



Joysticks & Lever Grips



"ERGO" JOYSTICKS

CAN BUS and HALL EFFECT



WATERPROOF



EASY
INSTALLATION



EXTENSIVE
FUNCTIONALITIES



BACKLIT
PUSHBUTTONS



CUSTOM
CONFIGURATIONS



PROGRAMMABLE



AGRICULTURAL VEHICLES | EARTHMOVING VEHICLES
INDUSTRIAL VEHICLES | FORKLIFTS

“ERGO” JOYSTICKS

CAN BUS and HALL EFFECT

La gamma **ERGO** rappresenta la soluzione ideale per applicazioni che richiedono precisione di comando, elevato comfort operativo e massima affidabilità nel tempo.

L'accurato studio ergonomico della manopola assicura una presa naturale e un utilizzo prolungato senza affaticamento, migliorando il comfort dell'operatore anche nelle applicazioni più impegnative.

Caratteristiche principali

Design ergonomico studiato per garantire il massimo comfort e una riduzione dell'affaticamento durante l'utilizzo continuativo.

Pulsanti frontali retroilluminati con luce bianca per un'immediata individuazione anche in condizioni di scarsa illuminazione, con possibilità di personalizzazione di colori e simboli tramite label adesive.

Interfaccia **CAN Bus** compatibile con gli standard **SAE J1939-11, SAE J1939-21 e SAE J1939-71**, per una perfetta integrazione con i più diffusi sistemi di controllo.

Disponibile in due configurazioni per soddisfare le diverse esigenze applicative:

- **Deadman meccanico**, con forza di attivazione ottimizzata per ridurre al minimo l'affaticamento dell'operatore durante l'impiego continuativo.
- **Deadman capacitivo**, progettato per aumentare la sicurezza operativa impedendo utilizzi impropri e consentendo l'attivazione solo con la corretta impugnatura del joystick.

Disponibile versione “**Safety**” certificata per applicazioni di sicurezza, in conformità alle normative **EN ISO 13849 e IEC EN 62061**. Il prodotto integra diverse funzioni di sicurezza, per le quali sono previsti specifici livelli di Performance Level (PL) e Safety Integrity Level (SIL).

The **ERGO** range is the ideal solution for applications requiring precise control, outstanding operator comfort and long-term reliability.

The carefully engineered ergonomic grip ensures a natural hand position and comfortable operation over extended periods, reducing operator fatigue even in the most demanding working environments.

Key Features

Ergonomic design developed to maximize operator comfort and minimize fatigue during long-term use.

Front-mounted buttons with white backlighting for immediate identification, even in low-light conditions, with customizable colors and symbols using adhesive labels.

CAN Bus interface compliant with **SAE J1939-11, SAE J1939-21, and SAE J1939-71** standards, ensuring seamless integration with the most widely used control systems.

Available in two configurations to meet different application requirements:

- **Mechanical Deadman**, featuring an optimized actuation force to minimize operator fatigue during continuous operation.
- **Capacitive Deadman**, designed to enhance operational safety by preventing unintended use and enabling activation only when the joystick is held correctly.

A “**Safety**” version is also available, it is certified for use in safety-related applications in compliance with the **EN ISO 13849 and IEC EN 62061** standards. The product integrates various safety functions, each designed to achieve specific Performance Level (PL) and Safety Integrity Level (SIL) targets.

“ERGO” JOYSTICKS

CAN BUS and HALL EFFECT

FRONT VIEW

MODULARITY
Up to 8 front
pushbuttons



BACKLIGHT
White lighting
for the outside
pushbutton



MAINTAINED or
MOMENTARY
ROLLER and
up to 3 possibilities
of colors (black,
orange, red)



PUSHBUTTONS
Up to 6 possibilities of colors
for the top of the pushbutton
(black, orange, red, green,
grey, blue) using adhesive
labels



5 pushbuttons
2 vertical roller



8 pushbuttons



5 pushbuttons
1 horizontal roller

“ERGO” JOYSTICKS

CAN BUS and HALL EFFECT

REAR VIEW

Roller



Pushbutton

Mechanical deadman

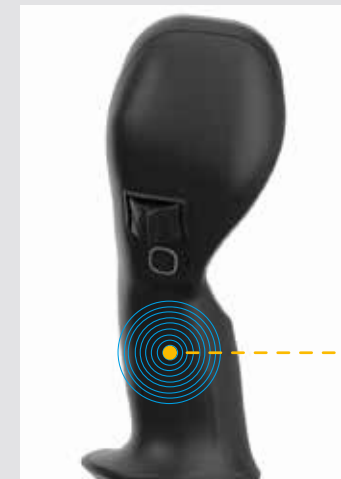


1 pushbutton
1 roller
1 mechanical deadman

CAPACITIVE deadman version

Il joystick si rinnova integrando il sensore capacitivo, che sostituisce la tradizionale leva meccanica «Presenza Operatore» senza compromessi sulla sicurezza. Questa tecnologia rileva il contatto dell'operatore in modo immediato e sicuro migliorando l'ergonomia.

The Ergo joystick has been updated by integrating a capacitive sensor, replacing the traditional mechanical “Operator Presence” lever without compromising safety. This technology detects the operator’s touch instantly and reliably, improving ergonomics.



1 pushbutton
1 roller
1 capacitive deadman



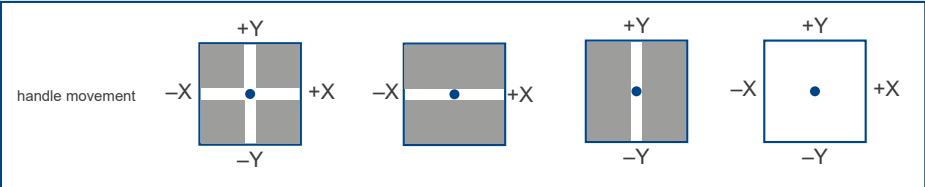
“ERGO” JOYSTICKS

CAN BUS and HALL EFFECT

Electrical characteristics	
Operating voltage	7..36V
Nominal voltage	12-24V
Current draw	170mA @ 13.5V, 85mA @ 27V (with maximum backlight)
Communication interfaces	CAN, compatibility with SAE J1939-11/ SAE J1939-21/ SAE J1939-71
Periodic transmission cycle	Configurable, standard 50ms, min 20ms
Baud rate	250kbps - Configurable with 50-100-125-250-500kbps
Power consumption	2.3W - Maximum current draw configuration
Backlight	16 configurable brightness levels - Derating after 60°C

EMC standard	
EN 61000-4-6:2014	Electromagnetic compatibility (EMC)
ISO 13766-1:2018	Electromagnetic compatibility (EMC) of machines with internal electrical power supply
CISPR25 Edition 5.0 2021-12	Vehicles, boats and internal combustion engines - Radio disturbance characteristics
ISO 7637-2:2011	Road vehicles - Electrical disturbances from conduction and coupling
ISO 16750-2:2012	Road vehicles - Environmental conditions and testing for electrical and electronic
ISO 11452-8:2015	Road vehicles

Mechanical and environmental characteristics	
Operating handle force	10N at 150mm from the fixing plate
Max. handle overload	1500N at 150mm from the fixing plate
Angular deviation	±15°
Lever and Roller mechanical life	2 000 000 cycles
Key and Dead man mechanical life	4 000 000 cycles
Handle fixation angle relative to the plate	Customizable
Operating temperature	-40°..+85°C
Storage temperature	-40°..+90°C
Ambient operating temperature without derating	-40°..+60°C
Protection grade above the fixing plate	IP66
Protection grade below the fixing plate	IP20
Work Axes	X or Y / X only / Y only / X and Y



Electrical characteristics	
Joystick base	Aluminium
Lever	Galvanised steel
Bellows	TA 20-40 P, EPDM Rubber 60sh
Handle	PA6GBF30, REINFORCED NYLON

“ERGO” JOYSTICKS

CAN BUS and HALL EFFECT

INSTALLAZIONE - INSTALLATION

- Fissaggio a vite.
- 4 viti M6 di lunghezza adeguata allo spessore della piastra di fissaggio
- Screw fixing.
- 4 x M6 screws of suitable length for the thickness of the fixing plate

FISSAGGIO DALL'ALTO
FIXING FROM BELOW



FISSAGGIO DAL BASSO
FIXING FROM BELOW

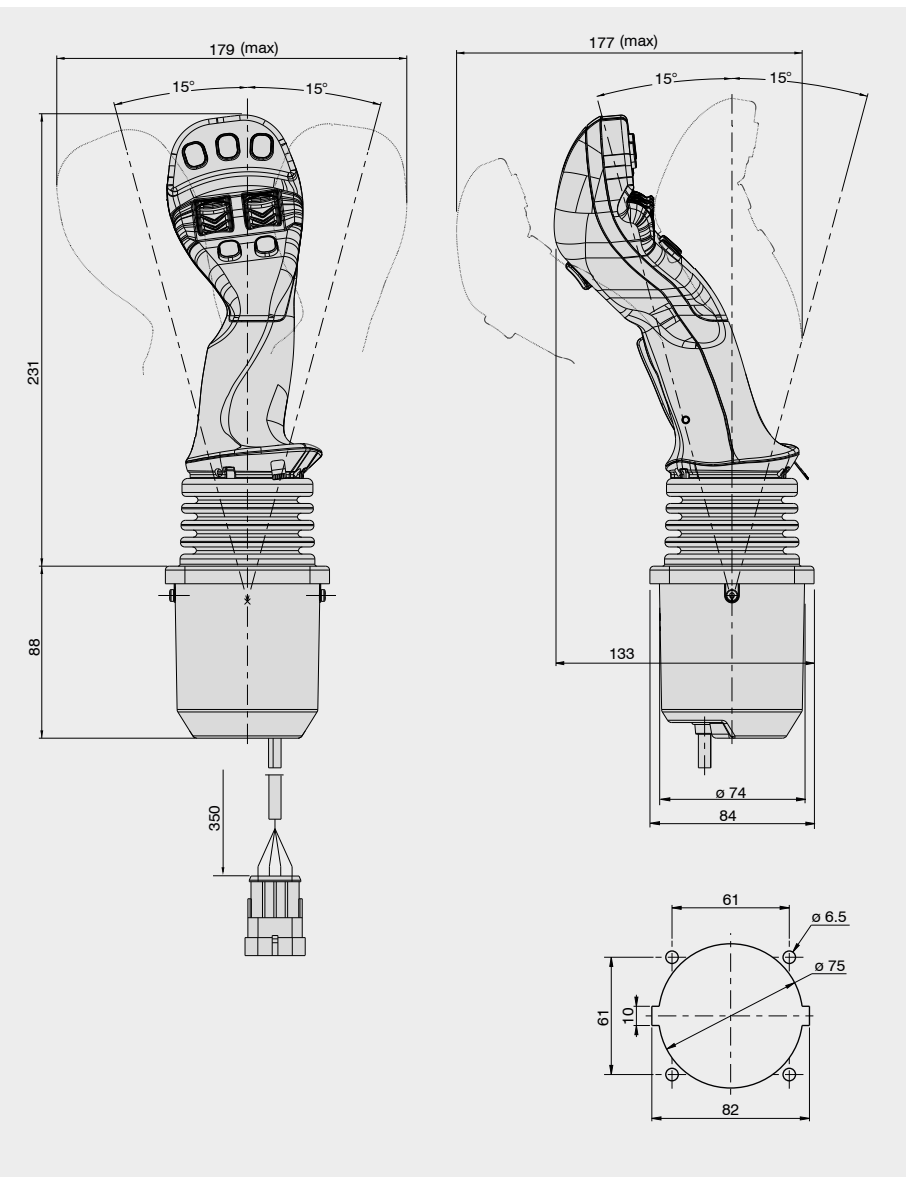


“ERGO” JOYSTICK | 2 AXIS

MECHANICAL deadman version CAPACITIVE deadman version

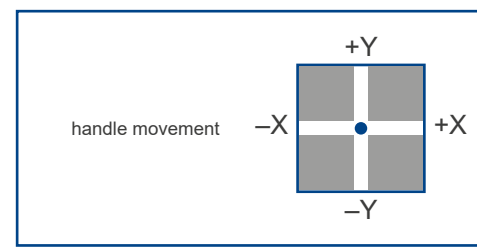
P/N	P/N
1106147 42-3001000	1109410 42-5001000

