



060

**DISPOSITIVI DI COMANDO
DI SICUREZZA**

SAFETY CONTROL DEVICES

060



Pulsantiera a due mani

Two-hand control device

■ SISTEMA MODULARE PER PULSANTIERE

Il nuovo sistema modulare per pulsantiera di comando che la New Elfin ha realizzato pensando alle esigenze del mercato e del tuo lavoro trova impiego nel settore dell'automazione industriale, è dotato di una serie di componenti che permettono di configurare svariate strutture ottimizzate per essere integrate con le macchine utensili con cui dovranno interagire come presse, piegatrici, saldatrici laser ecc.

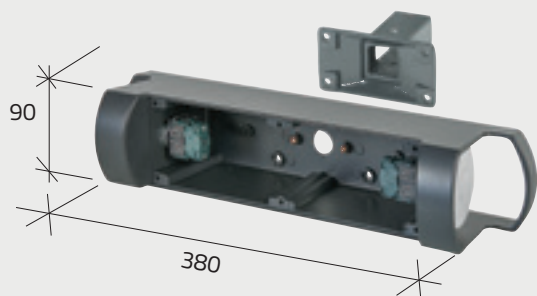
■ COLORAZIONE

La scelta delle colorazioni in toni di grigio e dell'alluminio satinato permettono l'armonizzazione estetica con gli apparati di destinazione; la colorazione in toni neutri evita un eccessivo impatto cromatico che può andare anche a discapito della concentrazione degli operatori alle macchine.

■ DIMENSIONI E FORMA

Nel progettare il nuovo comando a due mani è stata valutata la necessità di installazione in spazi ridotti e quindi ne è nato un prodotto con dimensioni 380 x 90 x 90 mm e con un notevole volume interno.

La forma ergonomica del nuovo comando a due mani conferisce un notevole comfort durante l'utilizzo; la dimensione della sezione di appoggio del palmo permette una contrapposizione tra il pollice e le altre dita facilitando l'azionamento dei pulsanti.



■ MODULAR SYSTEM FOR P/B PANELS

The new modular system for push-button panels, specifically designed by New Elfin to meet specific market and working needs. This modular system for industrial automation applications offers several components that enable you to configure many of the frames designed for machine-tools, like presses, folding machines, laser welding machines, etc.

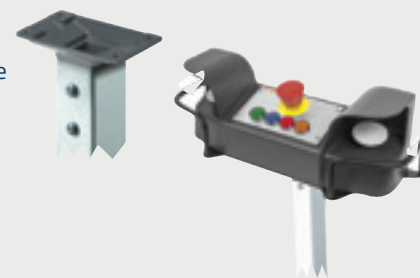
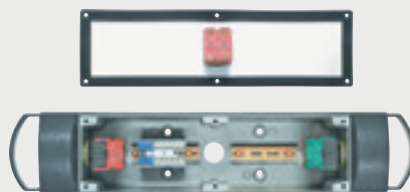
■ COLORATION

The range of colours available, from grey to satin aluminium, enhance the aesthetic integration with existing equipment, while the use of neutral shades reduces the chromatic impact that could distract machine operators during work.

■ DIMENSIONS AND SHAPE

The new two-hand control, device designed to be installed in small areas, has dimensions of 380 x 90 x 90 mm and very large internal volume.

Its ergonomic shape enhances comfort during use, while the size of the palm resting area enables operators to easily grasp the buttons between the thumb and fingers.



Pulsantiera a due mani Two-hand control device

■ SISTEMA MODULARE PER PULSANTIERE

L'estrema modularità del sistema permette di configurare anche soluzioni a braccio di sostegno dove è possibile applicare diversi componenti specifici.

La forma particolare dei giunti garantisce solidità e rigidità alla struttura, e le dimensioni ridotte permettono di allestire svariate versioni con la maggior parte dei contenitori.

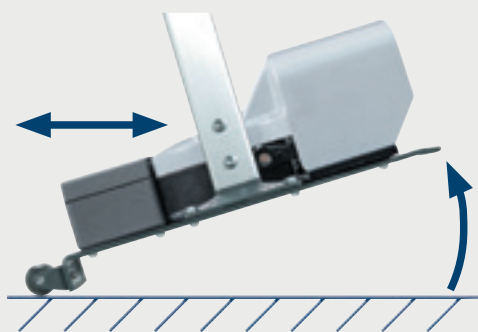
L'asola del giunto ortogonale permette il suo inserimento nella colonna anche dopo una eventuale posa di cavi elettrici.

■ KIT DI RUOTE

Il kit di ruote risolve razionalmente il problema della mobilità senza compromettere la solidità di appoggio della base. La base è predisposta per ricevere tutte le possibili configurazioni di applicazioni fisse o mobili.

■ KIT DI CONNESSIONE

Il kit di connessione risolve efficacemente tutti i problemi di cablaggio tra i numerosi possibili componenti.



■ MODULAR SYSTEM FOR P/B PANELS

Being highly modular, the system can also be fitted with a supporting bracket, which can be used to hold a wide range of specific components.

The truncated conical shape of the coupling confers solidity and rigidity to the frame. The system can in fact be easily combined with most of containers.

The straight coupling slot enables the system to be inserted into a column even after the cable laying.

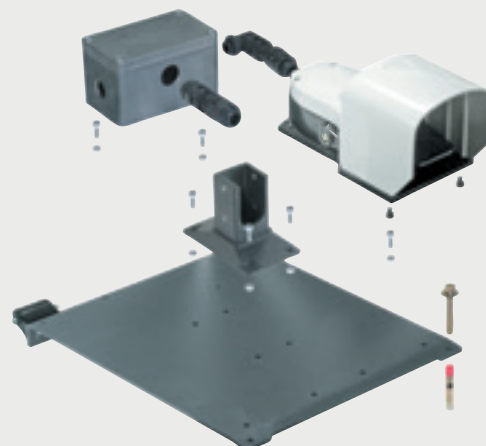
■ CASTOR KIT

The castor kit offers a rational solution to the problem of mobility without affecting the overall stability of the base.

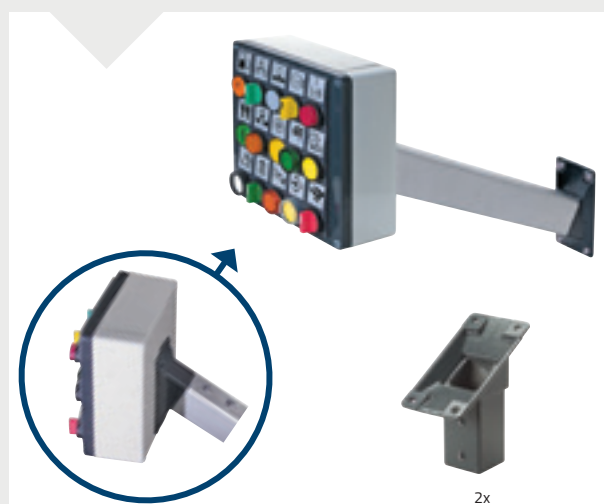
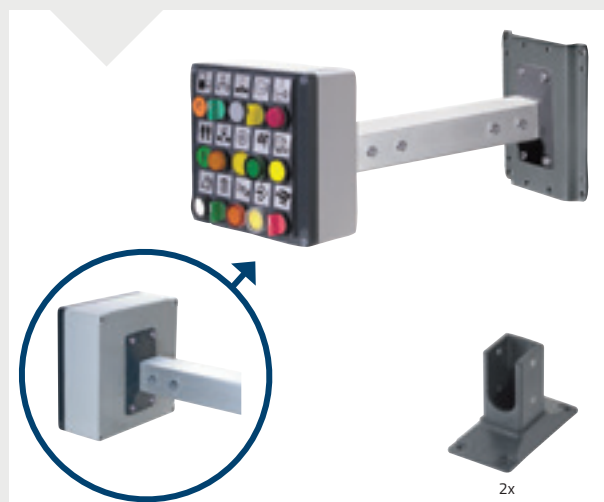
The base can also be joined to several fixed or mobile elements in an unlimited range of configurations.

■ CONNECTION KIT

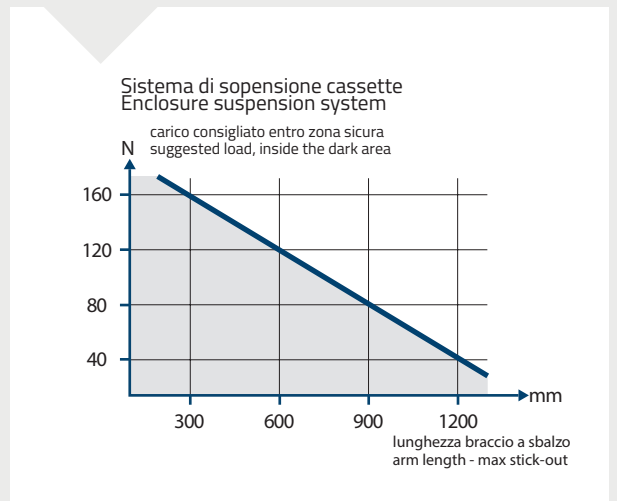
The exclusive connection kit helps you to effectively wire up all the components installed on the base.



