IMPUGNATURE

GRIPS

GRIFFE

HPCI

398SSC0073A01

INTRODUZIONE
INTRODUCTION
EINLEITUNG

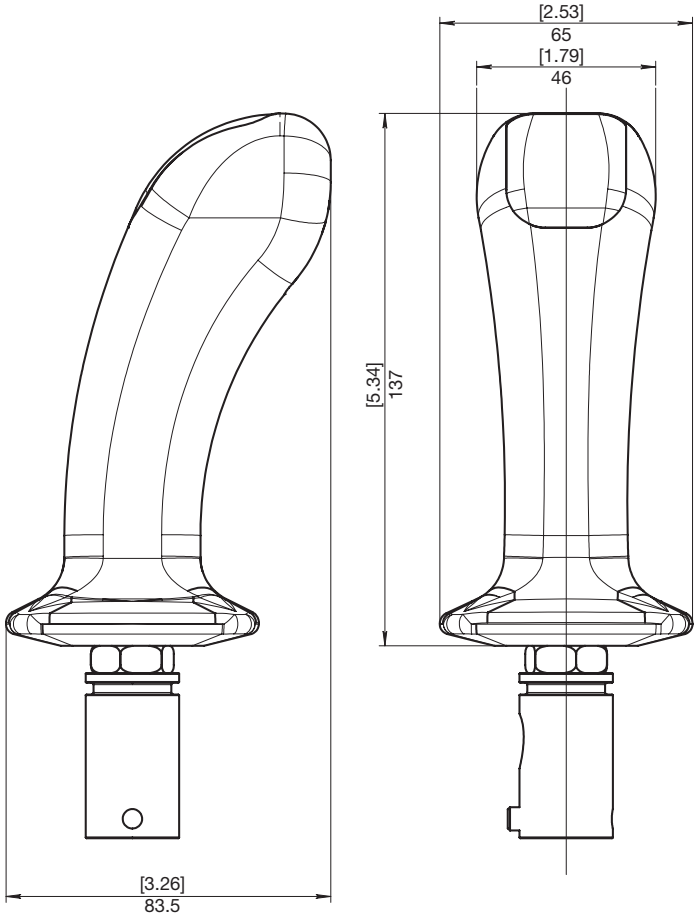
HP Hydraulic produce una gamma completa di impugnature concepite per l'utilizzo su macchine operatrici mobili per il movimento terra e per il cantiere ma che trovano impiego anche su macchine operatrici mobili per uso agricolo.
Per facilitare la selezione per ogni impugnatura vengono indicate le caratteristiche e le configurazioni standard.
Per applicazioni o configurazioni speciali prego contattare i nostri uffici.

HP Hydraulic produces a full range of hand grips designed for use on working vehicles in earthmoving applications, on building sites, and also in the farming industry.
To find the right grip for each application, the characteristics and standard configurations are indicated for each one.
For special applications or configuration, please contact our offices.

HP Hydraulic produziert eine komplette Familie von Handgriffen zur Steuerung von mobilen Arbeitsmaschinen, z.B. Baumaschinen, Erdbewegungsmaschinen, aber auch Land- und Forstmaschinen.
Um die Auswahl der Griffe zu erleichtern, werden hier die Standard-Ausführungen dargestellt. Für die Sonderausführungen sprechen Sie bitte unsere Vertriebsniederlassungen an.

