nm
Fixing screws of the contact block	0,3	0,5
Fixing screws of the support base	0,5	0,8

Command Units Ø 22

Accessories and spare parts

TYPE	DESCRIPTION			CODE
ADAPTER 	30-22MM adapter suitable to mount 22mm buttons into 30mm holes			GR2204PEX
FIXING RING 	Replacement for buttons 4000 series			PL2727PI
FIXING KEY 	Ring nut tightening wrench for 4000 series buttons			ECX 1608
PLUG FOR HOLES 	Black - supplied complete with gasket and ECX 1490 fixing screw Degree of protection IP65 Diameter 22			ECX 1490
BA9s 10x28 BULB 	DESCRIPTION	VOLTAGE	POWER	CODE
	Incandescent light bulb	6 V	1,2 W	ECX 1900
		12 V	2 W	ECX 1901
		24 V	2 W	ECX 1902
		48 V	2 W	ECX 1903
	Neon light bulb	130 V	2,6 W	ECX 1904
		110 V		ECX 1905
		220 V		ECX 1906
		300V		ECX 1907
BA9s LED BULB 	COLOR	24V AC/DC	115V AC/DC	230V AC/DC
		ECX 1911	ECX 1921	ECX 1961
		ECX 1912	ECX 1922	ECX 1962
		ECX 1913	ECX 1923	ECX 1963
		ECX 1914	ECX 1924	ECX 1964
		ECX 1915	ECX 1925	ECX 1965

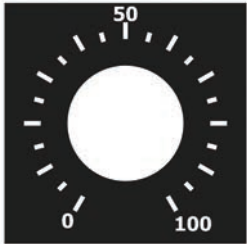
Command Units Ø 22

Accessories and spare parts

TYPE	DESCRIPTION		CODE	
CONNECTION CABLES 	Male/male connection cables			
	USB 2.0 type A - 1m		XX20010MM	
	USB 3.0 type A - 1m		XX30010MM	
	RJ45 Cat. 6 - 1m		XX45010MM	
SEALS FOR USB AND RJ45 	USB 2.0 Replacement cap for ECX 4620		GU1216PE	
	USB 3.0 Replacement cap for ECX 4630		GU1217PE	
	RJ45 Replacement cap for ECX 4645		GU1215PE	
COLORS CAPS FOR KEYS  * Key not included, order separately if needed (ECX 1067)	COLOR		PACKAGING	CODE
			2 pcs	ECX 1061
			2 pcs	ECX 1062
			2 pcs	ECX 1063
			2 pcs	ECX 1064
			2 pcs	ECX 1065
			2 pcs	ECX 1066
	Key without colored cover		2 pcs	ECX 1067
HOOD BUTTONS 	COLOR	DESCRIPTION	MATERIAL	CODE
		Protective cap for flush-fitting buttons	Neoprene	ECX 1700
			Silicone	ECX 1701
			Silicone	ECX 1702
			Silicone	ECX 1703
			Silicone	ECX 1704
			Silicone	ECX 1705
		Illuminated button protection cap	Silicone	ECX 1706
HOOD DOUBLE BUTTONS 	COLOR	DESCRIPTION	MATERIAL	CODE
		Double button protective cap without indicator light	Silicone	ECX 1710
		with indicator light	Silicone	ECX 1711

Command Units Ø 22

Accessories and spare parts

TYPE	DESCRIPTION	CODICE
PROTECTION FOR MUSHROOM BUTTONS 	Protection without text	ECX 1600
	Protection with EMERGENCY STOP text	ECX 1601
	Protection with EMERGENCY STOP text	ECX 1602
	N.B. Not compatible with ECX 4580 and ECX 4581 buttons	
PLATES FOR EMERGENCY PUSHBUTTONS 	Yellow plate without text Ø 50mm	ECX 1660
	Yellow plate without text Ø 60mm	ECX 1650
	Yellow background plate with EMERGENCY STOP writing, Ø 50mm	ECX 1661
	Yellow background plate with EMERGENCY STOP writing, Ø 60mm	ECX 1651
	Yellow background plate with EMERGENCY STOP Ø 50mm	ECX 1662
	Yellow background plate with EMERGENCY STOP Ø 60mm	ECX 1652
	N.B. Not compatible with ECX 4580 and ECX 4581 buttons insert final -G for plate with pushbutton positioning notch example ECX 1650-G	
PLATE identification with writable surface 	Rectangular plate 30x48mm without text	ECX 1850
	Rectangular plate 30x60mm without text	ECX 1855
PLATE FOR POTENTIOMETER 	Square plate 50x50mm without text	ECX 2640

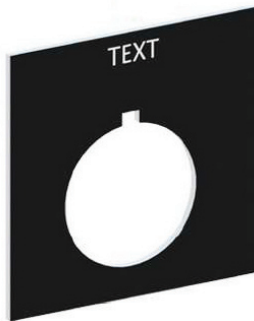
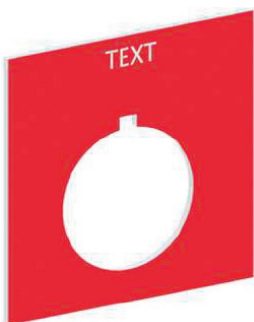
Command Units Ø 22

Accessories and spare parts

TYPE	DIMENSION	DESCRIPTION	CODE
READY TO USE PLATE FOR BUTTONS, SELECTORS AND INDICATOR LIGHTS - Made of Plastic - Internal diameter 22 mm - Black colour 	30 x 45 x 1,5	WITHOUT TEXT	ECX 1670-B
		CLOSE	ECX 1670-B01
		DOWN	ECX 1670-B02
		FORWARD	ECX 1670-B04
		JOG	ECX 1670-B05
		ON	ECX 1670-B06
		OPEN	ECX 1670-B07
		REVERSE	ECX 1670-B08
		RUN	ECX 1670-B09
		START	ECX 1670-B10
		STOP	ECX 1670-B11
		UP	ECX 1670-B12
		FOR-REV	ECX 1670-B13
		HAND-AUTO	ECX 1670-B14
		JOG-RUN	ECX 1670-B15
		OFF-ON	ECX 1670-B16
		OPEN-CLOSE	ECX 1670-B17
		UP-DOWN	ECX 1670-B18
		FOR-OFF-REV	ECX 1670-B19
		HAND-OFF-AUTO	ECX 1670-B20
		POWERON	ECX 1670-B21
		MOTOR RUN	ECX 1670-B22
		MOTORSTOP	ECX 1670-B23
		CLAMP	ECX 1670-B24
		FEEDER ON	ECX 1670-B25
		FEEDER OFF	ECX 1670-B26
		HIGH	ECX 1670-B27
		IN	ECX 1670-B28
		INCH	ECX 1670-B29
		JOG FOR	ECX 1670-B30
		JOG REV	ECX 1670-B31
		LOW	ECX 1670-B32
		LOWER	ECX 1670-B33
		OFF	ECX 1670-B34
		OUT	ECX 1670-B35
		RAISE	ECX 1670-B36
		READY	ECX 1670-B37
		RESET	ECX 1670-B38
		TEST	ECX 1670-B39
		TRANSFER	ECX 1670-B40
		TRIP	ECX 1670-B41
		UNCLAMP	ECX 1670-B42
		HIGH LOW	ECX 1670-B43
		MAN AUTO	ECX 1670-B44
		SAFE RUN	ECX 1670-B45
		AUTO OFF HAND	ECX 1670-B46
		MAN OFF AUTO	ECX 1670-B47
		OPEN OFF CLOSE	ECX 1670-B48
		UP OFF DOWN	ECX 1670-B49
		PULL ON PUSH OFF	ECX 1670-B50
		EXTEND	ECX 1670-B51
		RETRACT	ECX 1670-B52
		GRIP	ECX 1670-B53
		RELEASE	ECX 1670-B54
		START rotated 90°	ECX 1670-B10-90
		0-1	ECX 1670-B55
		0-1-2	ECX 1670-B56
		MARCIA	ECX 1670-B67

Command Units Ø 22

Accessories and spare parts

TYPE	DIMENSION	DESCRIPTION	CODE
READY TO USE PLATE FOR BUTTONS, SELECTORS AND LUMINOUS INDICATORS - Made of Plastic - Internal diameter 22 mm - Red colour 	30 x 45 x 1,5	WITHOUT TEXT	ECX 1670-R
		EMERG. STOP	ECX 1670-R03
		STOP	ECX 1670-R11
		STOP rotated 90°	ECX 1670-R11-90
READY TO USE PLATE FOR BUTTONS, SELECTORS AND INDICATOR LIGHTS - Made of Plastic - Internal diameter 22 mm - Black colour 	40 x 45 x 1,5	WITHOUT TEXT	ECX 1690-B
		JOG	ECX 1690-B05
		START	ECX 1690-B10
		OFF-ON	ECX 1690-B16
		OPEN-CLOSE	ECX 1690-B17
		HAND-OFF-AUTO	ECX 1690-B20
		POWER ON	ECX 1690-R21
READY TO USE PLATE FOR BUTTONS, SELECTORS AND INDICATOR LIGHTS - Made of Plastic - Internal diameter 22 mm - Red colour 	40 x 45 x 1,5	WITHOUT TEXT	ECX 1690-R
		EMERG. STOP	ECX 1690-R03
		STOP	ECX 1690-R11

Command Units Ø 22

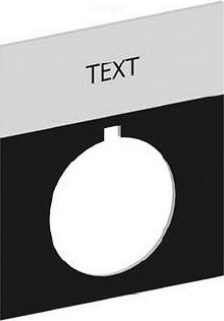
Accessories and spare parts

TYPE	DIMENSION	DESCRIPTION	CODE
READY TO USE PLATE FOR BUTTONS, SELECTORS AND INDICATOR LIGHTS - In Aluminum - Internal diameter 22 mm - Black colour 	30 x 45 x 1,5	WITHOUT TEXT	ECX 1670A-B
		CLOSE	ECX 1670A-B01
		DOWN	ECX 1670A-B02
		FORWARD	ECX 1670A-B04
		JOG	ECX 1670A-B05
		ON	ECX 1670A-B06
		OPEN	ECX 1670A-B07
		REVERSE	ECX 1670A-B08
		RUN	ECX 1670A-B09
		START	ECX 1670A-B10
		STOP	ECX 1670A-B11
		UP	ECX 1670A-B12
		FOR-REV	ECX 1670A-B13
		HAND-AUTO	ECX 1670A-B14
		JOG-RUN	ECX 1670A-B15
		OFF-ON	ECX 1670A-B16
		OPEN-CLOSE	ECX 1670A-B17
		UP-DOWN	ECX 1670A-B18
		FOR-OFF-REV	ECX 1670A-B19
		HAND-OFF-AUTO	ECX 1670A-B20
		POWERON	ECX 1670A-B21
		MOTOR RUN	ECX 1670A-B22
		MOTORSTOP	ECX 1670A-B23
		CLAMP	ECX 1670A-B24
		FEEDER ON	ECX 1670A-B25
		FEEDER OFF	ECX 1670A-B26
		HIGH	ECX 1670A-B27
		IN	ECX 1670A-B28
		INCH	ECX 1670A-B29
		JOG FOR	ECX 1670A-B30
		JOG REV	ECX 1670A-B31
		LOW	ECX 1670A-B32
		LOWER	ECX 1670A-B33
		OFF	ECX 1670A-B34
		OUT	ECX 1670A-B35
		RAISE	ECX 1670A-B36
		READY	ECX 1670A-B37
		RESET	ECX 1670A-B38
		TEST	ECX 1670A-B39
		TRANSFER	ECX 1670A-B40
		TRIP	ECX 1670A-B41
		UNCLAMP	ECX 1670A-B42
		HIGH LOW	ECX 1670A-B43
		MAN AUTO	ECX 1670A-B44
		SAFE RUN	ECX 1670A-B45
		AUTO OFF HAND	ECX 1670A-B46
		MAN OFF AUTO	ECX 1670A-B47
		OPEN OFF CLOSE	ECX 1670A-B48
		UP OFF DOWN	ECX 1670A-B49
		PULL ON PUSH OFF	ECX 1670A-B50
		EXTEND	ECX 1670A-B51
		RETRACT	ECX 1670A-B52
		GRIP	ECX 1670A-B53
		RELEASE	ECX 1670A-B54



Command Units Ø 22

Accessories and spare parts

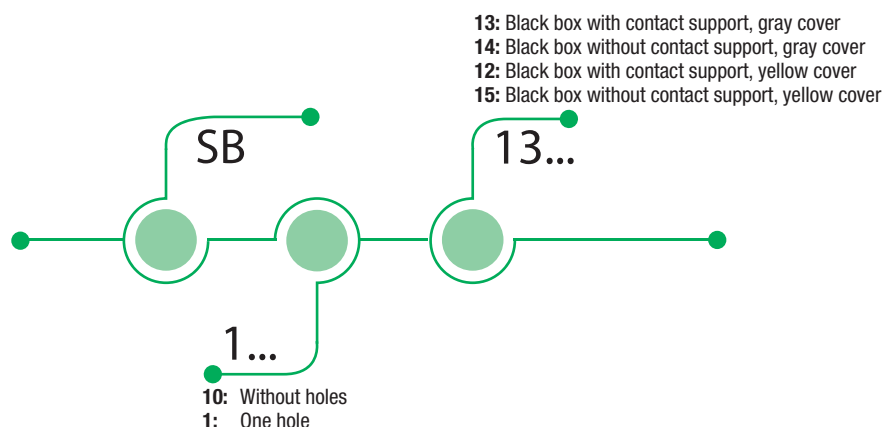
TYPE	DIMENSION	DESCRIPTION	CODE
READY TO USE PLATE FOR BUTTONS, SELECTORS AND INDICATOR LIGHTS - In Aluminum - Internal diameter 22 mm - Red colour 	30 x 45 x 1,5	WITHOUT TEXT	ECX 1670A-R
		EMERG. STOP	ECX 1670A-R03
		STOP	ECX 1670A-R11
READY TO USE PLATE FOR BUTTONS, SELECTORS AND INDICATOR LIGHT - In Aluminum - Internal diameter 22 mm - Black colour 	40 x 45 x 1,5	WITHOUT TEXT	ECX 1680A-B
		JOG	ECX 1680A-B05
		START	ECX 1680A-B10
		OFF-ON	ECX 1680A-B16
		OPEN-CLOSE	ECX 1680A-B17
		HAND-OFF-AUTO	ECX 1680A-B20
		POWER ON	ECX 1680A-R21
READY TO USE PLATE FOR BUTTONS, SELECTORS AND INDICATOR LIGHT - In Aluminum - Internal diameter 22 mm - Red colour 	40 x 45 x 1,5	WITHOUT TEXT	ECX 1680A-R
		EMERG. STOP	ECX 1680A-R03
		STOP	ECX 1680A-R11

Notes

A large rectangular area filled with a fine grid of light gray lines, intended for writing notes. The grid is approximately 30 units wide by 40 units high.

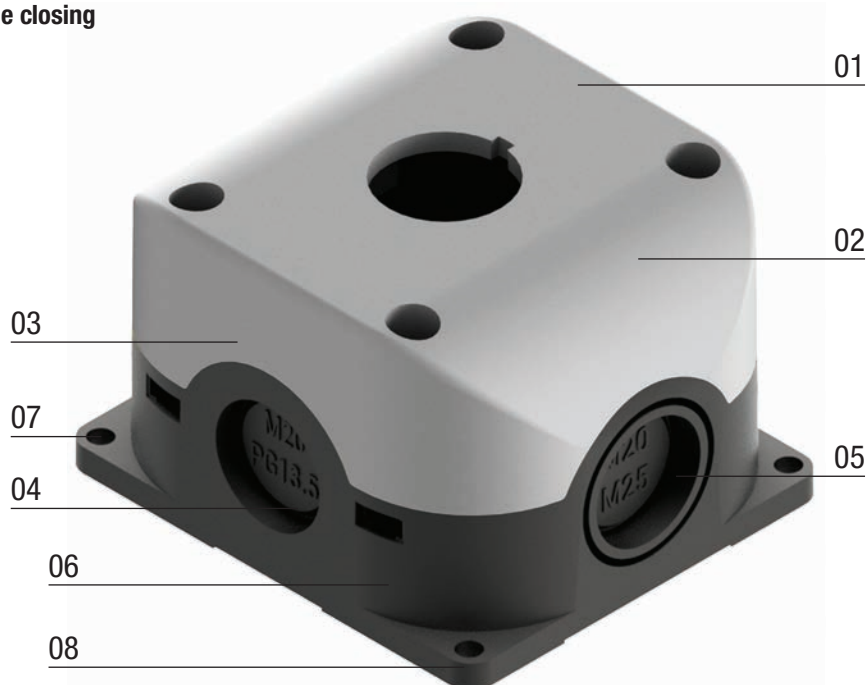
Enclosures in Polycarbonate - **SB Series**

APPROVALS:



HOW IS MADE?

- 01** One hole suitable for 22mm diameter pushbuttons
- 02** Polycarbonate fiberglass reinforced enclosures
- 03** Provided with fixing nuts for safe and comfortable closing
- 04** Gasket on deposit for best sealing performance, designed to reach IP67 and IP69K
- 05** Six breakable holes with different dimension
- 06** Suitable for contacts to be fixed at the bottom of the enclosure
- 07** Possible to fix with screws in two ways, also without opening the cover
- 08** Possible to fix with magnets (optional)



Enclosures in Polycarbonate - **SB Series**

Description

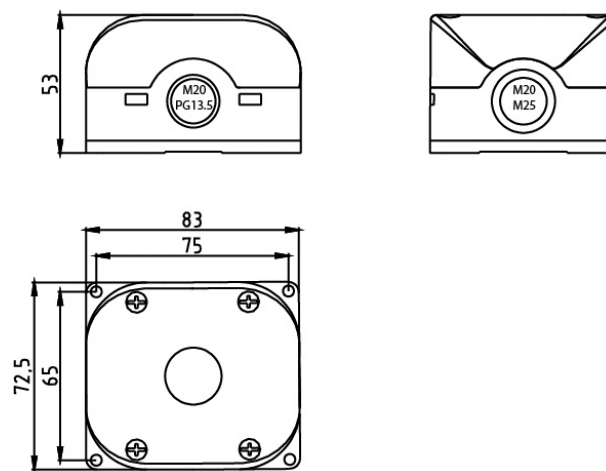
DESCRIPTION AND APPLICATION

Comepi SB enclosures are made of fiberglass reinforced polycarbonate. Assembled to the Comepi command and control units, they are the ideal complement to be used as high quality human-machine interfaces.

The SB line has been designed for applications in harsh environments, it can reach IP67 and IP69K protection degree, thanks also to gasket on deposit. The enclosure has numerous aesthetic, structural and use strengths, which distinguish it from the competition and place it among the top of the range. below are some examples where the SB enclosures could be placed:

- Packaging
- Production lines
- Logistics
- Mobile equipment
- Waste disposal equipment

DIMENSIONS



TECHNICAL FEATURES

Standards	IEC 60947-5-1 / EN 60947-5-1
Room temperature	
– operation	– 25 ... + 70 °C
– storage	–40 ... + 80 °C
Degree of protection (according to IEC 60529 and EN 60529)	Up to IP67 and IP69K
Material	Polycarbonate fiberglass reinforced
Container color Black	Black
Cover colors	Gray RAL 7035

ACCESSORIES

SB enclosures with contact support in the bottom (13)

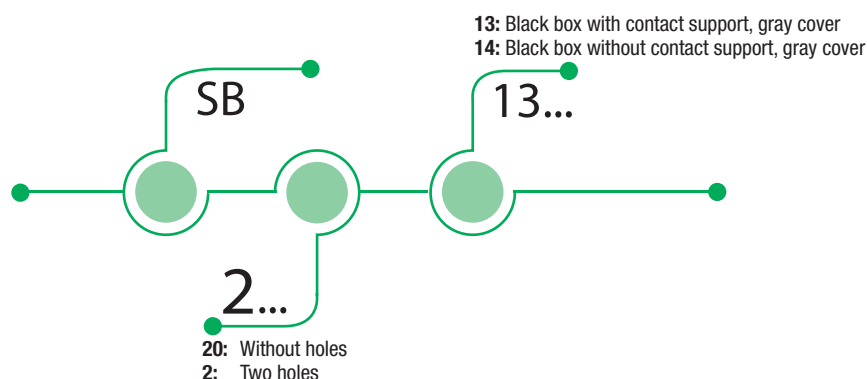
- ECX 1030R: NC contact for fixing to the bottom of the box without using the support base
- ECX 1040R: NO contact for fixing on the bottom of the box without using the support base

SB enclosures without contact support in the bottom (14)

- ECX 1030N: NC contact to be used with the support base
- ECX 1040N: NO contact to be used with the support base
- ECX 4029: support base
- GR CA001: set of magnets (4 pcs) for magnetic fixing of the case

Enclosures in Polycarbonate - **SB Series**

APPROVALS:



HOW IS MADE?

- 01** Two holes suitable for 22mm diameter pushbuttons
- 02** Polycarbonate fiberglass reinforced enclosures
- 03** Provided with fixing nuts for safe and comfortable closing
- 04** Gasket on deposit for best sealing performance, designed to reach IP67 and IP69K
- 05** Six breakable holes with different dimension
- 06** Suitable for contacts to be fixed at the bottom of the enclosure
- 07** Possible to fix with screws in two ways, also without opening the cover
- 08** Possible to fix with magnets (optional)



Enclosures in Polycarbonate - **SB Series**

Description

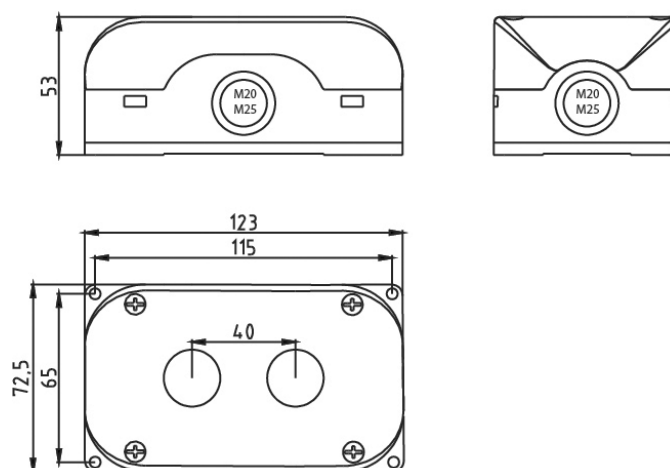
DESCRIPTION AND APPLICATION

Comepi SB enclosures are made of fiberglass reinforced polycarbonate. Assembled to the Comepi command and control units, they are the ideal complement to be used as high quality human-machine interfaces.