- Front: 5 Pushbuttons, 2 vertical roller
- Rear: 1 Pushbutton, 1 roller



Cable L= 350 mm
with connector AMP SUPERSEAL 4 pin

PIN OUT	
1	+VB
2	GND
3	CAN - H
4	CAN - L

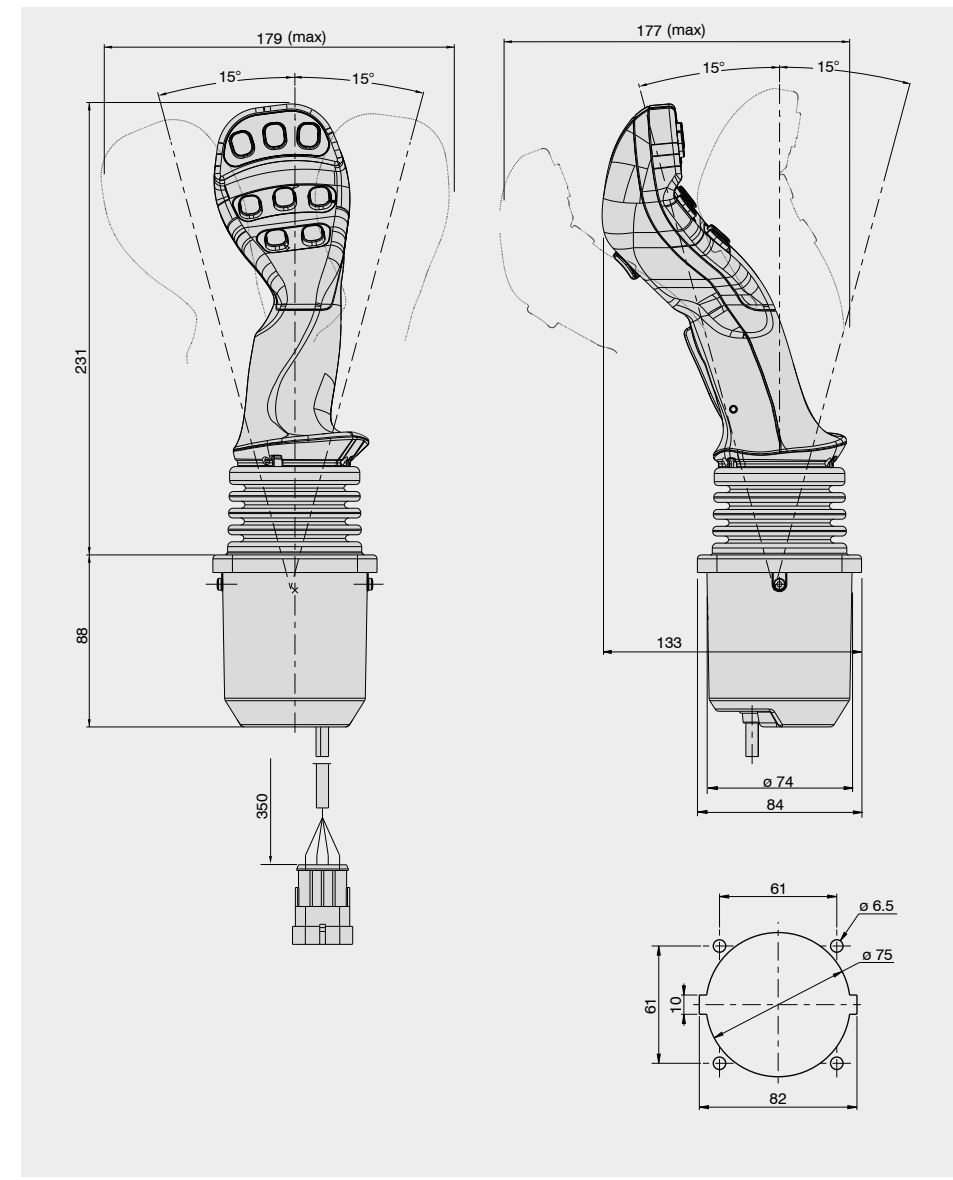


“ERGO” JOYSTICK | 2 AXIS

MECHANICAL deadman version CAPACITIVE deadman version

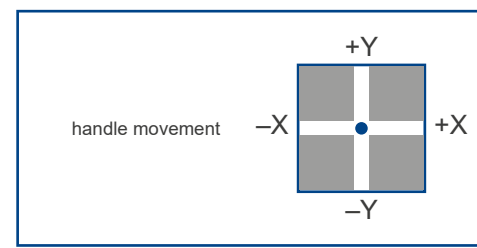
P/N	P/N
1106148 42-3002000	1109411 42-5002000

- Front: 8 Pushbuttons
- Rear: 1 Pushbutton, 1 roller



Cable L= 350 mm
with connector AMP SUPERSEAL 4 pin

PIN OUT	
1	+VB
2	GND
3	CAN - H
4	CAN - L



“ERGO” JOYSTICK | 2 AXIS

MECHANICAL
deadman version

P/N

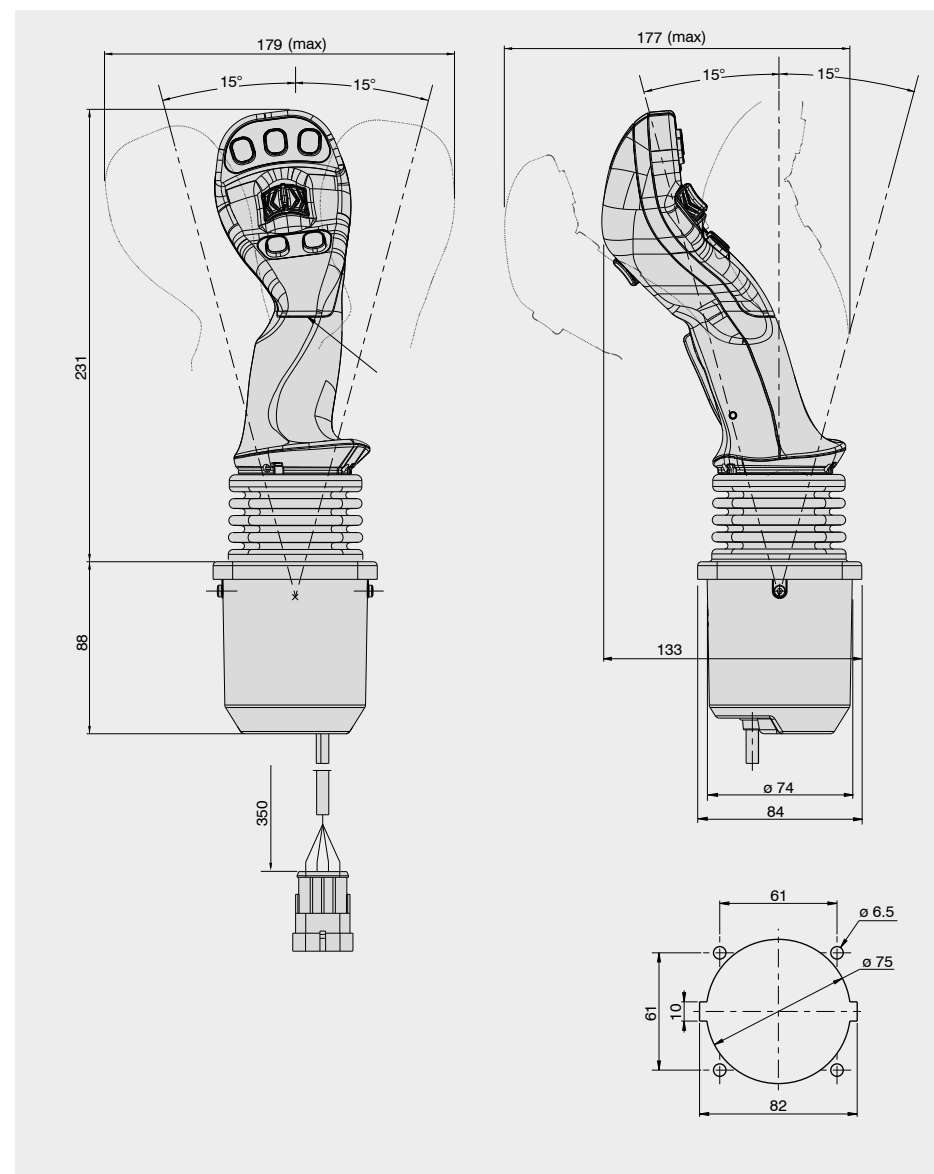
1106149
42-3003000

CAPACITIVE
deadman version

P/N

1109412
42-5003000

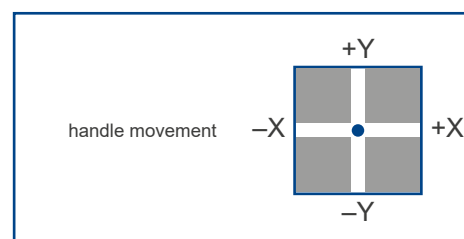
- **Front:** 5 Pushbuttons, 1 horizontal roller
- **Rear:** 1 Pushbutton, 1 roller



Cable L= 350 mm
with connector AMP SUPERSEAL 4 pin

PIN OUT

1	+VB
2	GND
3	CAN - H
4	CAN - L

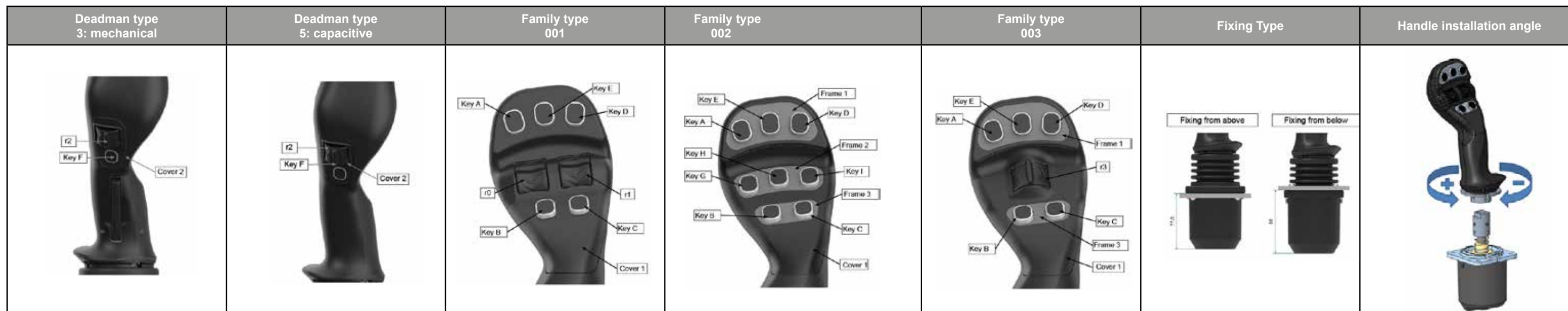


“ERGO” JOYSTICKS CAN BUS and HALL EFFECT



“ERGO” JOYSTICK | CODE CONFIGURATION

“ERGO” JOYSTICK | CODE CONFIGURATION



Family code	Deadman type	Family type	Internal reference
42-	3: mechanical 5: capacitive	001: 2 Roller 002: 8 keys 003: 1 Horizontal roller	Three incremental digits (COBO internal reference) I
Example			
42-	3	002	000 I

Family type	Connection	Work Axes	Keys									Roller				Frame			Cover		Fixing Type	Angle
			Key A	Key B	Key C	Key D	Key E	Key F	Key G	Key H	Key I	r0	r1	r2	r3	Frame 1	Frame 2	Frame 3	Cover 1	Cover 2		
001	yes	yes	yes	yes	yes	yes	yes	yes	No	No	No	yes	yes	yes	No	No	No	No	yes	yes	yes	yes
002	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	No	No	yes	No	yes	yes	yes	yes	yes	yes	yes
003	yes	yes	yes	yes	yes	yes	yes	yes	No	No	No	No	No	yes	yes	yes	No	yes	yes	yes	yes	yes

Yes: Item present and customizable / No: Missing item

Customisation:

Base model	Connection	Work Axes	Key A	Key B	Key C	Key D	Key E	Key F	Key G	Key H	Key I	r0	r1	r2	r3	Frame 1	Frame 2	Frame 3	Cover 1	Cover 2	Fixing Type	Angle
42-3001000 42-5001000 42-3002000 42-5002000 42-3003000 42-5003000	C: Can Bus	6: X or Y 7: X only 8: Y only 9: X and Y	X - NOT PRESENT ----- C: ORANGE R: RED V: GREEN H: GREY N: BLACK L: BLUE P: CUSTOMIZED									X - NO ROLLER ----- N: BLACK C: ORANGE (RAL2011) R: RED (RAL3001)				X - NOT PRESENT ----- N: BLACK H: GREY			N: BLACK H: GREY (RAL7040)		A: From above B: From below	Customizable value

How to configure a new part number (Base model + Customisation):

42-3001000	C-	9-	N	N	N	N	N	N	X	X	X-	N	N	N	X-	X	X	X	N	N-	A	
------------	----	----	---	---	---	---	---	---	---	---	----	---	---	---	----	---	---	---	---	----	---	--

“AX” JOYSTICKS

CAN BUS and HALL EFFECT



WATERPROOF



EASY
INSTALLATION



EXTENSIVE
FUNCTIONALITIES



SMALL SIZE



CUSTOM
CONFIGURATIONS



PROGRAMMABLE



AGRICULTURAL VEHICLES | EARTHMOVING VEHICLES
INDUSTRIAL VEHICLES | FORKLIFTS

“AX” JOYSTICKS *CAN BUS and HALL EFFECT*

La gamma **AX** è progettata per offrire una soluzione di comando compatta, versatile e altamente configurabile, ideale per applicazioni che richiedono precisione, affidabilità e semplicità di integrazione.

Grazie alle dimensioni contenute e alla facilità di installazione, il **joystick AX** permette un'integrazione rapida e ottimizzata anche in spazi ridotti, garantendo al contempo un'elevata ergonomia e un utilizzo intuitivo da parte dell'operatore.

La programmazione tramite **CAN Bus** e l'ampia possibilità di personalizzazione consentono di adattare il joystick alle specifiche esigenze del veicolo e del sistema di controllo, offrendo massima flessibilità progettuale.

Caratteristiche principali

Design compatto per un'installazione semplice e ottimizzata anche in ambienti con spazio limitato.

Configurazione personalizzabile per rispondere alle diverse esigenze applicative e funzionali.

Programmazione tramite CAN Bus per una facile integrazione nei sistemi elettronici di controllo del veicolo.