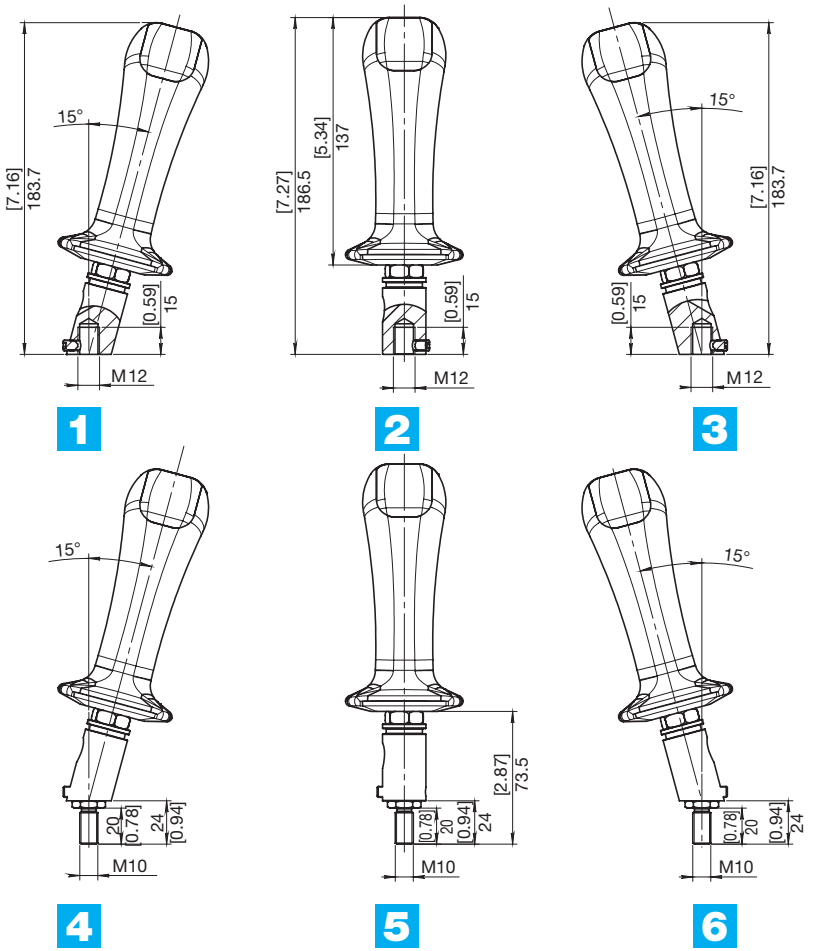
IMPUGNATURA ANATOMICA
ANATOMIC GRIP
ANATOMISCHER GRIFF

S



PERNI IMPUGNATURA
GRIP PIVOTS
GENEIGTE GRIFFE

HPCI



1 INCLINATA 15° DESTRA M12
RIGHT TILTED 15° M12
15° NACH RECHTS GENEIGT M12

2 DRITTO M12
STRAIGHT M12
GERADE M12

3 INCLINATO 15° SINISTRA M12
LEFT TILTED 15° M12
15° NACH LINKS GENEIGT M12

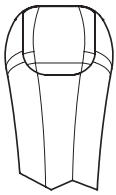
4 INCLINATA 15° DESTRA M10
RIGHT TILTED 15° M10
15° NACH RECHTS GENEIGT M10

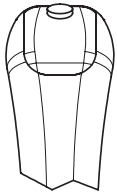
5 DRITTO M10
STRAIGHT M10
GERADE M10

6 INCLINATO 15° SINISTRA M10
LEFT TILTED 15° M10
15° NACH LINKS GENEIGT M10

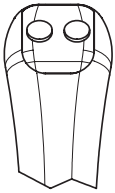
COMANDI ELETTRICI
ELECTRIC CONTROLS
ELEKTROSTEUERUNGEN

CONFIGURAZIONI SUPERIORI
TOP CONFIGURATIONS
SCHALTER OBEN

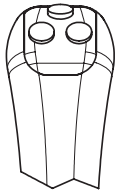




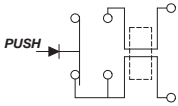
M1



M2+M3



M1+M2+M3



CAPACITÁ MICRO: DC 12V x 2A
MICRO CAPACITY: DC 12V x 2A
MIKROKAPAZITÄT: DC 12V x 2A

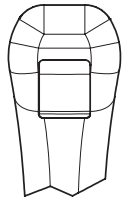
0 **NESSUN PULSANTE SUPERIORE**
NO TOP BUTTON
KEIN OBERER TASTER

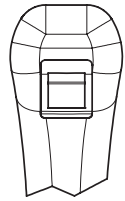
1 **M1**

2 **M2+M3**

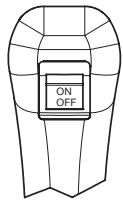
3 **M1+M2+M3**

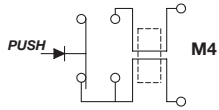
CONFIGURAZIONI FRONTALI
FRONT CONFIGURATIONS
ANORDNUNG VORN



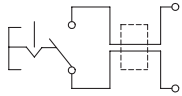


M4: Spring back





M4: On / Off



M4 On / Off

CAPACITÁ MICRO: DC 12V x 2A
MICRO CAPACITY: DC 12V x 2A
MIKROKAPAZITÄT: DC 12V x 2A

0 **NESSUN INTERRUTTORE M4**
NO M4 BUTTON
KEIN TASTER M4

1 **1 INTERRUTTORE FRONTALE M4**
A BILANCIERE CON RITORNO A MOLLA
1 FRONT SWITCH M4 WITH ROCKING LEVER
WITH SPRING RETURN-TO-CENTRE
1 FRONTSEITIGER KIPPSCHALTER M4 MIT
FEDERRÜCKLAUF IN MITTLERER STELLUNG

2 **M4 INTERRUTTORE ON/OFF**
M4 ON/OFF SWITCH
M4 EIN/AUS-SCHALTER

Questa pagina è intenzionalmente bianca
This page is intentionally blank
Diese Seite ist bewusst frei gelassen

ISTRUZIONI PER L'ORDINAZIONE
ORDERING INSTRUCTIONS
BESTELLANLEITUNG

HPCI S 1 0 1 0 000

SERIE
SERIES
SERIE

MODELLI
MODELS
MODELLE

PERNI
PIVOTS
BEFESTIGUNGSBOLZEN

Vedere pag. 50
See page 50
Siehe Seite 50

COMANDI ELETTRICI
CONFIGURAZIONE SUPERIORE
ELECTRIC CONTROLS
TOP CONFIGURATION
ELEKTROSTEUERUNGEN
ANORDNUNG OBEN

Vedere pag. 51
See page 51
Siehe Seite 51

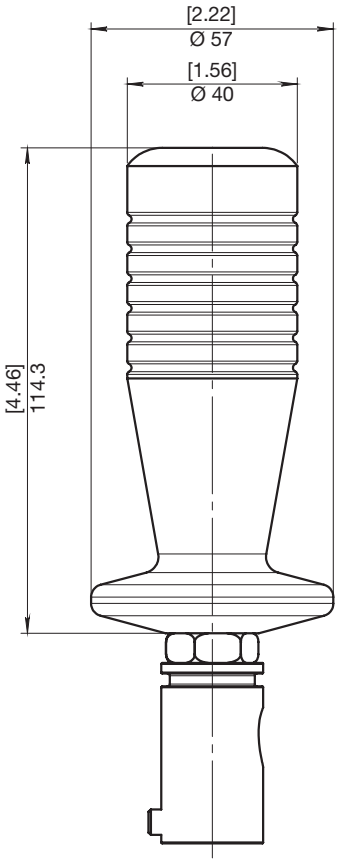
COMANDI ELETTRICI
CONFIGURAZIONE FRONTALE
ELECTRIC CONTROLS
FRONT CONFIGURATION
ELEKTROSTEUERUNGEN
ANORDNUNG VORNE

