COBO group

JIM

JOYSTICK MULTIFUNZIONE HALL EFFECT
MULTIFUNCTION HALL EFFECT JOYSTICK

COBO

edizione/*edition* 11-2012

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CARATTERISTICHE

LUNGA DURATA
La parte meccanica, grazie a particolari accorgimenti tecnici, durante i test di laboratorio ha superato gli otto milioni di cicli. La parte elettrica, grazie alla tecnologia Hall Effect, non ha componenti in contatto fra loro e quindi ha una durata di gran lunga superiore rispetto alla vita della parte meccanica.

ROBUSTEZZA & RESISTENZA
Questa gamma di Joystick è indicata per usi in condizioni particolarmente gravose.
L'impiego di materiali pregiati come la Poliammide 30%FG per il pomello, la Gomma siliconica per il soffietto, e l'elevato grado di tenuta all'acqua e alla polvere permettono una protezione elevata all'esterno della cabina.

ASSENZA DI MANUTENZIONE
L'adozione di soluzioni tecniche innovative - Hall Effect, LED, Can Bus - permettono di non dover effettuare alcuna manutenzione al dispositivo.

AFFIDABILITÀ
L'impiego di particolari accorgimenti tecnici garantisce un'elevata resistenza alle vibrazioni ed all'ingresso dell'acqua.

ADATTABILITÀ
La gamma "KEN" è disponibile con segnali di tipo CAN o Analogici per interfacciarsi con tutti gli impianti elettrici di ultima generazione. Inoltre le funzionalità del pomello sono personalizzabili per adattarsi meglio alla necessità di ciascun cliente.

BASSO ASSORBIMENTO
La componentistica elettrica è ottimizzata al fine di ottenere il minor assorbimento possibile: 40mA@12V

FEATURES

LONG LIFESPAN
With the introduction of particular technical solutions, the mechanical part has got over 8 million cycles during laboratory tests. Thanks to Hall Effect Technology it is possible to have an electrical part with no components in contact and with a much longer lifespan than the mechanical part.

SOLIDITY & RESISTANCE
This range of joysticks is suitable for particularly heavy-duty applications. The use of top-quality materials, like Polyamide 30%GF for handle and silicone rubber for bellows, together with a full water and dust resistance, enables a high protection outside the cabin.

NO MAINTENANCE
Thanks to the introduction of innovative technical solutions - Hall Effect, LED, Can Bus - there is no need of maintenance.

RELIABILITY
Particular technical solutions have been studied in order to guarantee a high vibration resistance and watertightness.

FLEXIBILITY
This new range of joysticks "KEN" is available with CAN or analog technology to interface all state-of-the-art electrical systems. Moreover, handle functions can be customized according to customers' requests.

LOW CURRENT CONSUMPTION
The electrical system is optimized in order to have the lower possible current consumption: 40mA@12V

SPECIFICHE TECNICHE:

Tensione di alimentazione: 9 - 36V
Inversione di polarità: 36V solo su alimentazione generale
Assorbimento di corrente: 75mA (12V) @ 45mA (24V)
Grado di protezione: IP60 CEI EN 60529 (sopra la flangia)
Forza di azionamento*: 7N (fine corsa)
Durata: 8 milioni di cicli
Peso: 750 gr. senza leva
Compatibilità elettromagnetica (EMC)