Esempi di realizzazione Mounting examples

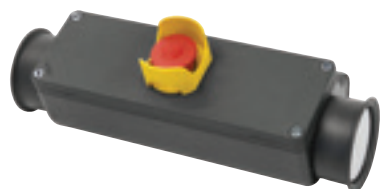


Esempi di realizzazione Mounting examples



Dispositivi di comando a due mani Two-hand control devices

Pulsantiera ergonomica a due mani in alluminio Ergonomic aluminium two-hand control device



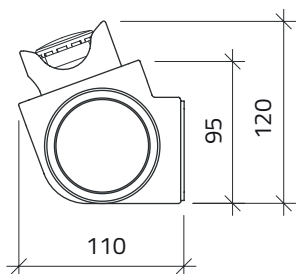
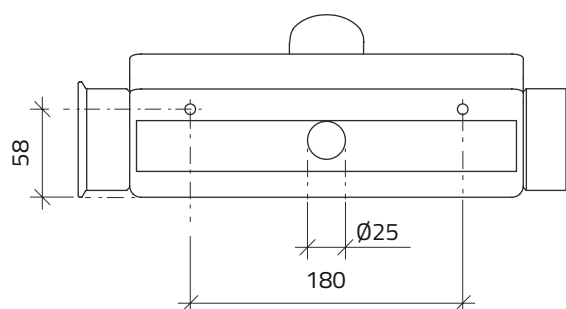
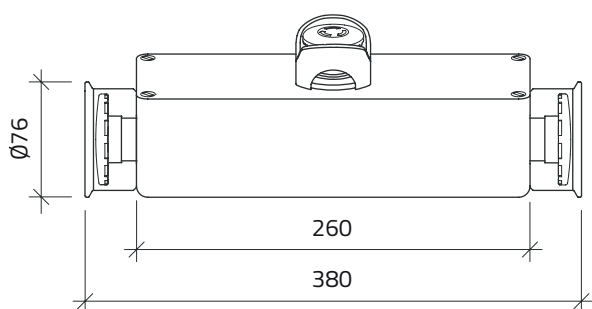
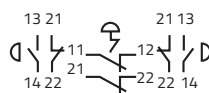
● RAL 7016

g

1461

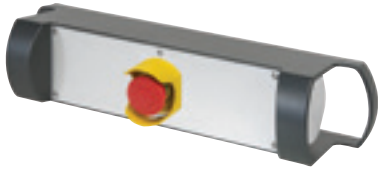
cod

060CL2MA



Dispositivi di comando a due mani Two-hand control devices

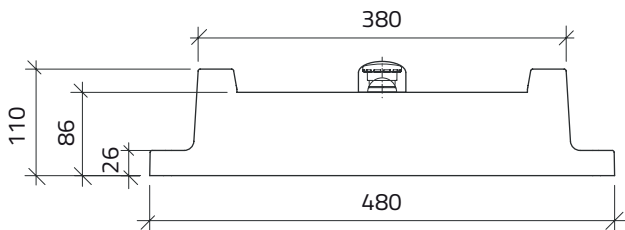
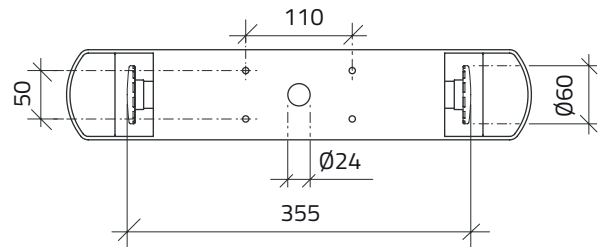
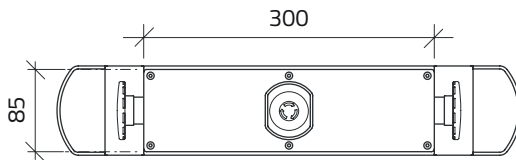
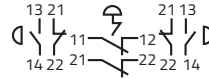
Pulsantiera a due mani in alluminio Aluminium two-hand control device



● RAL 7016

g
2050

cod
060C2MA



Dispositivi di comando a due mani Two-hand control devices

Pulsantiera a due mani in alluminio Aluminium two-hand control device

g

cod

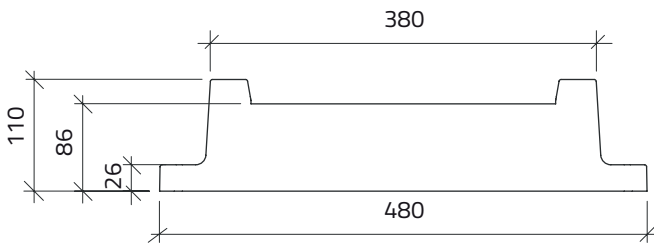
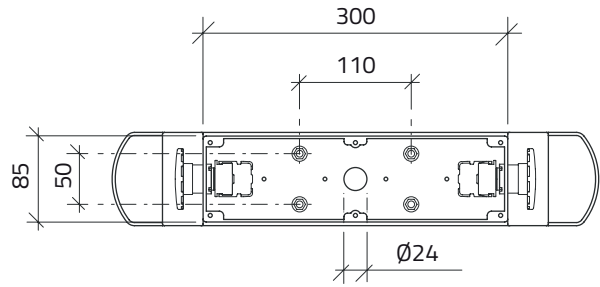
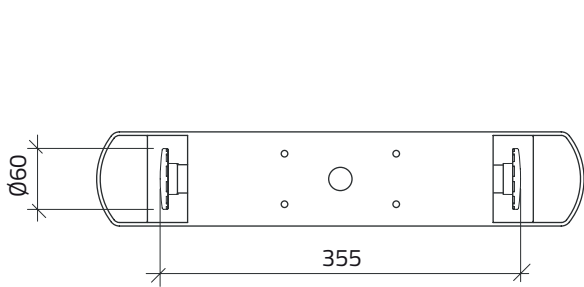


Involucro in alluminio con pulsanti Aluminium enclosure with push-buttons

● RAL 7016

4454

060C2MGR

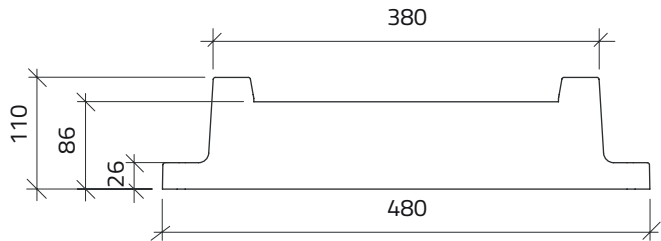
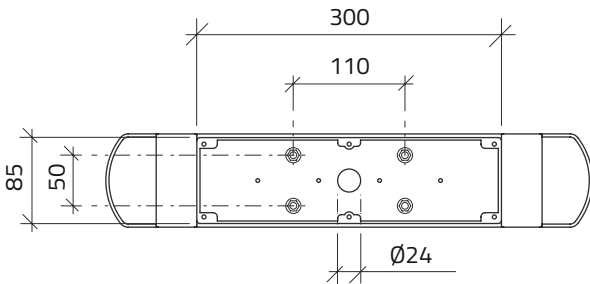


Involucro vuoto in alluminio Empty enclosure, aluminium

● RAL 7016

1730

060C2M



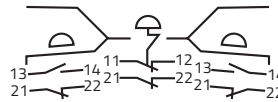
Dispositivi di comando a due mani Two-hand control devices

Pulsantiera a due mani in alluminio Aluminium two-hand control device



Per personalizzazioni con altri operatori ed elementi di contatto
vedi sezione "020 Comando e segnalazione SM2 Ø22"
For customization with other operators or contact blocks,
refer to section 020 "Command and signalling SM2 Ø22".

● RAL 7016



g

cod

4650

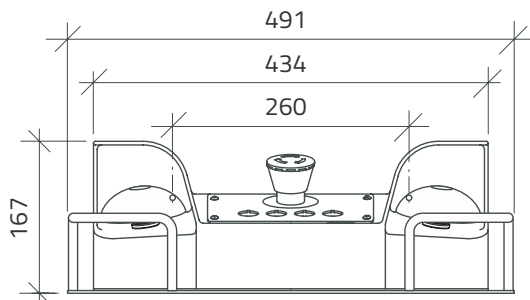
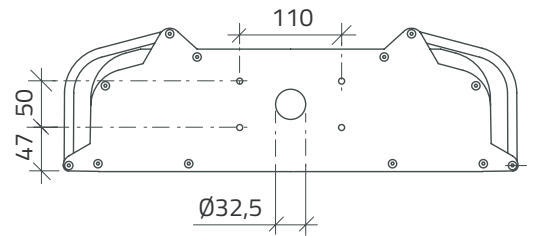
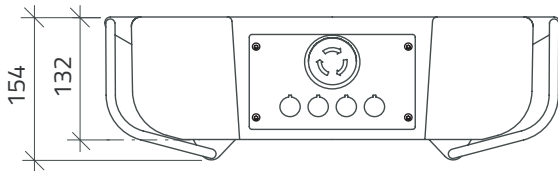
060P2MA



Viti chiusura ermetica / Sealing screws

0,3

060VCE



Dispositivi di comando a due mani Two-hand control devices

Pulsantiera a due mani in alluminio Aluminium two-hand control device

g

cod

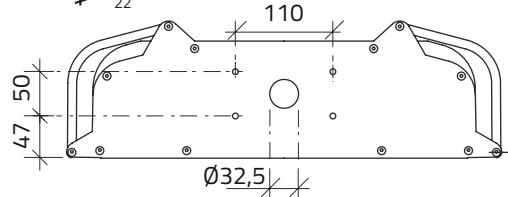
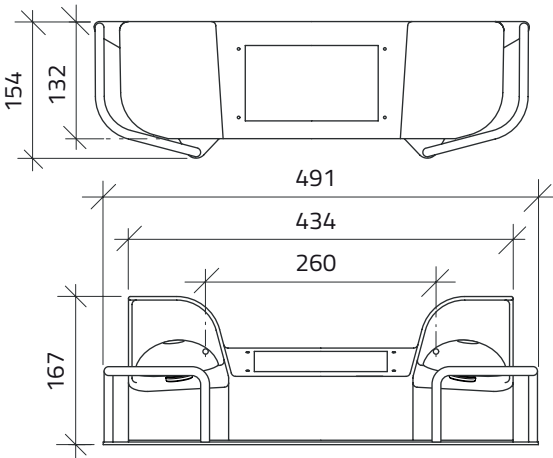
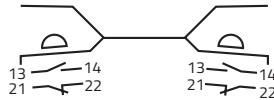