The SB line has been designed for applications in harsh environments, it can reach IP67 and IP69K protection degree, thanks also to gasket on deposit. The enclosure has numerous aesthetic, structural and use strengths, which distinguish it from the competition and place it among the top of the range. below are some examples where the SB enclosures could be placed:

- Packaging
- Production lines
- Logistics
- Mobile equipment
- Waste disposal equipment

DIMENSIONS



TECHNICAL FEATURES

Standards	IEC 60947-5-1 / EN 60947-5-1
Room temperature	
– operation	– 25 ... + 70 °C
– storage	–40 ... + 80 °C
Degree of protection (according to IEC 60529 and EN 60529)	Up to IP67 and IP69K
Material	Polycarbonate fiberglass reinforced
Container color Black	Black
Cover colors	Gray RAL 7035

ACCESSORIES

SB enclosures with contact support in the bottom (13)

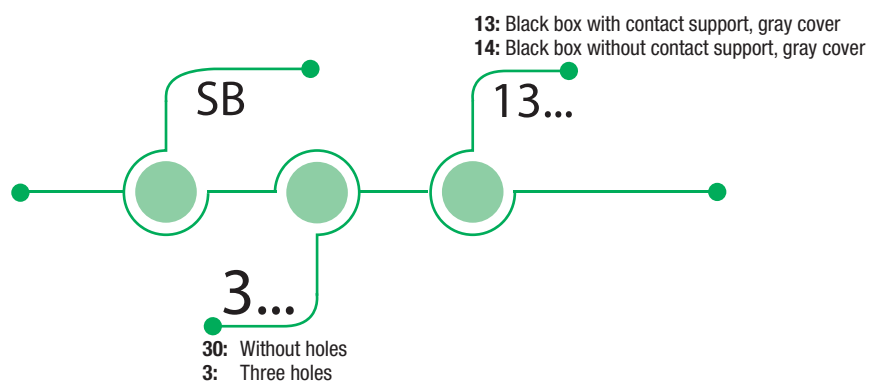
- ECX 1030R: NC contact for fixing to the bottom of the box without using the support base
- ECX 1040R: NO contact for fixing on the bottom of the box without using the support base

SB enclosures without contact support in the bottom (14)

- ECX 1030N: NC contact to be used with the support base
- ECX 1040N: NO contact to be used with the support base
- ECX 4029: support base
- GR CA001: set of magnets (4 pcs) for magnetic fixing of the case

Enclosures in Polycarbonate - **SB Series**

APPROVALS:



HOW IS MADE?

- 01** Three holes suitable for 22mm diameter pushbuttons
- 02** Polycarbonate fiberglass reinforced enclosures
- 03** Provided with fixing nuts for safe and comfortable closing
- 04** Gasket on deposit for best sealing performance, designed to reach IP67 and IP69K
- 05** Eight breakable holes with different dimension
- 06** Suitable for contacts to be fixed at the bottom of the enclosure
- 07** Possible to fix with screws in two ways, also without opening the cover
- 08** Possible to fix with magnets (optional)



Enclosures in Polycarbonate - **SB Series**

Description

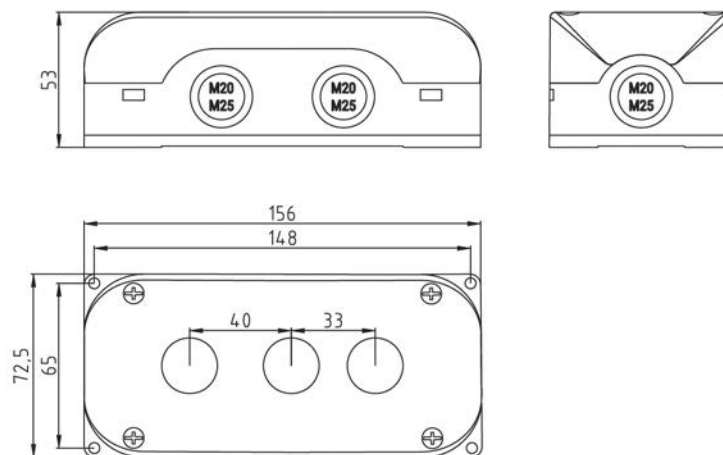
DESCRIPTION AND APPLICATION

Comepi SB enclosures are made of fiberglass reinforced polycarbonate. Assembled to the Comepi command and control units, they are the ideal complement to be used as high quality human-machine interfaces.

The SB line has been designed for applications in harsh environments, it can reach IP67 and IP69K protection degree, thanks also to gasket on deposit. The enclosure has numerous aesthetic, structural and use strengths, which distinguish it from the competition and place it among the top of the range. below are some examples where the SB enclosures could be placed:

- Packaging
- Production lines
- Logistics
- Mobile equipment
- Waste disposal equipment

DIMENSIONS



TECHNICAL FEATURES

Standards	IEC 60947-5-1 / EN 60947-5-1
Room temperature	
– operation	– 25 ... + 70 °C
– storage	– 40 ... + 80 °C
Degree of protection (according to IEC 60529 and EN 60529)	Up to IP67 and IP69K
Material	Polycarbonate fiberglass reinforced
Container color Black	Black
Cover colors	Gray RAL 7035

ACCESSORIES

SB enclosures with contact support in the bottom (13)

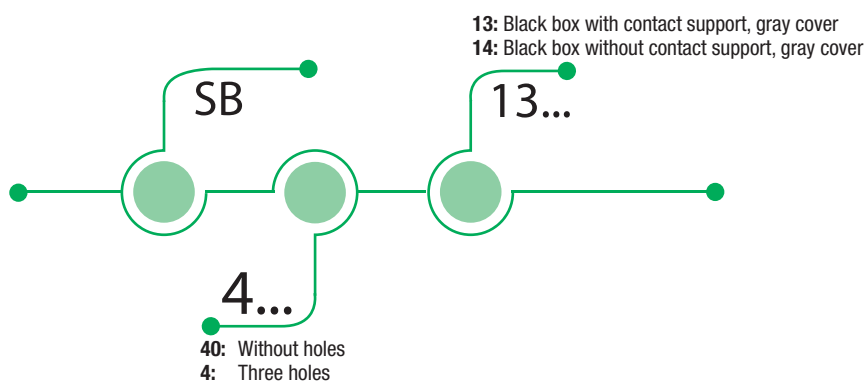
- ECX 1030R: NC contact for fixing to the bottom of the box without using the support base
- ECX 1040R: NO contact for fixing on the bottom of the box without using the support base

SB enclosures without contact support in the bottom (14)

- ECX 1030N: NC contact to be used with the support base
- ECX 1040N: NO contact to be used with the support base
- ECX 4029: support base
- GR CA001: set of magnets (4 pcs) for magnetic fixing of the case

Enclosures in Polycarbonate - **SB Series**

APPROVALS:



HOW IS MADE?

- 01** Four holes suitable for 22mm diameter pushbuttons
- 02** Polycarbonate fiberglass reinforced enclosures
- 03** Provided with fixing nuts for safe and comfortable closing
- 04** Gasket on deposit for best sealing performance, designed to reach IP67 and IP69K
- 05** Eight breakable holes with different dimension
- 06** Suitable for contacts to be fixed at the bottom of the enclosure
- 07** Possible to fix with screws in two ways, also without opening the cover
- 08** Possible to fix with magnets (optional)



Enclosures in Polycarbonate - **SB Series**

Description

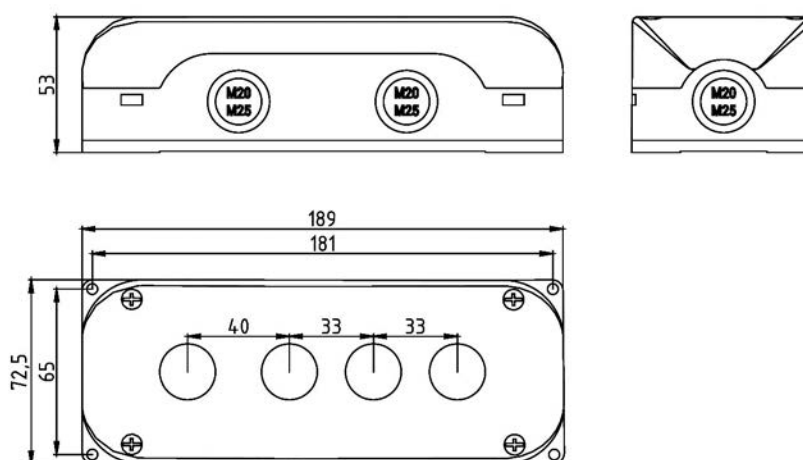
DESCRIPTION AND APPLICATION

Comepi SB enclosures are made of fiberglass reinforced polycarbonate. Assembled to the Comepi command and control units, they are the ideal complement to be used as high quality human-machine interfaces.

The SB line has been designed for applications in harsh environments, it can reach IP67 and IP69K protection degree, thanks also to gasket on deposit. The enclosure has numerous aesthetic, structural and use strengths, which distinguish it from the competition and place it among the top of the range. below are some examples where the SB enclosures could be placed:

- Packaging
- Production lines
- Logistics
- Mobile equipment
- Waste disposal equipment

DIMENSIONS



TECHNICAL FEATURES

Standards	IEC 60947-5-1 / EN 60947-5-1
Room temperature	
– operation	– 25 ... + 70 °C
– storage	–40 ... + 80 °C
Degree of protection (according to IEC 60529 and EN 60529)	Up to IP67 and IP69K
Material	Polycarbonate fiberglass reinforced
Container color Black	Black
Cover colors	Gray RAL 7035

ACCESSORIES

SB enclosures with contact support in the bottom (13)

- ECX 1030R: NC contact for fixing to the bottom of the box without using the support base
- ECX 1040R: NO contact for fixing on the bottom of the box without using the support base

SB enclosures without contact support in the bottom (14)

- ECX 1030N: NC contact to be used with the support base
- ECX 1040N: NO contact to be used with the support base
- ECX 4029: support base
- GR CA001: set of magnets (4 pcs) for magnetic fixing of the case

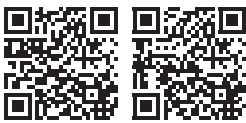
Enclosures with pushbuttons

SB series in polycarbonate - IP65

APPROVALS: UL 508 / EN 60947-5-1



Declaration of conformity



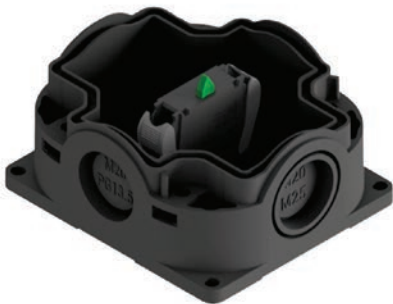
DESCRIPTION

Comepi enclosures are made of thermoplastic material. Assembled with Comepi command and control units, they are the ideal complement to be used as high quality human-machine interfaces.

TECHNICAL FEATURES	
Standards	IEC 60947-5-1 / EN 60947-5-1
Room temperature	
– operation	– 25 ... + 70 °C
– storage	–40 ... + 80 °C
Degree of protection (according to IEC 60529 and EN 60529)	Up to IP67 and IP69K
Material	Polycarbonate fibreglass reinforced
Container color	Black
Cover colors	Gray RAL 7035

Fixing contacts:
for SB enclosures with configuration 14, use the assembly instructions on page 2.

For SB enclosures with configuration 13
Contacts with direct fixing on the bottom of the enclosure



Enclosures with pushbuttons

SB series in polycarbonate - IP65



**Flush pushbutton Ø 30 mm.
white color "START"**

TECHNICAL FEATURES

Container size	72.5x83xh. 53 mm
Housing material	Glass fiber reinforced polycarbonate
Construction form	Rectangular
No. holes	1
Operator	ECX4105-01
Functionality	START
Mounted contacts	1 N.O. contact
Housing color	● Nero
Cover color	● Grey RAL 7035
Operating temperature	-25°....+70°C
Storage	-40°...+80°C
Degree of protection	IP65
Standards	IEC 60947-5-1
Approvals	CE EAC UK CA UL
Mechanical life	1M

CODE

h. 53 mm. with ECX4105-01	SB113-011-G
Output with M12 connector	SB113-011-G-M

Enclosures with pushbuttons

SB series in polycarbonate - IP65



**Extended pushbutton Ø 30 mm.
black color "STOP"**



**Flush pushbutton Ø 30 mm.
green color "I"**

TECHNICAL FEATURES

Container size	72.5x83x h. 53 mm	72.5x83xh. 53 mm
Housing material	Glass fiber reinforced polycarbonate	Glass fiber reinforced polycarbonate
Construction form	Rectangular	Rectangular
No. holes	1	1
Operator	ECX4110-01	ECX4107
Functionality	STOP	ON
Mounted contacts	1 N.C. contact	1 N.O. contact
Housing color	● Black	● Black
Cover color	● Grey RAL 7035	● Grey RAL 7035
Operating temperature	-25°....+70°C	-25°....+70°C
Storage	-40°...+80°c	-40°...+80°c
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE EAC UK UL	CE EAC UK UL
Mechanical life	1M	1M

CODE

h. 53 mm. with ECX4110-01	SB113-022-G	
h. 53 mm. with ECX4107		SB113-031-G
Output with M12 connector	SB113-022-G-M	SB113-031-G-M

Enclosures with pushbuttons

SB series in polycarbonate - IP65



**Flush pushbutton $\varnothing$ 30 mm.
red color "0"**



Selector "0-1" fixed positions

TECHNICAL FEATURES

Container size	72.5x83xh. 53 mm	72.5x83xh. 53 mm
Housing material	Glass fiber reinforced polycarbonate	Glass fiber reinforced polycarbonate
Construction form	Rectangular	Rectangular
No. holes	1	1
Operator	ECX4106	ECX4300
Functionality	OFF	Two fixed positions V
Mounted contacts	1 N.C. contact	1 N.C. contact
Housing color	● Black	● Black
Cover color	● Grey RAL 7035	● Grey RAL 7035
Operating temperature	-25°...+70°C	-25°...+70°C
Storage	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE EAC UK UL	CE EAC UK
Mechanical life	1M	300.000

CODE

h. 53 mm. with ECX4106	SB113-042-G	
h. 53 mm. with ECX4300		SB113-051-G
Output with M12 connector	SB113-042-G-M	SB113-051-G-M

Enclosures with pushbuttons

SB series in polycarbonate - IP65



**“0-1” key selector
fixed positions**



**2 flush pushbuttons Ø 30 mm.
black color with vertical arrow**

TECHNICAL FEATURES

Container size	72.5x83xh.53 mm	72.5x123x h.53 mm
Housing material	Glass fiber reinforced polycarbonate	Glass fiber reinforced polycarbonate
Construction form	Rectangular	Rectangular
No. holes	1	2
Operator	ECX4410	ECX4109
Functionality	Two fixed positions V	Up / down
Mounted contacts	1 N.O. contact	1 N.O. contact for operator
Housing color	● Black	● Black
Cover color	● Grey RAL 7035	● Grey RAL 7035
Operating temperature	-25°....+70°C	-25°....+70°C
Storage	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE EAC UK CA	CE EAC UK CA
Mechanical life	300.000	1M

CODE

h. 53 mm. with ECX 4410	SB113-061-G	
h. 53 mm. with ECX 4108-01 - ECX 4108		SB213-013-G
Output with M12 connector	SB113-061-G-M	SB213-013-G-M

Enclosures with pushbuttons

SB series in polycarbonate - IP65



2 flush pushbuttons
 $\varnothing$ 30 mm.
green colors "I"
and red "O"



2 flush pushbuttons
 $\varnothing$ 30 mm.
green and red colors

TECHNICAL FEATURES

Container size

72.5x123x h.53 mm

72.5x123x h.53 mm

Housing material

Glass fiber reinforced polycarbonate

Glass fiber reinforced polycarbonate

Construction form

Rectangular

Rectangular

No. holes

2

2

Operator

● ECX4107 ● ECX4106

● ECX4102 ● ECX4101

Functionality

ON OFF

START STOP

Mounted contacts

ECX 4107 1 N.O. contact

ECX 4102 1 N.O. contact

ECX 4106 1 N.C. contact

ECX 4101 1 N.C. contact

Housing color

● Black

● Black

Cover color

● Grey RAL 7035

● Grey RAL 7035

Operating temperature

-25°...+70°C

-25°...+70°C

Storage

-40°...+80°C

-40°...+80°C

Degree of protection

IP65

IP65

Standards

IEC 60947-5-1

IEC 60947-5-1

Approvals

CE EAC UK

CE EAC UK

Mechanical life

1M

1M

CODE

h. 53 mm. with ECX 4107-90 - ECX 4106

SB213-024-G

h. 53 mm. with ECX 4102 - ECX 4101

SB213-034-G

Output with M12 connector

SB213-024-G-M

SB213-034-G-M

Enclosures with pushbuttons

SB series in polycarbonate - IP65



3 flush pushbuttons
 Ø 30 mm. green and red colors



**1 emergency mushroom
 and 3 flush pushbuttons**
 (Ø 30 mm. white, black
 and blue colors)

TECHNICAL FEATURES

Container size	72.5x156xh. 53 mm	72.5x189xh. 53 mm
Housing material	Glass fiber reinforced polycarbonate	Glass fiber reinforced polycarbonate
Construction form	Rectangular	Rectangular
No. holes	3	4
Operator	I ECX 4107 II ECX 4111-01 II ECX 4107-01	ECX 4580 ECX 4109/B ECX 4109 ECX 4104-02
Functionality	Double start and stop	Emergency stop, up/down, reset
Mounted contacts	ECX 4107 1NO ECX 4111-01 1NC ECX 4107-01 1NO	ECX 4580 1NC ECX 4109/B 1NO ECX 4109 1NO ECX 4104-02 1NO
Housing color	● Black	● Black
Cover color	● Grey RAL 7035	● Grey RAL 7035
Operating temperature	-25°...+70°C	-25°...+70°C
Storage	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1 / IEC 60947-5-5
Approvals	CE EAC UK	CE EAC UK
Mechanical life	1M	300.000 for emergency stop mushroom 1M flush pushbutton

CODE

h. 53 mm. with ECX 4107-90 - ECX 4111-01 ECX 4107-91	SB313-017-G	
h. 53 mm. with ECX 4580 - ECX 4108-01/B ECX 4108 - ECX 4104-92		SB413-01B-G
Output with M12 connector	SB313-017-G-M	SB413-01B-G-M

Notes

A large rectangular area filled with a fine grid of light gray lines, intended for writing notes or drawing. The grid is composed of 30 columns and 40 rows of small squares.

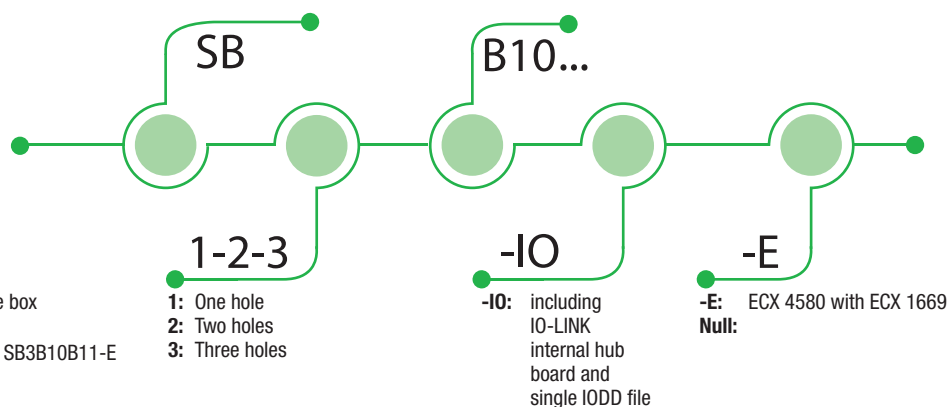
Enclosures with capacitive IO-Link buttons

SB series in polycarbonate - IP67-IP69K

APPROVAZIONI:



- B10:** Capacitive button with "START" text
- B11:** Capacitive button with "STOP" text
- B12:** Capacitive button with "ON OFF" text
- B13:** Capacitive button with "RESET" text
- B14:** Capacitive button with "POWER" symbol
- B15:** Capacitive button with "ENABLE" symbol
- B41:** Capacitive button with "OPEN" text
- B42:** Capacitive button with "CLOSE" text
- B50:** Capacitive button with "ARROW" symbol
- C20:** Capacitive neutral button



HOW IS MADE?

- 01** With adaptive light control +up to 16 million colors
- 02** Customized and illuminated symbols
- 03** 360° visibility
- 04** Unique + zero stress touch experience
- 05** Extremely robust + IP67/IP69K*
Made for infinity
- 06** Smart connectivity with IO-Link
- 07** Easy configurable
- 08** Possible to fix with magnets (optional)
- 09** Available including IO-LINK hub board inside and IODD file, connected with M12 connectors



Enclosures with capacitive IO-Link buttons

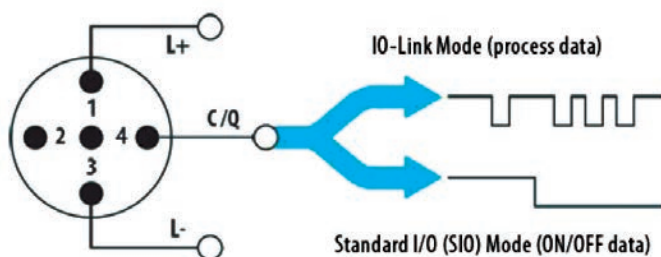
SB series in polycarbonate - IP67-IP69K

DESCRIPTION

IO-Link

IO-Link is a serial, bi-directional point-to-point connection for signal transmission and energy supply under any networks, fieldbuses, or backplane buses. It is based on the familiar 3-conductor connection for a digital switching signal, in which the switching signal is issued as a serial telegram.

With IO-Link, information can be exchanged in the form of a serial protocol between the I/O level and the field device.



The new capacitive button together with the SB enclosure combines an innovative design with the possibility of freely configuring all functional parameters via IO-Link: from the sensitivity of the switch, to the type of actuation, to the minimum actuation time, to the choice of fluorescent colors among 16 million options.