Disponibile con **due tasti integrati nella parte superiore della leva** per un accesso immediato alle funzioni principali, oppure in versione **senza tasti** per applicazioni che richiedono una configurazione essenziale.

Soluzione affidabile e versatile per garantire un controllo preciso e intuitivo delle funzioni operative.

Il **joystick AX** rappresenta la scelta ideale per costruttori e System Integrator alla ricerca di un comando compatto, flessibile e facilmente adattabile alle esigenze delle moderne macchine agricole, industriali e speciali.

*The **AX** range is designed to provide a compact, versatile and highly configurable control solution, ideal for applications requiring precision, reliability and easy integration.*

*Thanks to its compact dimensions and ease of installation, the **AX joystick** enables fast and optimized integration, even in space-constrained environments, while ensuring excellent ergonomics and intuitive operation for the user.*

***CAN Bus** programming and extensive customization options allow the joystick to be adapted to the specific requirements of the vehicle and control system, providing maximum design flexibility.*

Key Features

Compact design for easy and optimized installation, even in limited-space environments.

Customizable configuration to meet different application and functional requirements.

CAN Bus programming for seamless integration into vehicle electronic control systems.

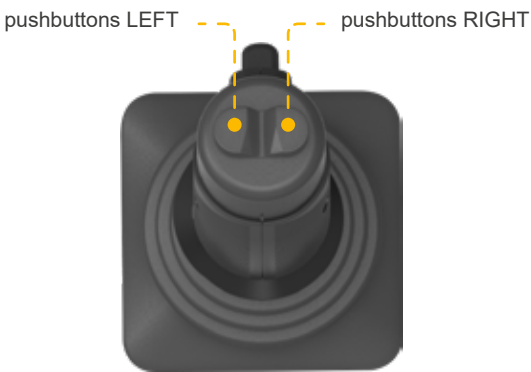
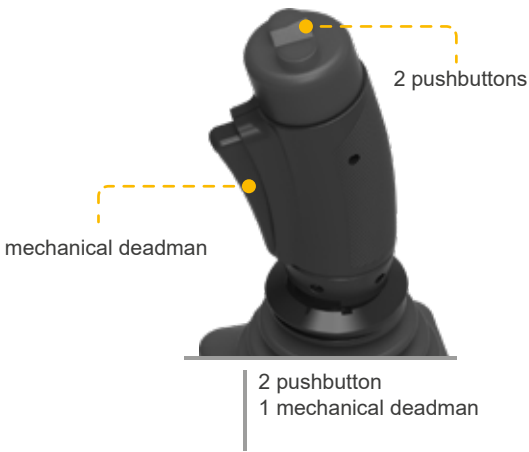
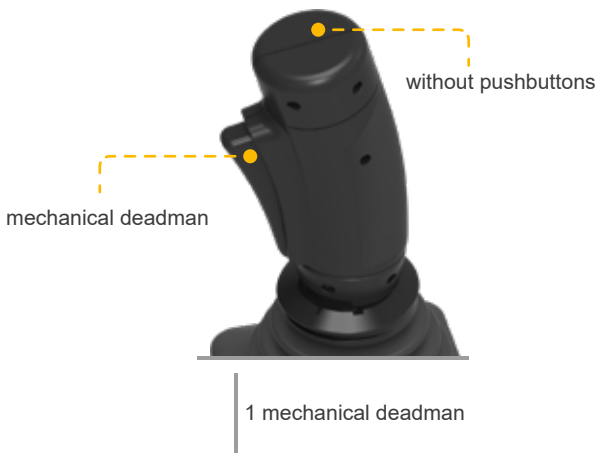
Available with **two integrated buttons on the top of the lever** for immediate access to main functions, or in a **buttonless version** for applications requiring a more essential configuration.

Reliable and versatile solution ensuring precise and intuitive control of operating functions.

*The **AX joystick** is the ideal choice for manufacturers and System Integrator looking for a compact, flexible and easily adaptable control solution for modern agricultural, industrial and special-purpose machines.*

“AX” JOYSTICKS
CAN BUS and HALL EFFECT

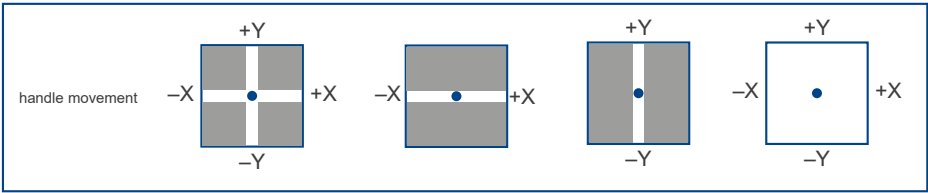
TOP and REAR VIEW



“AX” JOYSTICKS
CAN BUS and HALL EFFECT

Electrical characteristics	
Operating voltage	8-32V
Standby current consumption	33mA
Current consumption	< 280mA

Mechanical characteristics	
Lever actuation torque at the starting point	10.7 Nm
Lever operating torque at end point	1.35 Nm
Maximum horizontal load	55 Nm
Angular deviation	±15°
Mechanical life	5,000K
Mechanical endurance buttons keys	300K
Operating temperature	-40°..+85°C
Storage temperature	-40°..+85°C
Protection grade above the fixing plate	IP65
Protection grade below the fixing plate	IP20
Work Axes	X or Y / X only / Y only / X and Y



Electrical characteristics	
Joystick base	Aluminium
Lever	AVP steel
Bellows	EPDM Rubber
Handle	ASA

“AX” JOYSTICKS

CAN BUS and HALL EFFECT

INSTALLAZIONE - INSTALLATION

- Fissaggio a vite.
• 4 viti M6 di lunghezza adeguata allo spessore della piastra di fissaggio
Screw fixing.
• 4 x M6 screws of suitable length for the thickness of the fixing plate



“AX-2D” JOYSTICK | 2 AXIS or MULTIAXES

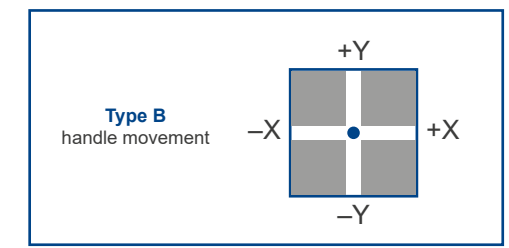
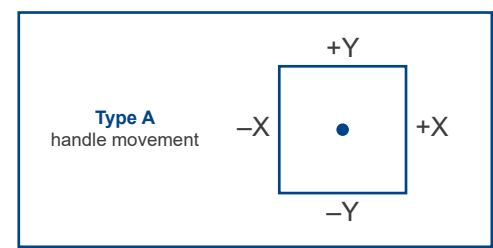
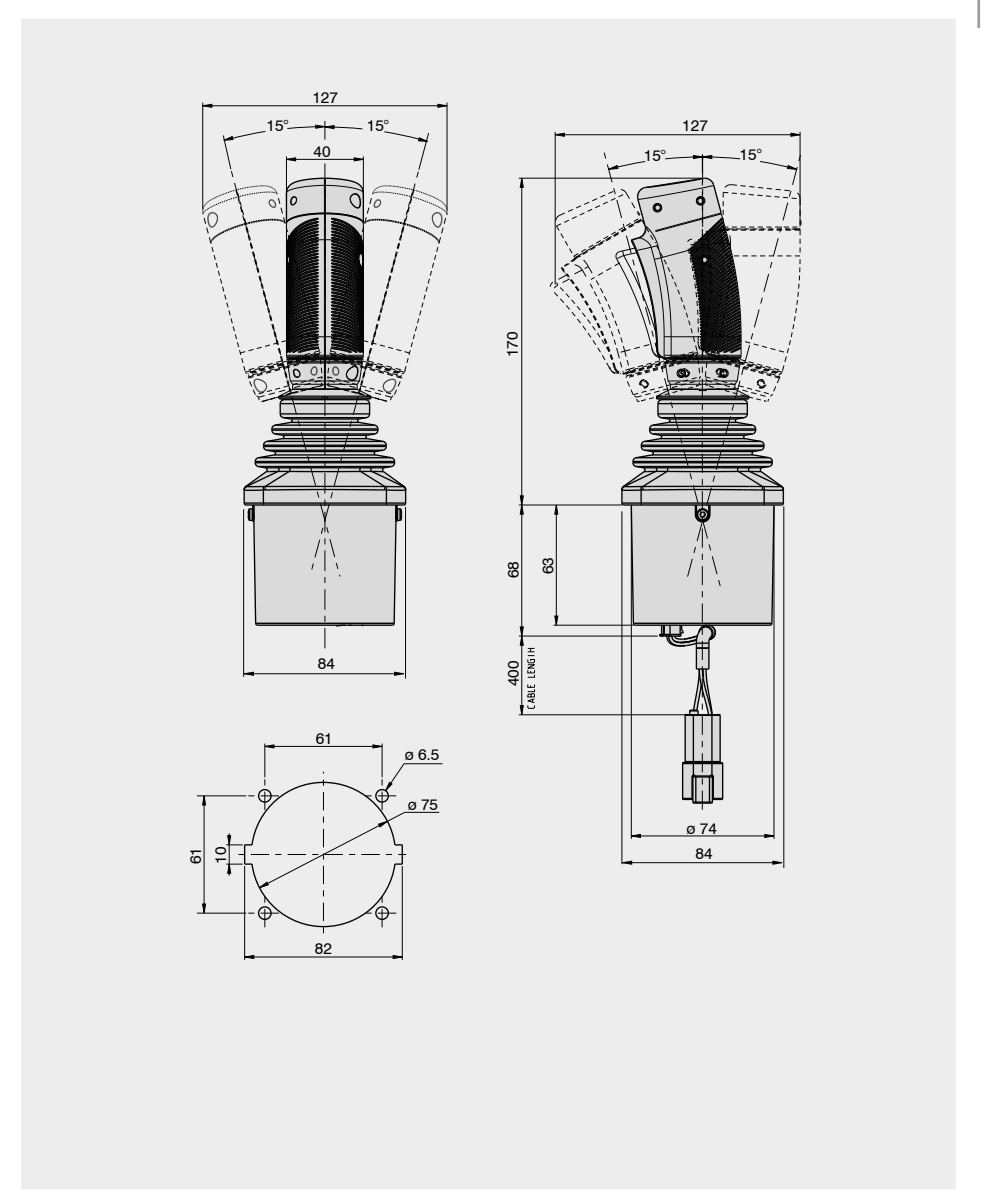
- **Rear:** 1 mechanical deadman

P/N	Handle movement type
1099063 42-0193-0000	A
1102028 42-0201-0000	B



Cable L= 400 mm
with connector DEUTSCH 6 pins

PIN OUT	
1	+VB
2	GND
3	CAN - H
4	CAN - L

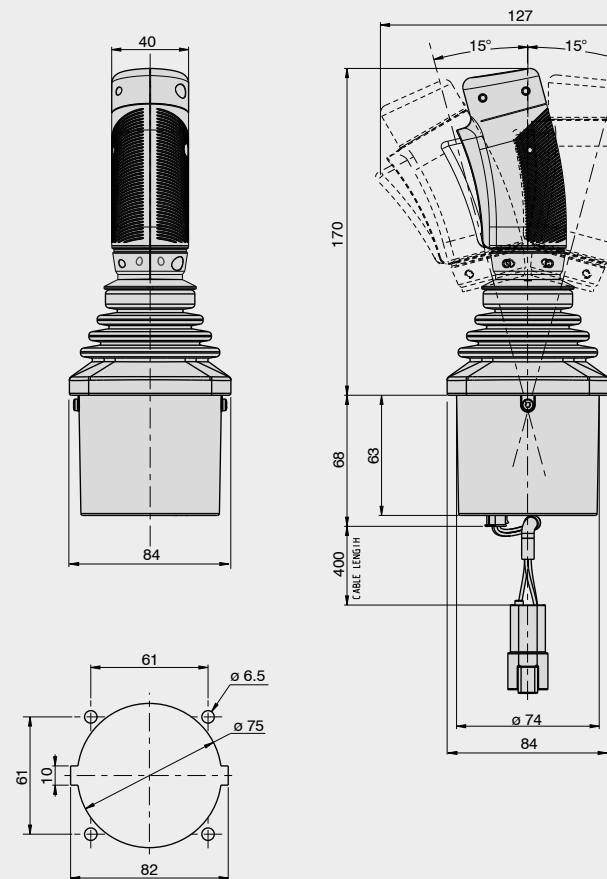


“AX-1D” JOYSTICK | 1 AXIS

- **Rear:** 1 mechanical deadman

P/N

1099064
42-0194-0000

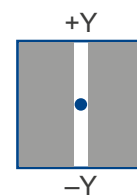


Cable L= 400 mm
with connector DEUTSCH 6 pins

PIN OUT

1	+VB
2	GND
3	CAN - H
4	CAN - L

handle movement

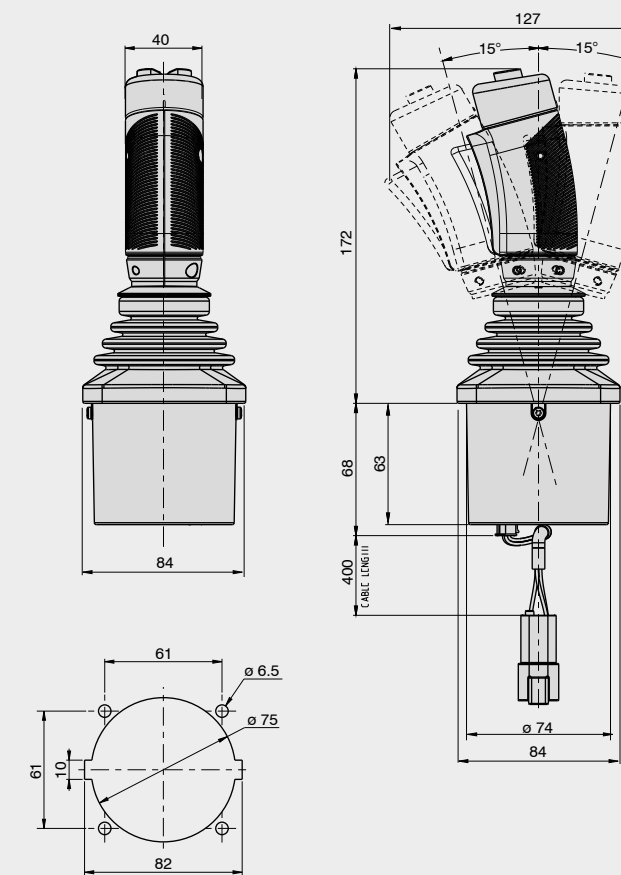


“AX-1D2” JOYSTICK | 1 AXIS

- Top:** 2 Pushbuttons
- Rear:** 1 mechanical deadman

P/N

1099062
42-0192-0000



Cable L= 400 mm
with connector DEUTSCH 6 pins

PIN OUT

1	+VB
2	GND
3	CAN - H
4	CAN - L

handle movement



“JIM” JOYSTICKS

HALL EFFECT

La gamma **JIM** è progettata per garantire robustezza, affidabilità e lunga durata anche in condizioni di utilizzo gravose. La tecnologia Hall Effect, unita alla semplicità di installazione e collegamento, assicura elevate prestazioni e un funzionamento affidabile nel tempo. È disponibile con segnali CAN o analogici, per una facile integrazione con gli impianti elettrici.