Involucro in alluminio con pulsanti Aluminium enclosure with push-buttons

● RAL 7016

4,98

060P2MGR

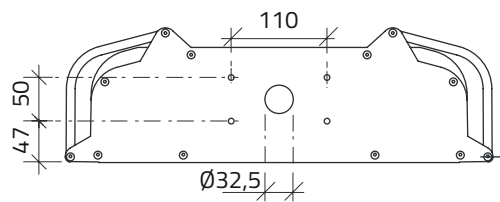
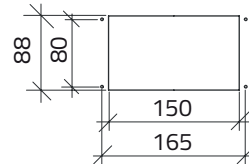
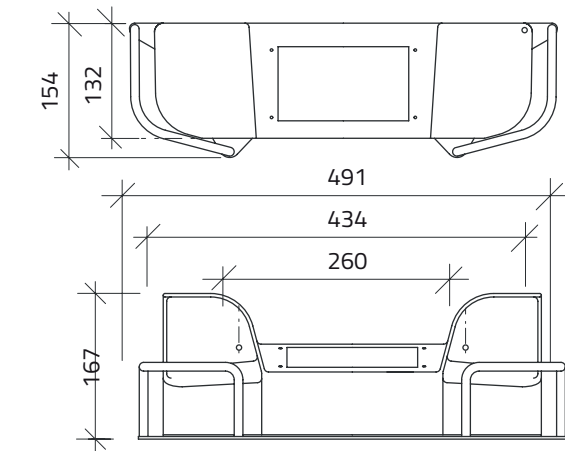


Involucro vuoto in alluminio Empty enclosure, aluminium

● RAL 7016

4364

060P2M

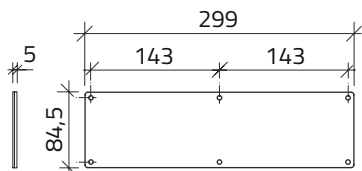


Dispositivi di comando a due mani Two-hand control devices

Piastra superiore / Upper plate



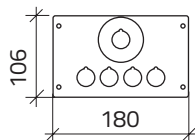
	g	cod
Per articolo 060C2MGR / For item code 060C2MGR	150	060PC



Piastra superiore / Upper plate



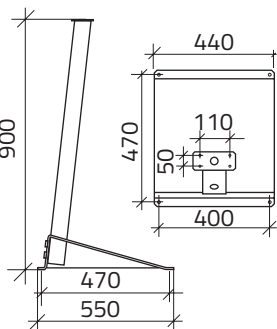
	g	cod
Per articolo 060P2MGR / For item code 060P2MGR		
Piastra forata / Drilled plate	95	060PP2MF
Piastra non forata / Undrilled plate	100	060PP2MN



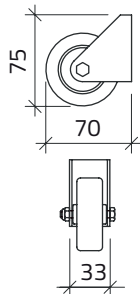
Stativo per comando bimanuale Stand for two-hand control devices



	g	cod
Per articolo 060CL2MA - 060C2MA - 060P2MA For item code 060CL2MA - 060C2MA - 060P2MA	11,85	060SP2M



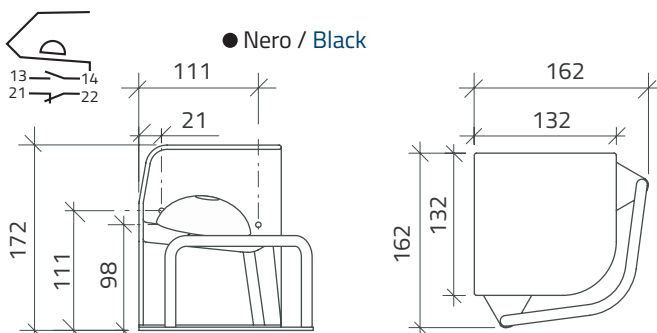
	g	cod
Kit ruote per stativo / Castor kit for stand	290	060SMS



Pulsantiera singola per comando a due mani Single push-button for two-hand control unit



	g	cod
● Nero / Black	1,6	060MP2GR



Dispositivi di comando a due mani

Two-hand control devices

DEFINIZIONE DI COMANDO A DUE MANI (UNI EN 292/1 PUNTO 3.23.4)

3.23.4

Comando a due mani: comando ad azione mantenuta che richiede almeno l'azionamento simultaneo dei due comandi manuali (attuatori) per avviare e mantenere il funzionamento della macchina o degli elementi di quest'ultima, assicurando così protezione alla persona che li aziona.

CLASSIFICAZIONE DEI COMANDI A DUE MANI (CEI EN 60204.1 PUNTO 9.2.5.7)

9.2.5.7

Comandi a due mani: esistono tre tipi di comandi a due mani, la cui selezione dipende dalla valutazione dei rischi. Essi devono avere le caratteristiche seguenti:

TIPO 1: questo tipo richiede:

- la fornitura di due dispositivi di comando dell'attivazione che necessitano l'uso contemporaneo delle due mani;
- l'attivazione continua durante le situazioni pericolose;
- l'interruzione dell'attivazione della macchina al rilascio di uno qualsiasi dei dispositivi di comando dell'attivazione, se le condizioni rimangono pericolose.

TIPO 2: comando di tipo 1 che richiede il rilascio di entrambi i dispositivi di comando dell'attivazione, prima che il funzionamento della macchina possa ripartire.

TIPO 3: comando di tipo 2 che richiede un'attivazione contemporanea dei dispositivi di comando dell'attivazione come segue:

- deve essere necessario fare funzionare i dispositivi di comando dell'attivazione entro un determinato tempo limite minore o uguale a 0,5 s (Appendice B); e
- quando viene superato il tempo limite, entrambi i dispositivi di comando dell'attivazione devono essere rilasciati prima che possa essere iniziata una nuova operazione.

DEFINITION OF TWO HAND CONTROL (UNI EN 292/1 ITEM 3.23.4)

3.23.4

Two hand control: maintained action control which requires at least the simultaneous activation of the two manual controls (actuators) to start up and continue running the machine and its elements, thus ensuring that operators are protected.

CLASSIFICATION OF TWO HAND CONTROLS (CEI EN 60204.1 ITEM 9.2.5.7)

9.2.5.7

Two hand controls: there are three types of two hand control, the selection of which depends on risk assessment. They must have the following features:

TYPE 1: this type must have:

- the supply of two activation control devices which require the simultaneous use of both hands;
- constant activation during dangerous situations;
- machine cut-off when any activation control is released, if conditions continue to be dangerous.

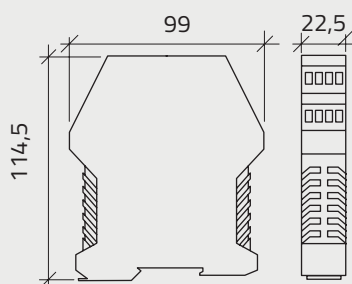
TYPE 2: type 1 control which requires the release of both activation control devices for the machine to start running again.

TYPE 3: type 2 control which requires the simultaneous activation of the activation control devices as follows:

- it must be possible to engage the activation control devices within a set time equal to or less than 0.5 seconds (Appendix B); and
- when the time limit is up, both activation control devices must be released before a new operation can begin.

Modulo di contemporaneità

Simultaneous action controller



Modulo di contemporaneità / Simultaneous action controller

Modulo / Controller

295

060MCP2M

Il modulo di contemporaneità 060MCP2M è un componente di sicurezza adibito al controllo della simultaneità di due operatori, protetti da azioni involontarie, utilizzati congiuntamente.

Il modulo di contemporaneità 060MCP2M rientra nella categoria di Tipo III C, poiché oltre che a rispondere ai requisiti della norma UNI EN 574, ha un circuito di retroazione, che attribuisce al modulo una funzione di autocontrollo (categoria 4) delle eventuali anomalie (cortocircuiti o inceppamenti) sia degli attuatori e, se collegati in serie, dei contatti ausiliari di apparecchi di manovra.

The 060MCP2M relay is a safety device for controlling the simultaneous action of two operators, protected from accidental actions, used together. The 060MCP2M relay belongs to category III C, due to the fact that, as well as satisfying UNI EN 574, it has a retroaction circuit which attributes a self-control function to the module (category 4) for any faults with the actuators (short circuits or jamming) and, if connected in series, with the auxiliary contacts of manoeuvring equipment.

Caratteristiche tecniche

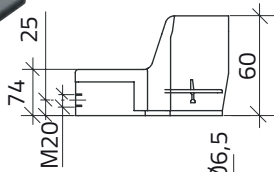
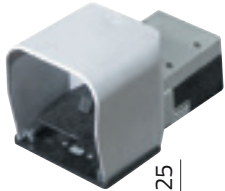
Peso	190 g
Temperatura di funzionamento	0...+55 °C
Temperatura di stoccaggio	-25...+70
Grado di protezione (IEC60529)	IP20
Grado di contaminazione	2
Montaggio	Guida DIN Standard 35mm
Tipo di connessione	Terminali a vite
Tensione di alimentazione	24±10% (AC 50 + 60 Hz) V AC/DC
Potenza assorbita	2 VA / 2W
Sincronizzazione tra gli ingressi	< 500 ms
Terminali uscite sicure	13-14, 23-24, 31-32
Tensione sulle uscite sicure	250 V AC
Corrente sulle uscite sicure	6 A (MAX)
Potenza sulle uscite sicure	1500 VA
Fusibili esterni sulle uscite	6 A rapido
Categoria di utilizzo (uscite sicure) secondo EN 60947-5-1	AC-1 3A, 250V / AC-15 1A, 250V / AC-1 3A, 24V / AC-15 1A, 24V DC-13 1,8A, 24V
Resistenza alle vibrazioni	in accordo con EN 60068-2-6
Vita elettrica	1 x 10 ⁶ (2 A, 24 V DC)
Vita meccanica	10 ⁷
Conformità EMC categoria	CEI EN 61000-6-2, CEI EN 61000-6-3, CEI EN 55011:1999
Conformità alle norme	EN 574, EN 60204-1, EN954-1, CEI EN 50178:1999
Categoria di sicurezza	cat. 4, PL "E" secondo norma EN ISO 13849-1: 2008 cat. III c secondo EN 574:1999 + A1 :2008
Omologazioni	c UL us Listed