*** Misurati a 120 mm sopra la flangia**

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

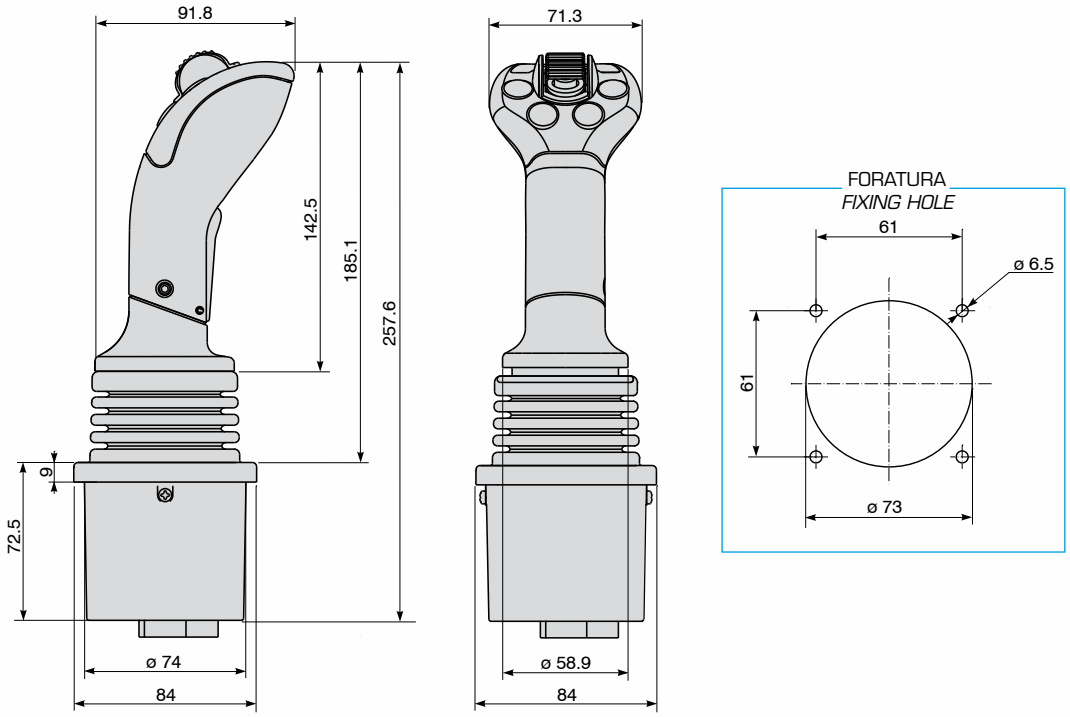
TECHNICAL SPECIFICATIONS:

Power supply 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 million operations*
Weight: *750 gr. without handle*
Electromagnetic compatibility (EMC)

**** Measured at 120mm above upper flange face***

INSTALLATION
From below the mounting panel,
Ø 73mm hole. Sealing depends on the panel mounting surface; a rigid and smooth surface is advisable.
- ***Recommended panel thickness: 3 - 7mm.***
- ***Fixing screws: M6,*** (L= panel thickness + 9mm).
- *Tightening torque 5Nm.*