Vedere pag. 51
See page 51
Siehe Seite 51

VERSIONI SPECIALI
SPECIAL VERSIONS
SONDERAUSFÜHRUNGEN

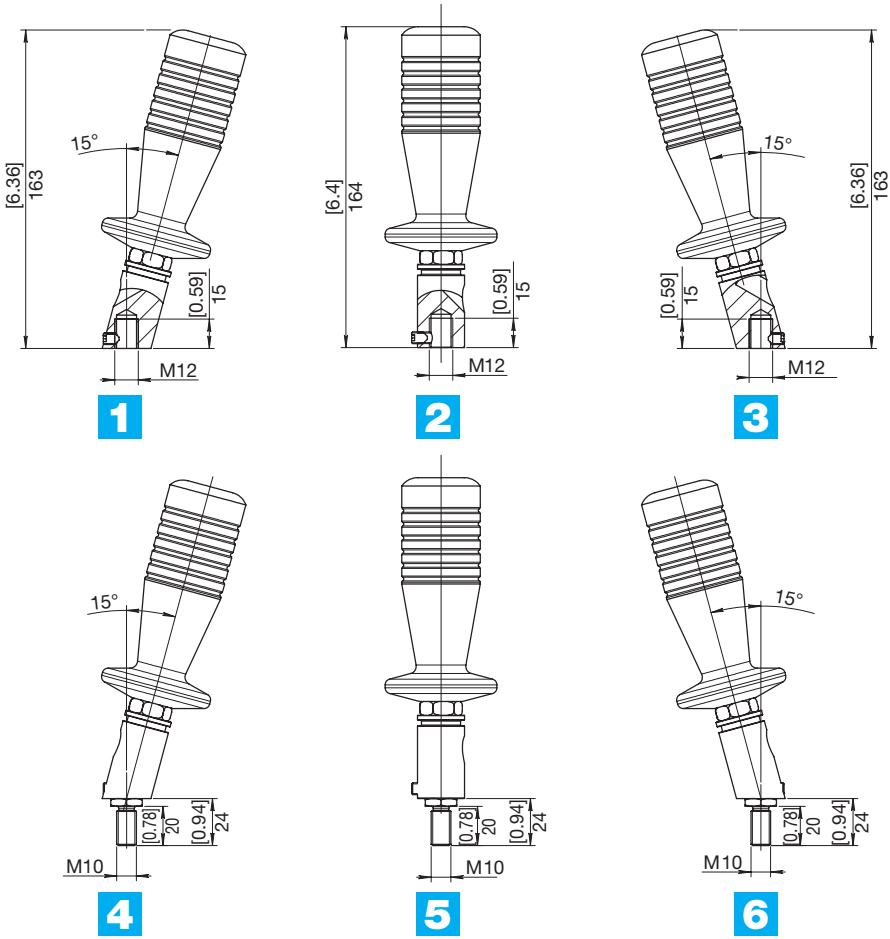
CONNETTORE
CONNECTOR
SCHALTER

0 = Senza connettore
0 = *No connector*
0 = Ohne Schalter


[2.22]
Ø 57
[1.56]
Ø 40
[4.46]
114.3

PERNI IMPUGNATURA
GRIP PIVOTS
GENEIGTE GRIFFE

HPCI



1 **INCLINATA 15° DESTRA M12**
RIGHT TILTED 15° M12
15° NACH RECHTS GENEIGT M12

2 **DRITTO M12**
STRAIGHT M12
GERADE M12

3 **INCLINATO 15° SINISTRA M12**
LEFT TILTED 15° M12
15° NACH LINKS GENEIGT M12

4 **INCLINATA 15° DESTRA M10**
RIGHT TILTED 15° M10
15° NACH RECHTS GENEIGT M10

5 **DRITTO M10**
STRAIGHT M10
GERADE M10

6 **INCLINATO 15° SINISTRA M10**
LEFT TILTED 15° M10
15° NACH LINKS GENEIGT M10

COMANDI ELETTRICI
ELECTRIC CONTROLS
ELEKTROSTEUERUNGEN

HPCI

CONFIGURAZIONI SUPERIORI
TOP CONFIGURATIONS
ANORDNUNG OBEN

T1

PULSANTE SINGOLO
CON RITORNO A MOLLA

SINGLE BUTTON WITH SPRING RETURN

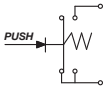
EINZELNER DRUCKTASTER
MIT RÜCKSTELLFEDER

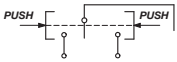
T2

PULSANTE
BASCULANTE

TOGGLE BUTTON

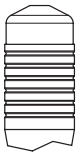
WIPPSCHALTER





CAPACITÁ MICRO: DC 12V x 8A
MICRO CAPACITY: DC 12V x 8A
MIKROKAPAZITÄT: DC 12V x 8A

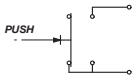
T3



PULSANTE SINGOLO
STABILE

SINGLE PUSH-PUSH BUTTON

EINZELNER DRUCKTASTER
MIT RÜCKSTELLFEDER
GERASTET



CAPACITA' MICRO:
DC 28V x 10A RESISTIVA;
DC 28V x 5A INDUTTIVA
MICRO CAPACITY:
DC 28V x 10A RESISTIVE;
DC 28V x 5A INDUCTIVE
MIKROKAPAZITAT:
DC 28V x 10A
WIDERSTANDSFAHIG;
DC 28V x 5A INDUKTIV