Technical data

Weight	206,5 g
Operation temperature	0...+55 °C
Storage temperature	-25...+70
Degree of protection (IEC60529)	IP20
Degree of pollution	2
Mounting	Standard DIN rail 35mm
Connections type	With screw
Power supply	24±10% (AC 50 + 60 Hz) V AC/DC
Power consumption	2 VA / 2W
Button contemporaneity	< 500 ms
Safe outputs terminals	13-14, 23-24, 31-32
Safe outputs voltage	250 V AC
Safe outputs current	6 A (MAX)
Safe outputs power	1500 VA
Output external fuses	6 A fast-blow
Utilization category (safe outputs) in according to EN 60947-5-1	AC-1 3A, 250V / AC-15 1A, 250V / AC-1 3A, 24V / AC-15 1A, 24V DC-13 1,8A, 24V
Vibration resistance	in according with EN 60068-2-6
Electrical life	1 x 10 ⁶ (2 A, 24 V DC)
Mechanical life	10 ⁷
EMC conformity in according to	CEI EN 61000-6-2, CEI EN 61000-6-3, CEI EN 55011:1999
Compliance with standards	EN 574, EN 60204-1, EN954-1, CEI EN 50178:1999
Safety category	cat. 4, PL "E" according to standard EN ISO 13849-1: 2008 cat. III c according to EN 574:1999 + A1 :2008
Approval	c UL us Listed

Interruttori a pedale Foot switches

Interruttori a pedale in termoplastico Thermoplastic foot switches



2 posizioni (1 microinterruttore) con leva di sicurezza
2 positions (1 microswitch) with safety lever

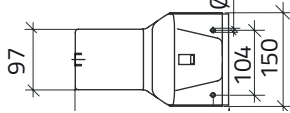
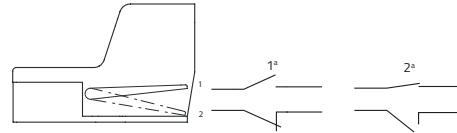
● Grigio / Grey

g

cod

900

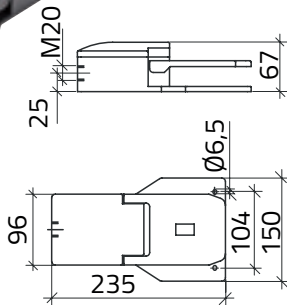
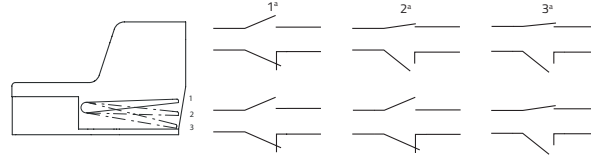
060PPLT11



3 posizioni (2 micro interruttori)
3 positions (2 microswitches)

1000

060PP3PT22



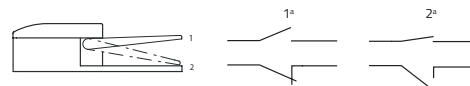
Senza coperchio / Without cover

2 posizioni (1 microinterruttore)
2 positions (1 microswitch)

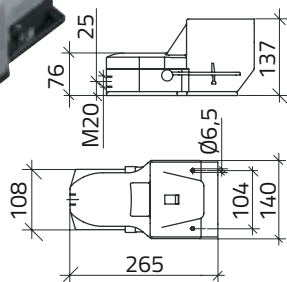
● Rosso / Red

800

060PT11



Interruttori a pedale in alluminio / Aluminium foot switches



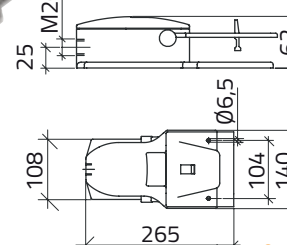
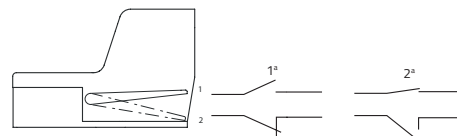
2 posizioni (1 microinterruttore) con leva di sicurezza
2 positions (1 microswitch) with safety lever

g

cod

1705

060PPLA11

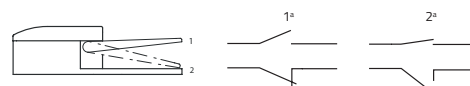


Senza coperchio / Without cover

2 posizioni (1 microinterruttore) con leva di sicurezza
2 positions (1 microswitch) with safety lever

1400

060PA11



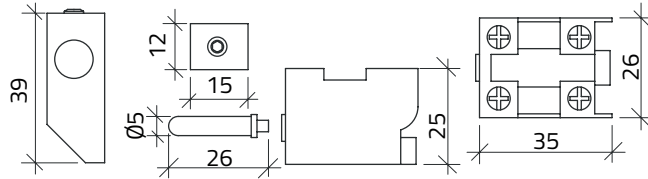
Interruttori a pedale Foot switches



g **cod**

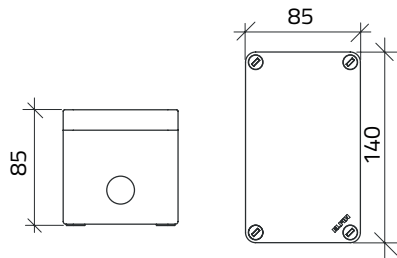
Accessori per comando a pedale / Foot switch accessories

Kit 2° micro / Kit for 2nd microswitch	40	060KM11
Ricambio micro / Spare microswitch	20	060M11




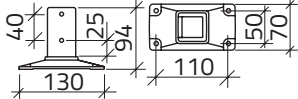

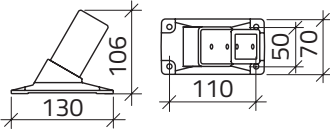

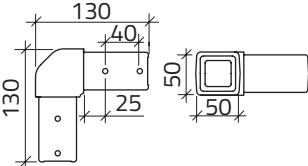

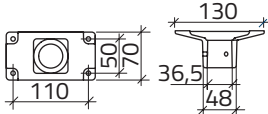

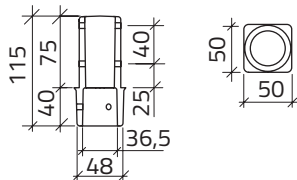

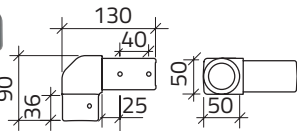

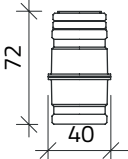
Kit di connessione interruttori a pedale Foot switch connection kit

Contenitore / Enclosure 85x140 mm	780	060KC
-----------------------------------	-----	--------------




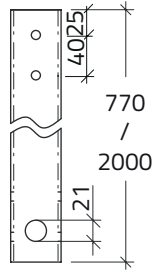
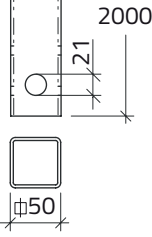

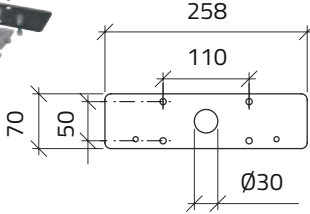
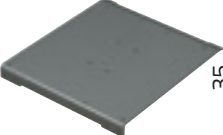
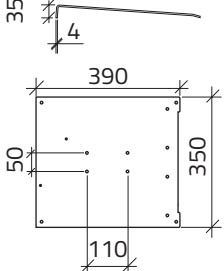

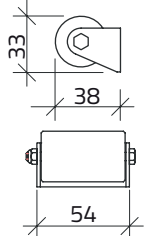
Sistema di sospensione modulare per automazione Modular suspension system for enclosures

Giunti / Joints

		g	cod
	 <p>Orthogonale / Orthogonal</p>	315	060GCO
	 <p>Inclinato / Oblique</p>	410	060GCI
	 <p>Angolare 90° / Angle 90°</p>	550	060GCA
	 <p>Girevole / Swivel</p>	480	060GRO
	 <p>Girevole assiale / Swivel, axial</p>	280	060GRD
	 <p>Girevole 90° / Swivel 90°</p>	480	060GRA
	 <p>Bussola girevole interno foro Ø 23 Swivel bushing, bore Ø 23</p>	280	060GSR

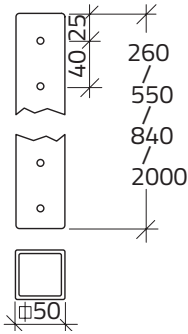
Sistema di sospensione modulare per automazione

Modular suspension system for enclosures

		g	cod	
		Lunghezza / Length mm 770	1185	060CB
		Lunghezza / Length mm 2000 senza fori / without holes	2790	060C2000
Piastre / Plates				
		Piastra accoppiamento pulsantiera inclinata Coupling plate for sloped enclosure	450	060PAP
			Piastra base colonna / Column base plate	4600
		Kit di ruote per piastra base colonna Castor kit for column base plate	200	060KR

Sistema di sospensione modulare per automazione Modular suspension system for enclosures

Bracci / Arms

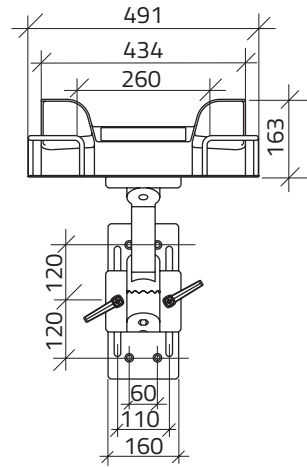
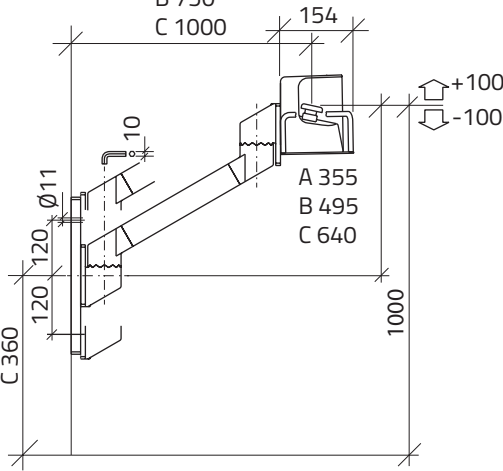