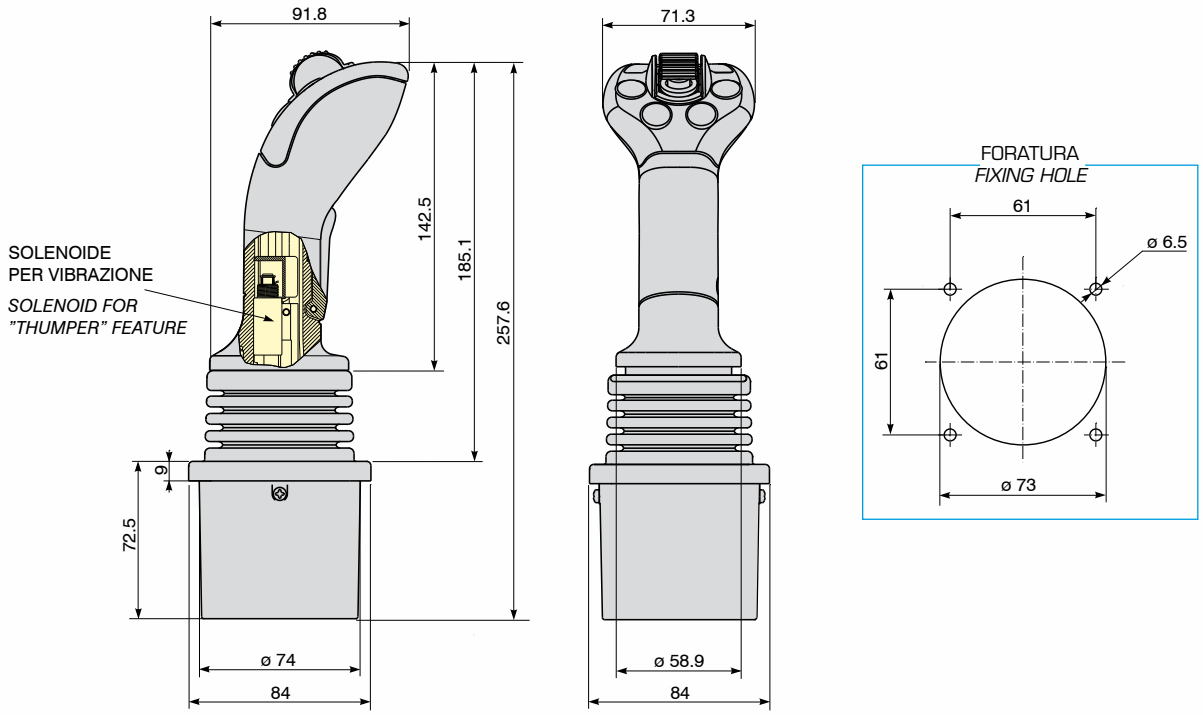
DIMENSIONI - *DIMENSIONS*



con vibrazione - *with "thumper" feature*

La funzione di vibrazione consente di inviare un impulso all'operatore attraverso il joystick ogni volta che il braccio del mezzo si sposta di una certa distanza.

Thanks to the 'thumper' feature a pulse is sent to the operator through the joystick every time the crane boom moves at a specified distance.



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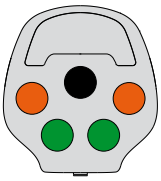
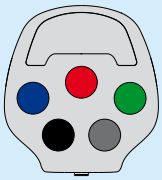
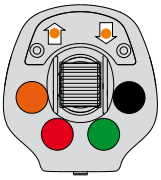
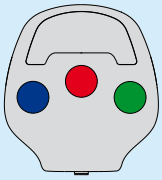
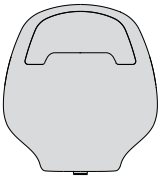
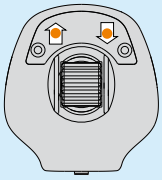
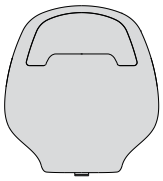
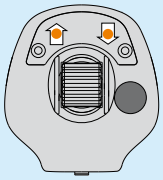
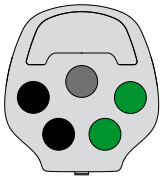
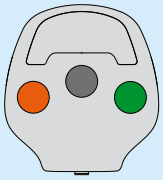
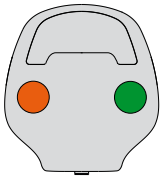
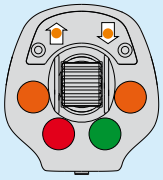
COMBINAZIONI CODIFICATE
CODIFIED SEQUENCES

P/N	JOYSTICK			INTERFACCIA *INTERFACE*
42.1000002A0			X	**C** vedi - *see* pag.10
42.1000003A0		X	X	**C** vedi - *see* pag.10
42.1000004A0			X	**C** vedi - *see* pag.10
42.1000005A0			X	**C** vedi - *see* pag.10
42.1000006A0			X	**C** vedi - *see* pag.10
42.1000007A0			X	**C** vedi - *see* pag.10