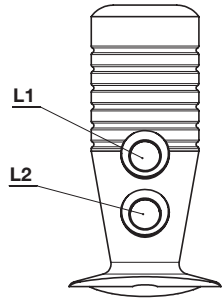
0 **NESSUN PULSANTE SUPERIORE**
NO TOP BUTTON
KEIN OBERER TASTER

B **T1 PULSANTE SINGOLO SUPERIORE**
T1 SINGLE TOP BUTTON
T1 DRUCKSCHALTER MIT FEDERRÜCKSTELLUNG

C **T2 PULSANTE BASCULANTE SUPERIORE**
T2 TOGGLE TOP BUTTON
T2 WIPPSCHALTER OBEN

D **T3 PULSANTE STABILE SUPERIORE**
T3 PUSH-PUSH TOP BUTTON
T3 DRUCKSCHALTER MIT FEDERRÜCKSTELLUNG UND RASTE

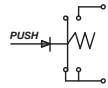
CONFIGURAZIONI FRONTALI
FRONT CONFIGURATIONS
ANORDNUNG SEITLICH



PULSANTE SINGOLO INSTABILE

SINGLE MOMENTARY BUTTON

EINZELNE DRUCKTASTER MIT
RÜCKSTELLFEDER



CAPACITA' MICRO: DC 28V x 5A RESISTIVA;
DC 28V x 2A INDUTTIVA

MICRO CAPACITY: DC 28V x 5A RESISTIVE;
DC 28V x 2A INDUCTIVE

MIKROKAPAZITAT: DC 28V x 5A WIDERSTANDSFAHIG;
DC 28V x 2A INDUKTIV

0 **NESSUN PULSANTE LATERALE**
NO SIDE BUTTON
OHNE SEITLICHEN DRUCKTASTER

F **L1 PULSANTE INSTABILE**
L1 MOMENTARY BUTTON
L1 DRUCKSCHALTER MIT FEDERRÜCKSTELLUNG

G **L2 PULSANTE INSTABILE**
L2 MOMENTARY BUTTON
L2 DRUCKSCHALTER MIT FEDERRÜCKSTELLUNG

H **L1 + L2**

ISTRUZIONI PER L'ORDINAZIONE
ORDERING INSTRUCTIONS
BESTELLANLEITUNG

HPCI K 1 B 0 0 000

SERIE
SERIES
SERIE

MODELLI
MODELS
MODELLE

PERNI
PIVOTS
BEFESTIGUNGSBOLZEN
Vedere pag. 55
See page 55
Siehe Seite 55

COMANDI ELETTRICI
CONFIGURAZIONE SUPERIORE
ELECTRIC CONTROLS
TOP CONFIGURATION
ELEKTROSTEUERUNGEN
ANORDNUNG OBEN
Vedere pag. 56
See page 56
Siehe Seite 56

COMANDI ELETTRICI
CONFIGURAZIONE FRONTALE
ELECTRIC CONTROLS
FRONT CONFIGURATION
ELEKTROSTEUERUNGEN
ANORDNUNG VORNE
Vedere pag. 56
See page 56
Siehe Seite 56

VERSIONI SPECIALI
SPECIAL VERSIONS
SONDERAUSFÜHRUNGEN

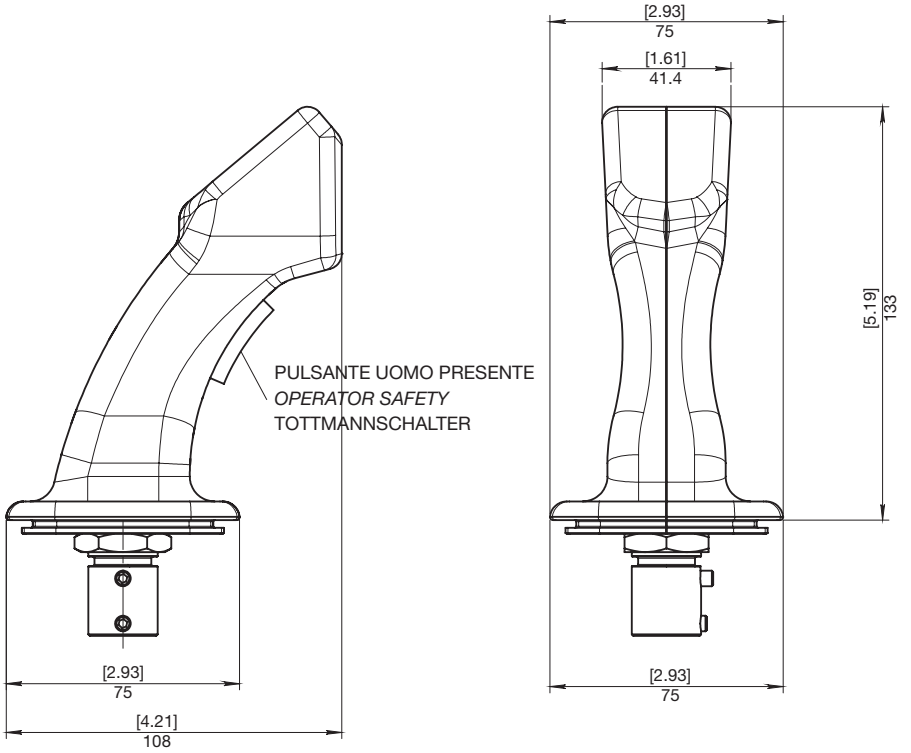
CONNETTORE
CONNECTOR
STECKER
0 = Senza connettore
0 = *No connector*
0 = Ohne Schalter