Lunghezza / Length mm 260
Lunghezza / Length mm 550
Lunghezza / Length mm 840
Lunghezza / Length mm 2000

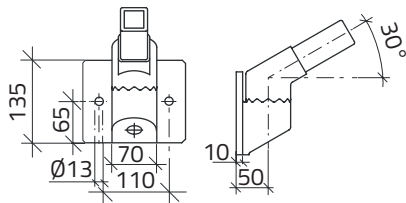
	g	cod
Lunghezza / Length mm 260	360	060B2
Lunghezza / Length mm 550	780	060B5
Lunghezza / Length mm 840	1160	060B8
Lunghezza / Length mm 2000	2790	060C2000

senza fori / undrilled

A 500
B 750
C 1000

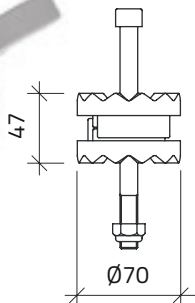
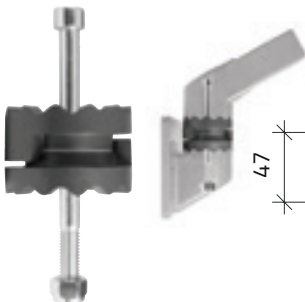


Supporto per braccio / Arm support



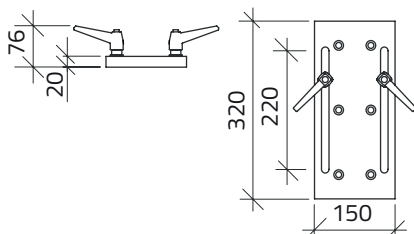
Supporto per braccio / Arm support	1800	060SB
------------------------------------	------	--------------

Snodo per braccio / Articulated joint for arm



Snodo per braccio / Articulated joint for arm	530	060SRB0
-----------------------------------------------	-----	----------------

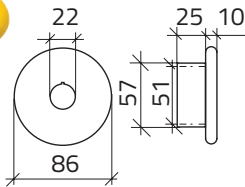
Piastra di regolazione / Adjustment plate



Piastra di regolazione / Adjustment plate	2,420	060PRB0
-------------------------------------------	-------	----------------

Pulpito di emergenza Emergency stand

Per selezione componenti aggiuntivi vedi pagina 17-18 / For additional components see pages 17-18



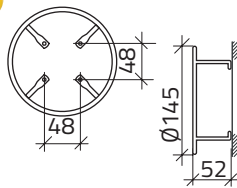
Supporto operatore / Operator support base

g

67

cod

060SOG

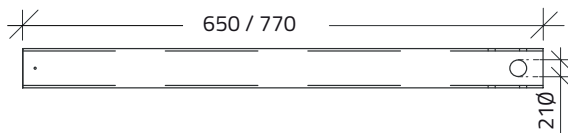


Protezione ad anello / Ring-shaped protection

150

020SE

Colonne per supporto operatore Columns for operator support



Lunghezza / Length mm 650
Lunghezza / Length mm 770

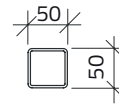
g

905

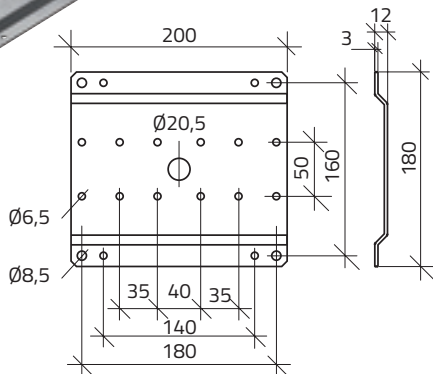
060C6

905

060C8E



Piastra / Plate



Piastra base colonna / Column base plate

g

836

cod

060PAC



060

PULSANTI A PALMO

PALM SWITCHES

060



Pulsanti a palmo

Palm switches

G

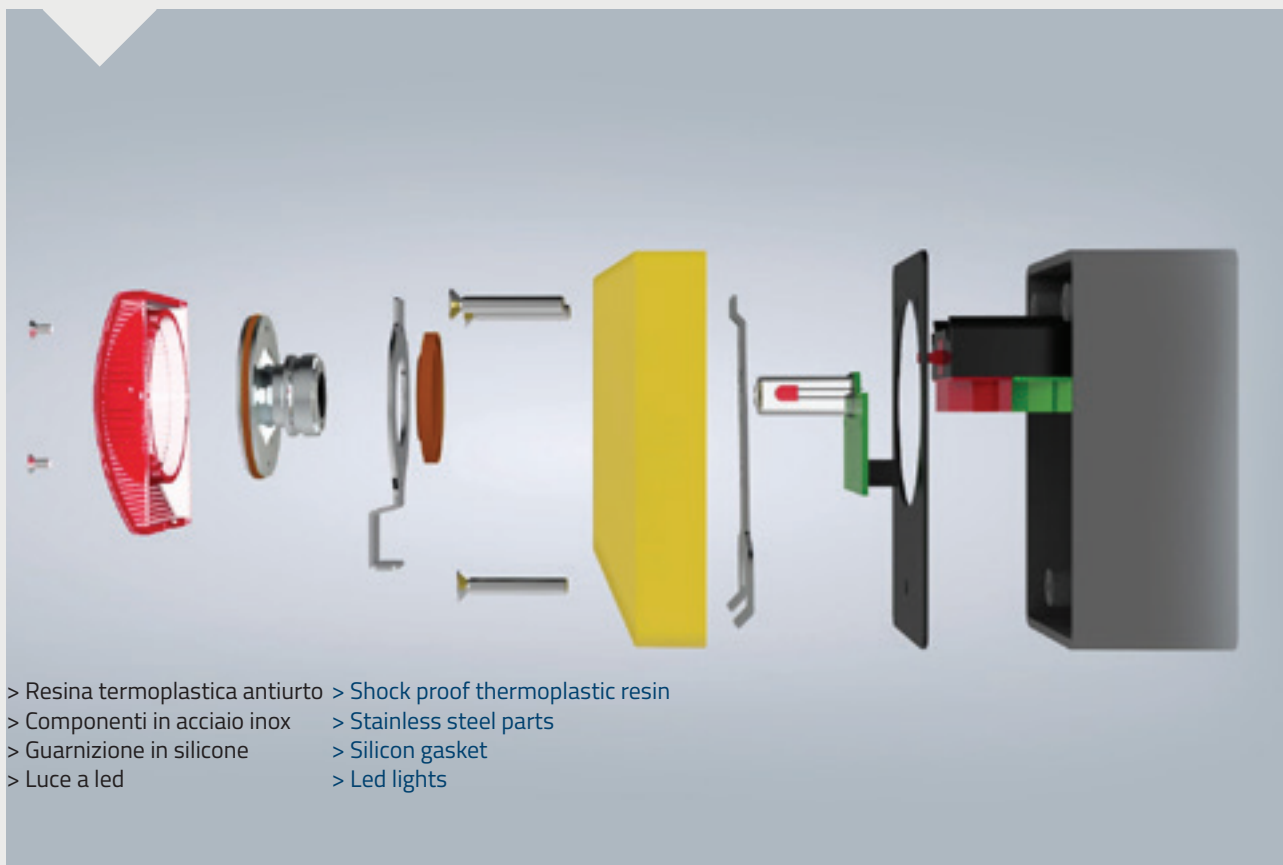
Gli azionatori a palmo, per il comando e controllo di circuiti elettrici alimentati sia in CC che in CA, sono progettati per **utilizzi energici o d'urgenza**.

Il **design particolarmente accurato ed ergonomico** ne permette l'utilizzo anche avendo guanti da lavoro oppure con altre parti del corpo quali: gomito, spalla, ginocchio, piede. Inoltre la **linearità senza soluzione di continuità** evita che vi si possano impigliare indumenti, capelli, o elementi estranei. Realizzati in **resina termoplastica antiurto**, con componenti metallici in acciaio inox, possono essere installati in ambienti con atmosfera particolarmente umida o corrosiva e dove sussiste il pericolo di scariche elettrostatiche. Nella **versione luminosa** la lampada è posta su ammortizzatori per salvarla in caso di utilizzi particolarmente gravosi e con forti vibrazioni. Disponibile in due varianti: con tasto bombato o a fungo avvolgente, luminoso o no, con funzionamento momentaneo o ad aggancio. In fine la grande superficie dei tasti consente di stampare complesse informazioni.

P

Palm switches for the command and control of both DC and AC circuits are designed for **energetic or emergency use**.

The particularly **careful and ergonomic design** allows them to be pushed even when wearing work gloves or using other parts of the body such as elbow, shoulder, knee and foot. Moreover its **dome shape** prevents clothing, hair or other elements from being caught up. Made from **shockproof thermoplastic resin**, with stainless steel parts, they can be installed in particularly damp or corrosive atmospheric environments where there is the risk of electrostatic discharge. The **illuminated palm switches** are provided with a lamp fitted onto shock absorbers to safeguard it when used in particularly severe environments or with strong vibrations. They are available in two models: with dome or mushroom buttons, normal or illuminated, momentary or latching. Furthermore the big button surface allows complex symbols to be printed on.