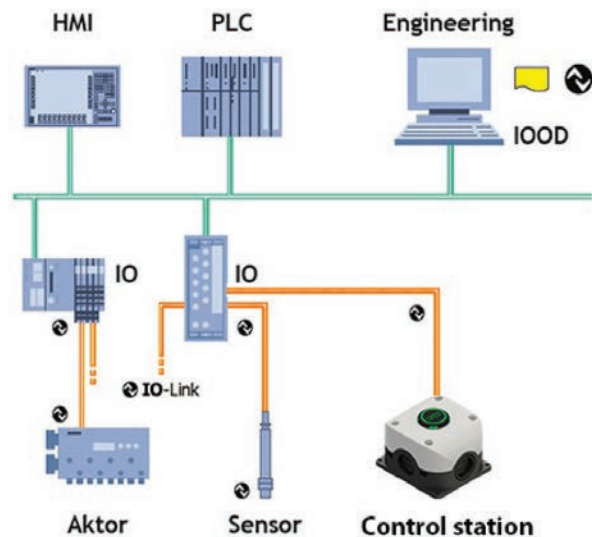
These devices can be flexibly integrated into network environments, offering great benefits for all HMI applications covering a wide range of requirements: from industrial automation and machine engineering to robotics and building technology. Standardized M12 connection allows easy installation, program and replacement of these devices.

This product series is very robust and extremely long-lasting enabling over 100 million switching cycles, as well as its fully molded electronics that make it impossible for dust and dirt to penetrate the housing. This saves time and money for maintenance and replacement.

The innovative lighting concept consisting of 16 million fluorescent colors and the free selection of symbols and pictograms offer numerous options to tailor displays to your individual needs.

The SB enclosure provides also to this product flexibility of installation, IP69K protection degree and the sturdy enclosure makes it suitable for harsh environment applications.

Use of capacitive pushbuttons allows to avoid stress to operators and makes life easier during production operations without loss of reliability thanks to the proven and tested technology.



This enclosure with buttons can be flexibly integrated into connected Industry 4.0 environments. They offer crucial advantages for all HMI applications, whether in industrial automation, machine engineering, robotics, or building technology. The buttons can be actuated via a wide range of interfaces (PNP, NPN, push-pull, etc.) and can act as both status indicators and buttons. Look at the table below to discover the predefined configurations.

The operator can be also commanded by PLC providing alarms and signals upon request.

This series offers also self-diagnosis functions, enabling new, preventive repair and maintenance concepts and increasing the productivity of your machines.



Enclosures with capacitive IO-Link buttons

SB series in polycarbonate - IP67-IP69K

Declaration of conformity



TECHNICAL FEATURES

Standards	IEC 60947-5-1 / EN 60947-5-1
Room temperature	
– operation	– 30 ... + 65 °C
– storage	– 30 ... + 65 °C
Degree of protection (according to IEC 60529 and EN 60529)	Up to IP67 and IP69K
SB Material	Polycarbonate fibreglass reinforced
Container color	Black
Cover colors	Gray RAL 7035
Operating voltage	DC 24 V (8,4...32 V)
Load current Max.	200 mA
Output	Look at the table below
Communications interface	IO-Link
Control voltage	E1/E2 on 80 % UV+ off 0....20 % UV+
Output pulse duration	Adjustable
Reverse polarity protection	Protection of all cables/lines
Short circuit protection	Protected against short circuit and overload
Voltage drop	Max. 5 V at 200 mA
Power consumption at 24 V	Max. 40 mA
Degree of protection IP	IP67, IP69K
Degree of protection IK	IK08
Type of actuation	Capacitive
Actuation force	No actuation force required
Button material	PC transparent, TPU black

Technical data of mechanical contact ECX1030N (nell'altra colonna scrivere) see page 25

FACTORY MADE BUTTON CONFIGURATION*

	START	STOP	ON OFF	RESET	POWER SYMBOL	OPEN	CLOSE	SINGLE ARROW	ENABLE	NEUTRAL
Sensor Mode	static	static	toggle	static	toggle	static	static	static	static	static
Touch Sensitivity	middle	middle	middle	middle	middle	middle	middle	middle	middle	middle
Minimum actuation time	0	0	0	0	0	0	0	0	0	0
Active inputs	none (3pins)	none (3pins)	none (3pins)	none (3pins)	none (3pins)	none (3pins)	none (3pins)	none (3pins)	none (3pins)	none (3pins)
Output mode	pnP	pnP	pnP	pnP	pnP	pnP	pnP	pnP	pnP	pnP
Output NO/NC	no	nc	no	no	no	no	no	no	no	no
LED control mode	classic two led mode	classic two led mode	classic two led mode	classic two led mode	classic two led mode	classic two led mode	classic two led mode	classic two led mode	classic two led mode	classic two led mode
Adaptive LED Brightness	on	on	on	on	on	on	on	on	on	on
LED COLOR IDLE	green	red	red	blue	red	blue	blue	blue	blue	green
LED COLOR TOUCH	green	red	green	blue	green	green	green	green	green	red
LED MODE IDLE	static	static	static	static	static	static	static	static	static	static
LED MODE TOUCH	pulse	pulse	static	pulse	static	pulse	pulse	pulse	pulse	pulse

*Can be modified on field by the user or in factory upon special request.

Enclosures with capacitive IO-Link buttons

SB series in polycarbonate - IP67-IP69K

DESCRIPTION AND APPLICATION

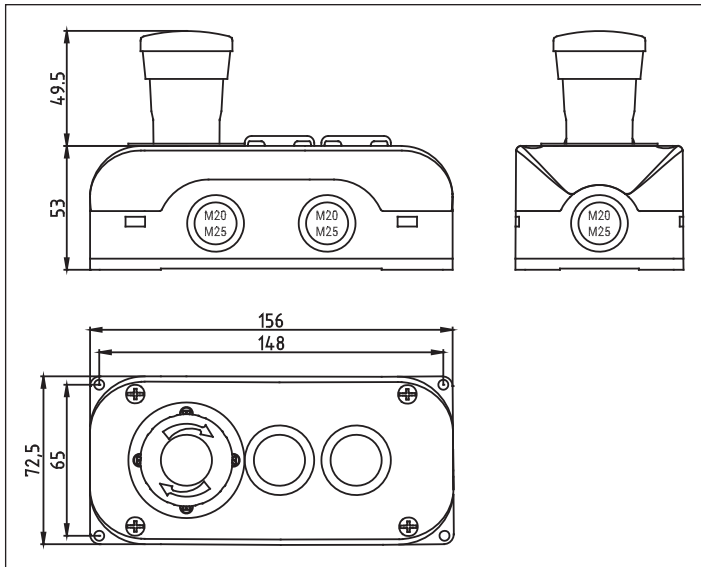
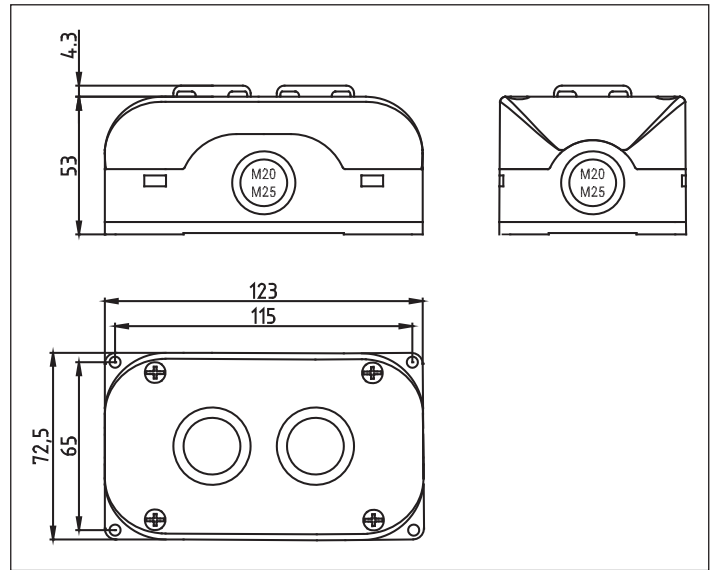
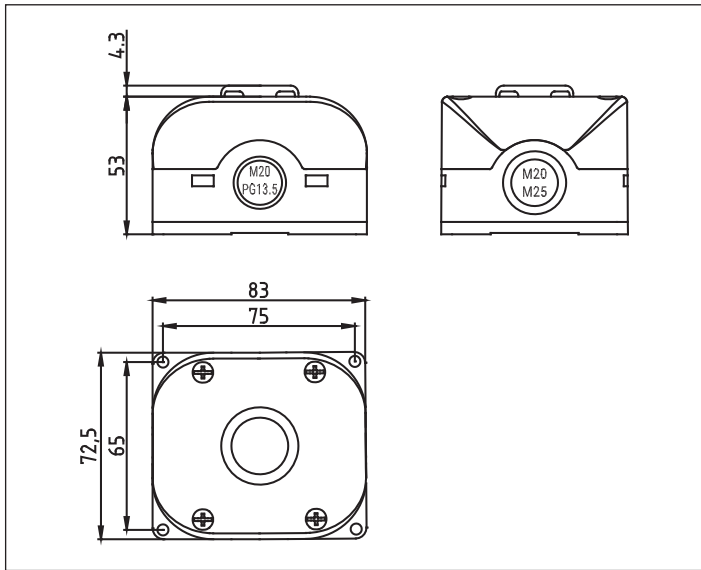
Comepi SB enclosures are made of fiberglass reinforced polycarbonate. Assembled with IO-Link capacitive buttons, Comepi wants to provide customers with an ideal complement to be used as high-quality human-machine interfaces.

The SB line has been designed for applications in harsh environments, it can reach IP67 and IP69K protection degree, thanks also to gasket on deposit. the product has numerous aesthetic, structural and use strengths, which distinguish it from the competition and place it among the top of the range.

Below are some examples where these products could be placed:

- Packaging
- Production lines
- Logistics

DIMENSIONS



IO-Link READY TO USE

Versions including digits -IO are equipped with an internal IO-LINK HUB, providing a single IODD file for the whole enclosure and a single IO-LINK connection for the entire command station. This solution provide live data about pusbuttons with IO-LINK communication.

Data available:

- Button status (including e-stop if present)
- Number of operations
- hours of service
- Internal temperature of the enclosure
- Internal humidity
- Real time vibrations on the device
- Voltage on the board
- Voltage on the microcontroller

ACCESSORIES

- ECX 1030N: NC contact to be used with the support base
- ECX 1040N: NO contact to be used with the support base
- ECX 4029: support base
- GR CA001: set of magnets (4 pcs) for magnetic fixing of the case

Enclosures with capacitive IO-Link buttons

SB series in polycarbonate - IP67-IP69K



Capacitive button Ø 30 mm.
"START"



Capacitive button Ø 30 mm.
"STOP"

TECHNICAL FEATURES		
Container size	72.5x83x h. 53 mm	72.5x83xh. 53 mm
Housing material	Glass fiber reinforced polycarbonate	Glass fiber reinforced polycarbonate
Construction form	Rectangular	Rectangular
No. holes	1	1
Operator	Capacitive button	Capacitive button
Functionality	START	STOP
Output	Look at the table on page 80	Look at the table on page 80
Housing color	● Black	● Black
Cover color	● Grey RAL 7035	● Grey RAL 7035
Operating temperature	-30°....+65°C	-30°....+65°C
Storage	-30°....+65°C	-30°....+65°C
Degree of protection	IP67, IP69K	IP67, IP69K
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE	CE
Mechanical life	100M	100M
CODE		
h. 53 mm. B10	SB1B10	
h. 53 mm. B11		SB1B11
h. 53 mm. IO-LINK ready to use with single M12 5 poles	SB1B10-IO	
h. 53 mm. IO-LINK ready to use with single M12 5 poles		SB1B11-IO

Enclosures with capacitive IO-Link buttons

SB series in polycarbonate - IP67-IP69K



Capacitive button Ø 30 mm.
"ON OFF"



Capacitive button Ø 30 mm.
"RESET"

TECHNICAL FEATURES

Container size	72.5x83xh. 53 mm	72.5x83xh. 53 mm
Housing material	Glass fiber reinforced polycarbonate	Glass fiber reinforced polycarbonate
Construction form	Rectangular	Rectangular
No. holes	1	1
Operator	Capacitive button	Capacitive button
Functionality	ON OFF	RESET
Output	Look at the table on page 80	Look at the table on page 80
Housing color	● Black	● Black
Cover color	● Grey RAL 7035	● Grey RAL 7035
Operating temperature	-30°....+65°C	-30°....+65°C
Storage	-30°....+65°C	-30°....+65°C
Degree of protection	IP67, IP69K	IP67, IP69K
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE	CE
Mechanical life	100M	100M

CODE

h. 53 mm. B12	SB1B12	
h. 53 mm. B13		SB1B13
h. 53 mm. IO-LINK ready to use with single M12 5 poles	SB1B12-IO	
h. 53 mm. IO-LINK ready to use with single M12 5 poles		SB1B13-IO

Enclosures with capacitive IO-Link buttons

SB series in polycarbonate - IP67-IP69K



Capacitive button Ø 30 mm.
"POWER SYMBOL"

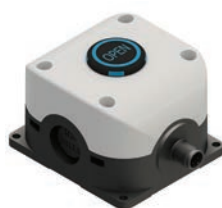


Capacitive button Ø 30 mm.
"ENABLE SYMBOL"

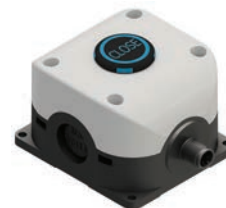
TECHNICAL FEATURES		
Container size	72.5x83x h. 53 mm	72.5x83xh. 53 mm
Housing material	Glass fiber reinforced polycarbonate	Glass fiber reinforced polycarbonate
Construction form	Rectangular	Rectangular
No. holes	1	1
Operator	Capacitive button	Capacitive button
Functionality	POWER	ENABLE
Output	Look at the table on page 80	Look at the table on page 80
Housing color	● Black	● Black
Cover color	● Grey RAL 7035	● Grey RAL 7035
Operating temperature	-30°....+65°C	-30°....+65°C
Storage	-30°....+65°C	-30°....+65°C
Degree of protection	IP67, IP69K	IP67, IP69K
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE	CE
Mechanical life	100M	100M
CODE		
h. 53 mm. B14	SB1B14	
h. 53 mm. B15		SB1B15
h. 53 mm. IO-LINK ready to use with single M12 5 poles	SB1B14-IO	
h. 53 mm. IO-LINK ready to use with single M12 5 poles		SB1B15-IO

Enclosures with capacitive IO-Link buttons

SB series in polycarbonate - IP67-IP69K



Capacitive button Ø 30 mm.
“OPEN”



Capacitive button Ø 30 mm.
“CLOSE”

TECHNICAL FEATURES

Container size	72.5x83xh. 53 mm	72.5x83xh. 53 mm
Housing material	Glass fiber reinforced polycarbonate	Glass fiber reinforced polycarbonate
Construction form	Rectangular	Rectangular
No. holes	1	1
Operator	Capacitive button	Capacitive button
Functionality	OPEN	CLOSE
Output	Look at the table on page 80	Look at the table on page 80
Housing color	● Black	● Black
Cover color	● Grey RAL 7035	● Grey RAL 7035
Operating temperature	-30°....+65°C	-30°....+65°C
Storage	-30°....+65°C	-30°....+65°C
Degree of protection	IP67, IP69K	IP67, IP69K
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE	CE
Mechanical life	100M	100M

CODE

h. 53 mm. B41	SB1B41	
h. 53 mm. B42		SB1B42
h. 53 mm. IO-LINK ready to use with single M12 5 poles	SB1B41-IO	
h. 53 mm. IO-LINK ready to use with single M12 5 poles		SB1B42-IO

Enclosures with capacitive IO-Link buttons

SB series in polycarbonate - IP67-IP69K



Capacitive button Ø 30 mm.
"ARROW SYMBOL"



Capacitive button Ø 30 mm.

TECHNICAL FEATURES		
Container size	72.5x83x h. 53 mm	72.5x83xh. 53 mm
Housing material	Glass fiber reinforced polycarbonate	Glass fiber reinforced polycarbonate
Construction form	Rectangular	Rectangular
No. holes	1	1
Operator	Capacitive button	Capacitive button
Functionality	UP or DOWN	N.A.
Output	Look at the table on page 80	Look at the table on page 80
Housing color	● Black	● Black
Cover color	● Grey RAL 7035	● Grey RAL 7035
Operating temperature	-30°....+65°C	-30°....+65°C
Storage	-30°....+65°C	-30°....+65°C
Degree of protection	IP67, IP69K	IP67, IP69K
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE	CE
Mechanical life	100M	100M
CODE		
h. 53 mm. B50	SB1B50	
h. 53 mm. C20		SB1C20
h. 53 mm. IO-LINK ready to use with single M12 5 poles	SB1B50-IO	
h. 53 mm. IO-LINK ready to use with single M12 5 poles		SB1C20-IO

Enclosures with capacitive IO-Link buttons

SB series in polycarbonate - IP67-IP69K



Capacitive buttons Ø 30 mm.
"POWER SYMBOL - RESET"



Capacitive buttons Ø 30 mm.
"OPEN - CLOSE"

TECHNICAL FEATURES

Container size	72.5x123x h.53 mm	72.5x123x h.53 mm
Housing material	Glass fiber reinforced polycarbonate	Glass fiber reinforced polycarbonate
Construction form	Rectangular	Rectangular
No. holes	2	2
Operator	Capacitive button	Capacitive button
Functionality	POWER - RESET	OPEN - CLOSE
Output	Look at the table on page 80	Look at the table on page 80
Housing color	● Black	● Black
Cover color	● Grey RAL 7035	● Grey RAL 7035
Operating temperature	-30°....+65°C	-30°....+65°C
Storage	-30°....+65°C	-30°....+65°C
Degree of protection	IP67, IP69K	IP67, IP69K
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE	CE
Mechanical life	100M	100M

CODE

h. 53 mm. B14 B13	SB2B14B13	
h. 53 mm. B41 B42		SB2B41B42
h. 53 mm. IO-LINK ready to use with single M12 5 poles	SB1B14B13-IO	
h. 53 mm. IO-LINK ready to use with single M12 5 poles		SB1B41B42-IO

Enclosures with capacitive IO-Link buttons

SB series in polycarbonate - IP67-IP69K



Capacitive buttons Ø 30 mm.
"UP - DOWN"



Capacitive buttons Ø 30 mm.

TECHNICAL FEATURES		
Container size	72.5x123x h.53 mm	72.5x123x h.53 mm
Housing material	Glass fiber reinforced polycarbonate	Glass fiber reinforced polycarbonate
Construction form	Rectangular	Rectangular
No. holes	2	2
Operator	Capacitive button	Capacitive button
Functionality	UP - DOWN	N.A.
Output	Look at the table on page 80	Look at the table on page 80
Housing color	● Black	● Black
Cover color	● Grey RAL 7035	● Grey RAL 7035
Operating temperature	-30°....+65°C	-30°....+65°C
Storage	-30°....+65°C	-30°....+65°C
Degree of protection	IP67, IP69K	IP67, IP69K
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE	CE
Mechanical life	100M	100M
CODE		
h. 53 mm. B50 B50	SB2B50B50	
h. 53 mm. C20 C20		SB2C20C20
h. 53 mm. IO-LINK ready to use with single M12 5 poles	SB2B50B50-IO	
h. 53 mm. IO-LINK ready to use with single M12 5 poles		SB2C20C20-IO

Enclosures with capacitive IO-Link buttons

SB series in polycarbonate - IP67-IP69K



Capacitive buttons
 $\varnothing$ 30 mm
“RESET - OPEN - CLOSE”



Capacitive buttons
 $\varnothing$ 30 mm.
“ENABLE SYMBOL - START - STOP”

TECHNICAL FEATURES

Container size	72.5x156xh. 53 mm	72.5x156xh. 53 mm
Housing material	Glass fiber reinforced polycarbonate	Glass fiber reinforced polycarbonate
Construction form	Rectangular	Rectangular
No. holes	3	3
Operator	Capacitive button	Capacitive button
Functionality	RESET - OPEN - CLOSE	ENABLE - START - STOP
Output	Look at the table on page 80	Look at the table on page 80
Housing color	● Black	● Black
Cover color	● Grey RAL 7035	● Grey RAL 7035
Operating temperature	-30°....+65°C	-30°....+65°C
Storage	-30°....+65°C	-30°....+65°C
Degree of protection	IP67, IP69K	IP67, IP69K
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE	CE
Mechanical life	100M	100M

CODE

h. 53 mm. B14 B41 B42	SB3B13B41B42	
h. 53 mm. B15 B10 B11		SB3B15B10B11
h. 53 IO-LINK ready to use with single M12 5 poles	SB3B13B41B42-IO	
h. 53 IO-LINK ready to use with single M12 5 poles		SB3B15B10B11-IO

Enclosures with capacitive IO-Link buttons

SB series in polycarbonate - IP67-IP69K



Capacitive buttons
 $\varnothing$ 30 mm.
“RESET - START - STOP”



1 emergency mushroom
and 2 capacitive buttons
 $\varnothing$ 30 mm. **“START - STOP”**

TECHNICAL FEATURES

Container size	72.5x156xh. 53 mm	72.5x156xh. 53 mm
Housing material	Glass fiber reinforced polycarbonat	Glass fiber reinforced polycarbonate
Construction form	Rectangular	Rectangular
No. holes	3	3
Operator	Capacitive button	ECX 4580 and capacitive buttons
Functionality	POWER - RESET	EMERGENCY STOP - START - STOP
Output	Look at the table on page. 80	Look at the table on page. 80
Housing color	● Black	● Black
Cover color	● Grey RAL 7035	● Grey RAL 7035
Operating temperature	-30°....+65°C	-30°....+65°C
Storage	-30°....+65°C	-30°....+65°C
Degree of protection	IP67, IP69K	IP67, IP69K
Standards	IEC 60947-5-1	IEC 60947-5-1 / IEC 60947-5-5
Approvals	CE	CE
Mechanical life	100M	100M 300.000 for emergency stop mushroom

CODE

h. 53 mm. B13 B10 B11	SB3B13B10B11	
h. 53 mm. ECX4580 B10 B11		SB3B10B11-E
h. 53 mm. IO-LINK ready to use with single M12 5 poles	SB3B13B10B11-IO	
h. 53 mm. IO-LINK ready to use with single M12 5 poles		SB3EB10B11-IO

Enclosures with capacitive IO-Link buttons

SB series in polycarbonate - IP67-IP69K



**1 emergency mushroom
and 2 capacitive buttons**
Ø 30 mm.
“UP - DOWN”



**1 emergency mushroom
and 2 capacitive buttons**
Ø 30 mm.

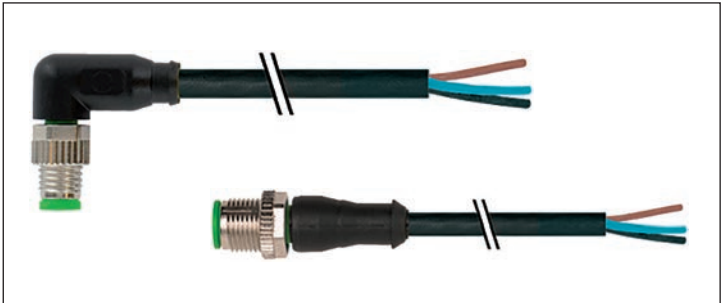
TECHNICAL FEATURES

Container size	72.5x156xh. 53 mm	72.5x156xh. 53 mm
Housing material	Glass fiber reinforced polycarbonate	Glass fiber reinforced polycarbonate
Construction form	Rectangular	Rectangular
No. holes	3	3
Operator	ECX 4580 and capacitive buttons	ECX 4580 and capacitive buttons
Functionality	EMERGENCY STOP - UP - DOWN	EMERGENCY STOP - NEUTRAL BUTTONS
Output	Look at the table on page. 80	Look at the table on page. 80
Housing color	● Black	● Black
Cover color	● Grey RAL 7035	● Grey RAL 7035
Operating temperature	-30°....+65°C	-30°....+65°C
Storage	-30°....+65°C	-30°....+65°C
Degree of protection	IP67, IP69K	IP67, IP69K
Standards	IEC 60947-5-1 / IEC 60947-5-5	IEC 60947-5-1 / IEC 60947-5-5
Approvals	CE	CE
Mechanical life	100M	100M
	300.000 for emergency stop mushroom	300.000 for emergency stop mushroom

CODE

h. 53 mm. ECX4580 B50 B50	SB3B50B50-E	
h. 53 mm. ECX4580 C20 C20		SB3C20C20-E
h. 53 mm. output M12 5 poles ECX4580 B50 B50	SB3EB50B50-IO	
h. 53 mm. output M12 5 poles ECX4580 C20 C20		SB3EC20C20-IO

Connection cable



Description	Poles	Lenght	Code
M8 female connection cable	3	3m	XX3D030SM8
M8 female connection cable	3	5m	XX3D050SM8
90° M8 female connection cable	3	3m	XX3A030SM8
90° M8 female connection cable	3	5m	XX3A050SM8
M12 female connection cable	4	3m	XX4D030SM
M12 female connection cable	4	5m	XX4D050SM
90° M12 female connection cable	4	3m	XX4A030SM
90° M12 female connection cable	4	5m	XX4A050SM

Master IO-LINK



Description	Code
Master IO-LINK	GR1120

Notes

A large rectangular area filled with a fine grid of light gray lines, intended for writing notes. The grid is approximately 30 units wide by 40 units high.