P/N	JOYSTICK			INTERFACCIA *INTERFACE*
42.1000008A0			X	**A** vedi - *see* pag.8
42.1000009A0			X	**C** vedi - *see* pag.10
42.1000010A0		X	X	**C** vedi - *see* pag.10
42.1000011A0			X	**C** vedi - *see* pag.10
42.1000012A0			X	**C** vedi - *see* pag.10
42.1000013A0			X	**C** vedi - *see* pag.10

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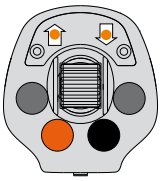
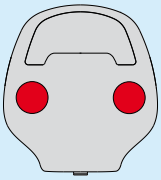
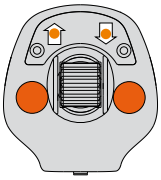
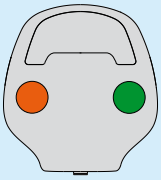
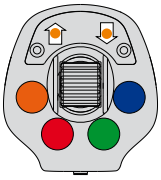
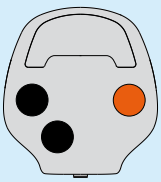
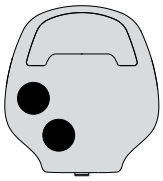
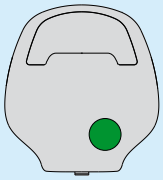
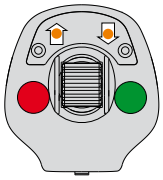
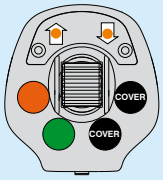
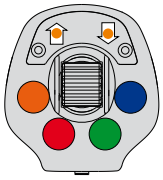
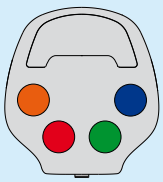
P/N	JOYSTICK			INTERFACCIA *INTERFACE*
42.1000014A0			X	**C** vedi - *see* pag.10
42.1000015A0			X	**C** vedi - *see* pag.10
42.1000016A0			X	**A** vedi - *see* pag.8
42.1000017A0			X	**A** vedi - *see* pag.8
42.1000018A0			X	**B** vedi - *see* pag.9
42.1000019A0		X	X	**B** vedi - *see* pag.9

P/N	JOYSTICK			INTERFACCIA *INTERFACE*
42.1000020A0		X	X	**B** vedi - *see* pag.9
42.1000021A0			X	**C** vedi - *see* pag.10
42.1000022A0			X	**B** vedi - *see* pag.9
42.1000023A0			X	**C** vedi - *see* pag.10
42.1000027A0			X	**C** vedi - *see* pag.10
42.1000028A0			X	**C** vedi - *see* pag.10

COMBINAZIONI CODIFICATE
CODIFIED SEQUENCES
con vibrazione - *with "thumper" feature*

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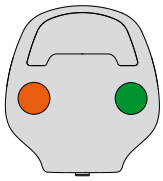
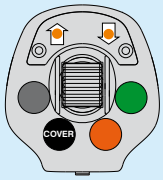
42.1000024A0			X	**C** vedi - *see* pag. 10
42.1000025A0			X	**C** vedi - *see* pag. 10

P/N	JOYSTICK			INTERFACCIA *INTERFACE*

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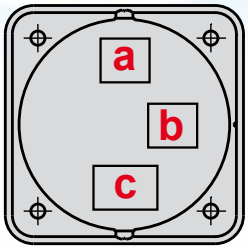
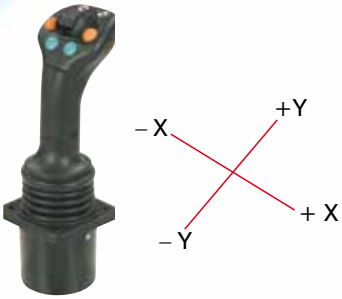
TYPE **A**