- > Resina termoplastica antiurto
- > Componenti in acciaio inox
- > Guarnizione in silicone
- > Luce a led
- > Shock proof thermoplastic resin
- > Stainless steel parts
- > Silicon gasket
- > Led lights

Pulsanti a palmo Palm switches



Con contenitore
With enclosure



Ad incasso
With enclosure



Tasto a fungo
Mushroom button



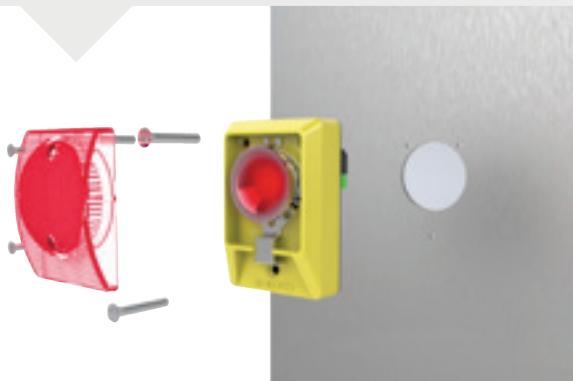
Tasto bombato
Dome button



Aggancio meccanico
Mechanical latching



Simboli
Symbol



Montaggio a parete
Wall mounting

Forma a piramide
Pyramid shaped

Forma bombata
Dome shaped



Pulsanti a palmo Palm switches

Caratteristiche tecniche

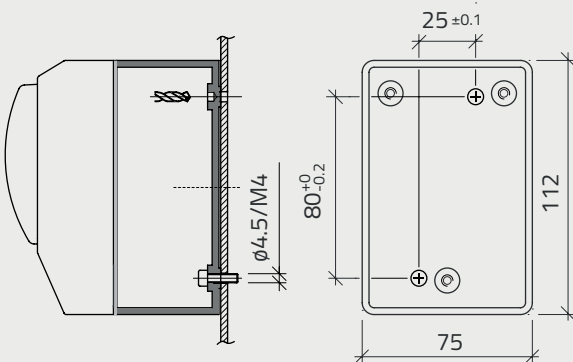
Rispondenza alle norme	EN-IEC60947-1, EN-IEC60947-5-1 UNI EN 13850, UNI EN ISO 12100 EN-IEC60947-5-5 UNI CEI EN 45545/2, CEI EN 61373																														
Omologazioni	CE, (UL, CSA solo elementi di contatto 030FA-030FAA / 030FC-030FCF)																														
Limiti di temperatura	Funzionamento $\geq -30^{\circ}\text{C}$ e $\leq +120^{\circ}\text{C}$ Stoccaggio $\geq -40^{\circ}\text{C}$ e $\leq +125^{\circ}\text{C}$																														
Grado di protezione	IP66-IP69K (EN-IEC60529-DIN40050)																														
Protezione contro gli impatti	IK08 (EN-IEC62262)																														
Materiale custodia	PA Poliammide V0																														
Materiale guarnizione	Gomma-sughero																														
Materiale viti custodia	Acciaio inox AISI 304																														
Coppia di serraggio	Viti custodia 1 = 2,5 Nm (8,8 = 22,1 Lb-in) Viti terminali 0,8 - 1,2 Nm (7,1 = 10,6 Lb-in)																														
Durata meccanica	3 milioni di manovre																														
Elementi di contatto	NO-NC inclusi apertura positiva del contatto NC secondo EN, IEC 60947-5-1																														
Funzionamento contatti	Azionamento lento con autopulitura e strisciamento delle pastiglie																														
Materiale contatti	Pastiglie in Ag 1000 / 1000																														
Tensione nominale di isolamento	690 V secondo : EN-IEC 60947-1																														
Corrente nominale termica	Ith 10A																														
Categorie nominali di impiego	AC15-DC13 secondo EN-IEC60947-5-1 A600 - P300 secondo UL508																														
	<table border="1"> <thead> <tr> <th colspan="3">AC</th> </tr> <tr> <th>Ue V</th> <th></th> <th>Ie A</th> </tr> </thead> <tbody> <tr> <td>24</td> <td></td> <td>10</td> </tr> <tr> <td>110</td> <td></td> <td>6</td> </tr> <tr> <td>230</td> <td></td> <td>3</td> </tr> <tr> <th colspan="3">DC</th> </tr> <tr> <th>Ue V</th> <th></th> <th>Ie A</th> </tr> <tr> <td>24</td> <td></td> <td>5</td> </tr> <tr> <td>110</td> <td></td> <td>1,1</td> </tr> <tr> <td>230</td> <td></td> <td>0,55</td> </tr> </tbody> </table>	AC			Ue V		Ie A	24		10	110		6	230		3	DC			Ue V		Ie A	24		5	110		1,1	230		0,55
AC																															
Ue V		Ie A																													
24		10																													
110		6																													
230		3																													
DC																															
Ue V		Ie A																													
24		5																													
110		1,1																													
230		0,55																													
Versioni luminose	Led incluso con alimentazione 24AC-DC																														

Technical data

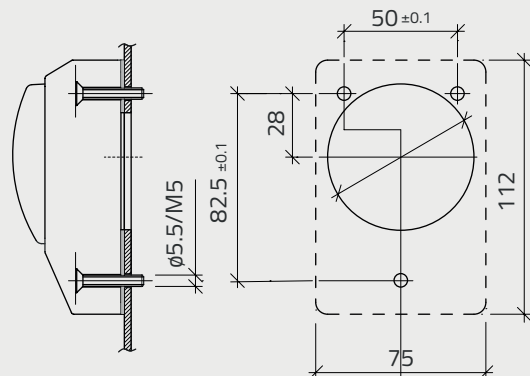
Compliance with Standards	EN-IEC60947-1, EN-IEC60947-5-1 UNI EN 13850, UNI EN ISO 12100 EN-IEC60947-5-5 UNI CEI EN 45545/2, CEI EN 61373																														
Approvals	CE, (UL, CSA only for contacts blocks 030FA-030FAA / 030FC-030FCF)																														
Temperature ranges	Working $\geq -30^{\circ}\text{C}$ e $\leq +120^{\circ}\text{C}$ Storage $\geq -40^{\circ}\text{C}$ e $\leq +125^{\circ}\text{C}$																														
Protection degree	IP66-IP69K (EN-IEC60529-DIN40050)																														
Protection against impact	IK08 (EN-IEC62262)																														
Housing material	PA Polyamide V0																														
Gasket material	Cork-rubber																														
Screws material	Stainless steel AISI 304																														
Tightening torque	Cover screws 1 = 2,5 Nm (8,8 = 22,1 Lb-in) Terminal screws 0,8 - 1,2 Nm (7,1 = 10,6 Lb-in)																														
Mechanical durability	3 millions operation																														
Contacts blocks	NO-NC included positive opening on NC contact according to EN, IEC 60947-5-1																														
Contact actuation	Slow action with self cleaning by pads creeping																														
Contacts material	Pads in Ag 1000 / 1000																														
Rated insulation voltage	690 V according to : EN-IEC60947-1																														
Rated thermal current	Ith 10A																														
Electrical ratings	AC15-DC13 according to EN-IEC60947-5-1 A600 - P300 according to UL508																														
	<table border="1"> <thead> <tr> <th colspan="3">AC</th> </tr> <tr> <th>Ue V</th> <th></th> <th>Ie A</th> </tr> </thead> <tbody> <tr> <td>24</td> <td></td> <td>10</td> </tr> <tr> <td>110</td> <td></td> <td>6</td> </tr> <tr> <td>230</td> <td></td> <td>3</td> </tr> <tr> <th colspan="3">DC</th> </tr> <tr> <th>Ue V</th> <th></th> <th>Ie A</th> </tr> <tr> <td>24</td> <td></td> <td>5</td> </tr> <tr> <td>110</td> <td></td> <td>1,1</td> </tr> <tr> <td>230</td> <td></td> <td>0,55</td> </tr> </tbody> </table>	AC			Ue V		Ie A	24		10	110		6	230		3	DC			Ue V		Ie A	24		5	110		1,1	230		0,55
AC																															
Ue V		Ie A																													
24		10																													
110		6																													
230		3																													
DC																															
Ue V		Ie A																													
24		5																													
110		1,1																													
230		0,55																													
Illuminated models	Led 24AC-DC included																														

Dima di foratura Drilling template

Con custodia
With case



A incasso
Wall mount



Pulsanti a palmo normali

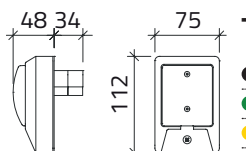
Normal palm switches

Pulsanti normali

Normal push-buttons

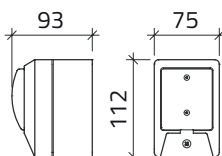
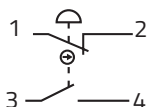
g

cod



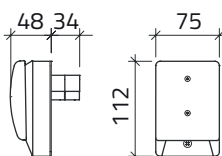
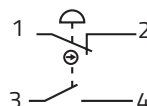
Tasto bombato senza custodia / Dome button without enclosure

● Nero / Black	204	060APTN
● Verde / Green	204	060APTVC
● Giallo / Yellow	204	060APTGC
● Blu / Blue	204	060APTBL



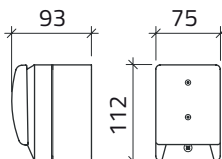
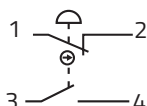
Tasto bombato con custodia / Dome button with enclosure

● Nero / Black	319	060APTNC
● Verde / Green	319	060APTVC
● Giallo / Yellow	319	060APTGC
● Blu / Blue	319	060APTBLC



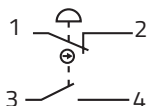
Tasto a fungo senza custodia / Mushroom button without enclosure

● Nero / Black	216	060APFN
● Verde / Green	216	060APFV
● Giallo / Yellow	216	060APFG
● Blu / Blue	216	060APFBL



Tasto a fungo con custodia / Mushroom button with enclosure

● Nero / Black	331	060APFNC
● Verde / Green	331	060APFVC
● Giallo / Yellow	331	060APFGC
● Blu / Blue	331	060APFBLC

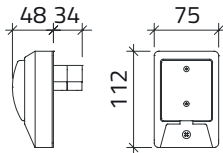


Pulsanti a palmo luminosi Illuminated palm switches

Pulsanti a palmo luminosi Illuminated palm switches

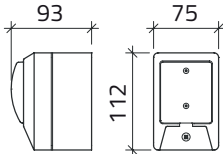
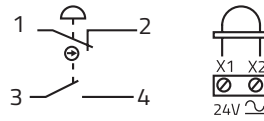
g

cod



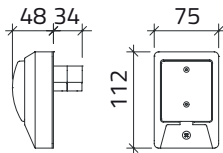
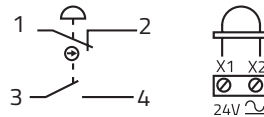
Tasto bombato senza custodia / Dome button without enclosure