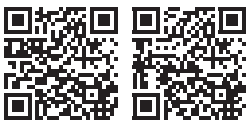
Enclosures with pushbuttons

In double insulation thermoplastic material complete with pushbuttons (IP65)

APPROVALS: UL 508 / EN 60947-5-1



Declaration of conformity
DDC-06 SA Series with push button
DDC-13 SA Series



DESCRIPTION

Comepi containers are made of thermoplastic material. Assembled to the Comepi command and control units, they are the ideal complement to be used as high quality human-machine interfaces.

TECHNICAL FEATURES	
Standards	IEC 60947-5-1 / EN 60947-5-1
Room temperature	
– operation	– 25 ... + 70 °C
– storage	–40 ... + 80 °C
Degree of protection	
(according to IEC 60529 and EN 60529)	IP65
Material	ABS thermoplastic V0
Container color	Gray RAL 7035
Cover colors	Gray RAL 7035 / Yellow RAL 1003

Enclosures with pushbuttons

In double insulation thermoplastic material complete with pushbuttons (IP65)



**Mushroom button Ø 40 mm.
without latch**



**Mushroom button Ø 40 mm.
with key
without latch**

TECHNICAL FEATURES

Container size	70x70xh. 51mm 70x70xh. 74 mm	70x70xh. 51mm 70x70xh. 74 mm
Housing material	Thermoplastic ABS V0	Thermoplastic ABS V0
Construction form	Square	Square
No. holes	1	1
Operator	ECX4135	ECX4145
Functionality	without latch, impulse	without latch, key operated / unlocked
Mounted contacts	1 N.C. contact	1 N.C. contact
Housing color	● Gray RAL 7035	● Gray RAL 7035
Cover color	● Yellow RAL 1033	● Yellow RAL 1033
Operating temperature	-25°...+70°C	-25°...+70°C
Storage	-40°...+ 80°C	-40°...+ 80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK	CE ENEC UK
Mechanical life	1M	300.000

CODE

h. 51 mm. with mushroom ECX4135	SA 101 SL-001G	
h. 74 mm. with mushroom ECX4135	SA 104 SL-001G	
h. 51 mm. with mushroom ECX4145		SA 101A SL-002-G
h. 74 mm. with mushroom ECX4145		SA 104A SL-002-G

Enclosures with pushbuttons

In double insulation thermoplastic material complete with pushbuttons (IP65)



**Mushroom button Ø 60 mm.
without latch**



**Mushroom button Ø 40 mm.
with latch twist to release**

TECHNICAL FEATURES

Container size	70x70xh. 51mm 70x70xh. 74 mm	70x70xh. 51mm 70x70xh. 74 mm
Housing material	Thermoplastic ABS V0	Thermoplastic ABS V0
Construction form	Square	Square
No. holes	1	1
Operator	ECX4137	ECX4131
Functionality	without latch	with latch, twist release
Mounted contacts	1 N.C. contact	1 N.C. contact
Housing color	● Gray RAL 7035	● Gray RAL 7035
Cover color	● Yellow RAL 1033	● Yellow RAL 1033 with writing
Operating temperature	-25°...+70°C	-25°...+70°C
Storage	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK	CE ENEC UK
Mechanical life	1M	300.000

CODE

h. 51 mm. with mushroom ECX4137	SA 101 SL-003-G	
h. 74 mm. with mushroom ECX4137	SA 104 SL-003-G	
h. 51 mm. with mushroom ECX4131		SA 101A SL-001-G
h. 74 mm. with mushroom ECX4131		SA 104A SL-001-G

Enclosures with pushbuttons

In double insulation thermoplastic material complete with pushbuttons (IP65)



**Mushroom button Ø 40 mm.
with key
with latch - Key release**



**Mushroom button Ø 60 mm.
with latch - Twist to release**

TECHNICAL FEATURES

Container size	70x70xh. 51mm 70x70xh. 74 mm	70x70xh. 51mm 70x70xh. 74 mm
Housing material	Thermoplastic ABS V0	Thermoplastic ABS V0
Construction form	Square	Square
No. holes	1	1
Operator	ECX4141	ECX4136
Functionality	without coupling, release with key	with latch, twist release
Mounted contacts	1 N.C. contact	1 N.C. contact
Housing color	● Gray RAL 7035	● Gray RAL 7035
Cover color	E Yellow RAL 1033 with writing	E Yellow RAL 1033 with writing
Operating temperature	-25°...+70°C	-25°...+70°C
Storage	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK	CE ENEC UK
Mechanical life	300.000	300.000

CODE

h. 51 mm. with mushroom ECX4141	SA 101A SL-003-G	
h. 74 mm. with mushroom ECX4141	SA 104A SL-003-G	
h. 51 mm. with mushroom ECX4136		SA 101A SL-004-G
h. 74 mm. with mushroom ECX4136		SA 104A SL-004-G

Enclosures with pushbuttons

In double insulation thermoplastic material complete with pushbuttons (IP65)



**Mushroom button Ø 40 mm.
with latch - Pull to release**



**Flush pushbutton Ø 30 mm.
white color "START"**

TECHNICAL FEATURES		
Container size	70x70xh. 51mm 70x70xh. 74 mm	70x70xh. 51mm 70x70xh. 74 mm
Housing material	Thermoplastic ABS V0	Thermoplastic ABS V0
Construction form	Square	Square
No. holes	1	1
Operator	ECX1146	ECX4105-01
Functionality	with latch, pull release	START
Mounted contacts	1 N.C. contact	1 N.O. contact
Housing color	● Gray RAL 7035	● Gray RAL 7035
Cover color	● Yellow RAL 1033 with writing	● Gray RAL 7035
Operating temperature	-25°...+70°C	-25°...+70°C
Storage	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK	CE ENEC UK
Mechanical life	300.000	1M
CODE		
h. 51 mm. with mushroom ECX1146	SA 101A SL-005-M	
h. 74 mm. with mushroom ECX1146	SA 104A SL-005-M	
h. 51 mm. with ECX4105-01		SA 100 SL-001-G
h. 74 mm. with ECX4105-01		SA 103 SL-001-G

Enclosures with pushbuttons

In double insulation thermoplastic material complete with pushbuttons (IP65)



**Extended pushbutton Ø 30 mm.
black color "STOP"**



**Flush pushbutton Ø 30 mm.
green color "I"**

TECHNICAL FEATURES

Container size	70x70xh. 51mm 70x70xh. 74 mm	70x70xh. 51mm 70x70xh. 74 mm
Housing material	Thermoplastic ABS V0	Thermoplastic ABS V0
Construction form	Square	Square
No. holes	1	1
Operator	ECX4110-01	ECX4107
Functionality	STOP	ON
Mounted contacts	1 N.O. contact	1 N.O. contact
Housing color	● Gray RAL 7035	● Gray RAL 7035
Cover color	● Gray RAL 7035	● Gray RAL 7035
Operating temperature	-25°...+70°C	-25°...+70°C
Storage	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK	CE ENEC UK
Mechanical life	1M	1M

CODE

h. 51 mm. with mushroom ECX4110-01	SA 100 SL-002-G	
h. 74 mm. with mushroom ECX4110-01	SA 103 SL-002-G	
h. 51 mm. with ECX4107		SA 100 SL-003-G
h. 74 mm. with ECX4107		SA 103 SL-003-G

Enclosures with pushbuttons

In double insulation thermoplastic material complete with pushbuttons (IP65)



**Flush pushbutton $\varnothing$ 30 mm.
red color "0"**



Selector "0-1" fixed positions

TECHNICAL FEATURES		
Container size	70x70xh. 51mm 70x70xh. 74 mm	70x70xh. 51mm 70x70xh. 74 mm
Housing material	Thermoplastic ABS V0	Thermoplastic ABS V0
Construction form	Square	Square
No. holes	1	1
Operator	ECX4106	ECX4300
Functionality	OFF	Two fixed positions V
Mounted contacts	1 N.C. contact	1 N.O. contact
Housing color	● Gray RAL 7035	● Gray RAL 7035
Cover color	● Gray RAL 7035	● Gray RAL 7035
Operating temperature	-25°...+70°C	-25°...+70°C
Storage	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK	CE ENEC UK
Mechanical life	1M	300.000
CODE		
h. 51 mm. with ECX4106	SA 100 SL-004-G	
h. 74 mm. with ECX4106	SA 103 SL-004-G	
h. 51 mm. with ECX4300		SA 100 SL-005-G
h. 74 mm. with ECX4300		SA 103 SL-005-G

Enclosures with pushbuttons

In double insulation thermoplastic material complete with pushbuttons (IP65)



**“0-1” key selector
fixed positions**



**2 flush pushbuttons Ø 30 mm.
black color with vertical arrow**

TECHNICAL FEATURES

Container size	70x70xh. 51mm 70x70xh. 74 mm	70x70xh. 51mm 70x70xh. 74 mm
Housing material	Thermoplastic ABS V0	Thermoplastic ABS V0
Construction form	Square	Rectangular
No. holes	1	2
Operator	ECX4410	ECX4109
Functionality	Two fixed positions	Up / down
Mounted contacts	1 N.C. contact	1 N.O. contact per operator
Housing color	● Gray RAL 7035	● Gray RAL 7035
Cover color	● Gray RAL 7035	● Gray RAL 7035
Operating temperature	-25°...+70°C	-25°...+70°C
Storage	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK	CE ENEC UK
Mechanical life	300.000	1M

CODE

h. 51 mm. with ECX4410	SA 100 SL-006-G	
h. 74 mm. with ECX4410	SA 100 SL-006-G	
h. 51 mm. with ECX4109		SA 105/40 SL-001-G
h. 74 mm. with ECX4109		SA 106/40 SL-001-G

Enclosures with pushbuttons

In double insulation thermoplastic material complete with pushbuttons (IP65)



2 flush pushbuttons
Ø 30 mm.
green colors "I"
and red "O"



2 flush pushbuttons
Ø 30 mm.
green and red colors

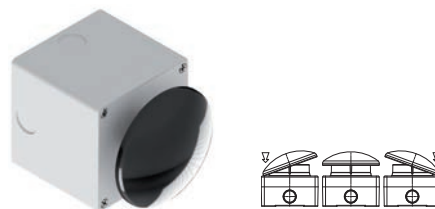


3 flush pushbuttons
Ø 30 mm.
green and red colors

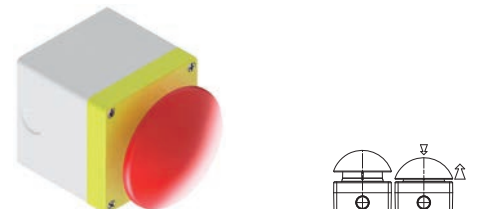
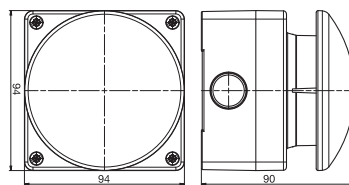
TECHNICAL FEATURES			
Container size	105x70xh. 51mm 105x70xh. 74 mm	105x70xh. 51mm 105x70xh. 74 mm	140x70xh. 51mm 140x70xh. 74 mm
Housing material	Thermoplastic ABS V0	Thermoplastic ABS V0	Thermoplastic ABS V0
Construction form	Rectangular	Rectangular	Rectangular
No. holes	2	2	3
Operator	● ECX4107 ● ECX4106	● ECX4102 ● ECX4101	● ECX4102 ● ECX4101
Functionality	ON OFF	Run Stop	Double start and stop
Mounted contacts	ECX4107 1 N.O.contact ECX4106 1 N.C. contact	ECX4102 1 N.O.contact ECX4101 1 N.C. contact	ECX4102 1 N.O.contact ECX4101 1 N.C. contact
Housing color	● Gray RAL 7035	● Gray RAL 7035	● Gray RAL 7035
Cover color	● Gray RAL 7035	● Gray RAL 7035	● Gray RAL 7035
Operating temperature	-25°....+70°C	-25°....+70°C	-25°....+70°C
Storage	-40°...+80°C	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK	CE ENEC UK	CE ENEC UK
Mechanical life	1M	1M	1M
CODE			
h. 51 mm. with ECX4107 - ECX4106	SA 105/40 SL-002-G		
h. 74 mm. with ECX4107 - ECX410	SA 106/40 SL-002-G		
h. 51 mm. with ECX4102 - ECX4101		SA 105/40 SL-003-G	
h. 74 mm. with ECX4102 - ECX4101		SA 106/40 SL-003-G	
h. 51 mm. with ECX4102 - ECX4101			SA 107/40 SL-001-G
h. 74 mm. with ECX4102 - ECX4101			SA 108/40 SL-001-G

Enclosures with pushbuttons

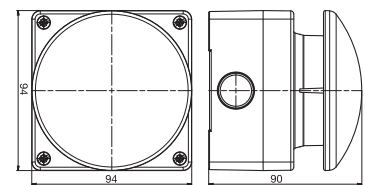
In double insulation thermoplastic material complete with pushbuttons (IP65)



**Wooble mushroom
pushbutton panel**
Ø 90 mm. without coupling



Emergency pushbutton panel
Ø 90 mm. with latch - pull to release



TECHNICAL FEATURES

Container size	94x94x51 mm	94x94x51 mm
Housing material	Thermoplastic ABS V0	Thermoplastic ABS V0
Construction form	Square	Square
No. holes	1	1
Operator	ECX4410	ECX1117
Functionality	Oscillating	—
Mounted contacts	10 - 1NO / 11 - 1NO+1NC / 01 - 1NC	01 - 1NC / 02 - 2NC / 11 - 1NO+1NC
Housing color	● Gray RAL 7035	● Gray RAL 7035
Cover color	● Gray RAL 7035	● Yellow RAL 1033
Operating temperature	-25°...+70°C	-25°...+70°C
Storage	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK	CE ENEC UK
Mechanical life	1M	300.000

CODE

● 1NO	SA 080-10	
● 1NO+1NC	SA 080-11	
● 1NC	SA 081-01	SA 091-01
● 1NO+1NC	SA 081-11	SA 091-11
● 2NC		SA 091-02
● 1NO	SA 082-10	
● 1NO+1NC	SA 082-11	

Enclosures

In double insulation thermoplastic material (IP65)



Enclosure 70x70 mm



Enclosure 105x70 mm

TECHNICAL FEATURES

Container size	70x70xh. 51 mm 70x70xh. 74 mm	105x70xh. 51 mm 105x70xh. 74 mm
Housing material	Thermoplastic ABS V0	Thermoplastic ABS V0
Construction form	Square	Rectangular
No. holes	0 - 1	0 - 2
Cover color	- Gray RAL 7035 - Gray RAL 7035 - Yellow RAL 1033 E Yellow RAL 1033 with writing	- Gray RAL 7035 - Gray RAL 7035 - Yellow RAL 1033 E Yellow RAL 1033 with writing
Operating temperature	-25°...+70°C	-25°...+70°C
Storage	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals		

CODE

0 holes	h. 51 cover	SA 100/00 SL
0 holes	h. 74 cover	SA 103/00 SL
1 holes	h. 51 cover	SA 100 SL
1 hole	h. 74 cover	SA 103 SL
1 hole	h. 51 cover	SA 101 SL
1 hole	h. 74 cover	SA 104 SL
1 hole	h. 51 cover	SA 101A SL
1 hole	h. 74 cover	SA 104A SL
0 holes	h. 51 cover	SA 105/00 SL
0 holes	h. 74 cover	SA 106/00 SL
2 holes	h. 51 cover	SA 105/40 SL
2 holes	h. 74 cover	SA 106/40 SL

Enclosures

In double insulation thermoplastic material (IP65)



Enclosure 140x70 mm



Enclosure 185x70 mm

TECHNICAL FEATURES

Container size	140x70xh. 51 mm 140x70xh. 74 mm	185x70xh. 51 mm 185x70xh. 74 mm
Housing material	Thermoplastic ABS V0	Thermoplastic ABS V0
Construction form	Rectangular	Rectangular
No. holes	0 - 3	0 - 4
Housing color	● Gray RAL 7035	● Gray RAL 7035
Cover color	● Gray RAL 7035	● Gray RAL 7035
Operating temperature	-25°...+70°C	-25°...+70°C
Storage	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK UL 508	CE ENEC UK UL 508

CODE

0 holes h. 51 cover ●	SA 107/00 SL	
0 holes h. 74 cover ●	SA 108/00 SL	
3 holes h. 51 cover ●	SA 107/40 SL	
3 holes h. 74 cover ●	SA 108/40 SL	
0 holes h. 51 cover ●		SA 109/00 SL
0 holes h. 74 cover ●		SA 110/00 SL
4 holes h. 51 cover ●		SA 109/40 SL
4 holes h. 74 cover ●		SA 110/40 SL

Enclosures

In double insulation thermoplastic material (IP65)



Enclosure 225x70 mm



Enclosure 94x94 mm

TECHNICAL FEATURES		
Container size	225x70xh. 74 mm —	94x94xh. 50 mm 94x94xh. 90 mm
Housing material	Thermoplastic ABS V0	Thermoplastic ABS V0
Construction form	Rectangular	Square
No. holes	0 - 5 - 6	0 - 1 - 2
Housing color	● Gray RAL 7035	● Gray RAL 7035
Cover color	● Gray RAL 7035	● Gray RAL 7035 ● Giallo RAL 1033 E Yellow RAL 1033 with writing
Operating temperature	-25°...+70°C	-25°...+70°C
Storage	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK UL 508	CE ENEC UK UL 508
CODE		
0 holes h. 74 cover ●	SA 111/00 SL	
5 holes h. 74 cover ●	SA 111 SL	
6 holes h. 74 cover ●	SA 112 SL	
0 holes h. 50 cover ●		SA 113/00 SL
1 hole h. 50 cover ●		SA 113/1 SL
2 holes h. 50 cover ●		SA 113/2 SL
1 hole h. 50 cover ●		SA 113Y/1 SL
1 hole h. 50 cover E		SA 113Y-A/1 SL
0 holes h. 90 cover ●		SA 114/00 SL
1 hole h. 90 cover ●		SA 114/1 SL
2 holes h. 90 cover ●		SA 114/2 SL
1 hole h. 90 cover ●		SA 114Y/1 SL
1 hole h. 90 cover E		SA 114Y-A/1 SL

Enclosures

In double insulation thermoplastic material (IP65)



Enclosure 130x94 mm



Enclosure 180x94 mm

TECHNICAL FEATURES

Container size	130x94xh. 90 mm	180x94xh. 90 mm
	—	—
Housing material	Thermoplastic ABS V0	Thermoplastic ABS V0
Construction form	Rectangular	Rectangular
No. holes	0 - 1 - 2 - 3 - 4	0 - 3 - 4 - 5 - 6
Housing color	● Gray RAL 7035	● Gray RAL 7035
Cover color	● Gray RAL 7035	● Gray RAL 7035
Operating temperature	-25°...+70°C	-25°...+70°C
Storage	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK UL 508	CE ENEC UK UL 508

CODE

0 holes h. 90 cover ●	SA 116/00 SL	
1 hole h. 90 cover ●	SA 116/1 SL	
2 holes h. 90 cover ●	SA 116/2 SL	
3 holes h. 90 cover ●	SA 116/3 SL	
3 holes h. 90 cover ●	SA 116/21 SL	
4 holes h. 90 cover ●	SA 116/4 SL	
0 holes h. 90 cover ●		SA 118/00 SL
3 holes h. 90 cover ●		SA 118/3 SL
4 holes h. 90 cover ●		SA 118/4 SL
5 holes h. 90 cover ●		SA 118/5 SL
5 holes h. 90 cover ●		SA 118/221 SL
6 holes h. 90 cover ●		SA 118/6 SL

Enclosures

In double insulation thermoplastic material (IP65)



Enclosure 180x110 mm



Enclosure 180x180 mm

TECHNICAL FEATURES		
Container size	180x110xh. 90 mm	180x180xh. 116 mm
	—	—
Housing material	Thermoplastic ABS V0	Thermoplastic ABS V0
Construction form	Rectangular	Square
No. holes	0 - 6 - 7 - 8 - 9	0 - 9 - 12
Housing color	● Gray RAL 7035	● Gray RAL 7035
Cover color	● Gray RAL 7035	● Gray RAL 7035
Operating temperature	-25°...+70°C	-25°...+70°C
Storage	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK UL 508	CE ENEC UK UL 508
CODE		
0 holes h. 90 cover ●	SA 200/00 SL	
6 holes h. 90 cover ●	SA 206 SL	
7 holes h. 90 cover ●	SA 207 SL	
8 holes h. 90 cover ●	SA 208 SL	
9 holes h. 90 cover ●	SA 209 SL	
0 holes h. 116 cover ●		SA 300/00 SL
9 holes h. 116 cover ●		SA 309 SL
12 holes h. 116 cover ●		SA 312

Enclosures

In aluminum for control auxiliaries Ø 22

APPROVALS: UL 508 / EN 60947-5-1



Declaration of conformity
DOC-29
SAM series



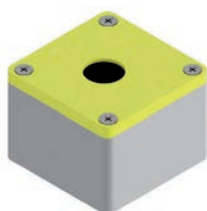
DESCRIPTION

Comepi containers are made of aluminum. Assembled to the Comepi command and control units, they are the ideal complement to be used as high quality human-machine interfaces.