Funzionalità e personalizzazione:
il joystick JIM può essere dotato di funzione di vibrazione (Aptico) che consente all'operatore di percepire un allarme senza controllo visivo dell'operazione. Le funzionalità del pomello e i colori dei pulsanti possono essere personalizzati in base alle esigenze del cliente, migliorando funzionalità e riconoscibilità dei comandi.

Ergonomia e comfort:
La forma ergonomica della maniglia e il basso assorbimento elettrico garantiscono un utilizzo confortevole e riducono l'affaticamento dell'operatore anche durante impieghi prolungati.



*The **JIM** range is designed to ensure robustness, reliability and long service life, even under demanding operating conditions. Hall Effect technology, combined with ease of installation and connection, ensures high performance and reliable operation over time. It is available with CAN or analogue signals, enabling easy integration with electrical systems.*

Features and customization:
The JIM joystick can be equipped with a vibration function (Aptico), allowing the operator to perceive an alarm without the need for visual monitoring of the operation. The knob functions and button colours can be customized according to customer requirements, enhancing both functionality and control identification.

Ergonomics and comfort:
The ergonomic handle design and low power consumption ensure comfortable operation and reduce operator fatigue, even during long-term use.

“JIM” JOYSTICK

HALL EFFECT



Scansiona o clicca il QR code per visualizzare tutte le combinazioni già esistenti

Scan or click the QR code to view all existing combinations



Electrical characteristics	
Operating voltage	9-36V
Reverse polarity protection	36V only on main power supply
Current consumption	75mA (12V) @ 45mA (24V)
Sealing	IP60 CEI EN 60529 (above the flange)
Operating force*	7N (full stroke)
Expected life	8.000.000 cycles
Weight	750 g without handle
Electromagnetic compatibility (EMC)	

“JIM” JOYSTICK

HALL EFFECT

MONTAGGIO

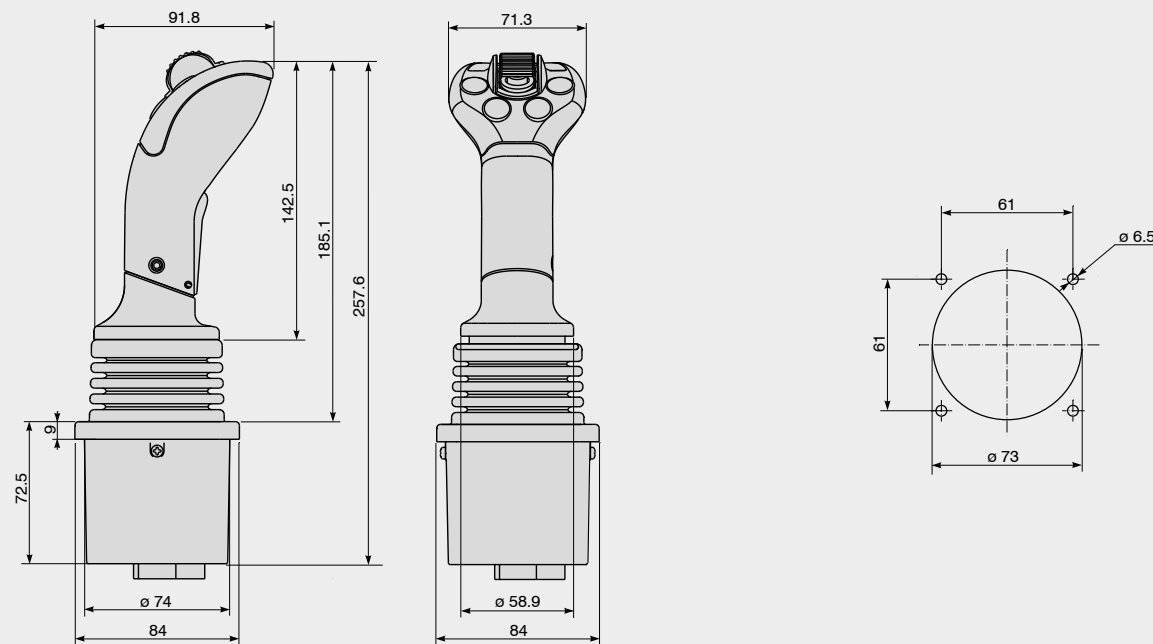
Fissaggio dalla parte inferiore del supporto, foro di passaggio Ø 73mm.
Il grado di tenuta dipende dal tipo di superficie di montaggio, consigliata rigida e liscia.

- Spessore pannello consigliato: 3 - 7mm.
- Viti di fissaggio: M6 (L= spessore del pannello + 9mm).
- Coppia di serraggio 5Nm.

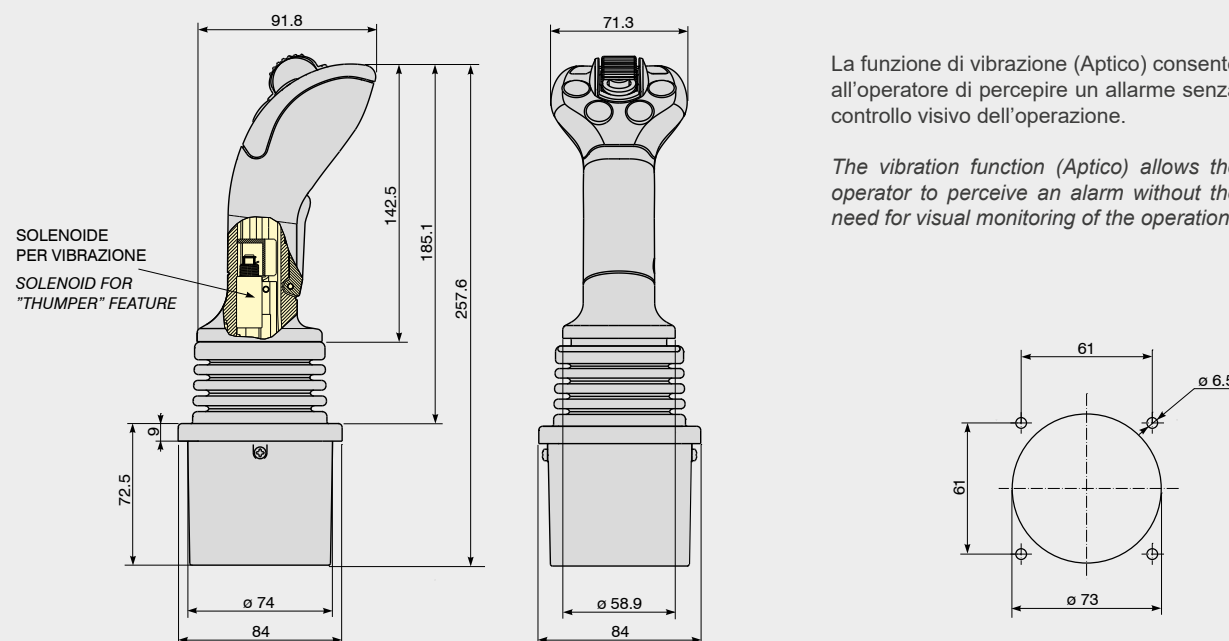
INSTALLATION

Mounting from the underside of the support, with a Ø 73 mm through-hole.
The sealing performance depends on the type of mounting surface, which is recommended to be rigid and smooth.

- Recommended panel thickness: 3-7 mm
- Mounting screws: M6 (L = panel thickness + 9 mm)
- Tightening torque: 5 Nm



CON VIBRAZIONE WITH “THUMPER” FEATURE



La funzione di vibrazione (Aptico) consente all'operatore di percepire un allarme senza controllo visivo dell'operazione.

The vibration function (Aptico) allows the operator to perceive an alarm without the need for visual monitoring of the operation.

“JIM” JOYSTICK

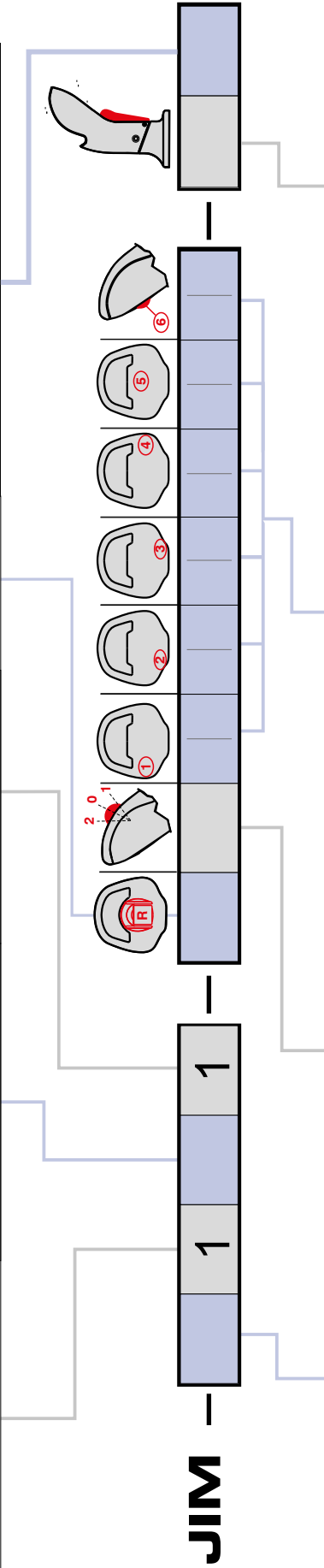
HALL EFFECT

FRONT and REAR VIEW



“JIM” JOYSTICK | CODE CONFIGURATION

TECNOLOGIA TECHNOLOGY	ASSI DI LAVORO OPERATING AXES	FORZA DI AZIONAMENTO OPERATING FORCE	ROLLER	GRAFICA ETICHETTA LABEL GRAPHICS
1 : HALL EFFECT	6 : Transv - X or Long - Y 7 : Transv - X 8 : Long - Y 9 : Transv - X and Long - Y	1 : 7 N	X : NO ROLLER C : GIALLO - YELLOW D : NERO - BLACK	00 : NO LED (SOLO SENZA ROLLER) NO LED (ONLY WITHOUT ROLLER) 02 : 2 LED ARANCIO CON FRECCIE (SOLO CON ROLLER) 2 LED ORANGE WITH ARROWS (ONLY WITH ROLLER) 03 : 2 FRECCIE BIANCHE NO LED (SOLO SENZA ROLLER) 2 ARROWS WHITE NO LED (ONLY WITHOUT ROLLER)