● Verde / Green	204	060APTLV
● Giallo / Yellow	204	060APTLG
● Blu / Blue	204	060APTLBL
○ Bianco / White	204	060APTLB



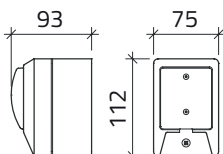
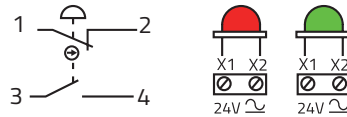
Tasto bombato con custodia / Dome button with enclosure

● Verde / Green	319	060APTLVC
● Giallo / Yellow	319	060APTLGC
● Blu / Blue	319	060APTLBLC
○ Bianco / White	319	060APTLBC



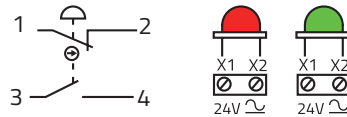
Tasto bombato senza custodia / Dome button without enclosure

● Rosso-verde / Red-green	204	060APTLRV
---------------------------	-----	------------------



Tasto bombato con custodia / Dome button with enclosure

● Rosso-verde / Red-green	319	060APTLRVC
---------------------------	-----	-------------------

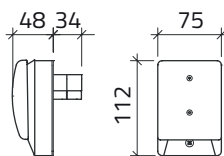


Pulsanti a palmo luminosi Illuminated palm switches

Pulsanti a palmo luminosi Illuminated palm switches

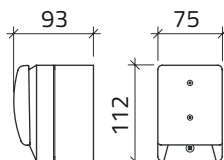
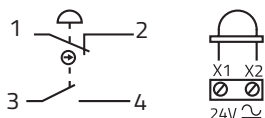
g

cod



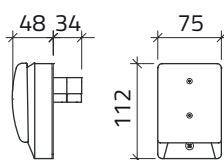
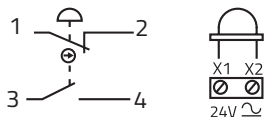
Tasto a fungo senza custodia / Mushroom button without enclosure

● Verde / Green	216	060APFLV
● Giallo / Yellow	216	060APFLG
● Blu / Blue	216	060APFLBL
○ Bianco / White	216	060APFLB



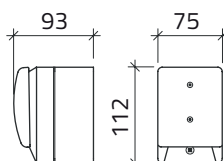
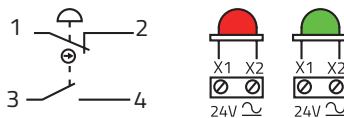
Tasto a fungo con custodia / Mushroom button with enclosure

● Verde / Green	331	060APFLVC
● Giallo / Yellow	331	060APFLGC
● Blu / Blue	331	060APFLBLC
○ Bianco / White	331	060APFLBC



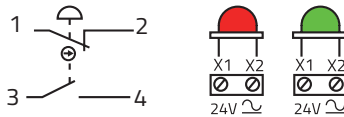
Tasto a fungo senza custodia / Mushroom button without enclosure

● Rosso-verde / Red-green	216	060APFLRV
---------------------------	-----	------------------



Tasto a fungo con custodia / Mushroom button with enclosure

● Rosso-verde / Red-green	331	060APFLRVC
---------------------------	-----	-------------------



Pulsanti di emergenza a palmo momentanei normali

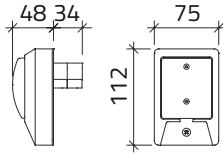
Momentary normal emergency stop palm switches

Pulsanti di emergenza momentanei normali

Normal momentary emergency stop push-buttons

g

cod

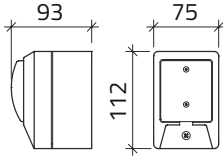
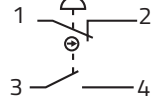


Tasto bombato senza custodia / Dome button without enclosure

● Rosso / Red

204

060APTR

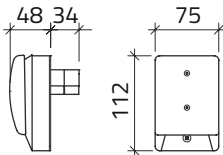
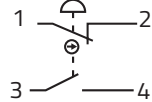


Tasto bombato con custodia / Dome button with enclosure

● Rosso / Red

319

060APTRC

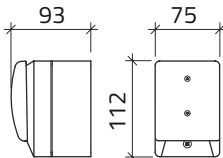
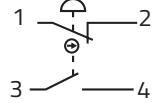


Tasto a fungo senza custodia / Mushroom button without enclosure

● Rosso / Red

216

060APFR

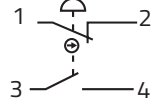


Tasto a fungo con custodia / Mushroom button with enclosure

● Rosso / Red

331

060APFRC

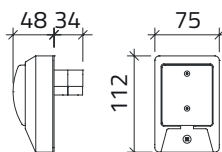


Pulsanti di emergenza a palmo momentanei luminosi Momentary illuminated emergency stop palm switches

Pulsanti di emergenza a palmo luminosi Illuminated emergency stop palm switches

g

cod

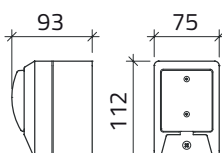
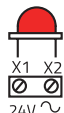
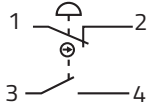


Tasto bombato senza custodia / Dome button without enclosure

● Rosso / Red

204

060APTLR

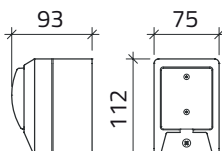
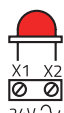
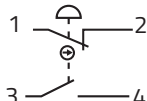


Tasto bombato con custodia / Dome button with enclosure

● Rosso / Red

319

060APTLRC

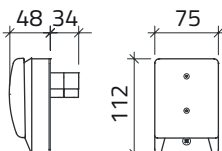
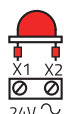
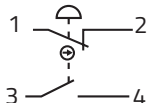


Tasto bombato con custodia luminosa Dome button with illuminated enclosure

● Rosso / Red

319

060APTLRCL

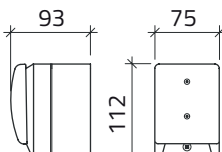
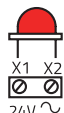
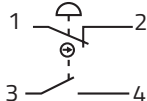


Tasto a fungo con custodia / Mushroom button without enclosure

● Rosso / Red

216

060APFLR

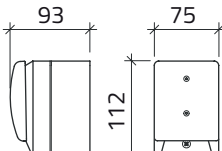
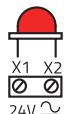
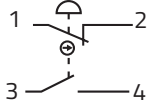


Tasto a fungo con custodia / Mushroom button with enclosure

● Rosso / Red

331

060APFLRC

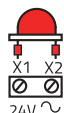
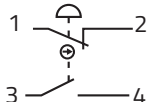


Tasto a fungo con custodia luminosa Mushroom button with illuminated enclosure

● Rosso / Red

331

060APFLRCL

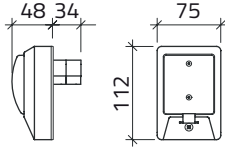


Pulsanti di emergenza a palmo ad aggancio normali Latching normal emergency stop palm switches

Pulsanti di emergenza ad aggancio Latching emergency stop push-buttons

g

cod

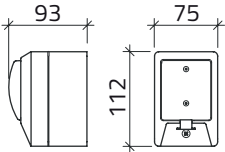
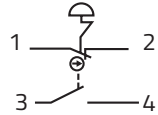


Tasto bombato senza custodia / Dome button without enclosure

● Rosso / Red

229

060APATR

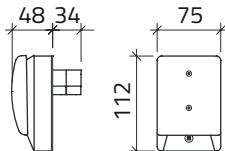
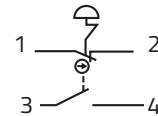


Tasto bombato con custodia / Dome button with enclosure

● Rosso / Red

344

060APATRC

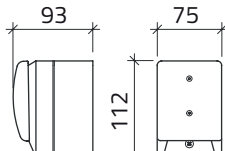
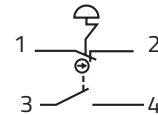


Tasto a fungo senza custodia / Mushroom button without enclosure

● Rosso / Red

240

060APAFR

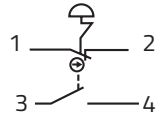


Tasto a fungo con custodia / Mushroom button with enclosure

● Rosso / Red

356

060APAFRC

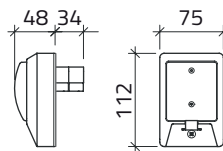


Pulsanti di emergenza a palmo ad aggancio luminosi Illuminated latching emergency stop palm switches

Pulsanti di emergenza a palmo ad aggancio luminosi Illuminated latching emergency stop palm switches

g

cod

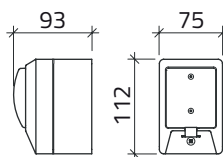
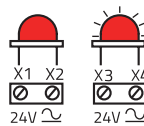
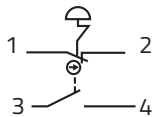


Tasto bombato senza custodia / Dome button without enclosure

● Rosso / Red

229

060APATLR

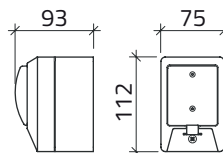
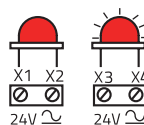
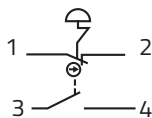


Tasto bombato con custodia / Dome button with enclosure

● Rosso / Red

344

060APATLRC

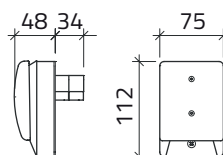
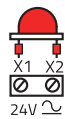
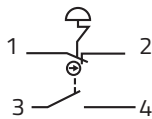


Tasto bombato con custodia luminosa Dome button with illuminated enclosure

● Rosso / Red

344

060APATRLCL

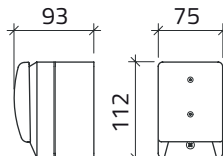
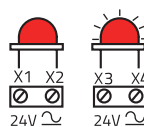
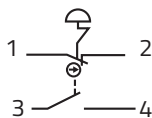