IMPUGNATURA MULTIFUNZIONE
MULTIFUNCTION GRIP
MULTIFUNKTIONS GRIFF

HPCI

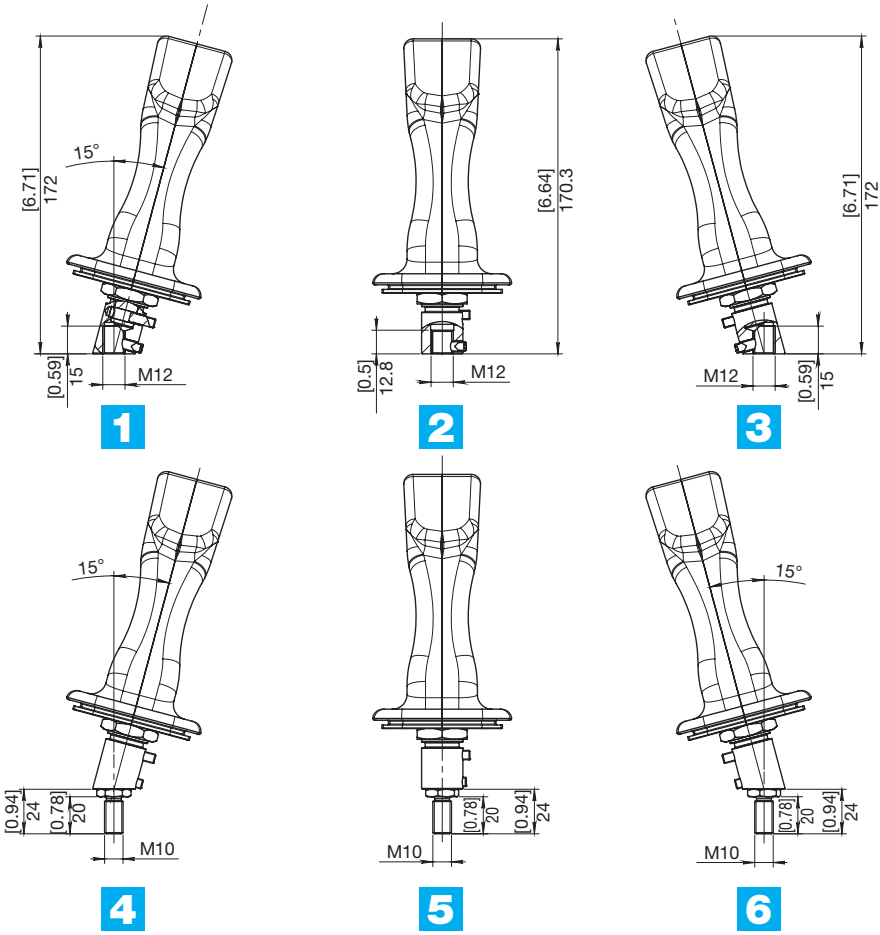
E **IMPUGNATURA ERGONOMICA**
ERGONOMIC HANDLE
ERONOMISCHER GRIFF

F **VERSIONE "E" + PULSANTE UOMO PRESENTE**
VERSION "E" + NO OPERATOR SAFETY
VERSION "E" + TOTMANNSCHALTER



PERNI IMPUGNATURA
GRIP PIVOTS
ANSCHLUSSGEWINDE FÜR GRIFFE

HPCI



1 INCLINATA 15° DESTRA M12
RIGHT TILTED 15° M12
15° NACH RECHTS GENEIGT M12

2 DRITTO M12
STRAIGHT M12
GERADE M12

3 INCLINATO 15° SINISTRA M12
LEFT TILTED 15° M12
15° NACH LINKS GENEIGT M12

4 INCLINATA 15° DESTRA M10
RIGHT TILTED 15° M10
15° NACH RECHTS GENEIGT M10

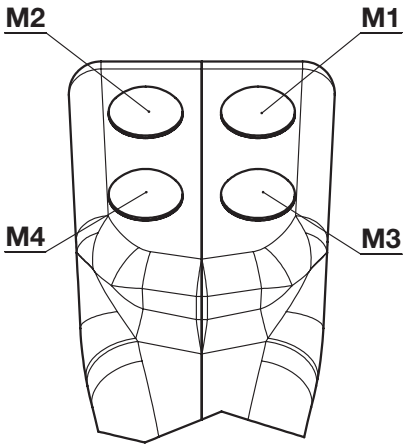
5 DRITTO M10
STRAIGHT M10
GERADE M10

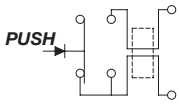
6 INCLINATO 15° SINISTRA M10
LEFT TILTED 15° M10
15° NACH LINKS GENEIGT M10

COMANDI ELETTRICI
ELECTRIC CONTROLS
ELEKTROSTEUERUNGEN

HPCI

CONFIGURAZIONI SUPERIORI
TOP CONFIGURATIONS
ANORDNUNG OBEN





CAPACITÁ MICRO: DC 12V x 2A
MICRO CAPACITY: DC 12V x 2A
MIKROKAPAZITÄT: DC 12V x 2A

COLORE DEI PULSANTI SOLO VERDE
BUTTONS ONLY AVAILABLE IN GREEN
FARBE DER TASTER NUR GRÜN

0 **NESSUN PULSANTE SUPERIORE**
NO TOP BUTTON
KEIN OBERER TASTER

1 **M1**

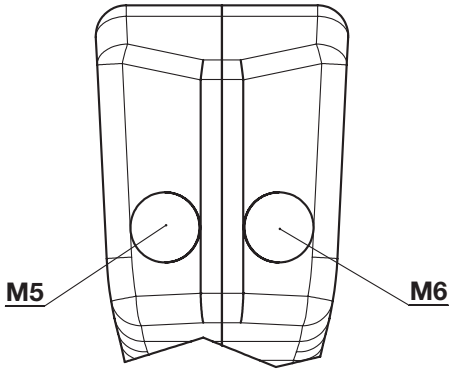
2 **M1+M2**

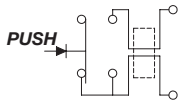
3 **M1+M2+M3**

4 **M1+M2+M3+M4**

5 **M2**

CONFIGURAZIONI FRONTALI
FRONT CONFIGURATIONS
ANORDNUNG VORNE





CAPACITÁ MICRO: DC 12V x 2A
MICRO CAPACITY: DC 12V x 2A
MIKROKAPAZITÄT: DC 12V x 2A

COLORE DEI PULSANTI SOLO VERDE
BUTTONS ONLY AVAILABLE IN GREEN
FARBE DER TASTER NUR GRÜN

0 **NESSUN PULSANTE SUPERIORE**
NO TOP BUTTON
KEIN OBERER TASTER

1 **M5**

2 **M5+M6**

3 **M6**

ISTRUZIONI PER L'ORDINAZIONE
ORDERING INSTRUCTIONS
BESTELLANLEITUNG

HPCI E 1 0 1 0 000

SERIE
SERIES
SERIE

MODELLI
MODELS
MODELLE

E = Senza presenza uomo
F = Con presenza uomo
E = *Without No Operator contact*
F = *With No Operator contact*
E = ohne Totmannschalter
F = mit Totmannschalter