CONNESSIONE E SEGNALE CONNECTION AND SIGNAL	ROLLER, TIPO CONTATTO ROLLER, CONTACT TYPE	FUNZIONE / COLORE PULSANTI PUSH BUTTONS COLOR / FUNCTION	CONFIGURAZIONE MANOPOLA HANDLE GRIP CONFIGURATION
A : TYCO 040 / ANALOG 0-5 Vdc B : TYCO 25 PIN / ANALOG 0-12 Vdc C : DEUTSCH / CAN-BUS D : MOLEX / CAN-BUS	X : NO ROLLER A : 1 POSIZIONE STABILE MAINTAINED POSITION 2 POSIZIONE STABILE MAINTAINED POSITION B : 1 POSIZIONE INSTABILE MOMENTARY POSITION 0 POSIZIONE STABILE MAINTAINED POSITION 2 POSIZIONE INSTABILE MOMENTARY POSITION	XX : NO PULSANTI - NO PUSH BUTTONS INSTABILE - MOMENTARY CP : ARANCIO - ORANGE RP : ROSSO - RED VP : VERDE - GREEN HP : GRIGIO - GREY NP : NERO - BLACK LP : BLU - BLUE STABILE - MAINTAINED CB : ARANCIO - ORANGE RB : ROSSO - RED VB : VERDE - GREEN HB : GRIGIO - GREY NB : NERO - BLACK LB : BLU - BLUE	0 : NO UOMO PRESENTE NO DEAD MAN SWITCH 1 : UOMO PRESENTE ABILITATO ACTIVATED DEAD MAN SWITCH 2 : NO UOMO PRESENTE CON VIBRAZIONE NO DEAD MAN SWITCH WITH THUMPERING FEATURE 3 : UOMO PRESENTE ABILITATO CON VIBRAZIONE ACTIVATED DEAD MAN SWITCH WITH THUMPERING FEATURE 4 : UOMO PRESENTE DISABILITATO DEACTIVATED DEAD MAN SWITCH CON VIBRAZIONE DEACTIVATED DEAD MAN SWITCH WITH THUMPERING FEATURE 5 : UOMO PRESENTE DISABILITATO CON VIBRAZIONE DEACTIVATED DEAD MAN SWITCH WITH THUMPERING FEATURE OPZIONI 2, 3 e 5 (CON VIBRAZIONE) COMPATIBILI SOLO CON CONNESSIONE TIPO C OPTIONS 2, 3 and 5 (WITH THUMPERING FEATURE) ONLY COMPATIBLE WITH TYPE C CONNECTION.
NON CONSENTE PRESENZA PULSANTI 5 - 6 NOT COMPATIBLE PUSH BUTTONS 5 - 6		PULSANTI 5 - 6 NON COMPATIBILI CON ROLLER PUSH BUTTONS 5 - 6 NOT COMPATIBLE WITH ROLLER	

ASSI DI LAVORO - DIRECTION AXES				
6	7	8	9	
DOPPIO ASSE (X o Y) DOUBLE AXIS (X or Y)	SINGOLO ASSE (X) SINGLE AXIS (X)	SINGOLO ASSE (Y) SINGLE AXIS (Y)	DOPPIO ASSE (X e Y) DOUBLE AXIS (X and Y)	

ROLLER			
X	C	D	
			Solo per ERGO 510 - Only for ERGO 510 Giallo Yellow Nero Black

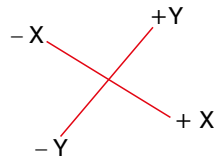
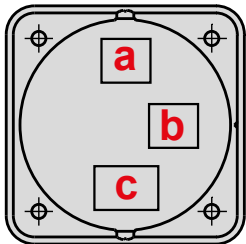
ESEMPIO DI COMPOSIZIONE DEL CODICE - CODE COMPOSITION EXAMPLE

Connessione e segnale: Tyco 25 Pin /Analog 0 -12 Vdc	Joystick con: B	Joystick with: B
Tecnologia: Hall Effect	1	1
Assi di lavoro: Trans - X e Long - Y	9	9
Forza di azionamento: 7N	1	1
Colore roller: Nero	D	D
Roller (tecnologia & funzione): HE/1- 2 instabile 0 stabile	B	B
Funzione/colore pulsante 1: NO pulsante	XX	XX
Funzione/colore pulsante 2: Bistabile rosso	RB	RB
Funzione/colore pulsante 3: Bistabile verde	VB	VB
Funzione/colore pulsante 4: NO pulsante	XX	XX
Funzione/colore pulsante 5: NO pulsante	XX	XX
Funzione/colore pulsante 6: NO pulsante	XX	XX
Configurazione impugnatura: Uomo presente	1	1
Grafica etichetta: 2 led arancio	02	02

JIM — B 1 9 1 — D B XXRBVBXXXXXX — 1 02

CONNESSIONE E SEGNALE
CONNECTION AND SIGNAL

TYPE A



CONNETTORI - CONNECTORS

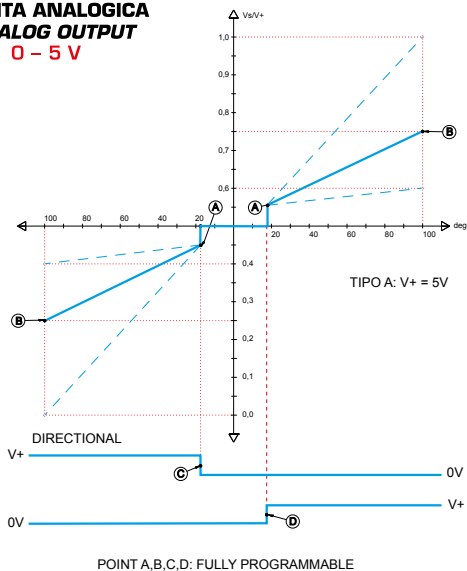
USCITA - OUTPUT

Connettori su joystick - Joystick connectors

- "a"** Connettore - connector:
12 pins PM TYCO 174973-2 Multilock 040
- "b"** Connettore - connector:
8 pins PM TYCO 174971-2 Multilock 040
- "c"** Connettore - connector:
16 pins PM TYCO 174975-2 Multilock 040

OPTIONAL KIT
Connettore controparte
Mating connector
P/N COBO 27.0933.0000

USCITA ANALOGICA
ANALOG OUTPUT
0 - 5 V



COLLEGAMENTO PIN - PIN OUT

CONNETTORE "a" CONNECTOR

- 1 alimentazione +5V (prop1b and prop2b)
+5V power supply (prop1b and prop2b)
- 2 GND (prop1b and prop2b)
- 3 alimentazione +5V (prop1b and prop2b)
+5V supply (prop1b and prop2b)
- 4 GND (prop1b and prop2b)
- 5 prop1b (long - asse Y)
prop1b (long - axis Y)
- 6 prop2 (trasv - asse X)
prop2 (transv - axis X)
- 7 prop2b (trasv - asse X)
prop2b (transv - axis X)
- 8 prop1 (long - asse Y)
prop1 (long - axis Y)
- 9 R1 CAN - E
- 10 R2 CAN - E
- 11 CAN - L
- 12 CAN - H

CONNETTORE "b" CONNECTOR

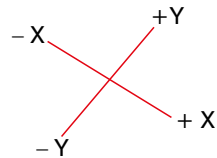
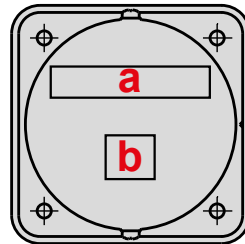
- 1 alimentazione per uscita movimento avanti
power supply forward sw
- 2 uscita movimento avanti (long - asse Y)
forward sw out (long - axis Y)
- 3 uscita movimento indietro (long - asse Y)
back sw out (long - axis Y)
- 4 alimentazione per uscita movimento indietro
power supply back sw
- 5 alimentazione per uscita movimento sinistra
power supply left sw
- 6 uscita movimento sinistra (trasv - asse X)
left sw out (transv - axis X)
- 7 uscita movimento destra (trasv - asse X)
right sw out (transv - axis X)
- 8 alimentazione per uscita movimento destra
power supply right sw

CONNETTORE "c" CONNECTOR

- 1 rocker back sw out
possibilità di sostituire questo pin con tasto 6
possibility of replacing this pin with button 6
- 2 rocker forward sw out
possibilità di sostituire questo pin con tasto 5
possibility of replacing this pin with button 5
- 3 uscita pulsante - push button out 1
- 4 uscita pulsante - push button out 4
- 5 uscita proporzionale del rocker
rocker proportional output
- 6 uscita pulsante - push button out 3
- 7 V alimentazione - V supply
- 8 contatto 2 uscita uomo presente - dead man 2 contact out
- 9 uscita pulsante - push button out 2
- 10 non utilizzato - not used
- 11 alimentazione per pulsanti e rocker
power supply for push buttons and rocker sw
- 12 contatto 1 uomo presente
+ V alimentazione per uomo presente
dead man 1 contact + V supply for dead man contact
- 13 alimentazione indipendente per logic + V supply
independent power supply for logic + V supply
- 14 LED 1 input
- 15 LED 2 input
- 16 non utilizzato - not used

CONNESSIONE E SEGNALE
CONNECTION AND SIGNAL

TYPE B



CONNETTORI - CONNECTORS

USCITA - OUTPUT

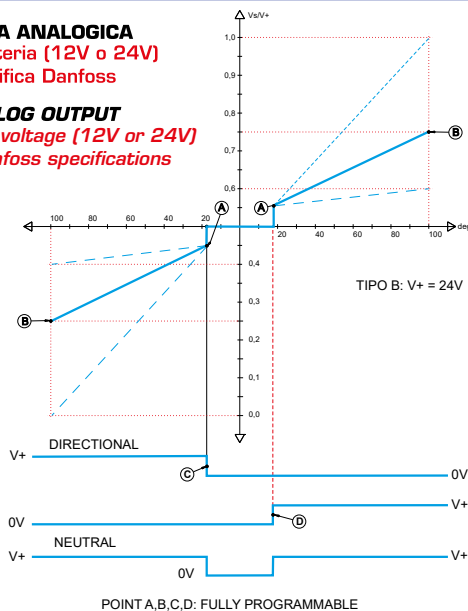
Connettore su joystick - Joystick connector

25 pins PM HARTING 09 66 321 7703

OPTIONAL KIT
Connettore controparte
Mating connector
P/N COBO 27.0934.0000

USCITA ANALOGICA
0 - V batteria (12V o 24V)
specifica Danfoss

ANALOG OUTPUT
0 - V battery voltage (12V or 24V)
as per Danfoss specifications



COLLEGAMENTO PIN - PIN OUT

CONNETTORE "a" CONNECTOR

- 1 uscita neutro - neutral out
- 2 uscita neutro - neutral out
- 3 alimentazione per pulsanti e interruttori direzionali
power supply for push buttons and directional switches
- 4 uscita pulsante - push button out
- 5 prop3 (rocker)
- 6 uscita movimento avanti rocker on-off (+o uscita pulsante 5)
rocker forward sw out on-off (+or 5 push button output)
- 7 prop2 (trasv - asse X) - prop2 (transv - axis X)
- 8 prop1 (long - asse Y) - prop1 (long - axis Y)
- 9 uscita movimento avanti on-off (long - + asse Y)
forward sw out on-off (long - + axis Y)
- 10 + VBE (+ V alimentazione batteria)
+ VBE (+ V battery supply)
- 11 uscita movimento sinistro on-off (trasv - - asse X)
left sw out on-off (transv - - axis X)
- 12 comando LED 1 (+ V batteria>LED on, - V batteria>LED off)
LED 1 command (+ V battery>LED on, - V battery >LED off)
- 13 uscita uomo presente - dead man out
- 14 uscita neutro - neutral out
- 15 alimentazione per pulsanti e interruttori direzionali
power supply for push buttons and directional switches

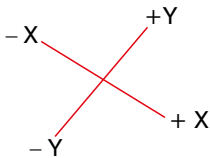
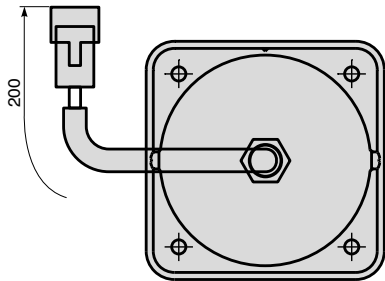
- 16 alimentazione per pulsanti e interruttori direzionali
power supply for push buttons and directional switches
- 17 uscita pulsante - push button out
- 18 comando LED 2
(+ V batteria>LED on, - V batteria>LED off)
LED 2 command
(+ V battery>LED on, - V battery >LED off)
- 19 uscita movimento indietro rocker on-off
(o uscita pulsante 6)
rocker back sw out on-off
(or 6 push button output)
- 20 uscita pulsante - push button out
- 21 uscita pulsante - push button out
- 22 - VBE (- V alimentazione batteria)
- VBE (- V battery supply)
- 23 uscita movimento indietro on-off (long - - asse Y)
back sw out on-off (long - - axis Y)
- 24 uscita movimento destro on-off (trasv - + asse X)
right sw out on-off (transv - + axis X)
- 25 non utilizzato - not used

CONNETTORE "b" CONNECTOR

- 1 +V alimentazione
+V supply
- 2 - V alimentazione
- V supply
- 3 CAN - H
- 4 CAN - L

CONNESSIONE E SEGNALE
CONNECTION AND SIGNAL

TYPE C



CONNETTORI - CONNECTORS

USCITA - OUTPUT

Connettore sul cavo di uscita - Joystick cable connector
Connettore 6 pins DEUTSCH PM - DT04-6P-C015
Secondary lock conn. DEUTSCH - W6P

OPTIONAL KIT
Connettore controparte
Mating connector
P/N COBO 1028545 (27.0935.0000)

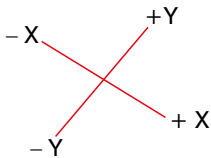
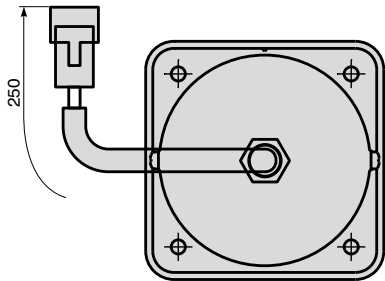
USCITA DIGITALE
DIGITAL OUTPUT
CAN 2.0b J1939
9 - 36 V