Tasto a fungo senza custodia / Mushroom button without enclosure

● Rosso / Red

240

060APAFRLR

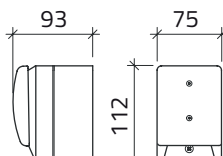
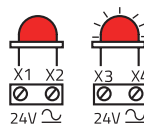
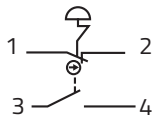


Tasto a fungo con custodia / Mushroom button with enclosure

● Rosso / Red

356

060APAFRLRC

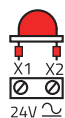
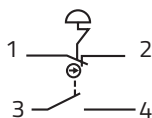


Tasto a fungo con custodia luminosa Mushroom button with illuminated enclosure

● Rosso / Red

356

060APAFRLCL

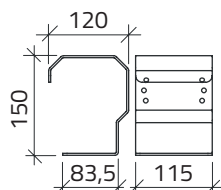


Accessori

Accessories

Elemento di protezione per pulsante a palmo

Protective shroud for palm switch



Acciaio / Steel

g

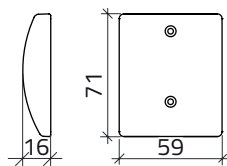
1,145

cod

060SEP

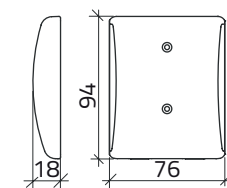
Tasti per pulsanti a palmo normale

Buttons for normal palm switches



Tasto bombato / Dome button

● Nero / Black	25	060TBN
● Rosso / Red	25	060TBR
● Verde / Green	25	060TBV
● Giallo / Yellow	25	060TBG
● Blu / Blue	25	060TBL

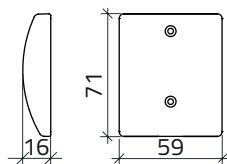


Tasto a fungo / Mushroom button

● Nero / Black	36	060TFN
● Rosso / Red	36	060TFR
● Verde / Green	36	060TFV
● Giallo / Yellow	36	060TFG
● Blu / Blue	36	060TFBL

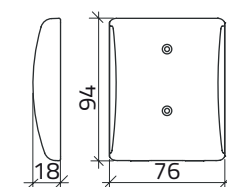
Tasti per pulsante a palmo luminosi

Buttons for illuminated palm switches



Tasto bombato / Dome button

● Rosso / Red	25	060TBLR
● Verde / Green	25	060TBLV
● Giallo / Yellow	25	060TBLG
● Blu / Blue	25	060TBLBL
○ Bianco / White	25	060TBLB
○ Trasparente / Clear	25	060TBLI

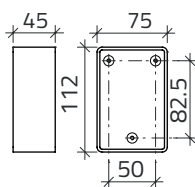


Tasto a fungo / Mushroom button

● Rosso / Red	36	060TFLR
● Verde / Green	36	060TFLV
● Giallo / Yellow	36	060TFLG
● Blu / Blue	36	060TFLBL
○ Bianco / White	36	060TFLB
○ Trasparente / Clear	36	060TFLI

Custodia per azionatore a palmo

Palm switch enclosures



Custodia non luminosa / Not illuminated enclosure

● Grigio / Grey	115	060SGR
-----------------	-----	--------

Custodia luminosa / Illuminated enclosure

● Rosso / Red	115	060SRT
---------------	-----	--------

Accessori

Accessories

Suffissi per stampa simboli su tasti Suffixes for printing symbols on buttons

cod

Far seguire al codice del prodotto il suffisso del simbolo desiderato
Item code is to be followed by the suffix of the required symbol

SIMBOLO / SYMBOL

SUFFISSO / SUFFIX



S48



S148



S55



S152



S153



S144

i

S154

SOS

S159

Pulsantiera mobile

Hand-held push-button control unit

PULSANTIERA MOBILE

L'unità portatile è stata progettata per rispondere ai requisiti di ergonomia, sicurezza ed affidabilità. Questo tipo di apparecchiature trova un utilizzo ideale nei settori dei sistemi di automazione a controllo numerico e nelle applicazioni con robot industriali. Le caratteristiche dimensionali della parte superiore permettono di realizzare svariate configurazioni di operatori, mentre nella parte inferiore, usata come impugnatura, è possibile allestire tastiere a membrana; nei lati è prevista la possibilità d'installare pulsanti di abilitazione a 3 posizioni con funzione antipanico. La caratteristica forma della pulsantiera è stata progettata per proteggere gli operatori (anche nel caso di selettori con chiave inserita) da eventuali urti o shock.

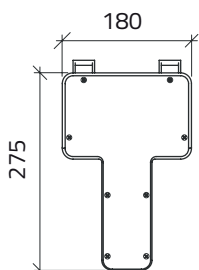
MODULAR SYSTEM FOR PUSH-BUTTON

The hand-held unit has been designed to meet ergonomic and safety requirements and to offer reliability. This type of equipment is ideal for usage in numeric control automation systems and applications which use industrial robots. The size of the upper part makes it possible to create various operator configurations, while the lower part, used to grip the unit, can be equipped with 3 positions enabling switch, with antipanic function. The characteristic shape of the button board is designed to protect operators (also when the key selector is inserted) from collision or shock.



Pulsantiera mobile

Hand-held push-button control unit



Scatola pulsantiera in resina termoplastica

Push-button enclosure made of thermoplastic resin

Completa di piastra in alluminio, senza forature.

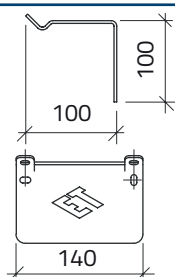
Per richieste speciali contattare la nostra organizzazione commerciale.

Provided with aluminium undrilled plate.

For special requirements get in touch with our commercial department.

Grado di protezione : IP66/ Protection degree : IP66 560

060PMG

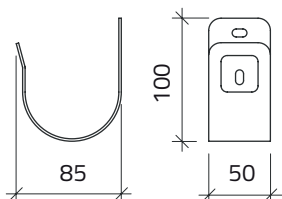


Staffa fissaggio parete / Wall-mounting bracket

Acciaio / Steel

455

060SFP

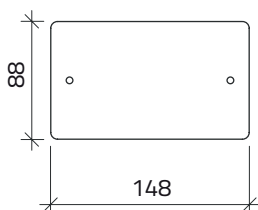


Staffa di fissaggio cavo / Cable bracket

Acciaio / Steel

360

060SFC

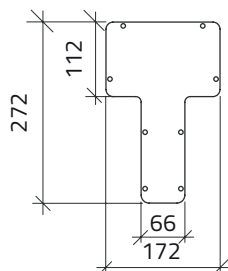


Piastra di fissaggio magnetica / Magnetic mounting plate

Acciaio / Steel

200

060PFM

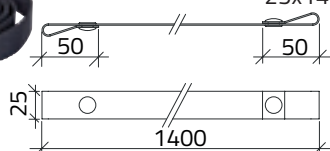


Piastra non forata (ricambio) / Undrilled plate (spare part)

Alluminio anodizzato / Anodised aluminium

160

060PPM



Cinghia tracolla / Shoulder belt

25x1400 mm

46

010CT25

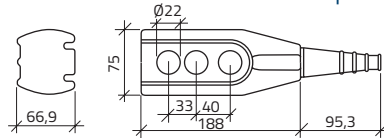
Pulsantiere pensili Pendant push-button stations

Con operatore / With operator



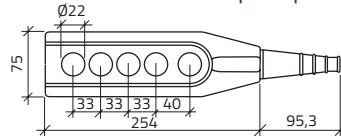
2 operatori + emergenza 1NC / 2 operators + emergency 1NC

Pulsanti a 1 velocità / 1 speed push-buttons	390	060PM2S1
Pulsanti a 2 velocità / 2 speed push-buttons	390	060PM2S2



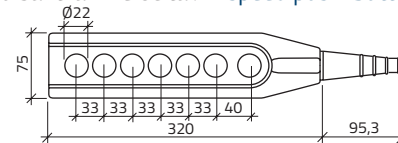
4 operatori + emergenza 1NC / 4 operators + emergency 1NC

Pulsanti a 1 velocità / 1 speed push-buttons	550	060PM4S1
Pulsanti a 2 velocità / 2 speed push-buttons	550	060PM4S2



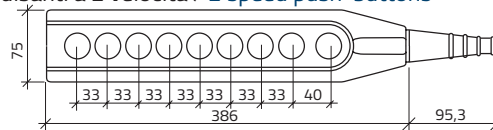
6 operatori + emergenza 1NC / 6 operators + emergency 1NC

Pulsanti a 1 velocità / 1 speed push-buttons	960	060PM6S1
Pulsanti a 2 velocità / 2 speed push-buttons	960	060PM6S2



8 operatori + emergenza 1NC / 8 operators + emergency 1NC

Pulsanti a 1 velocità / 1 speed push-buttons	1070	060PM8S1
Pulsanti a 2 velocità / 2 speed push-buttons	1070	060PM8S2



Senza operatore / Without operator

3 fori / 3 holes	240	060PM3
5 fori / 5 holes	290	060PM5
7 fori / 7 holes	400	060PM7

Caratteristiche tecniche

Involucro	Body
ABS	ABS
Grado di protezione	Degree of protection
IP65	IP65
Temperatura di esercizio	Operating temperature
-5°C +125°C	-5°C +125°C

Technical data

Caratteristiche pulsanti

Durata meccanica	5 x 10 ⁵ cicli di manovra
Durata elettrica	1 x 10 ⁵ cicli di manovra
Tensione nominale U _e	250v AC
Corrente nominale I _a	4 A
Potenze nominali di impiego in AC 15 secondo IEC947-5-1	1000 VA
Tensione di isolamento U _I	300V Uimp 2,5 Kv

Push-button performance

Mechanical durability	5 x 10 ⁵ operations
Electrical durability	1 x 10 ⁵ operations
Rating operating voltage U _e	250v AC
Rating operating current I _a	4 A
Rated switching power according to IEC947-5-1	1000 VA
Insulation Voltage U _I	300V Uimp 2,5 Kv