TECHNICAL FEATURES	
Standards	IEC 60947-5-1 / EN 60947-5-1
Room temperature	
– operation	– 25 ... + 70 °C
– storage	–40 ... + 80 °C
Degree of protection	
(according to IEC 60529 and EN 60529)	IP65
Material	Aluminum alloy AlSi9Cu EN-AB47100 with Cu <1% (ex UNI 5079)
Specific weight	Kg/dm ³ 2,65
Breaking load	Kg/mm ² 23 ÷ 27
Brinell hardness	75 ÷ 95
Thermal conductivity 20 °C	cal/cm sec 0,37 °C
Heat resistance	+300 °C
Cold resistance	–100 °C
Housing color	Gray RAL 7035 / Yellow RAL 1003
Cover colors	Gray RAL 7035 / Yellow RAL 1003
TYPE OF FINISH	
	Ⓐ Sandblasted box and lid
	Ⓑ Box and lid painted RAL 7035 (Gray)
	Ⓒ Sandblasted box and lid painted in yellow RAL 1023
	Ⓓ Box painted gray RAL 7035 - Cover painted yellow RAL 1023

Enclosures

In aluminum for control auxiliaries Ø 22



Enclosure 75x75 mm

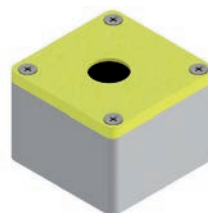


Enclosure 125x78 mm

TECHNICAL FEATURES		
Container size	75x75xh. 54 mm	125x78xh. 61 mm
	—	125x78xh. 75 mm
Housing material	Aluminum	Aluminum
Construction form	Square	Rectangular
No. holes	0 - 1	0 - 2
Type of finish	(A) (B) (C) (D)	(A) (B)
Operating temperature	-25°....+70°C	-25°....+70°C
Storage	-40°... +80°C	-40°... +80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK	CE ENEC UK
CODE		
1 hole h. 54 finish (A)	SAM 070-A	
1 hole h. 54 finish (B)	SAM 070-B	
1 hole h. 54 finish (C)	SAM 070-C	
1 hole h. 54 finish (D)	SAM 070-D	
0 holes h. 54 finish (A)	SAM 170-A	
0 holes h. 54 finish (B)	SAM 170-B	
2 holes h. 61 finish (A)		SAM 104-A
2 holes h. 61 finish (B)		SAM 104-B
0 holes h. 61 finish (A)		SAM 204-A
0 holes h. 61 finish (B)		SAM 204-B
2 holes h. 75 finish (A)		SAM 106-A
2 holes h. 75 finish (B)		SAM 106-B
0 holes h. 75 finish (A)		SAM 206-A
0 holes h. 75 finish (B)		SAM 206-B

Enclosures

In aluminum for control auxiliaries Ø 22



Enclosure 90x90 mm

TECHNICAL FEATURES

Container size	90x90xh. 61 mm 90x90xh. 69 mm
Housing material	Aluminum
Construction form	Square
No. holes	0 - 1
Type of finish	Ⓐ Ⓑ Ⓒ Ⓓ
Operating temperature	-25°....+70°C
Storage	-40°...+80°C
Degree of protection	IP65
Standards	IEC 60947-5-1
Approvals	CE ENEC UK

CODE

1 hole	h. 61 finish Ⓐ	SAM 100-A
1 hole	h. 61 finish Ⓑ	SAM 100-B
1 hole	h. 61 finish Ⓒ	SAM 100-C
1 hole	h. 61 finish Ⓓ	SAM 100-D
0 holes	h. 61 finish Ⓐ	SAM 200-A
0 holes	h. 61 finish Ⓑ	SAM 200-B
1 hole	h. 69 finish Ⓐ	SAM 101-A
1 hole	h. 69 finish Ⓑ	SAM 101-B
1 hole	h. 69 finish Ⓒ	SAM 101-C
1 hole	h. 69 finish Ⓓ	SAM 101-D
0 holes	h. 69 finish Ⓐ	SAM 301-A
0 holes	h. 69 finish Ⓑ	SAM 301-B

Enclosures

In aluminum for control auxiliaries Ø 22



Enclosure 185x90 mm

TECHNICAL FEATURES

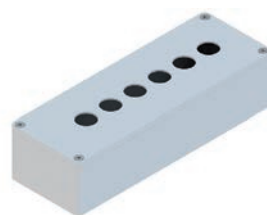
Container size	185x90xh. 61 mm 185x90xh. 75 mm
Housing material	Aluminum
Construction form	Rectangular
No. holes	0 - 3 - 4
Type of finish	Ⓐ Ⓑ Ⓒ Ⓓ
Operating temperature	-25°....+70°C
Storage	-40°...+80°C
Degree of protection	IP65
Standards	IEC 60947-5-1
Approvals	CE ENEC UK CA

CODE

3 holes	h. 61 finish Ⓐ	SAM 180-A
3 holes	h. 61 finish Ⓑ	SAM 180-B
4 holes	h. 61 finish Ⓐ	SAM 181-A
4 holes	h. 61 finish Ⓑ	SAM 181-B
0 holes	h. 61 finish Ⓐ	SAM 280-A
0 holes	h. 61 finish Ⓑ	SAM 280-B
3 holes	h. 75 finish Ⓐ	SAM 185-A
3 holes	h. 75 finish Ⓑ	SAM 185-B
4 holes	h. 75 finish Ⓐ	SAM 186-A
4 holes	h. 75 finish Ⓑ	SAM 186-B
0 holes	h. 75 finish Ⓐ	SAM 285-A
0 holes	h. 75 finish Ⓑ	SAM 285-B

Enclosures

In aluminum for control auxiliaries Ø 22



Enclosure 255x90 mm

TECHNICAL FEATURES

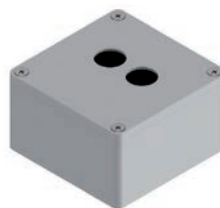
Container size	255x90xh. 61 mm 255x90xh. 75 mm
Housing material	Aluminum
Construction form	Rectangular
No. holes	0 - 4 - 5 - 6
Type of finish	Ⓐ Ⓑ
Operating temperature	-25°....+70°C
Storage	-40°...+80°C
Degree of protection	IP65
Standards	IEC 60947-5-1
Approvals	CE ENEC UK CA

CODE

4 holes	h. 61 finish Ⓐ	SAM 119-A
4 holes	h. 61 finish Ⓑ	SAM 119-B
5 holes	h. 61 finish Ⓐ	SAM 130-A
5 holes	h. 61 finish Ⓑ	SAM 130-B
6 holes	h. 61 finish Ⓐ	SAM 131-A
6 holes	h. 61 finish Ⓑ	SAM 131-B
0 holes	h. 61 finish Ⓐ	SAM 219-A
0 holes	h. 61 finish Ⓑ	SAM 219-B
4 holes	h. 75 finish Ⓐ	SAM 109-A
4 holes	h. 75 finish Ⓑ	SAM 109-B
5 holes	h. 75 finish Ⓐ	SAM 111-A
5 holes	h. 75 finish Ⓑ	SAM 111-B
6 holes	h. 75 finish Ⓐ	SAM 112-A
6 holes	h. 75 finish Ⓑ	SAM 112-B
0 holes	h. 75 finish Ⓐ	SAM 209-A
0 holes	h. 75 finish Ⓑ	SAM 209-B

Enclosures

In aluminum for control auxiliaries Ø 22



Enclosure 105x105 mm

TECHNICAL FEATURES		
Container size		105x105xh. 61 mm 105x105xh. 81 mm
Housing material		Aluminum
struction form		Square
No. holes		0 - 1 - 2
Type of finish		Ⓐ Ⓑ Ⓒ Ⓓ
Operating temperature		-25°....+70°C
Storage		-40°... +80°C
Degree of protection		IP65
Standards		IEC 60947-5-1
Approvals		CE ENEC UK
CODE		
1 hole	h. 61 finish Ⓐ	SAM 102-A
1 hole	h. 61 finish Ⓑ	SAM 102-B
1 hole	h. 61 finish Ⓒ	SAM 102-C
1 hole	h. 61 finish Ⓓ	SAM 102-D
0 holes	h. 61 finish Ⓐ	SAM 122-A
0 holes	h. 61 finish Ⓑ	SAM 122-B
2 holes	h. 61 finish Ⓐ	SAM 132-A
2 holes	h. 61 finish Ⓑ	SAM 132-B
1 hole	h. 81 finish Ⓐ	SAM 103-A
1 hole	h. 81 finish Ⓑ	SAM 103-B
1 hole	h. 81 finish Ⓒ	SAM 103-C
1 hole	h. 81 finish Ⓓ	SAM 103-D
1 hole	h. 81 finish Ⓐ	SAM 203-A
1 hole	h. 81 finish Ⓑ	SAM 203-B
2 holes	h. 81 finish Ⓐ	SAM 105-A
2 holes	h. 81 finish Ⓑ	SAM 105-B

Enclosures

In aluminum for control auxiliaries Ø 22



Enclosure 155x105 mm

TECHNICAL FEATURES

Container size	155x105xh. 61 mm 155x105xh. 81 mm
Housing material	Aluminum
Construction form	Rectangular
No. holes	0 - 3 (2+1) - 4 (2+2)
Type of finish	Ⓐ Ⓑ
Operating temperature	-25°....+70°C
Storage	-40°... +80°C
Degree of protection	IP65
Standards	IEC 60947-5-1
Approvals	CE ENEC UK

CODICE

3 (2+1) holes	h. 61 finish Ⓐ	SAM 117-A
3 (2+1) holes	h. 61 finish Ⓑ	SAM 117-B
4 (2+2) holes	h. 61 finish Ⓐ	SAM 108-A
4 (2+2) holes	h. 61 finish Ⓑ	SAM 108-B
0 holes	h. 61 finish Ⓐ	SAM 127-A
0 holes	h. 61 finish Ⓑ	SAM 127-B
3 (2+1) holes	h. 81 finish Ⓐ	SAM 137-A
3 (2+1) holes	h. 81 finish Ⓑ	SAM 137-B
4 (2+2) holes	h. 81 finish Ⓐ	SAM 138-A
4 (2+2) holes	h. 81 finish Ⓑ	SAM 138-B
0 holes	h. 81 finish Ⓐ	SAM 208-A
0 holes	h. 81 finish Ⓑ	SAM 208-B

Enclosures

In aluminum for control auxiliaries Ø 22



Enclosure 205x105 mm

TECHNICAL FEATURES		
Container size		205x105xh. 61 mm 205x105xh. 81 mm
Housing material		Aluminum
Construction form		Rectangular
No. holes		0 - 3 - 5 (2+2+1) - 6 (2+2+2)
Type of finish		Ⓐ Ⓑ
Operating temperature		-25°....+70°C
Storage		-40°... +80°C
Degree of protection		IP65
Standards		IEC 60947-5-1
Approvals		CE ENEC UKCA
CODE		
3 holes	h. 61 finish Ⓐ	SAM 114-A
3 holes	h. 61 finish Ⓑ	SAM 114-B
5 (2+2+1) holes	h. 61 finish Ⓐ	SAM 210-A
5 (2+2+1) holes	h. 61 finish Ⓑ	SAM 210-B
6 (2+2+2) holes	h. 61 finish Ⓐ	SAM 201-A
6 (2+2+2) holes	h. 61 finish Ⓑ	SAM 201-B
0 holes	h. 61 finish Ⓐ	SAM 300-A
0 holes	h. 61 finish Ⓑ	SAM 300-B
3 holes	h. 81 finish Ⓐ	SAM 107-A
3 holes	h. 81 finish Ⓑ	SAM 107-B
5 (2+2+1) holes	h. 81 finish Ⓐ	SAM 093-A
5 (2+2+1) holes	h. 81 finish Ⓑ	SAM 093-B
6 (2+2+2) holes	h. 81 finish Ⓐ	SAM 113-A
6 (2+2+2) holes	h. 81 finish Ⓑ	SAM 113-B
0 holes	h. 81 finish Ⓐ	SAM 207-A
0 holes	h. 81 finish Ⓑ	SAM 207-B

Enclosures

In aluminum for control auxiliaries Ø 22



Enclosure 198x133 mm

TECHNICAL FEATURES

Container size	198x133xh. 75 mm 198x133xh. 91 mm
Housing material	Aluminum
Construction form	Rectangular
No. holes	0 - 5 (2+2+1) - 9 (3+3+3)
Type of finish	Ⓐ Ⓑ
Operating temperature	-25°....+70°C
Storage	-40°... +80°C
Degree of protection	IP65
Standards	IEC 60947-5-1
Approvals	CE ENEC UK

CODE

5 (2+2+1) holes	h. 75 finish Ⓐ	SAM 190-A
5 (2+2+1) holes	h. 75 finish Ⓑ	SAM 192-B
9 (3+3+3) holes	h. 75 finish Ⓐ	SAM 191-A
9 (3+3+3) holes	h. 75 finish Ⓑ	SAM 191-B
0 holes	h. 75 finish Ⓐ	SAM 290-A
0 holes	h. 75 finish Ⓑ	SAM 290-B
5 (2+2+1) holes	h. 91 finish Ⓐ	SAM 195-A
5 (2+2+1) holes	h. 91 finish Ⓑ	SAM 195-B
9 (3+3+3) holes	h. 91 finish Ⓐ	SAM 196-A
9 (3+3+3) holes	h. 91 finish Ⓑ	SAM 196-B
0 holes	h. 91 finish Ⓐ	SAM 295-A
0 holes	h. 91 finish Ⓑ	SAM 295-B

Enclosures

In aluminum for control auxiliaries Ø 22

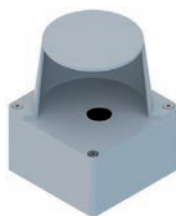


Enclosure 268x133 mm

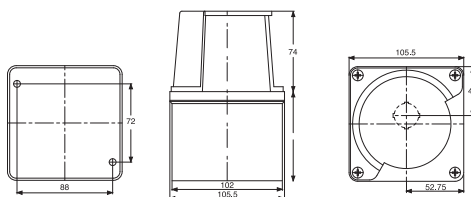
TECHNICAL FEATURES	
Container size	268x133xh. 75 mm 268x133xh. 91 mm
Housing material	Aluminum
Construction form	Rectangular
No. holes	0 - 8 (2+2+2+2) - 12 (3+3+3+3)
Type of finish	Ⓐ Ⓑ
Operating temperature	-25°+70°C
Storage	-40° ...+80°C
Degree of protection	IP65
Standards	IEC 60947-5-1
Approvals	CE ENEC UKCA
CODE	
8 (2+2+2+2) holes h. 75 finish Ⓐ	SAM 125-A
8 (2+2+2+2) holes h. 75 finish Ⓑ	SAM 125-B
12 (3+3+3+3) holes h. 75 finish Ⓐ	SAM 126-A
12 (3+3+3+3) holes h. 75 finish Ⓑ	SAM 126-B
0 holes h. 75 finish Ⓐ	SAM 225-A
0 holes h. 75 finish Ⓑ	SAM 225-B
8 (2+2+2+2) holes h. 91 finish Ⓐ	SAM 115-A
8 (2+2+2+2) holes h. 91 finish Ⓑ	SAM 115-B
12 (3+3+3+3) holes h. 91 finish Ⓐ	SAM 116-A
12 (3+3+3+3) holes h. 91 finish Ⓑ	SAM 116-B
0 holes h. 91 finish Ⓐ	SAM 215-A
0 holes h. 91 finish Ⓑ	SAM 215-B

Enclosures

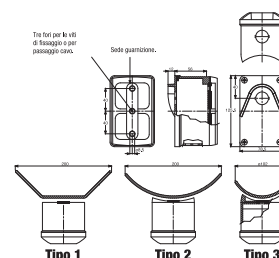
In aluminum for control auxiliaries Ø 22



**Enclosure with protection
per pushbutton**



Pole enclosure



TECHNICAL FEATURES

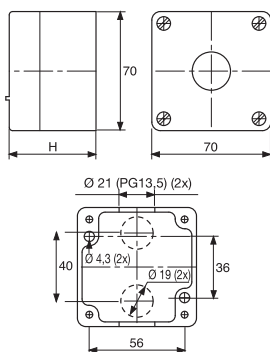
Container size	105x105x61 mm (74 protection) 105x105x81 mm (74 protection)	125x78x61 mm
Housing material	Aluminum	Aluminum
Construction form	Rectangular	Rectangular
No. holes	1	1
Type of finish	(A) (B)	(A) (C)
Operating temperature	-25°....+70°C	-25°....+70°C
Storage	-40°	-40°
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1	IEC 60947-5-1
Approvals	CE ENEC UK	CE ENEC UK

CODE

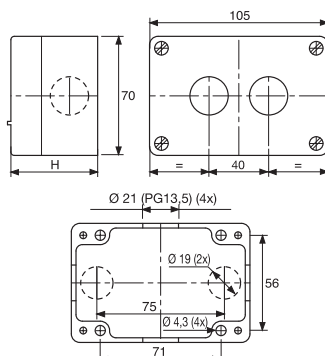
1 hole h. 61 finish (A)	SAM 139-A	
1 hole h. 61 finish (B)	SAM 139-B	
1 hole h. 81 finish (A)	SAM 120-A	
1 hole h. 81 finish (B)	SAM 120-B	
1 hole h. 61 finish (A)		SAM 135-A
1 hole h. 61 finish (C)		SAM 135-C
1 hole h. 61 finish (A)		SAM 140-A
1 hole h. 61 finish (C)		SAM 140-C
1 hole h. 61 finish (A)		SAM 150-A
1 hole h. 61 finish (C)		SAM 150-C