PERNI
PIVOTS
BEFESTIGUNGSBOLZEN

Vedere pag. 59
See page 59
Siehe Seite 59

COMANDI ELETTRICI
CONFIGURAZIONE SUPERIORE
ELECTRIC CONTROLS
TOP CONFIGURATION
ELEKTROSTEUERUNGEN
ANORDNUNG OBEN

Vedere pag. 60
See page 60
Siehe Seite 60

COMANDI ELETTRICI
CONFIGURAZIONE FRONTALE
ELECTRIC CONTROLS
FRONT CONFIGURATION
ELEKTROSTEUERUNGEN
ANORDNUNG VORNE

Vedere pag. 60
See page 60
Siehe Seite 60

VERSIONI SPECIALI
SPECIAL VERSIONS
SONDERAUSFÜHRUNGEN

CONNETTORE
CONNECTOR
STECKER

0 = Senza connettore
0 = *No connector*
0 = Ohne Schalter

IMPUGNATURA MULTIFUNZIONE
MULTIFUNCTION GRIP
MULTIFUNKTIONS GRIFF

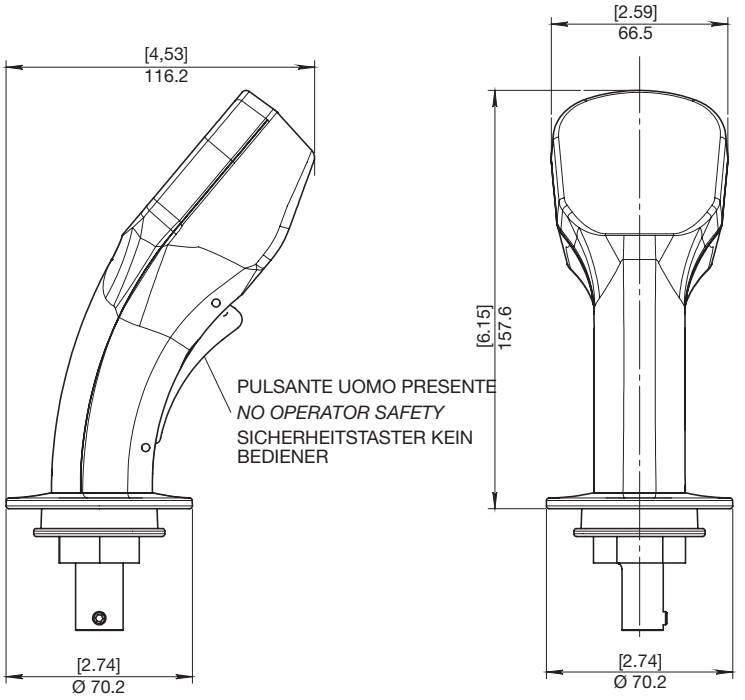
HPCI

T IMPUGNATURA MULTIFUNZIONE
MULTIFUNCTION HANDLE
MULTIFUNKTIONS GRIFF

H VERSIONE “T” + PULSANTE UOMO PRESENTE
VERSION “T” WITH NO OPERATOR CONTACT
VERSION “T” MIT TOTMANNSCHALTER

V COMANDO ELETTROPROPORZIONALE CON USCITA PWM
MULTIFUNCTION GRIP WITH PROPORTIONAL PWM SIGNAL
MULTIFUNKTIONSGRIFF MIT PWM SIGNAL

Z VERSIONE “V” + PULSANTE UOMO PRESENTE
VERSION “V” NO OPERATOR CONTACT
VERSION “V” + TOTMANNSCHALTER



IMPUGNATURA MULTIFUNZIONE
MULTIFUNCTION GRIP
MULTIFUNKTIONS GRIFF

L'impugnatura è disponibile con comandi elettrici, con comandi elettroproporzionali (al massimo due) o con la combinazione degli stessi.
Il segnale di potenza (PWM) è generato da una scheda elettronica integrata nell'impugnatura; tuttavia se nell'impianto è già presente un'unità elettronica esterna il roller switch fornirà la sola differenza di potenziale che verrà poi elaborata in segnale di potenza.
Nell'ipotesi di impugnatura avente due comandi elettro-proporzionali, montata su servocomando a due assi idraulici, si ottiene il controllo di 4 assi.

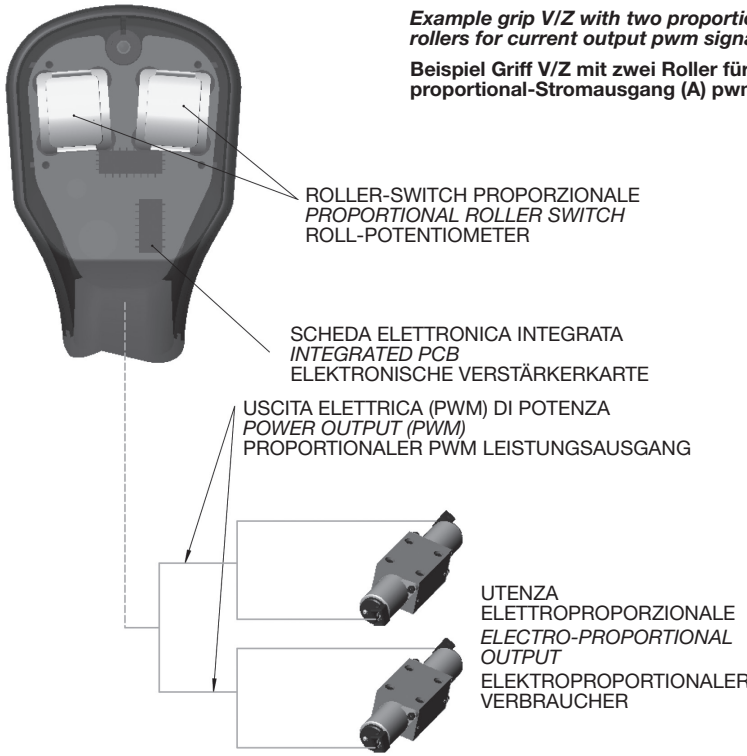
Handles are available with electric controls, with electronic proportional controls (two controls maximum), or with both.
The power signal (PWM) is generated by a control unit integrated into the handle. Nonetheless if the system already features an exteral electronic unit, the roller switch will deliver exclusively the potential difference, which is then processed in power signal.
In case of a handle with two electro-proportional controls, fitted on a two-axle servocontrol, the control on 4-axle is achieved.

Handgriffe sind verfügbar mit Elektrosteuerungen, Proportionalausgängen (max.2 Stk) oder mit beiden.
Das Leistungssignal (pwm) wird von einer Elektronikkarte erzeugt, die in dem Griff eingebaut ist; wenn diese jedoch schon in einer externen Elektronik vorhanden ist, gibt der Rolltaster eine Differenzspannung aus, die von der externen Elektronikkarte dann als Signaleingang ausgewertet wird.
Wenn der Griff auf dem Fernsteuergeber mit zwei hydraulischen Achsen auch zwei elektroproportionale Rollgeber aufgebaut hat, erhält man eine Steuerung für vier Achsen.