COLLEGAMENTO PIN - PIN OUT

- 1 +VB
- 2 GND
- 3 CAN - H
- 4 CAN - L
- 5 free
- 6 free

CONNESSIONE E SEGNALE
CONNECTION AND SIGNAL

TYPE D



CONNETTORI - CONNECTORS

USCITA - OUTPUT

Connettore sul cavo di uscita - Joystick cable connector
Connettore 6 pins MOLEX PM P/N 39-01-2061

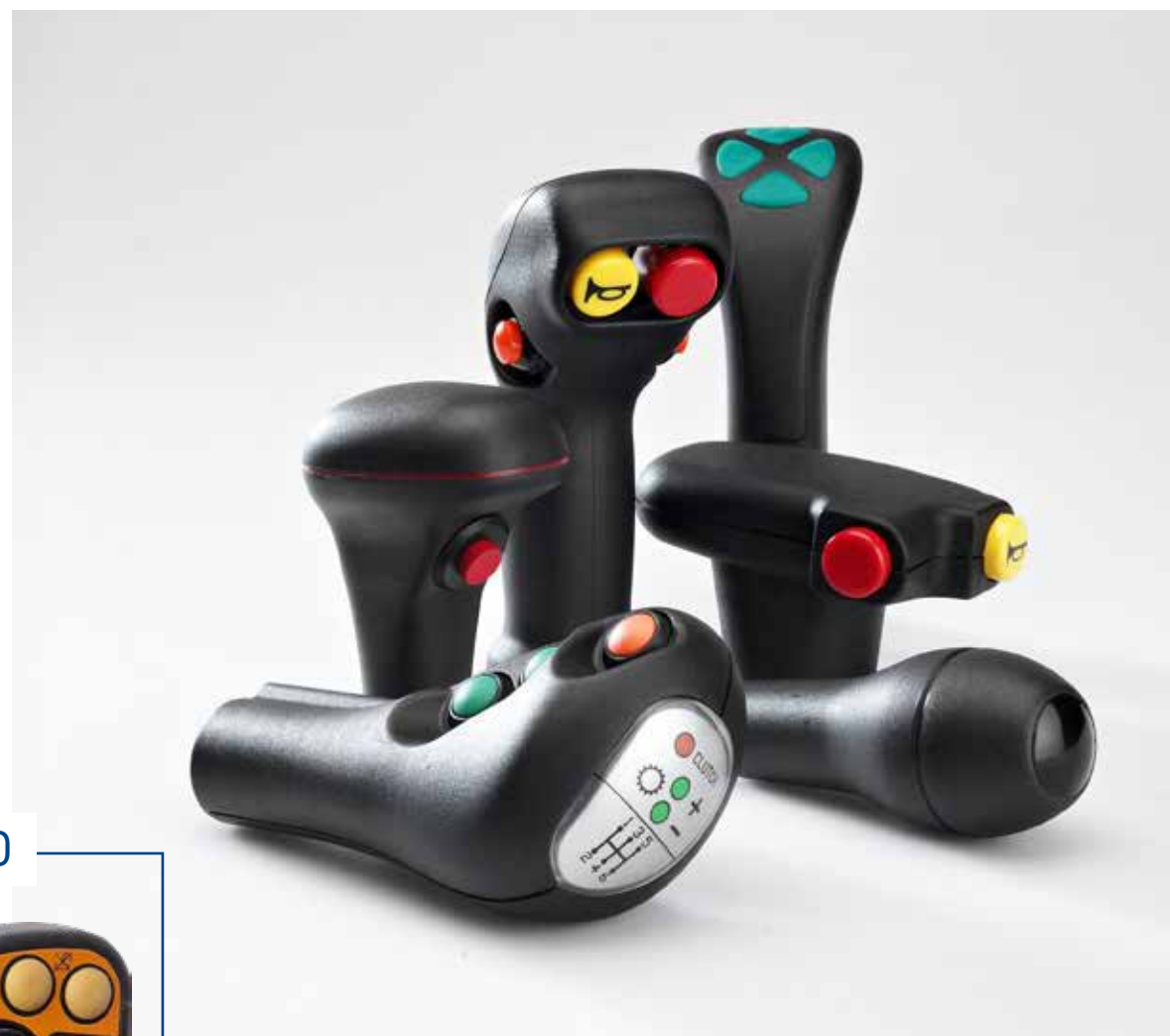
Connettore controparte
Mating connector
MOLEX P/N 39-01-2060

USCITA DIGITALE
DIGITAL OUTPUT
CAN 2.0b J1939
9 - 36 V

COLLEGAMENTO PIN - PIN OUT

- 1 +VB
- 2 GND
- 3 CAN - H
- 4 CAN - L
- 5 free
- 6 free

“LEVER GRIPS”



CUSTOMIZED



“ERGO” LEVER GRIPS

Sviluppo di Lever Grip personalizzati, progettati nello stile e nelle funzionalità in base alle specifiche esigenze del cliente.

Development of customized Lever Grips, designed in terms of style and functionality to meet the customer's specific requirements.

I **Lever Grip** COBO sono progettati per offrire una presa sicura, confortevole e intuitiva, assicurando all'operatore un controllo preciso delle leve di comando nelle applicazioni agricole e nel movimento terra.

Caratterizzati da un design ergonomico e da una costruzione robusta, sono pensati per garantire affidabilità e resistenza anche negli utilizzi più intensivi, contribuendo a migliorare il comfort dell'operatore e la qualità dell'interfaccia uomo-macchina.

Un'ampia scelta di configurazioni, forme e finiture permette di soddisfare le specifiche esigenze applicative, combinando funzionalità, comfort e qualità del design.

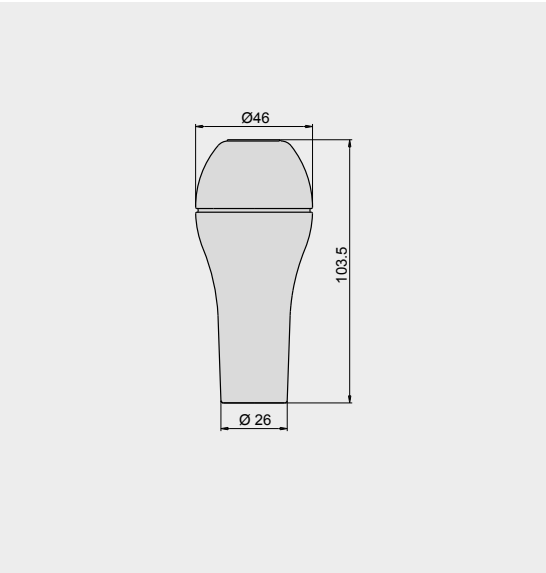
*COBO **Lever Grips** are designed to provide a secure, comfortable and intuitive grip, ensuring precise control of operating levers in agricultural and construction equipment applications.*

Featuring an ergonomic design and robust construction, they are engineered to ensure reliability and durability even under intensive operating conditions, helping to enhance operator comfort and the overall quality of the human-machine interface.

A wide range of configurations, shapes and finishes is available to meet specific application requirements, combining functionality, comfort and design quality.



“ERGO 100” LEVER GRIPS

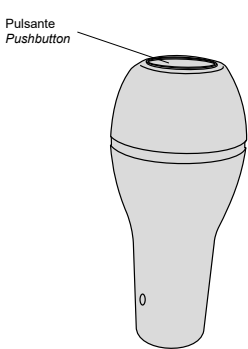
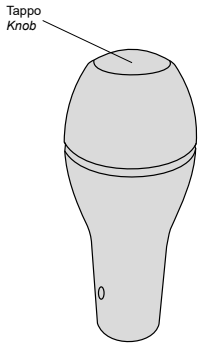


- Characteristics
- Optimum ergonomic design
- Lever grip with / without push-button
- Lever connection Ø 16,25
- Possibility to supply the rubber casing with customized symbol
- Possibility to fit different push-buttons and switches



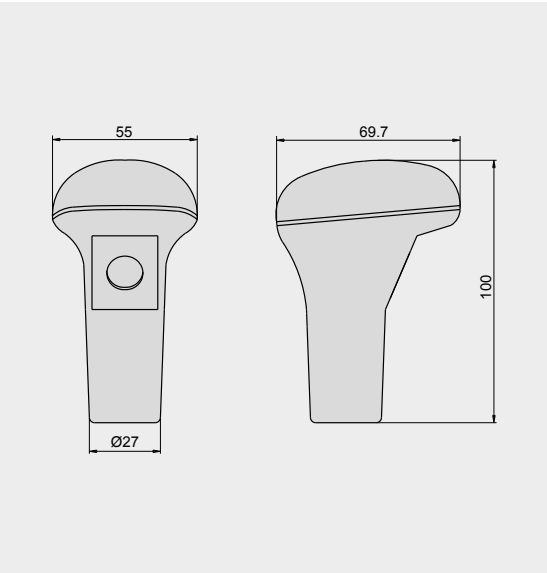
Scansiona o clicca il QR code per visualizzare tutte le combinazioni già esistenti (Tabella sotto alcuni esempi di combinazioni)

Scan or click the QR code to view all existing combinations (Table below some examples of combinations)



P/N	Description	Knob body	Cap with serigraphy	Pushbutton	Connector	Wiring length	Type assembly
1005613 00000859	Lever grip with red button	with rubber cap	-	N.O.	-	-	assembly kit
1071469 00000897	Lever grip with pushbutton diverter gears	with rubber cap	4 gears 1 - 2 - N - 3 - 4	N.C. N.O.	Deutsch 3 pins	500 mm	assembled
1048863 00000953	Lever grip with horn button	with rubber cap	Claxon	N.O.	-	-	assembly kit
1048835 00000955	Lever grip with cap	totally rigid	-	-	-	-	assembled

“ERGO 200” LEVER GRIPS

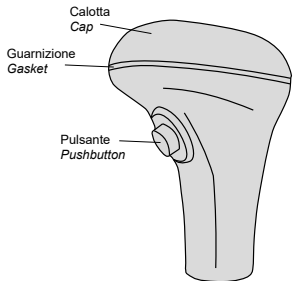


- Characteristics
- Optimum ergonomic design
- High performance switches
- Lever grip with push-button
- Lever connection: Ø 16, 25 and Ø 14
- Possibility to fit different colour gaskets
- Possibility to fit customized grip cap
- Possibility to fit different kind of push-buttons and switches
- Available with microswitch version



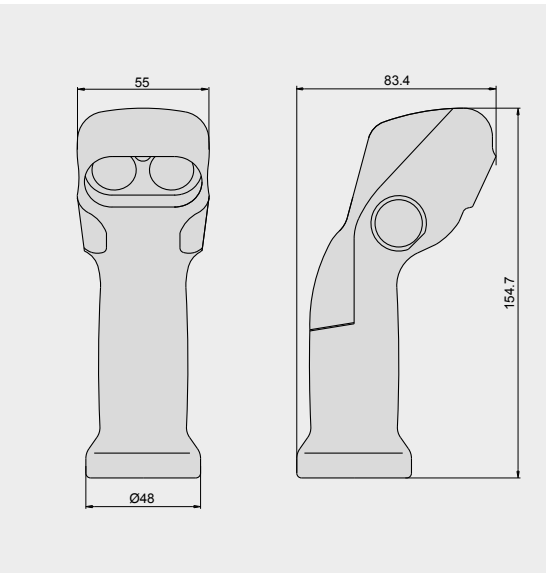
Scansiona o clicca il QR code per visualizzare tutte le combinazioni già esistenti (Tabella sotto alcuni esempi di combinazioni)

Scan or click the QR code to view all existing combinations (Table below some examples of combinations)



P/N	Description	Cap color	Cap with serigraphy	Gasket color	Pushbutton	Pushbutton color	Adapter	Connector	Wiring length	Type assembly
1071406 00000315	Lever grip with neutral cap	●	-	●	-	-	Ø16.5	-	-	assembled
1047004 00000816	Lever grip with cap black 3 gears	●	3 gears 1 - N - 2 - 3	●	-	-	Ø16,5	-	-	assembled
1052280 00000875	Lever grip with cap black 4 gears	●	4 gears 1 - 2 - N - 3 - 4	●	N.C.	-	Ø16	-	-	-
1071475 00000917	Lever grip with neutral cap	●	-	●	N.O.	●	Ø14	-	-	assembled

“ERGO 300” LEVER GRIPS

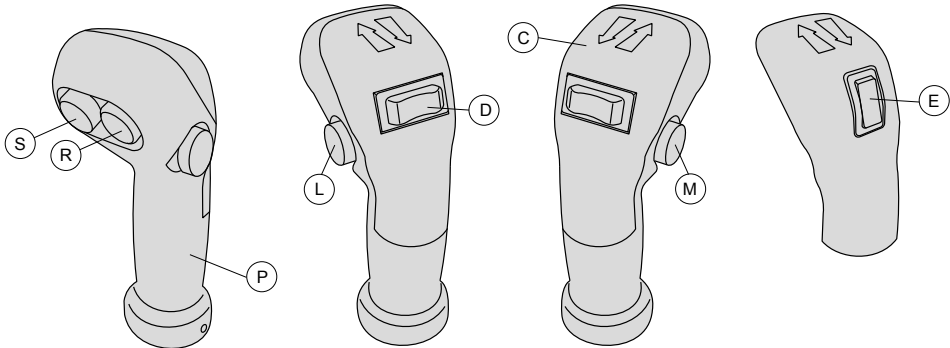


- Characteristics
- Optimum ergonomic design
 - High performance switches
 - Multifunction joystick with interchangeable caps
 - Lever connection: Ø 22,5 and Ø 14
 - Possibility to fit cap with forward-reverse speed led
 - Possibility to fit different kind of push button and switch