In double insulation thermoplastic material (IP65) - Dimensional

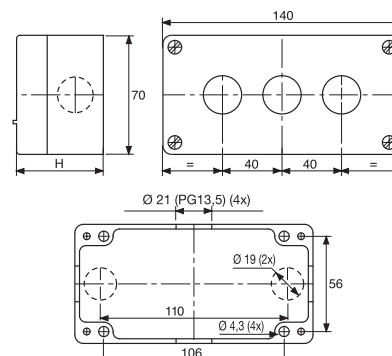
Dimensions 70x70 mm



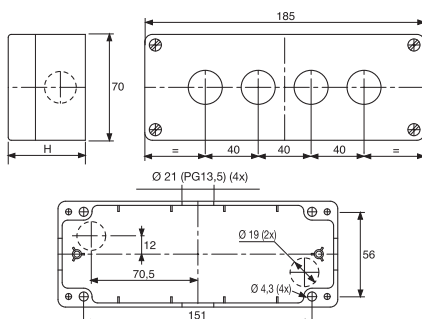
Dimensions 105x70 mm



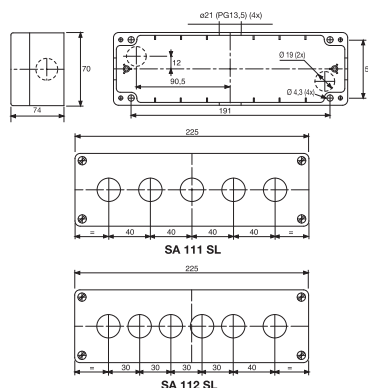
Dimensions 140x70 mm



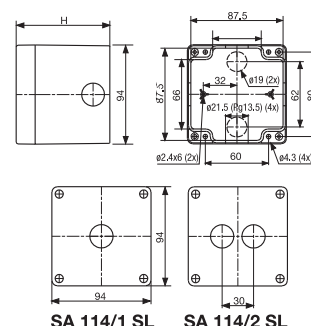
Dimensions 185x70 mm



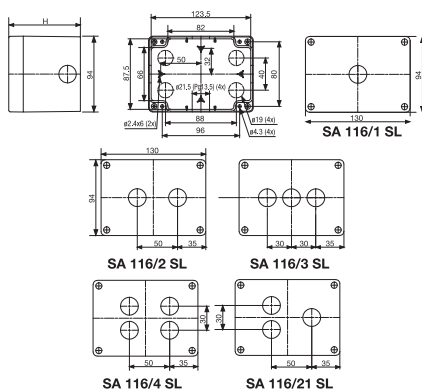
Dimensions 225x70 mm



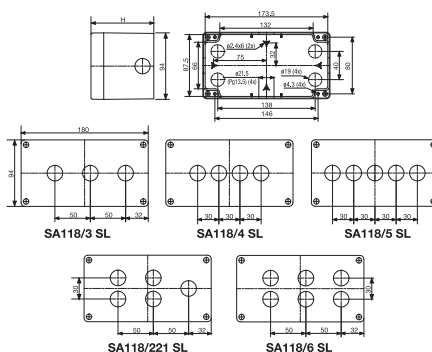
Dimensions 94x94 mm



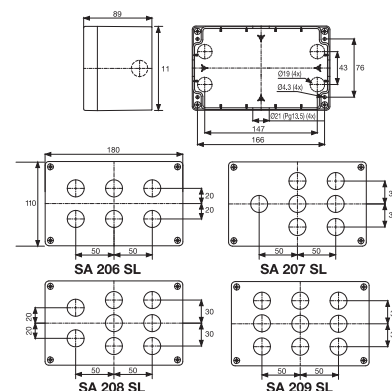
Dimensions 130x94 mm



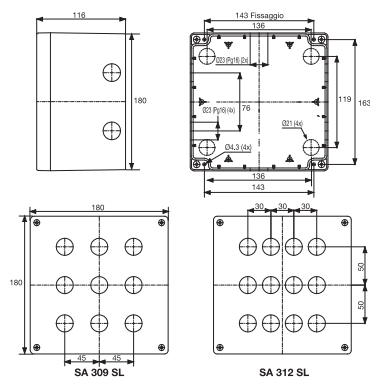
Dimensions 180x94 mm



Dimensions 180x110 mm



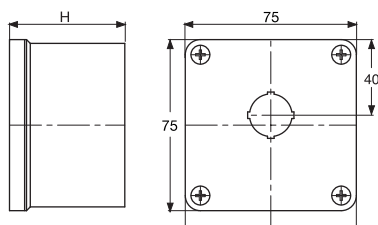
Dimensions 180x180 mm



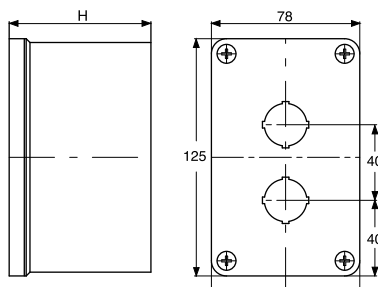
Enclosures

In aluminum for control auxiliaries $\varnothing 22$ - Dimensional

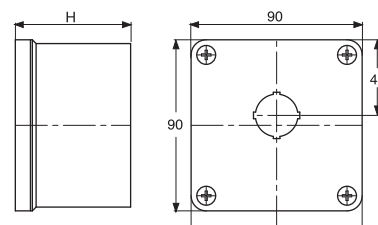
Dimensions 75x75 mm



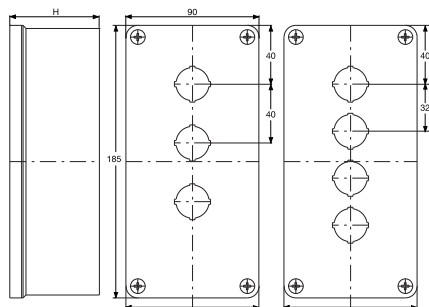
Dimensions 125x78 mm



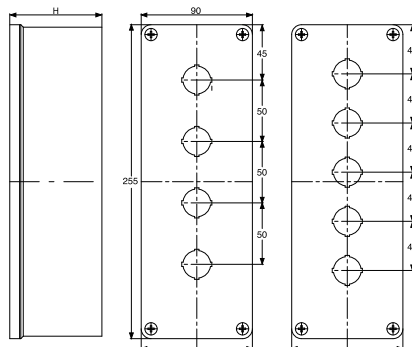
Dimensions 90x90 mm



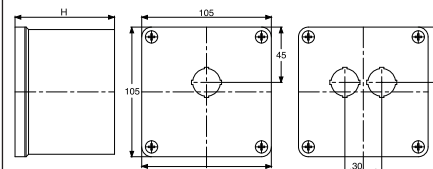
Dimensions 185x90 mm



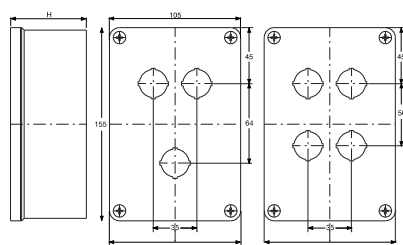
Dimensions 255x90 mm



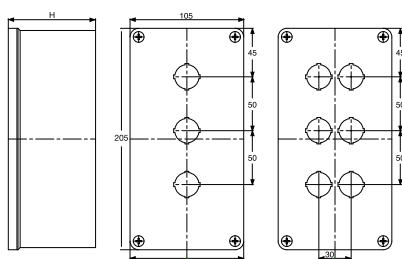
Dimensions 105x105 mm



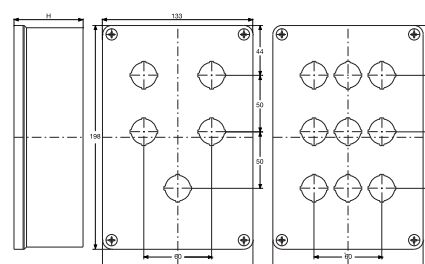
Dimensions 155x105 mm



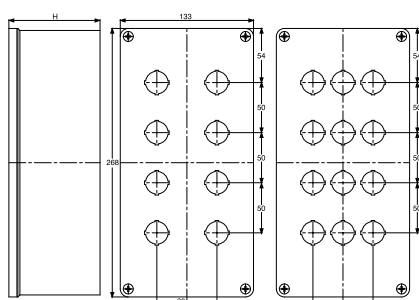
Dimensions 205x105 mm



Dimensions 198x133 mm



Dimensions 268x133 mm

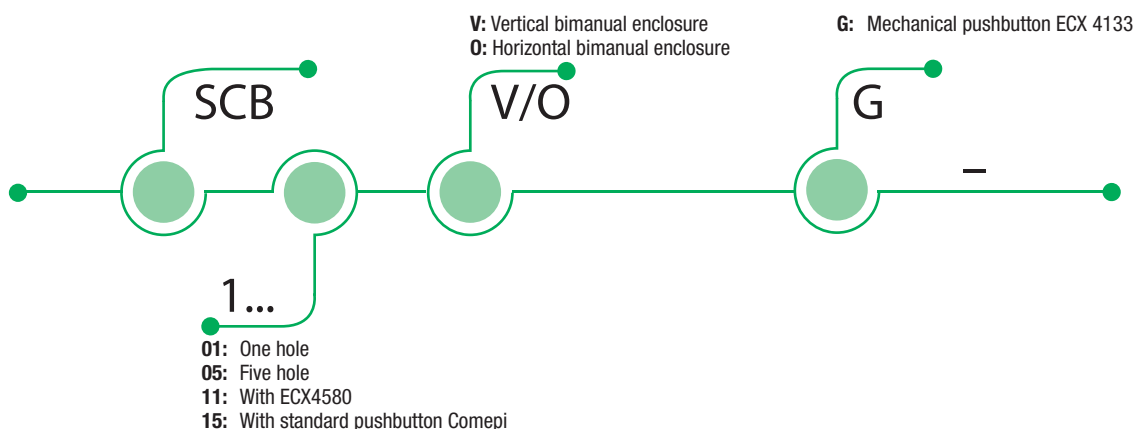


Two-hand control station - **SCB Series**

APPROVALS:

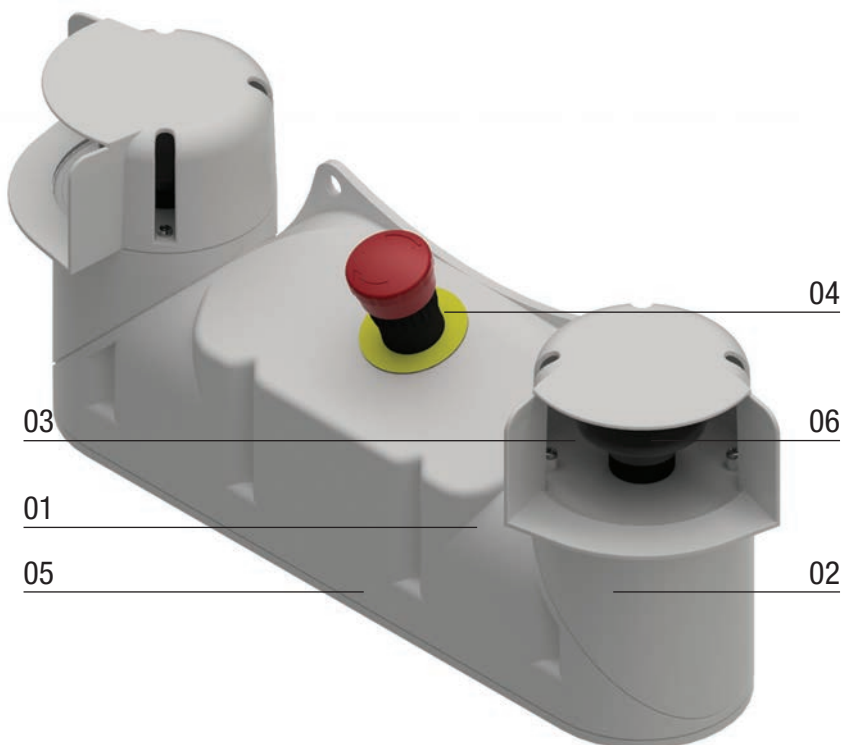


Declaration of conformity



HOW IS MADE?

- 01 Robust and indestructible thanks to the special self-extinguishing polycarbonate fiberglass reinforced.
- 02 Allows assembly for vertical or lateral operation.
- 03 Designed to ensure compliance with all the requirements of the ISO 13851 standard.
- 04 Always supplied with an emergency stop device allows the integration of control stations thanks to the holes for 22mm diameter buttons. (Available with 1 or 5 holes)
- 05 Can be installed on a surface or pedestal and connected via cable or M12 connector.
- 06 Operation can be performed by traditional mechanical buttons with 1NO+1NC electromechanical contacts.



Two-hand control station - SCB Series

Description

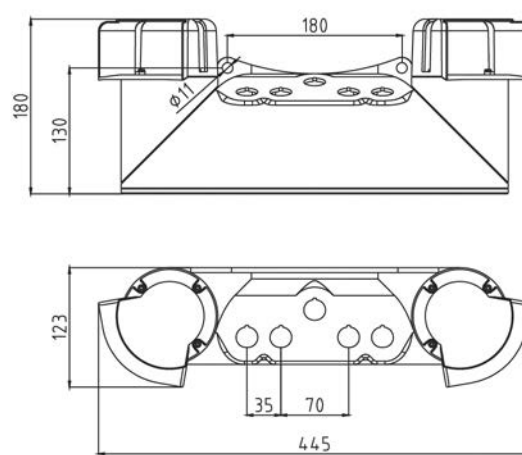
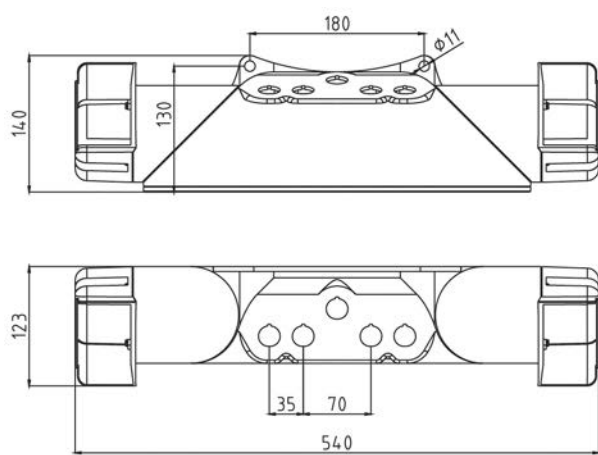
DESCRIPTION AND APPLICATION

Comepi SCB two-hand control station are made of fiberglass reinforced polycarbonate. Assembled to the Comepi command and control units, they are the ideal complement to be used as high quality human-machine interfaces. The SCB line has been designed for applications in harsh environments, it can reach IP65 protection degree, thanks also to gasket on deposit. The two-hand control station has numerous aesthetic, structural and use strengths, which distinguish it from the competition and place it among the top of the range. SCB allows assembly for vertical or lateral operation, and is designed to ensure compliance with all the requirements of the ISO 13851 standard.

Below are some examples where the SB enclosures could be placed:

- Packaging
- Production lines
- Presses
- Two-hand start control

DIMENSIONS



TECHNICAL FEATURES

Standards

IEC 60947-5-1 / EN 60947-5-1 / EN ISO 13851

Room temperature

– operation

– 25 ... + 70 °C

– storage

– 40 ... + 80 °C

Degree of protection (according to IEC 60529 and EN 60529)

Up to IP65 and IP69K

Material

Polycarbonate fiberglass reinforced

Container color Black

Gray RAL 7035

Cover colors

Gray RAL 7035

Two-hand control station

SCB series in polycarbonate - IP65



**Vertical two-hand control station
with mechanical pushbuttons**



**Horizontal two-hand control station
with mechanical pushbuttons**

TECHNICAL FEATURES		
Container size	72.5x83xh. 53 mm	72.5x83xh. 53 mm
Housing material	Glass fiber reinforced polycarbonate	Glass fiber reinforced polycarbonate
Construction form	Vertical	Horizontal
No. holes	1	1
Operator	N2 ECX 4133 N1 ECX 4580	N2 ECX 4133 N1 ECX 458
Functionality	Two-hand control	Two-hand control
Mounted contacts	2NC + (1NO+1NC on each side)	2NC + (1NO+1NC on each side)
Housing color	● Grey RAL 7035	● Grey RAL 7035
Cover color	● Grey RAL 7035	● Grey RAL 7035
Operating temperature	-25°....+70°C	-25°....+70°C
Storage	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1 EN ISO 13851 IEC 60947-5-5	IEC 60947-5-1 EN ISO 13851 IEC 60947-5-5
Approvals	CE ENEC UK UL	CE ENEC UK
Mechanical life	ECX 4580 300k - ECX 4133 1M	ECX 4580 300k - ECX 4133 1M
CODE		
Vertical two-hand control station	SCB11V-G	
Horizontal two-hand control station	SCB110-G	

Two-hand control station

SCB series in polycarbonate - IP65



**Vertical two-hand control station
with 1 hole**



**Vertical two-hand control station
with 5 holes**

TECHNICAL FEATURES

Container size	72.5x83xh.53 mm	72.5x83xh.53 mm
Housing material	Glass fiber reinforced polycarbonate	Glass fiber reinforced polycarbonate
Construction form	Vertical	Vertical
No. holes	1	5
Operator	N.A.	N.A.
Functionality	Two-hand control	Two-hand control
Mounted contacts	N.A.	N.A.
Housing color	● Grey RAL 7035	● Grey RAL 7035
Cover color	● Grey RAL 7035	● Grey RAL 7035
Operating temperature	-25°....+70°C	-25°....+70°C
Storage	-40°...+80°C	-40°...+80°C
Degree of protection	IP65	IP65
Standards	IEC 60947-5-1 - EN ISO 13851	IEC 60947-5-1 - EN ISO 13851
Approvals	CE ENEC UK CA	CE ENEC UK CA
Mechanical life	N.A.	N.A.

CODE

Vertical two-hand control station 1 hole
Vertical two-hand control station 5 holes

SCB01V

SCB05V

Two-hand control station

Accessories

Black mushroom Ø 60



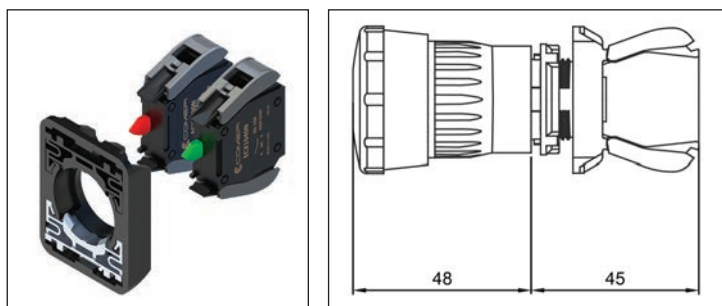
Description	Colour	Code
Mushroom	Black	ECX 4133

Red mushroom



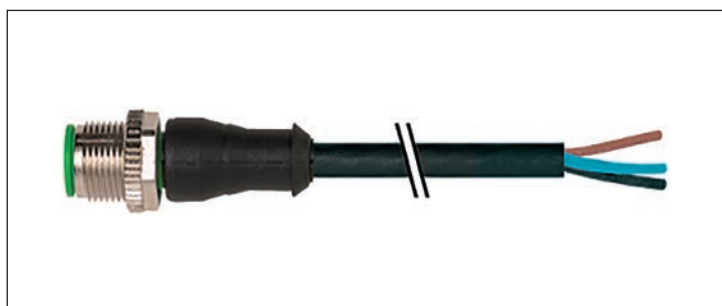
Description	Colour	Code
Mushroom	Red	ECX 4580
Mushroom with green vision for status indication	Red	ECX 4581

Support base



Description	Code
Support Base	ECX 4029
NC contact	ECX 1030N
NO contact	ECX 1040N

Connection



Description	Poles	Lenght	Code
M12 female/male connection cable	8	0,2m	XX8D002SM
M12 Connector	8		XX1068C0
Cable gland M20x1.5			XX1079C0

Safety modules

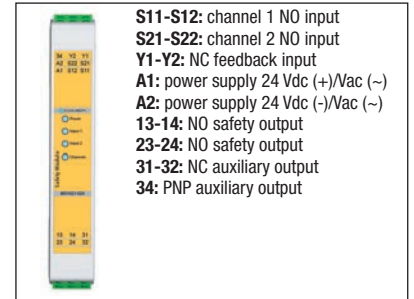
Electromechanical Safety modules

MS1H21-024

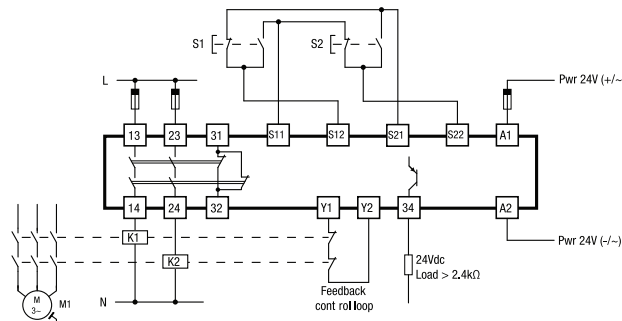
MS1H21-024 is the solution to safely monitor and control the operation of two-hand control consoles (type III C according to EN ISO 13851). The device enables safety control outputs only if the two console buttons are activated by the operator simultaneously or with a maximum interval of 500ms from each button.

APPLICATIONS

- Two-hand control consoles



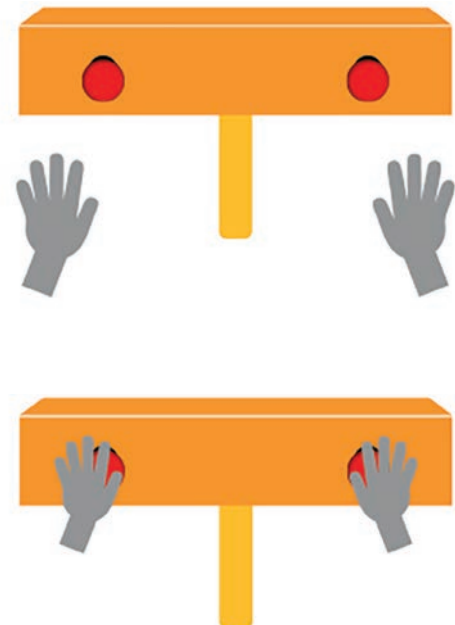
EXAMPLE OF APPLICATION



Functional description

A
 1 (S11-S12) and channel 2 (S21-S22) inputs are open, while the NC contact of S1 (on the console) is closed between S11 and S22, and the NC contact of S2 (on the console) is closed between S12 and S21.

B
 The NO safety outputs are switched off.