Esempio di impugnatura V/Z con due roller proporzionali per comando PWM (A)

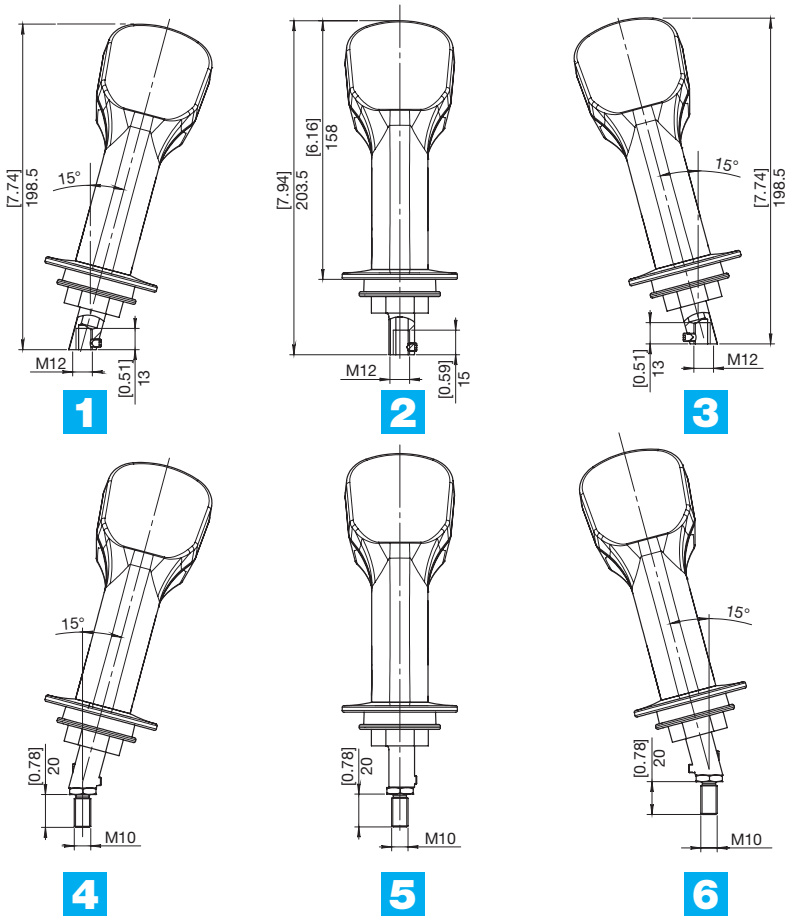
Example grip V/Z with two proportional rollers for current output pwm signal (A)

Beispiel Griff V/Z mit zwei Roller für proportional-Stromausgang (A) pwm



PERNI IMPUGNATURA
GRIP PIVOTS
GRIFFBEFESTIGUNG

HPCI



1 **INCLINATA 15° DESTRA M12**
RIGHT TILTED 15° M12
15° NACH RECHTS GENEIGT M12

2 **DRITTO M12**
STRAIGHT M12
GERADE M12

3 **INCLINATO 15° SINISTRA M12**
LEFT TILTED 15° M12
15° NACH LINKS GENEIGT M12

4 **INCLINATA 15° DESTRA M10**
RIGHT TILTED 15° M10
15° NACH RECHTS GENEIGT M10

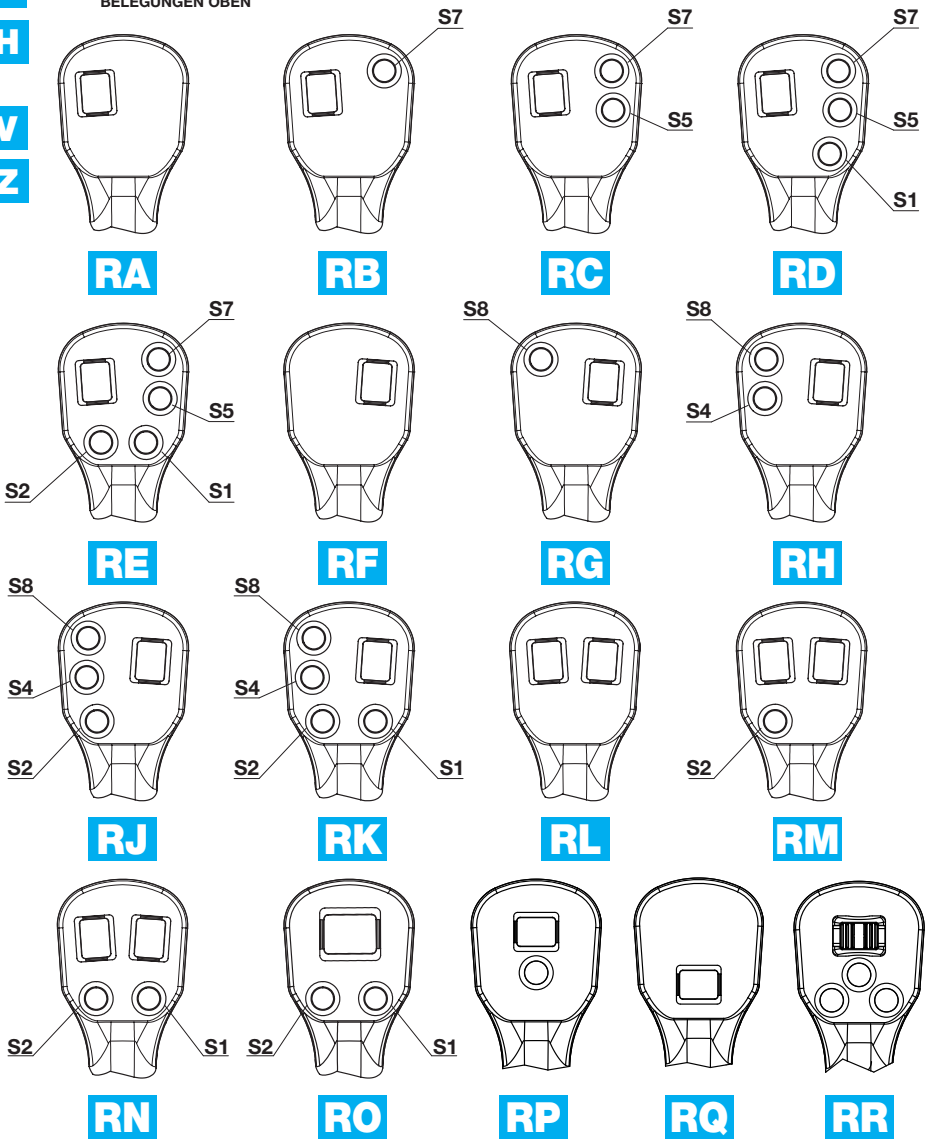
5 **DRITTO M10**
STRAIGHT M10
GERADE M10