CONNETTORI - *CONNECTORS*

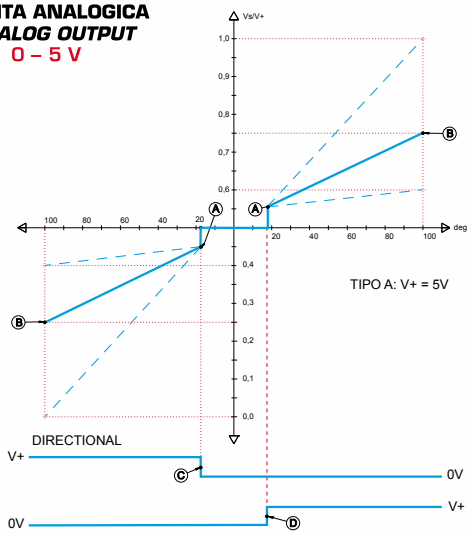
Connettori su joystick - *Joystick connectors*
"a" Connettore - *connector:*
12 pin PM Tyco 174973-2 Multilock 040
"b" Connettore - *connector:*
8 pin PM Tyco 174971-2 Multilock 040
"c" Connettore - *connector:*
16 pin PM Tyco 174975-2 Multilock 040

OPTIONAL KIT DI CONNESSIONE
*CONNECTION **OPTIONAL KIT***

27.0933.0000
KIT DI CONNESSIONE
TYCO 8+12+16 VIE
CONNECTION KIT
8+12+16 PINS TYCO

USCITA - *OUTPUT*

USCITA ANALOGICA
ANALOG OUTPUT
0 – 5 V



POINT A,B,C,D: FULLY PROGRAMMABLE

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*

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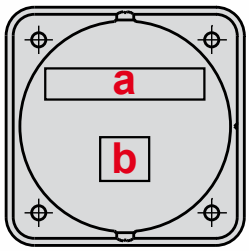
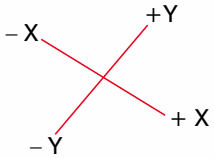
TYPE B





CONNETTORI - *CONNECTORS*

Connettore su joystick - *Joystick connector*

25 pin PM Harting 09 66 321 7703

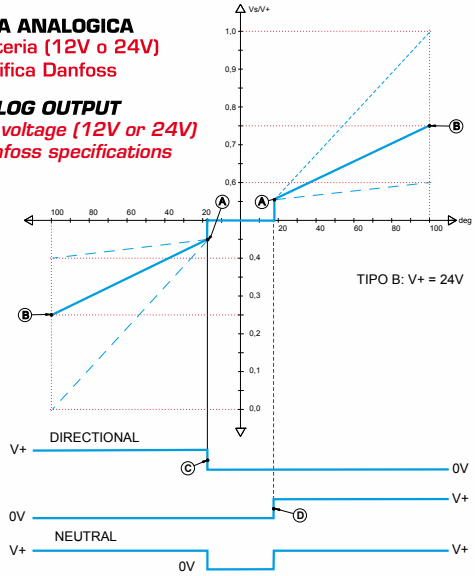
OPTIONAL KIT DI CONNESSIONE
*CONNECTION **OPTIONAL KIT***

27.0934.0000
KIT DI CONNESSIONE
PF TYCO 25 VIE
CONNECTION KIT
25 PINS PF TYCO

USCITA - *OUTPUT*

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

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



POINT A,B,C,D: FULLY PROGRAMMABLE

COLLEGAMENTO PIN - *PIN OUT*

CONNETTORE **"a"** *CONNECTOR*

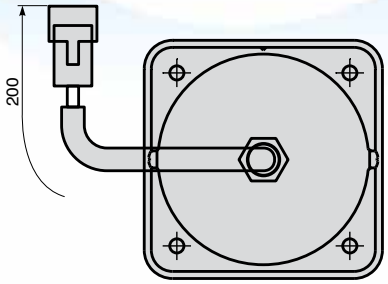
1 uscita neutro - *neutral out*
2 uscita neutro - *neutral out*
3 alimentazione per pulsanti e interruttori direzionali
power supply for push buttons and directional switches
4 uscita pulsante - *push button out*
5 prop3 (rocker)
6 uscita movimento avanti rocker on-off +(o uscita pulsante 5)
rocker forward 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 - + axis X)
right sw out on-off (transv - + axis X)
25 non utilizzato - *not used*