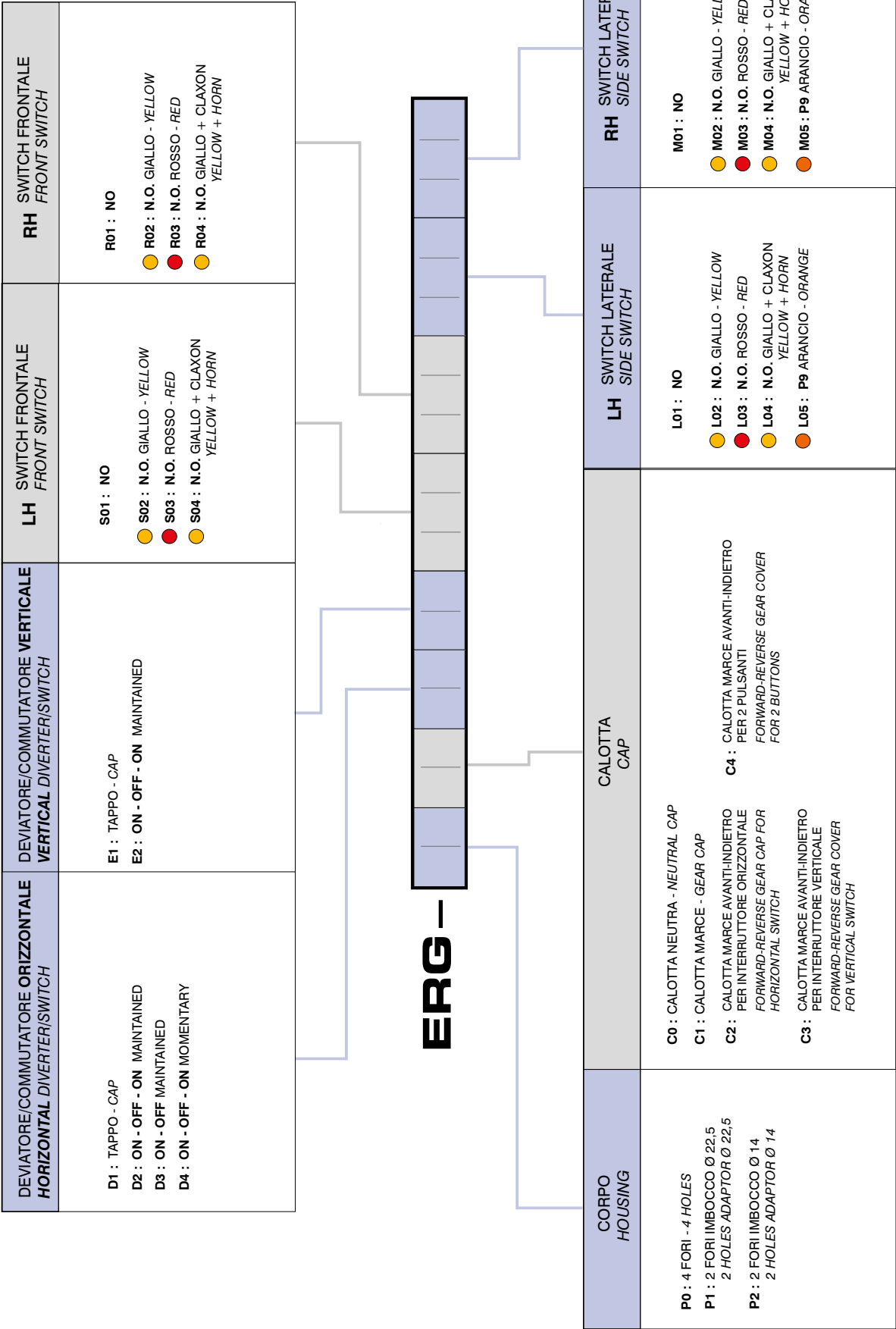
Scansiona o clicca il QR code per visualizzare tutte le combinazioni già esistenti (Tabella sotto alcuni esempi di combinazioni)

Scan or click the QR code to view all existing combinations (Table below some examples of combinations)

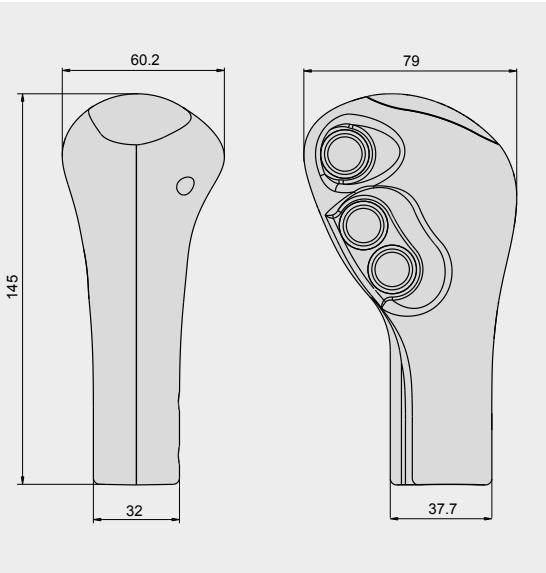


P/N	Description	Front switch	Rocker switches	Side switch	Cap with serigraphy	Adapter	Wiring length	Type assembly
1071460 00000864	2 switch	  switch N.O.	-	-	-	Ø22.5	-	assembly kit
1048836 00000882	2 switch + rocker switch	  switch	 rocker switch ON-OFF-ON momentary	-	-	Ø22.5	600 mm	assembled
1048862 00000887	1 switch gear cap	-	-	 switch	4 gears 1 - 2 - N - 3 - 4	Ø22.5	-	assembly kit
1073451 42-0113-0000	3 switch + rocker switch	  switch N.O.	 rocker switch ON-OFF-ON momentary	 switch	-	Ø22.5	300 mm	assembled

“ERGO 300” LEVER GRIPS
CODE CONFIGURATION



“ERGO 400” LEVER GRIPS

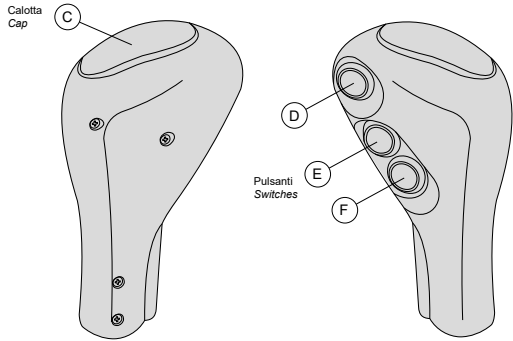


Characteristics
Optimum ergonomic design
High performance switches
3 push-button joystick
Lever connection Ø 20,5
Customizable graphic grip cap



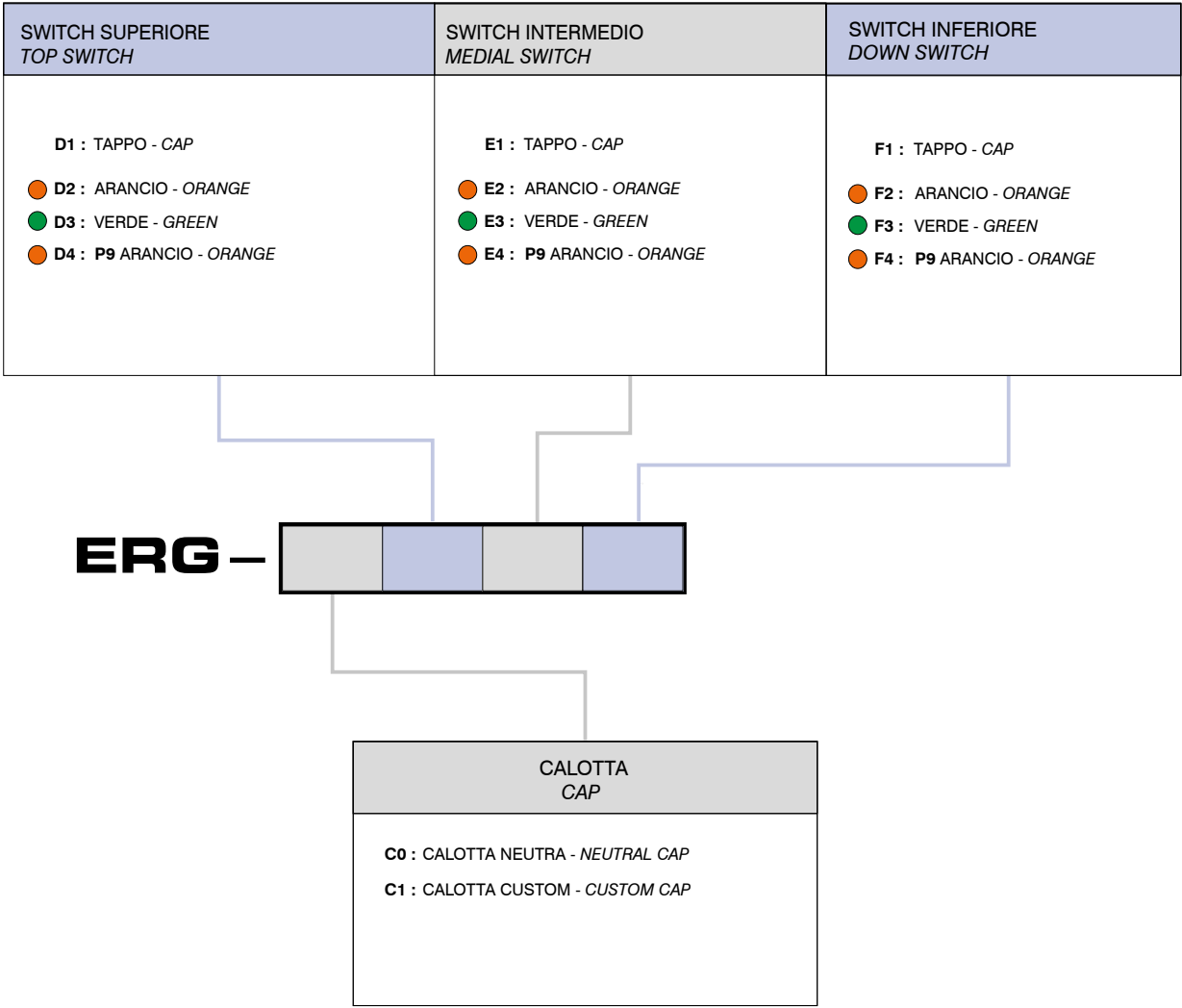
Scansiona o clicca il QR code per visualizzare tutte le combinazioni già esistenti (Tabella sotto alcuni esempi di combinazioni)

Scan or click the QR code to view all existing combinations (Table below some examples of combinations)



P/N	Grip configuration	Switches	C Cap with serigraphy	C Cap color	Connector	Wiring length
1047005 00000821	2 switch	D E switch N.O.	-	neutral	Deutsch 4 pins	400 mm
1050711 42-0106-0000	2 switch	E F switch N.O.	-	neutral	Deutsch 4 pins	500 mm
1031618 42-0107-0000	3 switch	D E F switch N.O.	-	neutral	Deutsch 6 pins	500 mm
1098523 42-0190-0000	1 switch	D switch N.O.	4 gears 1 - 2 - 3 - 4		Superseal 2 pins	1000 mm

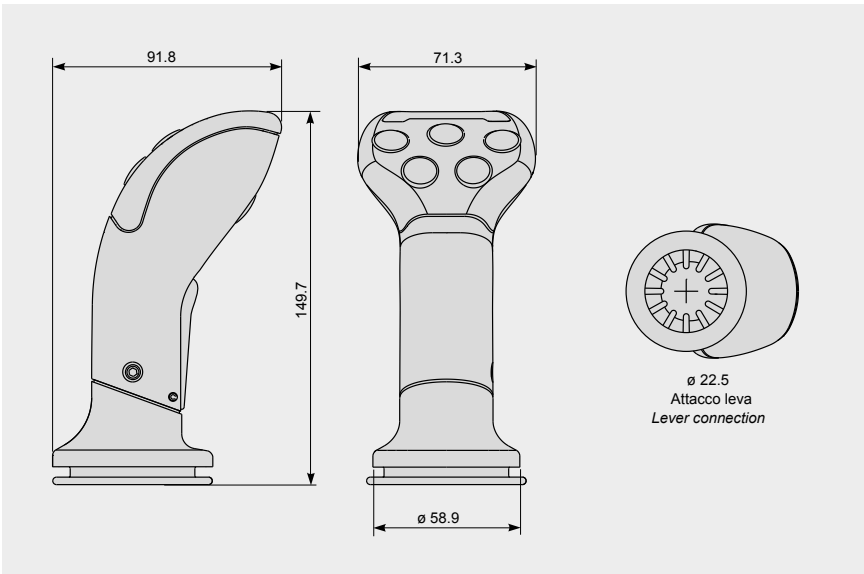
“ERGO 400” LEVER GRIPS | CODE CONFIGURATION



“ERGO 500” LEVER GRIPS

- Lever grip multifunzionale con configurazione massima:
 - 5 tasti nella parte superiore, uno nella parte frontale e leva funzione uomo presente
 - Tasti con funzione instabile
 - Zona superiore frontale con serigrafia personalizzabile e disponibile eventualmente con due LED per segnalazione funzioni

- Multifunctional lever grip with maximum configuration:
 - 5 push buttons on the top, one in the front and safety trigger switch possibility
 - Push-buttons instable version
 - On the top customized graphic, available with 2 orange LEDs functions