Foot switches **PS... / PD**

Double insulation - Plastic Casing IP65 - Description

APPLICATIONS

Foot switch operated machines such as: shearing machines, spinning machines, spinning lathers, machine tools, wrapping machines, riveting presses, etc.
Foot switches come in five operation formats:

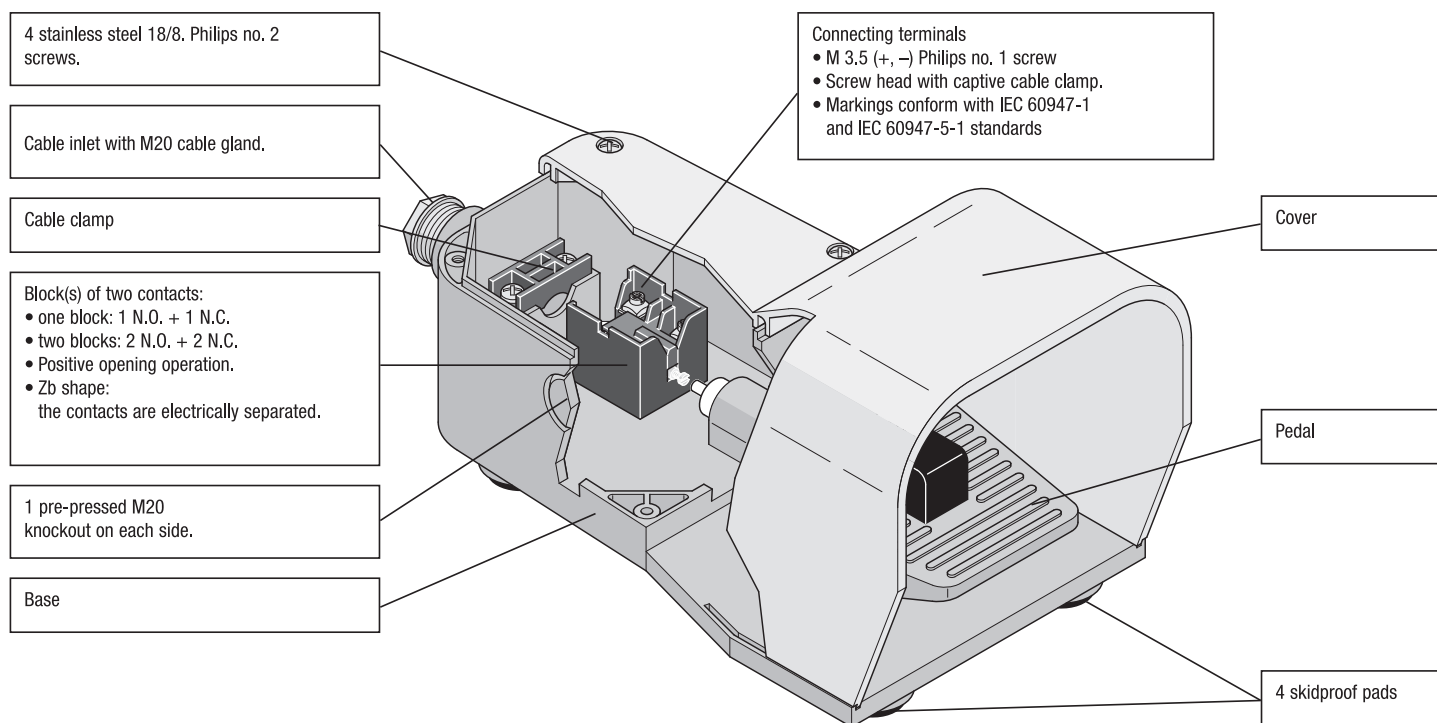
- **Free movement:** contact position follows pedal movement: actuated when the pedal is pushed down, released when pedal is in state of rest.
- **Foot switch locked in neutral position:** same operation as above, after unlocking the pedal with the end of the foot.
- **Foot switch latched in low position:** same operation as free movement, excepted that a state of rest is obtained only after having unlatched the pedal with the end of the foot.
- **Free movement with two-stage actuating force:** two different contact blocks are actuated with a different force on the lever.
- **Foot switch locked in neutral position with two-stage actuating force:** same operation as above, after unlocking the pedal with the end of the foot

DESCRIPTION OF THE SWITCH

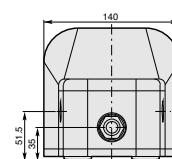
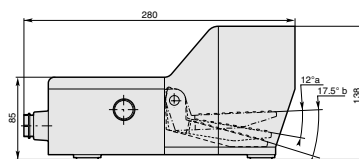
- **Dimensions:** 280 x 140 x 138mm.
- **Materials:** **Standard version (IMQ approved):** Base, cover and pedal made of shock resistant ABS material.
Self-extinguishing / VO (IMQ, UL, CSA approved): Base, cover and pedal made of Polycarbonate/ABS-V0.
Metal version / VO-M (IMQ, UL, CSA approved): Cover made in die cast aluminium, base and pedal made of Polycarbonate/ABS-V0.
- **Colour choice:** Grey base; grey, yellow or red cover.
- **Variations:** Grey base, half-red cover. Especially used for emergency stop function.

They comply with the requirements of European Directives (Low Voltage and RoHS) and are conform to European and International Standards.

The CE declaration of these products are available in the download section of website www.comepi.it or by writing to the following email address: tecnico@comepi.it
DDC05 - Foot Switches.



Dimensions (in mm)



Foot switches **PS... / PD**

Double insulation - Plastic Casing IP65 - Description

Symbols

Example:

P	S	1	2	1	1
---	---	---	---	---	---

 /

V0

Structure:

P					
---	--	--	--	--	--

 /

--

Type
S = Simple Foot Switch
D = Double Foot Switch

Electrical connection
1 = Pg 16 cable gland
2 = M20 cable gland

Devices
1 = Free movement of the lever
2 = Movement of the lever dependant of the safety device notch
3 = Device to maintain the lever in lowered down position
4 = Free movement with two-stage actuating force
5 = With safety device notch and two-stage actuating force

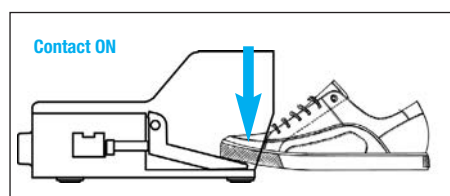
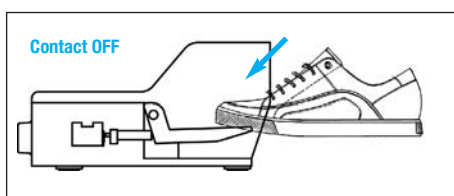
Contact blocks
1 - One (NO+NC) snap action contact
2 - One (NO+NC) slow action contact
3 - Two (NO+NC) snap action contacts
4 - Two (NO+NC) slow action contacts

Cover material
- = Shock resistant ABS (standard)
V0 = UL approved self-extinguishing
V0-M = UL approved with aluminium cover

Cover colour 1 = Yellow / 2 = Grey / 3 = Yellow + Grey (PD series)
4 = Red / 5 = Half red cover / 7 = Half yellow cover / 8 = Half grey cover

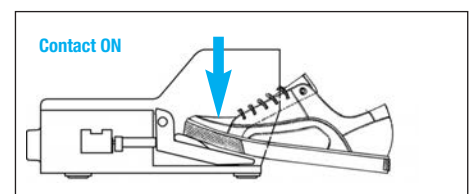
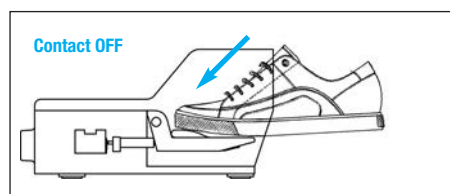
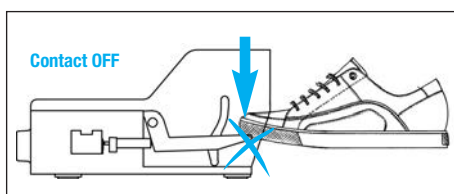
DEVICES

1: Free movement of the lever



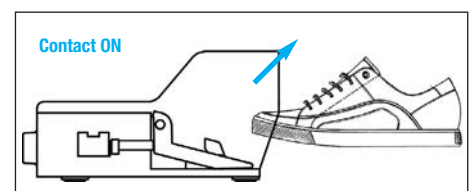
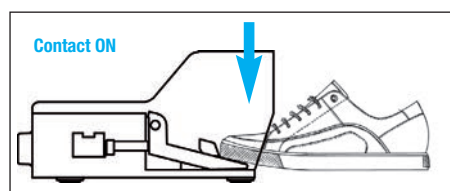
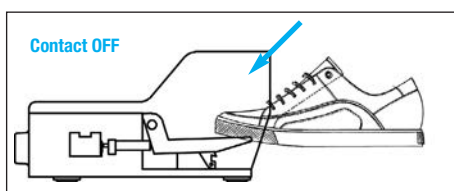
The lever can be actuated without any particular device.

2: Movement of the lever dependent of the safety device notch

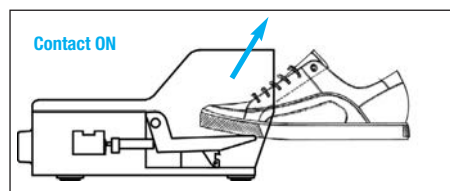
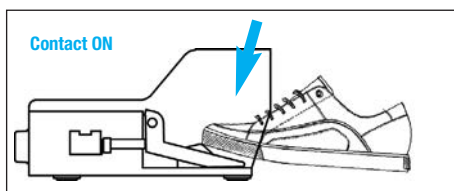


The pedal can be actuated only by lowering the safety lever fully inserting the foot, thus preventing any accidental actuation.

3: Device to maintain the lever in lowered position

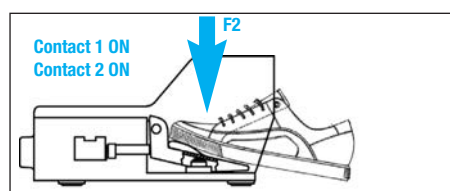
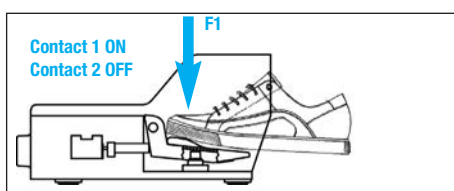


By pushing the lever the contact switches and the lever remains locked in lowered position.



Push the locking device in order to unlock the pedal actuator.
Once you release the lever the contacts return to their initial position.

4: Free movement with two-stage actuating force



By applying a light pressure F1 on the lever, the first contact block will be actuated while the second keeps in state.
An higher pressure F2 on the lever will switch also the second contact block.

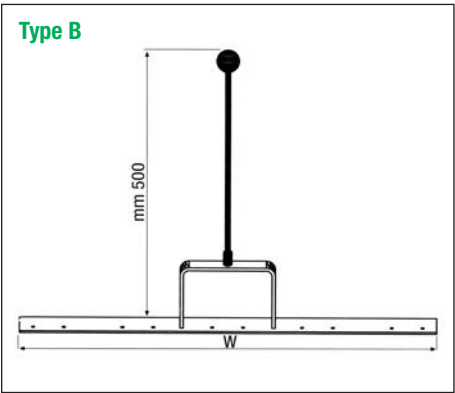
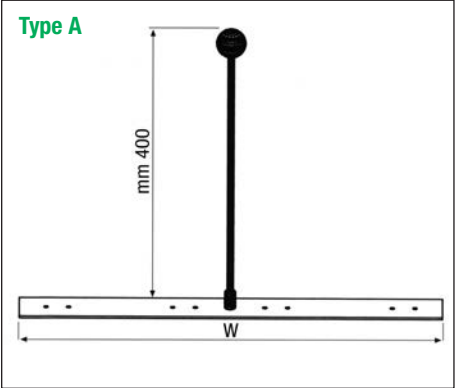
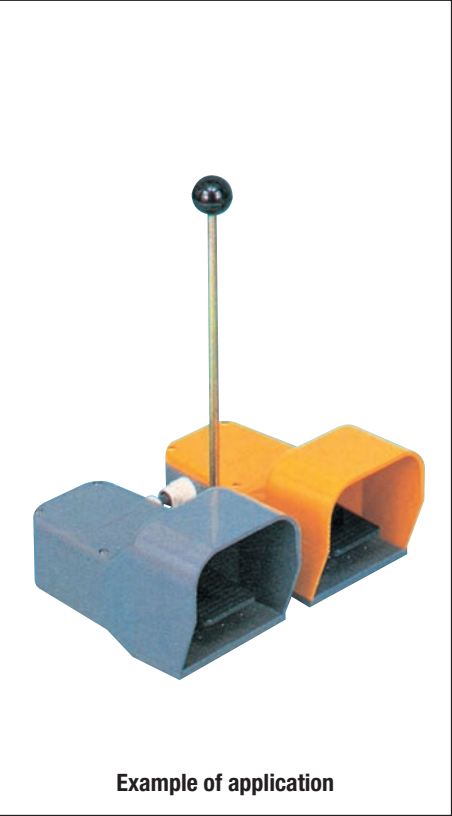
5: With safety device notch and two-stage actuating force

Same as above but the pedal can be actuated only by completely inserting the foot in the device.

Foot switches PS... / PD

Double insulation - Plastic Casing IP65 - Accessories

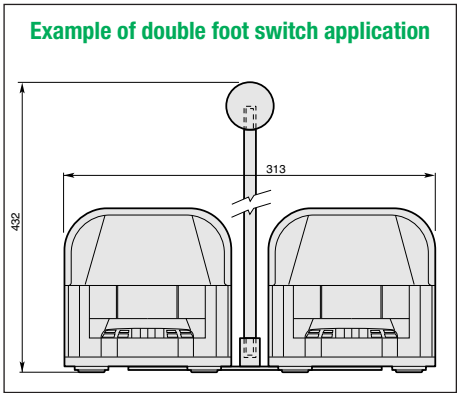
Carrying Rod Kits



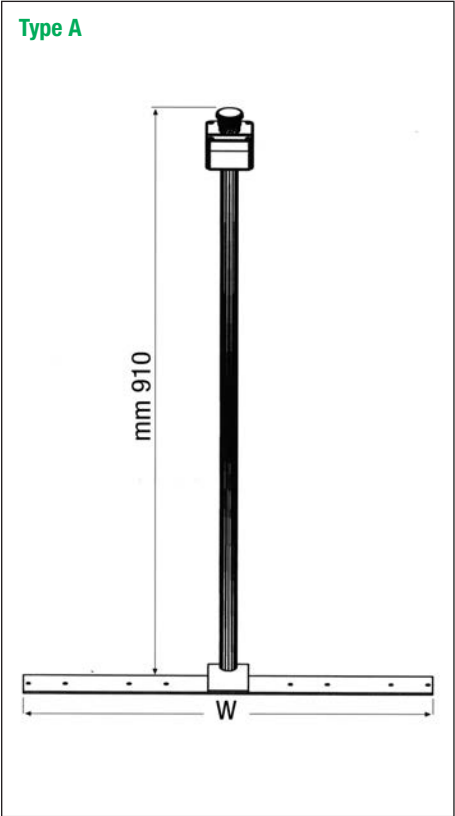
Order Code	Description	W (mm)	Type
PD1000	Max 2 Foot Switches*	225	A
PD1001	Max 3 Foot Switches*	405	B
PD1002	Max 4 Foot Switches*	580	A
PD1003	Max 5 Foot Switches*	745	B

* Foot Switches not included

Note: Each carrying rod kit includes necessary fixing screws and cable glands for the specified number of foot switches.



Metal Steel Frame



Order Code	Description	W (mm)
GR2025	For 1 foot switch only*	175
GR2026	Max 2 foot switches*	280
GR2027	Max 3 foot switches*	440
GR2028	Max 4 foot switches*	580

* Foot Switches not included

Attention!
Push button and plastic box not included:
please consult our “Control Units 022”
catalog.

Note: Each carrying rod kit includes necessary fixing screws and cable glands for the specified number of foot switches.

Foot switches **PS... / PD**

Two hand control station with support base

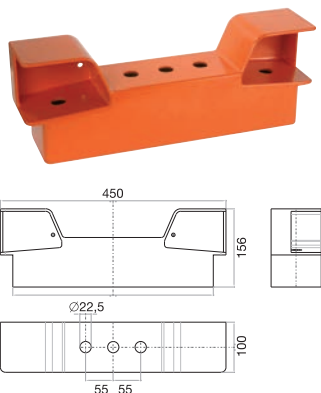


GR2030

Aluminium two hand control station

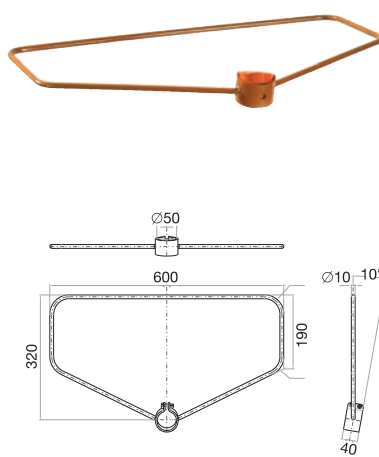
GR2031

Aluminium two hand control station suitable for adjustable support base



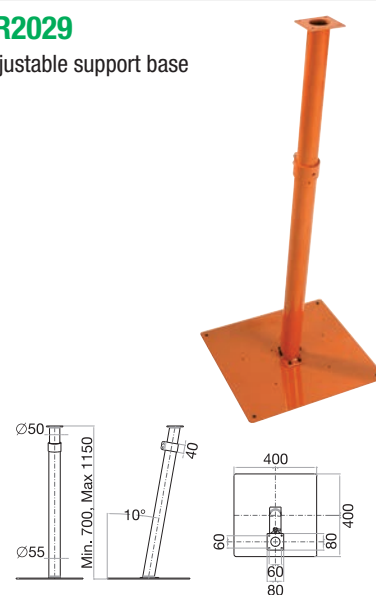
AN003PE

Protection ring



GR2029

Adjustable support base



Foot switches **MP...**

Plastic Casing IP65 - Description

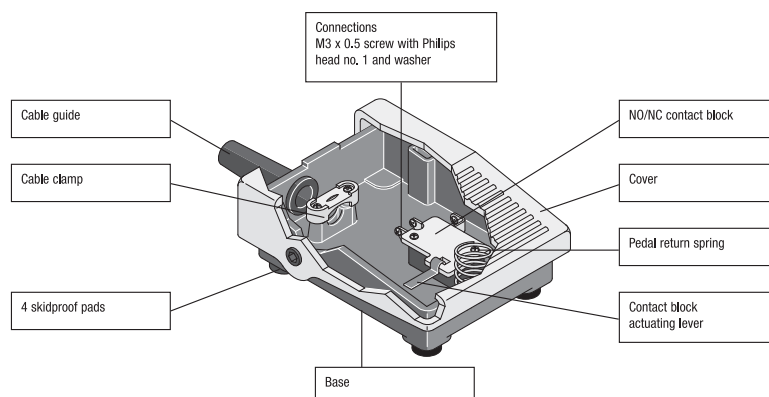
APPLICATIONS

Comepi foot switches of the MP series are plastic foot switches in mini design that besides their robust form and technical versatility are specially convincing for their functionality and ergonomic design. They can be applied on foot switch operated machines such as: shearing machines, spinning lathers, machine tools, wrapping machines, riveting presses, etc.

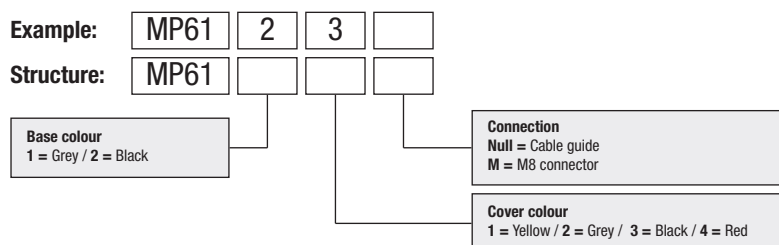
DESCRIPTION OF MP6... MINI FOOT SWITCHES

- **Dimensions:** 100 x 75 x 34 mm.
- **Materials:** cover and base made of self-extinguishing ABS.
- **Colour choice:** black or grey base; black, grey, yellow or red cover.

They comply with the requirements of European Directives (Low Voltage and RoHS) and are conform to European and International Standards. The CE declaration of these products are available in the download section of website www.comepi.it or by writing to the following email address: tecnico@comepi.it DDC05 - Foot Switches.

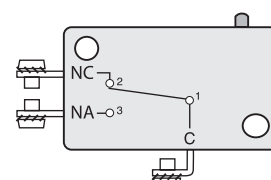
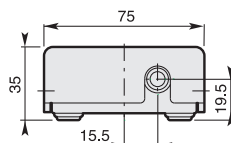
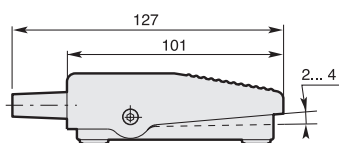
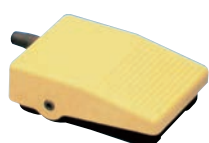


Symbols

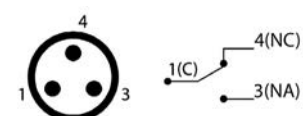
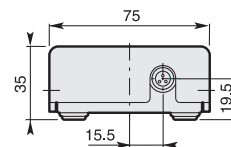
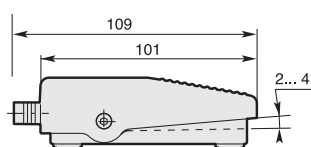


Dimensions (in mm)

NO / NC Contact Block



Connection by cable guide



Connection by M8 connector

Accessories



XX3D030SM

3m PVC cable with straight 3 poles M8 female connector

Foot switches

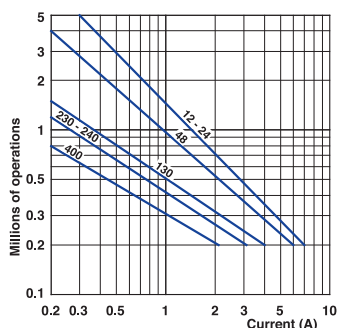
Technical Data

		Mini Foot Switch	Foot Switch with Cover
Standards		EN 61058-1	IEC 60947-5-1
Certifications - Approvals		UL - EAC - UKCA	IMQ - UL and CSA (upon request) - EAC - CCC - UKCA
Air temperature near the device			
– during operation	°C	– 25 ... + 70	– 25 ... + 70
– for storage	°C	– 30 ... + 80	– 30 ... + 80
Climatic withstand		–	according to IEC 60068-2-78 and salty mist according to IEC 60068-2-11
Shock withstand (according to IEC 60068-2-27 and EN 60068-2-27)	g	–	50g (1/2 sinusoidal shock for 11 ms) no change in contact position
Degree of protection (according to IEC 60529 and EN 60529)		IP 40	IP 65
Operating Torque	N.m	1.2	0,25
Operating angle	Degree	2 to 4	15
Cable inlet		Cable guide ø 6 mm; ø max. 8.5	M20

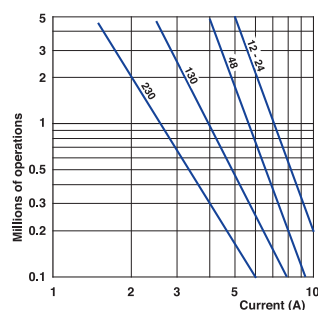
Electrical Data

Rated insulation voltage U_i	V	250 (50 for M8 connector)	690 (according to IEC 60947-1 and EN 60947-1) Degree of pollution 3
Rated impulse withstand voltage U_{imp} (according to IEC 60947-1 and EN 60947-1)	kV	1	6
Conventional free air thermal current I_{th} $\theta < 40\text{ °C}$	A	15 (4 for M8 connector)	10 (according to IEC 60947-1)
Short-circuit protection $U_e < 500\text{ V a.c.}$ - gG (gl) type fuses	A	10 (4 for M8 connector)	10
Rated operational current	A	3 (250 V a.c.) for cable guide versions	A 600 (according to UL 508 and CSA C22-2 n° 14)
	A	0.06 (230 V d.c.) for cable guide versions	Q 600 (according to UL 508 and CSA C22-2 n° 14)
AC-15 (according to IEC 60947-5-1)	24 V	4 for M8 connector	10
	240 V	–	6
	400 V	–	4
DC-13 (according to IEC 60947-5-1)	24 V	4 for M8 connector	6
	125 V	–	0.55
	250 V	–	0.4
Resistance between contacts	mΩ	30	25
Connecting terminals		M3 x 0.5 screw with Philips head no. 1 and washer	M3.5 (+, –) pozidriv with cable clamp
Positive opening operation (according to IEC 60947-5-1)		–	⊖
Connecting capacity	1 or 2 x mm ²	–	0.75 ... 2.5
Terminal marking		(Refer to contact block page 132)	According to IEC 60947-5-1
Mechanical durability	Millions of operations	10	30
Electrical durability	Operations	100 000	utilization categories AC-15 and DC-13 (Load factor of 0.5 according to curves below)