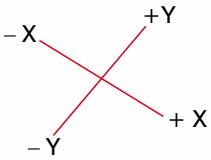
CONNETTORE **"b"** *CONNECTOR*

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

JIM
HALL EFFECT

TYPE	C





CONNETTORI - *CONNECTORS*

Connettore sul cavo di uscita - *Joystick cable connector*

Connettore 6 pin Deutsch PM - DT04-6P-C015
Secondary lock conn. Deutsch - W6P

OPTIONAL KIT DI CONNESSIONE
*CONNECTION **OPTIONAL KIT***

27.0935.0000
KIT DI CONNESSIONE
DEUTSCH 6 VIE
CONNECTION KIT
6 PINS DEUTSCH

USCITA - *OUTPUT*

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

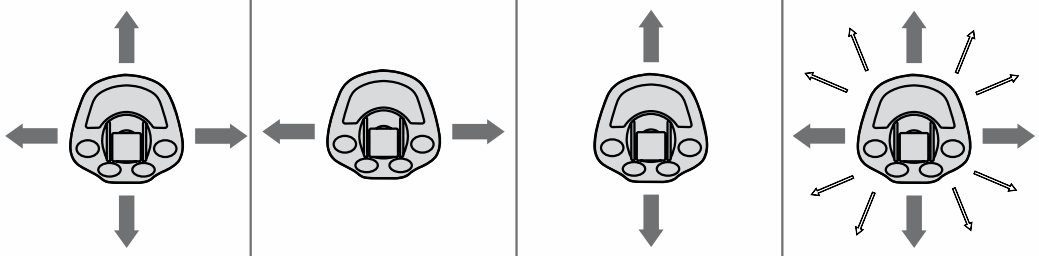
COLLEGAMENTO PIN - *PIN OUT*

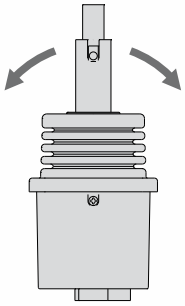
1 +VB
2 GND
3 CAN - H
4 CAN - L
5 free
6 free

OPZIONI POMELLO - *HANDLE OPTIONS*

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)*





FORZA DI AZIONAMENTO
OPERATING FORCE

1
AZIONAMENTO *OPERATING* 7 N

ROLLER TECNOLOGIA E COLORE
ROLLER COLOR AND TECHNOLOGY

X	SWITCH		HALL EFFECT	
	A	B	C	D
	Solo per **ERGO 510** - *Only for **ERGO 510***		Solo per **ERGO 510** - *Only for **ERGO 510***	

COLORI PULSANTI
PUSH BUTTON COLORS

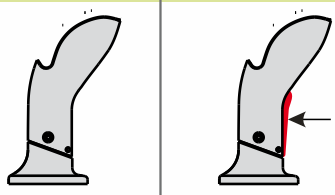
C	R	V	H
N	L	-	-

FUNZIONAMENTO PULSANTI
PUSH BUTTON OPERATION

P	B
PULSANTE *PUSH BUTTON*	BISTABILE *MAINTAINED*

CONFIGURAZIONE IMPUGNATURA
HANDLE CONFIGURATION

0	1



GRAFICA ETICHETTA - *LABEL GRAPHICS*

00	01	02	

LED di colore arancio
orange LEDs

Headquarters:

Via Tito Speri, 10

25024 Leno (Brescia) ITALY

Phone +39 030 90451

Fax +39 030 9045330

info@cobospa.it

www.cobospa.it

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