Scansiona o clicca il QR code per visualizzare tutte le combinazioni già esistenti (Tabella sotto alcuni esempi di combinazioni)

Scan or click the QR code to view all existing combinations (Table below some examples of combinations)

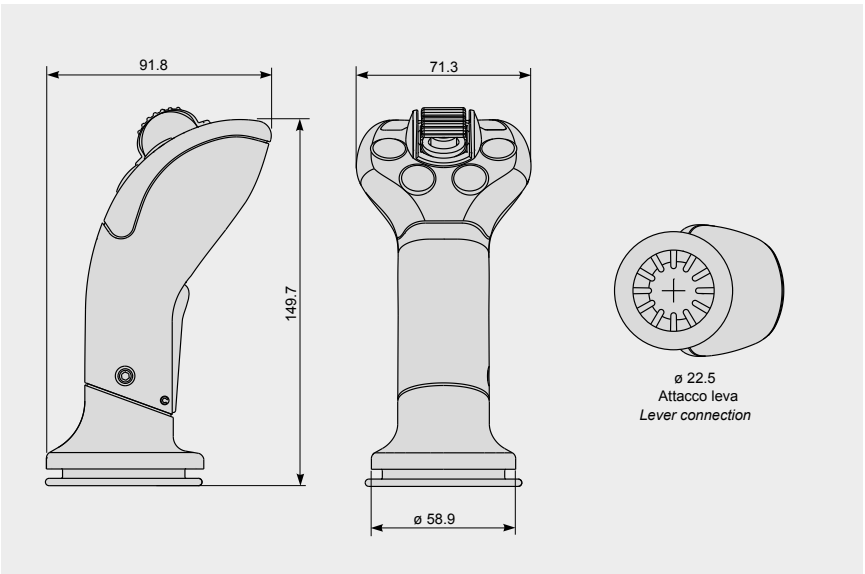
Characteristics	
Housing	polyamide
Push buttons and roller	Silicon rubber
2 LEDs	
Lever fixing	M10 - M12 - Ø 22,5
Max current	resistive 3A - inductive 2A
Electrical life:	1.000.000 cycles at the maximum load 3A
Mechanical life:	2.000.000 cycles

P/N	Description	Pushbutton 1	Pushbutton 2	Pushbutton 3	Pushbutton 4	Pushbutton 5	Pushbutton 6	Dead man	Adapter option	Bellows	Label graphics	Connection
1031597 42-0038-0000	5 Pushbutton	●	●	●	●	●	●	-	-	-	NO led	Deutsch 8 pins cable 300 mm
2109181 42-0052-0000	6 Pushbutton and 1 Pushbutton on the back	●	●	●	●	●	●	X	-	-	NO led	Deutsch 12 pins cable 300 mm
1073427 42-0070-0000	with Roller and 1 Pushbutton LH	●	-	-	-	-	-	-	M12	-	NO led	cable 450 mm
1073428 42-0071-0000	with Roller and 1 Pushbutton RH	-	-	-	●	-	-	-	M12	-	NO led	cable 450 mm

“ERGO 510” LEVER GRIPS

- Lever grip multifunzionale con configurazione massima:
 - 4 tasti nella parte superiore, roller e leva funzione uomo presente.
 - Tasti con funzione instabile uno dei quali con possibilità di funzione bistabile (elettronicamente).
 - Zona superiore frontale con serigrafia personalizzabile e disponibile eventualmente con due LEDs per segnalazione funzioni

- Multifunctional joystick with maximum configuration:
 - 4 push buttons on the top , roller and safety trigger switch possibility
 - All Push-buttons are instable , with possibility to have one of these in bistable version (electronically).
 - on the top customized graphic, available with 2 LEDs functions



Scansiona o clicca il QR code per visualizzare tutte le combinazioni già esistenti (Tabella sotto alcuni esempi di combinazioni)

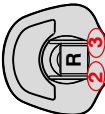
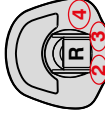
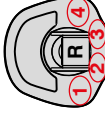
Scan or click the QR code to view all existing combinations (Table below some examples of combinations)

Characteristics	
Housing	polyamide
Push buttons and roller	Silicon rubber
2 LEDs	
Lever fixing	M10 - M12 - Ø 22,5
Max current	resistive 3A - inductive 2A
Electrical life:	1.000.000 cycles at the maximum load 3A
Mechanical life:	2.000.000 cycles

P/N	Description	Roller type	Roller R	Pushbutton 1	Pushbutton 2	Pushbutton 3	Pushbutton 4	Pushbutton 6	Dead man	Adapter option	Bellows	Label graphics	Connection
1078599 42-0142-0000	F-R + 4 Pushbutton + Switch + Dead man	2 Maintained position (1-0-2)	●	●	●	●	●	-	X	M12	X	2 green led with arrows	cable 300 mm
1050704 42-0028-0000	F-R + 2 Pushbutton + Switch	3 Maintained position (1-0-2)	●	●	-	-	●	●	-	M10	-	2 green led with arrows	Deutsch 8 pins + Deutsch 3 pins cable 250 mm
1050708 42-0087-0000	2 Pushbutton + Switch + Dead man	3 Maintained position (1-0-2)	●	●	-	-	●	-	X	-	-	2 green led with arrows	Deutsch 8 pins + Deutsch 3 pins cable 600 mm
2109182 42-0091-0000	F-R + 4 Pushbutton + Switch	3 Momentary position (1-0-2)	●	●	●	●	●	-	-	M10	-	NO led	cable 1500 mm

“ERGO 500 - 510” LEVER GRIPS | CODE CONFIGURATION

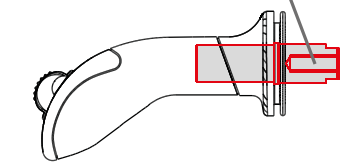
ERGO 510

COMPOSIZIONE PARTE SUPERIORE HANDLE UPPER PART					
R0	R1	R2	R3	R4	R5
					
R6	R7	R8	R9		
					

ERGO 500

COMPOSIZIONE PARTE SUPERIORE HANDLE UPPER PART					
Q0	Q1	Q2	Q3	Q4	Q5

ROLLER		
X	Y	B
No Roller		



TIPO FISSAGGIO ADAPTER OPTIONS		
1	2	3
IMBOCCO M10 M10 ADAPTER	IMBOCCO M12 M12 ADAPTER	IMBOCCO Ø12 ADAPTER Ø12

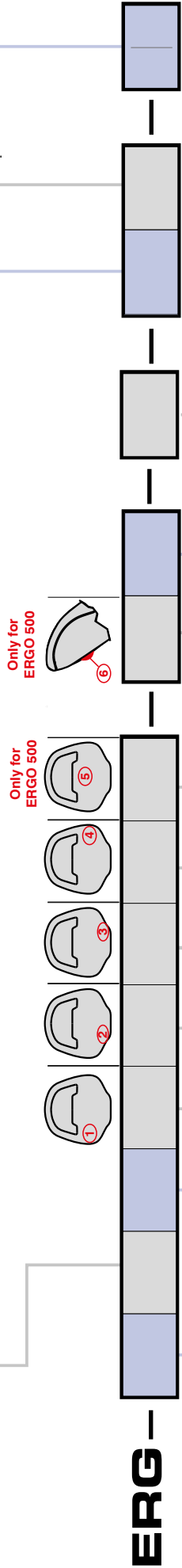
SOFFIETTO BELLOWS	
1	

COLORI PULSANTI PUSH BUTTON COLORS				
C	R	V	H	
N	L	X		

GRAFICA ETICHETTA LABEL GRAPHICS		
00	01	02
LED di colore verde green LEDs		

CONFIGURAZIONE MANOPOLA HANDLE GRIP CONFIGURATION			
0	1	2	3
Only for ERGO 500			

ROLLER	TIPO DI FISSAGGIO FIXING TYPE	SOFFIETTO BELLOWS	GRAFICA ETICHETTA LABEL GRAPHICS
X : NO ROLLER Y : GIALLO - YELLOW B : NERO - BLACK	0 : NO 1 : IMBOCCO - ADAPTOR M10 2 : IMBOCCO - ADAPTOR M12 3 : IMBOCCO - ADAPTOR Ø12	0 : NO 1 : SOFFIETTO - BELLOWS	00 : NO LED NO LED 01 : 2 LED VERDI 2 LED GREEN 02 : 2 LED VERDI CON FRECCIE 2 LED GREEN WITH ARROWS



COMPOSIZIONE PARTE SUPERIORE HANDLE UPPER PART	ROLLER, TIPO CONTATTO ROLLER, CONTACT TYPE	COLORE PULSANTI PUSH BUTTONS COLOR	CONFIGURAZIONE MANOPOLA HANDLE GRIP CONFIGURATION	Only for ERGO 510 FUNZIONE BISTABILE MAINTAINED FUNCTION
Q0 : ERGO 500 / NO PUSH BUTTONS Q1 : " / PUSH BUTTON 5 Q2 : " / PUSH BUTTONS 1 - 4 Q3 : " / PUSH BUTTONS 1 - 4 - 5 Q4 : " / PUSH BUTTONS 1 - 2 - 3 - 4 Q5 : " / PUSH BUTTONS 1 - 2 - 3 - 4 - 5 R0 : ERGO 510 / ONLY ROLLER R1 : " / ROLLER + PUSH BUTTON 1 R2 : " / ROLLER + PUSH BUTTON 4 R3 : " / ROLLER + PUSH BUTTONS 1 - 4 R4 : " / ROLLER + PUSH BUTTON 2 R5 : " / ROLLER + PUSH BUTTON 3 R6 : " / ROLLER + PUSH BUTTONS 2 - 3 R7 : " / ROLLER + PUSH BUTTONS 1 - 2 - 3 R8 : " / ROLLER + PUSH BUTTONS 2 - 3 - 4 R9 : " / ROLLER + PUSH BUTTONS 1 - 2 - 3 - 4	X : NO ROLLER E : SW / 1 - 0 - 2 MOMENTARY F : SW / 1 - 0 - 2 MAINTAINED G : SW / 1 MAINTAINED - 2 MOMENTARY H : SW / 1 MOMENTARY - 2 MAINTAINED SW = SWITCH	X : NO PULSANTI NO PUSH BUTTONS C : ARANCIO - ORANGE R : ROSSO - RED V : VERDE - GREEN H : GRIGIO - GREY N : NERO - BLACK L : BLU - BLUE	0 : NO PULSANTI NO PUSH BUTTONS 1 : SOLO UOMO PRESENTE ONLY DEAD MAN SWITCH 2 : UOMO PRESENTE + PULSANTE 6 DEAD MAN SWITCH + PUSH BUTTON 6 3 : SOLO PULSANTE 6 ONLY PUSH BUTTON 6	X : NO 1 : PUSH BUTTON 1 2 : PUSH BUTTON 2 3 : PUSH BUTTON 3 4 : PUSH BUTTON 4 5 : PUSH BUTTON 5 6 : PUSH BUTTON 6



HEADQUARTERS

C.O.B.O. SpA

Via Tito Speri, 10
25024 Leno (Brescia) ITALY
Phone +39 030 90451

GERMANY



COBO Deutschland GmbH
Zum Schürmannsgraben, 12E
D-47441 - Moers
Germany
Phone: +49 2841 88238-0
info@cobogroup.net
www.cobogroup.net

FRANCE



COBO France Sarl
Allée de l'Europe, 2 - Zone Coriolis
71210 - Ecuisses
France
Phone: +33 3 857 30560
info@cobogroup.net
www.cobogroup.net

NORTH AMERICA



COBO USA Corporation
West Division Street, 304
52655 - West Burlington
Iowa - Usa
Phone: +1 319 754 5585
info@cobogroup.net
www.cobogroup.net

LATIN AMERICA



COBO Components Agrícolas e Industrias Ltda
Rua Dona Francisca, 8300 - Bloco 2-M
89219-600 Zona Industrial - Joinville
Santa Catarina - Brasil
Phone: +55 47 3305 0095
info@cobogroup.net
www.cobogroup.net

OCEANIA



COBO Oceania Pty Ltd
Burnside Road, 9/93
4207 Stapylton
Brisbane Queensland
Australia
Phone: +61 7 3807 4866
info@cobogroup.net
www.cobogroup.net

SOUTH-EAST ASIA



COBO Asia Ltd
Flat/Rm 3002, 30/F,
Oxford House, 979 King's
Road, Quarry Bay
Hong Kong
Phone: +852 3590 3588
info@cobogroup.net
www.cobogroup.net

CHINA



COBO (Guangzhou) Electronic Systems and Components Ltd
101/102 Building 7, Shi Dai Fang Zhou
30 Hua Zhou Road, Haizhu District
510220 - Guangzhou
People's Republic of China
Phone: +86 20 8922 5611
info@cobogroup.net
www.cobogroup.net

INDIA



COBO India Components & Systems Pvt Ltd
Plot no I-74, Sector 32
DLF Industrial Area
121003 - Faridabad
Haryana - India
Phone: +91 129 487 1206
info@cobogroup.net
www.cobogroup.net



info@cobogroup.net | www.cobogroup.net

Le informazioni contenute nella presente informativa hanno scopo puramente indicativo.
L'Azienda si riserva senza preavviso il diritto di apportare qualsiasi modifica tecnica del prodotto.
The information published in this catalogue is purely indicative. The Company reserves the right to introduce all technological changes of the present product at any time and without prior notice.