AC-15 - Snap action



AC-15 - Slow action



DC-13	Snap action	Slow action
	Power breaking for a durability of 5 million operating cycles	
Voltage 24 V	9.5 W	12 W
Voltage 48 V	6.8 W	9 W
Voltage 110 V	3.6 W	6 W

Modular indicators - LUX series

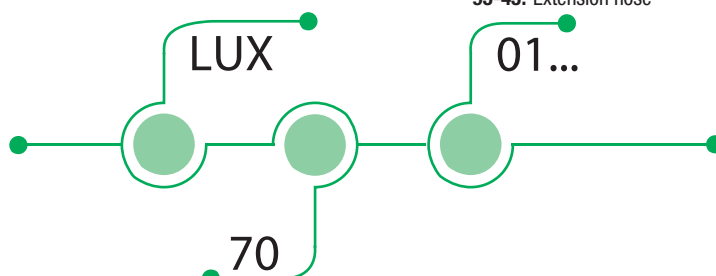
APPROVALS:



Declaration of conformity



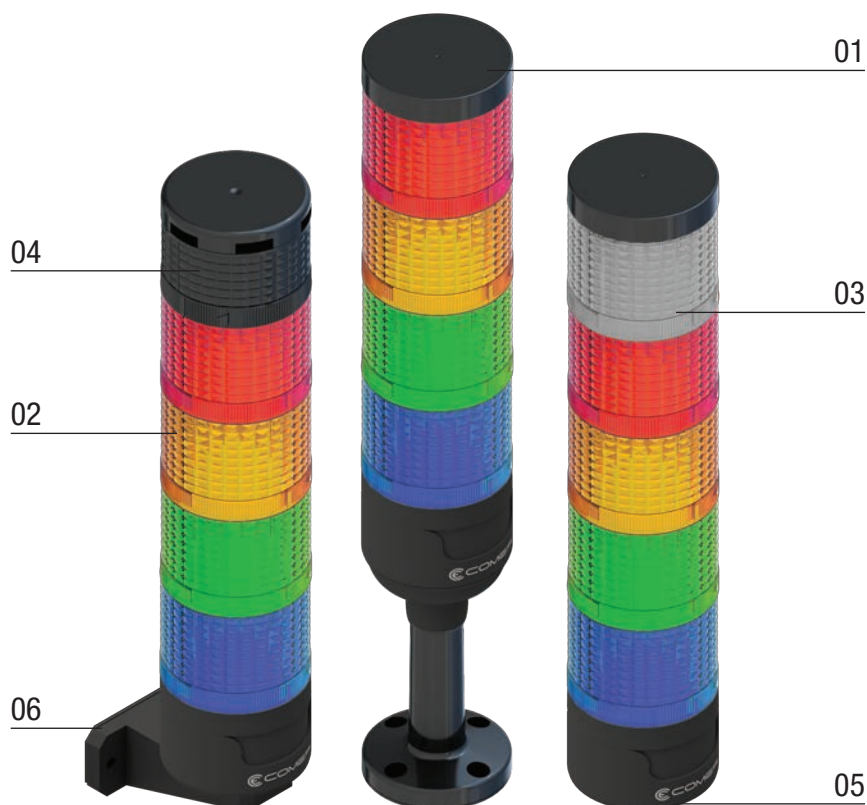
- 01: Fixed red light sector
- 11: Red flashing light sector
- 02: Fixed green light sector
- 12: Green flashing light sector
- 03: Fixed yellow light sector
- 13: Yellow flashing light sector
- 04: Fixed blue light sector
- 14: Blue flashing light sector
- 05: Fixed white light sector
- 15: White flashing light sector
- 30: Buzzer
- 90: Standard fixing base
- 91: Fixing base for tube
- 92: Fixing tube with stand
- 93: 90° bracket
- 94: Adjustable bracket
- 95-45: Extension hose



70: Light and acoustic modular indicators Ø 70mm

HOW IS MADE?

- 01 Light and acoustic sector Ø 70mm
- 02 Degree of protection IP65
- 03 Five colors available in two operating modes
- 04 Buzzer configurable fixed or intermittent
- 05 Easy installation and wiring
- 06 Wide range of bases available



Modular indicators - LUX series

Description

DESCRIPTION AND APPLICATION

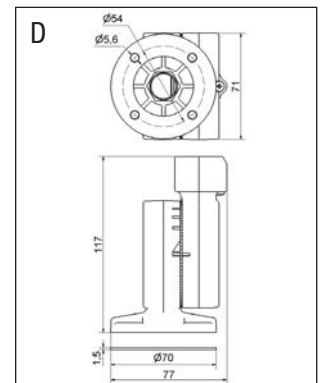
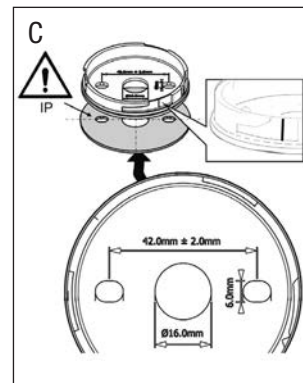
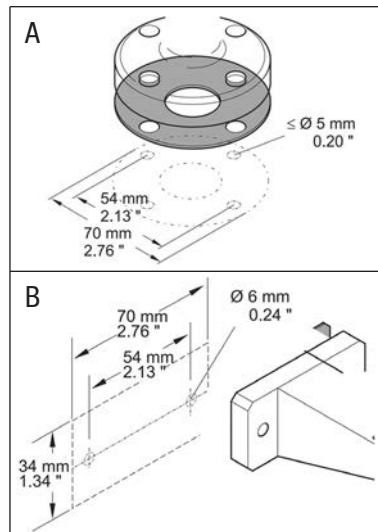
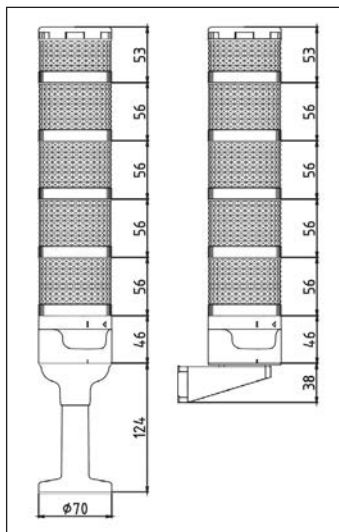
The Comepi LUX series indicators are vertical modular acoustic and luminous indicators Ø 70 mm, they are available in various colors and can be combined by the customer flexibly based on his needs.

They are usually used in automatic operating machines, are indispensable devices for feedback on the operating condition in time real (correct operation, anomaly, maintenance, danger...) of the machine.

Main characteristics:

- Maximum visibility at a distance and at any angle thanks to the vertical development
- Modular, quick and simple mechanical and electrical connection for maximum flexibility
- Various combination options (colours/functionality) for different fields of application.

DIMENSIONS



A) holes for fixing the indicator with the tube
B) 90° bracket indicator fixing holes
C) exit holes and wiring module fixing

D) exit holes and folding bracket fixing

TECHNICAL FEATURES

Rated operating voltage

24 VDC (+/-10%)

Room temperature

– operation

– 30 ... + 50 °C

– storage

– 30 ... + 50 °C

Degree of protection (according to IEC 60529 and EN 60529)

IP65

Material

PC/ABS

Maximum number of overlapping sectors

5

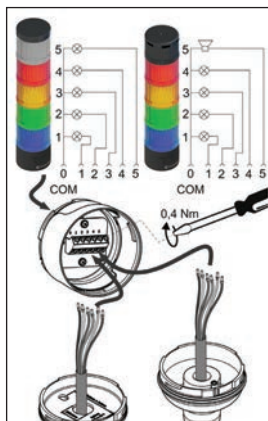
Decibel buzzer

90db

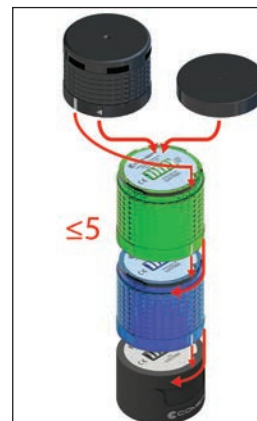
Certifications - Approvals

CE

INSTALLATION AND ASSEMBLY



Wire terminal 0 with common e follow the ascending numbering of the electrical terminal based on the sectors mounted from bottom to top.
e.g. terminal 1 sector1, terminal 2 sector2



Engage the first signaling sector on wiring sector, making the reference marks and rotate in the direction clockwise until the bayonet stop clicks.

Proceed to assemble the subsequent reporting sectors such as described before. On the last sector mount the cover.

The acoustic signal is already equipped with lid and can only be mounted as last sector.

Modular indicators - LUX series

COMPOSITION OF 24 V DC MODULAR INDICATORS

	BUZZER Order no. LUX7030		LIGHT yellow Order no. LUX7003
	LIGHT red Order no. LUX7001 FLASH red Order no. LUX7011		FLASH yellow Order no. LUX7013
	LIGHT green Order no. LUX7002 FLASH green Order no. LUX7012		LIGHT blue Order no. LUX7004 FLASH blue Order no. LUX7014
			LIGHT white Order no. LUX7005 FLASH white Order no. LUX7015
Base mounting		Tube mounting	
	WIRING SECTOR base Code LUX7090		WIRING SECTOR tube Code LUX7091
	90° FIXING BRACKET Code LUX7093 *Optional for base wiring sector		
	EXTENSION HOSE Code LUX7095-45 *Optional for adjustable bracket	ADJUSTABLE BRACKET Code LUX7094	FIXING TUBE WITH STAND Code LUX7092

Modular indicators - **LUX series**

DESCRIPTION	COLOR	POWER SUPPLY	
		24V Dc	ACCESSORIES
Sectors with fixed light (LED board included)		LUX7001	
		LUX7002	
		LUX7003	
		LUX7004	
		LUX7005	
Flashing sectors (LED board included)		LUX7011	
		LUX7012	
		LUX7013	
		LUX7014	
		LUX7015	
Buzzers		LUX7030	
WIRING SECTOR base			LUX7090
WIRING SECTOR tube			LUX7091
FIXING TUBE WITH STAND			LUX7092
90° FIXING BRACKET			LUX7093
ADJUSTABLE BRACKET			LUX7094
EXTENSION HOSE			LUX7095-45

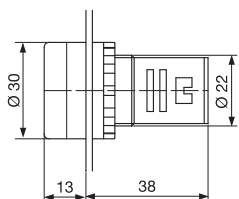
Command Units Ø 22

Plastic series - LED pilot lights and buzzers

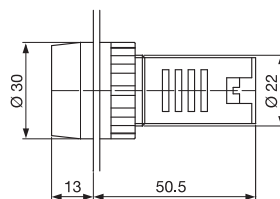
These products series ECX 205•, thanks to the Led illumination device, are characterized by long service life and low power consumption.



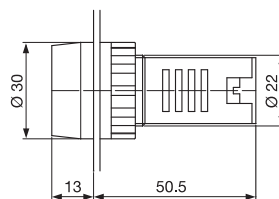
**Indicator lights
LED**



**Signalers
acoustics
not bright**



**Signalers
luminous acoustics
flashing**



TECHNICAL FEATURES

Mounting diameter	22 mm	22 mm	22 mm
Operator diameter	30 mm	30 mm	30 mm
Body material	Thermoplastic	Thermoplastic	Thermoplastic
Construction form	Round	Round	Round
Mounting panel thickness	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm	Min. 1 mm - Max. 6 mm
Functionality	Light signaling	Sound signaling	Light and sound signaling
Operating temperature	-25°....+70°C	-25°....+70°C	-25°....+70°C
Degree of protection	IP20, IP65 after installation except ECX 207• : IP64	IP20, IP64 after installation except ECX 207• : IP64	IP20, IP64 after installation except ECX 207• : IP64
Colors			
Standards	IEC 60947-5-1	IEC 60947-5-1	IEC 60947-5-1
Approvals			
Mechanical durability	—	—	—
Fixing ring	Included	Included	Included
Nominal Current	12mA~140mA	12mA~140mA	12mA~140mA
Insulation Resistance	> 2 MΩ	> 2 MΩ	> 2 MΩ
Electric Life	> 30.000 h	> 30.000 h	> 30.000 h
Luminous Flux	> 60 cd/m2	> 60 cd/m2	> 60 cd/m2
Pollution Degree	3	3	3
Sound intensity		80 dB (a 10 cm)	80 dB (a 10 cm)

Command Units Ø 22

Plastic series - LED pilot lights and buzzers

CODE	 PILOT LIGHTS	 BUZZERS	 FLASHING ILLUMINATED BUZZERS
● 12 V AC/DC	ECX 2051-12L		ECX 2071-12R
● 24 V AC/DC	ECX 2051-24L		ECX 2071-24R
● 127 V AC/DC	ECX 2051-127L		ECX 2071-127R
● 220 V AC	ECX 2051-220L		ECX 2071-220R
● 12 V AC/DC	ECX 2052-12L		
● 24 V AC/DC	ECX 2052-24L		
● 127 V AC/DC	ECX 2052-127L		
● 220 V AC	ECX 2052-220L		
● 12 V AC/DC	ECX 2053-12L		
● 24 V AC/DC	ECX 2053-24L		
● 127 V AC/DC	ECX 2053-127L		
● 220 V AC	ECX 2053-220L		
● 12 V AC/DC	ECX 2054-12L		
● 24 V AC/DC	ECX 2054-24L		
● 127 V AC/DC	ECX 2054-127L		
● 220 V AC	ECX 2054-220L		
○ 12 V AC/DC	ECX 2055-12L		
○ 24 V AC/DC	ECX 2055-24L		
○ 127 V AC/DC	ECX 2055-127L		
○ 220 V AC	ECX 2055-220L		
● 12 V AC/DC		ECX 2070-12	
● 24 V AC/DC		ECX 2070-24	
● 127 V AC/DC		ECX 2070-127	
● 220 V AC		ECX 2070-220	

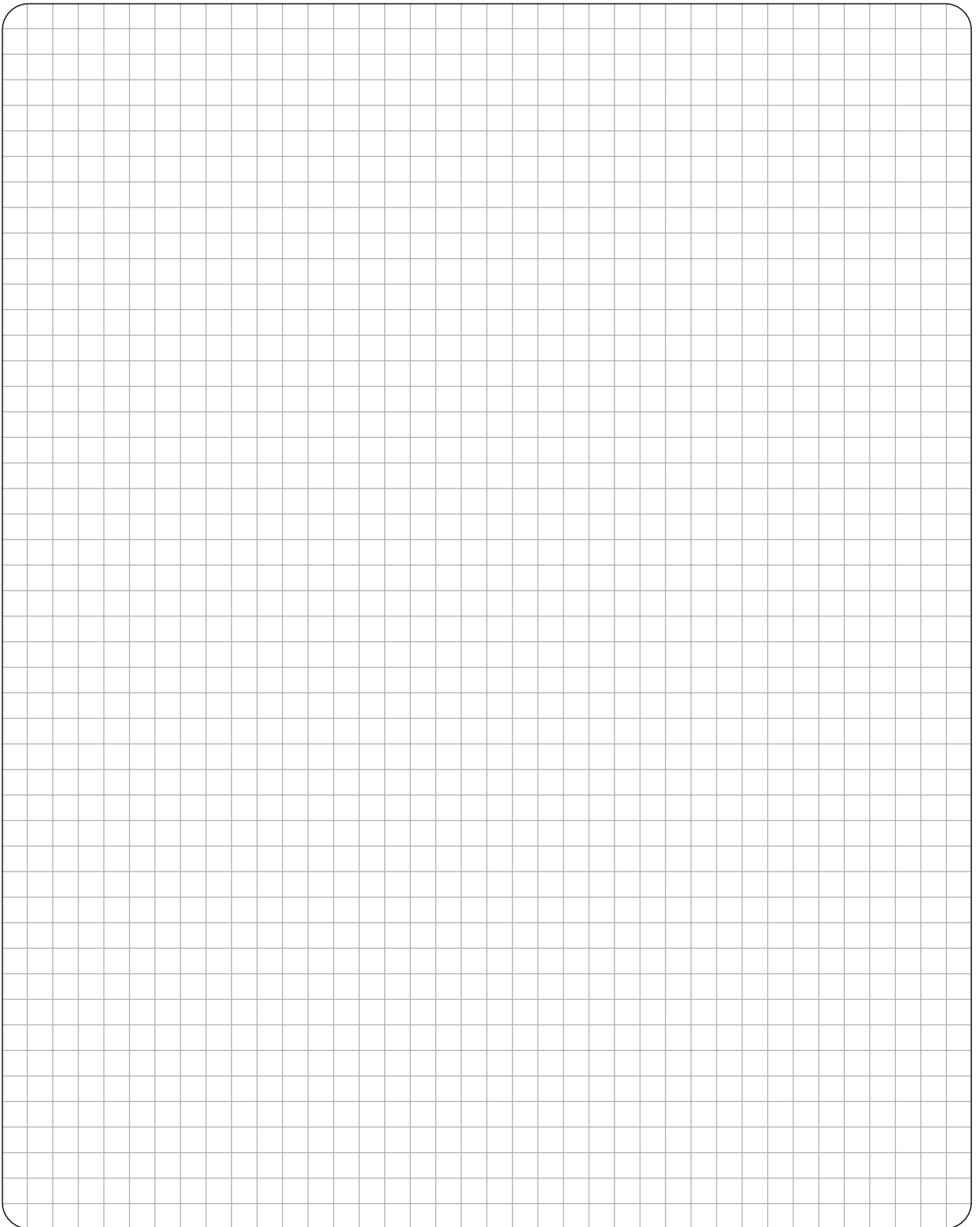


Notes

Notes

A large rectangular area filled with a fine grid of light gray lines, intended for writing notes. The grid is approximately 30 units wide by 40 units high.

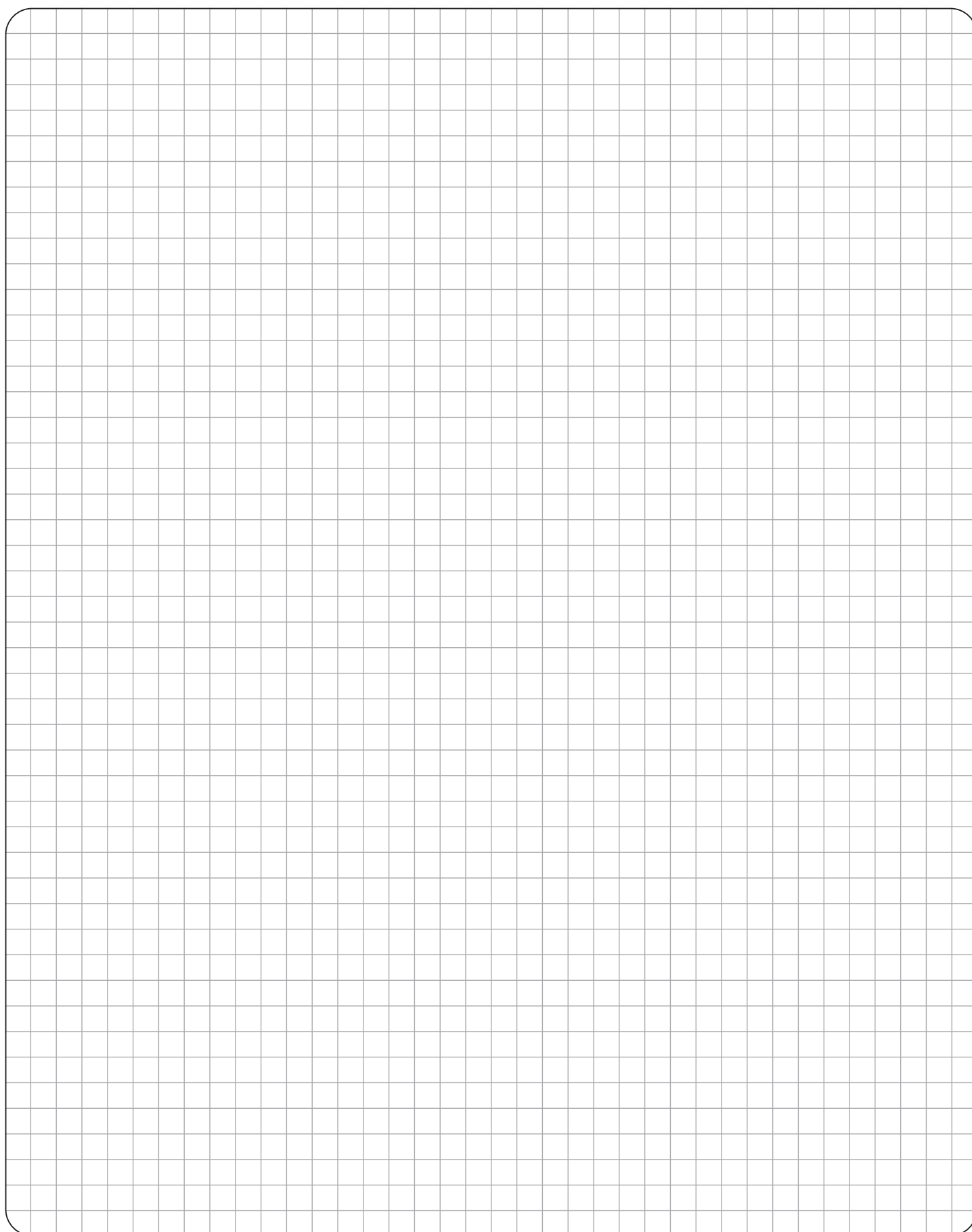
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COMEPI AROUND THE WORLD

Comepi products are available all over the world, the company supplies 76 countries in 5 continents. Our focus on flexibility translates into the ability to create solutions where the market requires new application needs. Comepi has a network of agents and importers, supported by local distributors. This organization ensures global presence and support.



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