6 **INCLINATO 15° SINISTRA M10**
LEFT TILTED 15° M10
15° NACH LINKS GENEIGT M10

COMANDI ELETTRICI - PULSANTI E ROLLER PROPORZIONALI
ELECTRIC CONTROLS - PUSHBUTTONS AND ROLLER SWITCHES
ELEKTROSTEUERUNGEN - DRUCKTASTER UND ROLLPOTENTIOMETER

T H V Z

CONFIGURAZIONI SUPERIORI
TOP CONFIGURATIONS
BELEGUNGEN OBEN

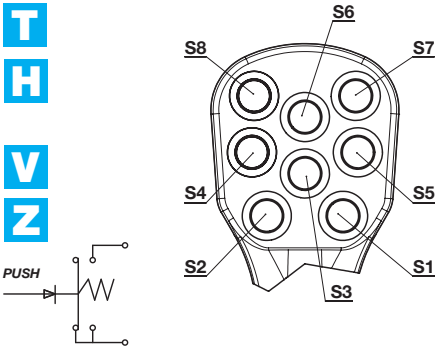


COMANDI ELETTRICI - PULSANTI
ELECTRIC CONTROLS - PUSH BUTTONS
ELEKTROSTEUERUNGEN - DRUCKTASTER

HPCI

CONFIGURAZIONI SUPERIORI
TOP CONFIGURATIONS
ANORDNUNG OBEN

T
H
V
Z

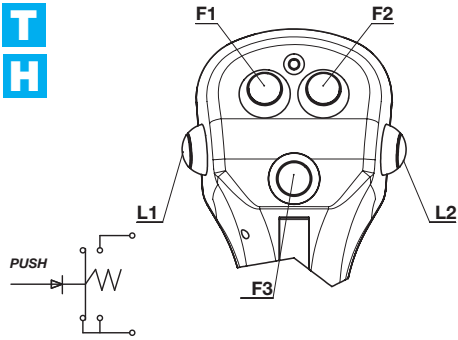


00 **NESSUN PULSANTE SUPERIORE**
NO TOP BUTTON
KEIN OBERER TASTER

01	S1
02	S3
03	S1+S2
04	S4+S5
05	S1+S2+S5
06	S1+S2+S4+S5
07	S1+S2+S3+S4+S5
08	S1+S2+S3+S4+S5+S6
09	S1+S2+S3+S4 +S5+S7+S8
0A	S1+S2+S3+S4 +S5+S6+S7+S8
0B	S3+S7+S8
0C	S1+S2+S4+S5+S7+S8
0D	S4+S8
0E	S5
0F	S4
0G	S5+S7
0H	S3+S4+S5+S6
0I	S4+S5+S6
0J	S1+S2+S3
0K	S4+S5+S7+S8
0L	S6
0M	S1+S2+ S4+S5+S6
0N	S3+S7
0P	S1+S5+S7
0Q	S1+S2+S7+S8
0R	S2+S4
0S	S3+S4+S5+S7+S8
0T	S1+S7
0U	S3+S6
0V	S8
0W	S2+S8
0Z	S1+S2+S6

CONFIGURAZIONI FRONTALI
FRONT CONFIGURATIONS
ANORDNUNG VORNE

T
H



CAPACITA' MICRO: DC 28V x 5A RESISTIVA ;
DC 28V x 2A INDUTTIVA

MICRO CAPACITY : DC 28V x 5A RESISTIVE
DC 28V x 2A INDUCTIVE

MIKROKAPAZITAT: DC 28V x 5A WIDERSTANDSFAHIG
DC 28V x 2A INDUKTIV

Per le versioni "V"e "Z" non sono previsti pulsanti FRONTALI.

The versions "V" and "Z" are not prepared for front switches.

Die Ausführungen "V" und "Z" sind nicht vorbereitet für den frontseitigen Einbau von Tastern.

0 **NESSUN PULSANTE SUPERIORE**
NO TOP BUTTON
KEIN OBERER TASTER

1	L1
2	L2
3	L1+L2
4	F1
5	F2
6	F3
7	F1+F2
8	F1+F2+F3
9	F1+F2+F3+L1+L2
A	F1+F2+L1+L2
B	F3+L1+L2
C	F1+L1
D	F1+F3
E	F1+F3+L1+L2

PROGRAMMAZIONE PROFILO USCITA PWM (A)
PROGRAMMING OF OUTPUT CURRENT PWM (A)
PROGRAMMIERUNG DES STROMAUSGANGS PWM (A)

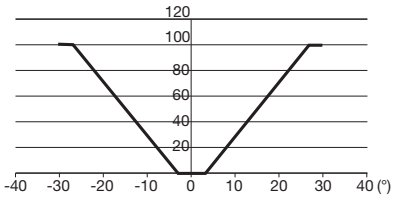
La programmazione della scheda elettronica, integrata nella impugnatura H/T, è specifica per ogni applicazione in quanto la rampa è progettata per assolvere al meglio le diverse condizioni di lavoro.
Si dovrà quindi richiedere ad HP Hydraulic SpA l'assegnazione del codice a 3 cifre una volta concordata l'applicazione e la corretta rampa (corrente erogata, % Imax, in funzione della posizione del roller, gradi).
A seguire esempi di rampe disponibili alla configurazione standard dei parametri di tensione, corrente e frequenza di PWM della scheda elettronica.

The integrated PCB in the H/T hand grip is programmed specifically for each application as the ramp is designed to respond optimally to each operating condition.
You will therefore have to ask HP Hydraulic SpA to assign you a 3-figure code once the application and correct ramp have been agreed (current delivered, % Imax, depending on the position of the roller switch, degrees).
Below are some examples of ramps available in standard configurations for the voltage, current and PWM frequency of the PCB.

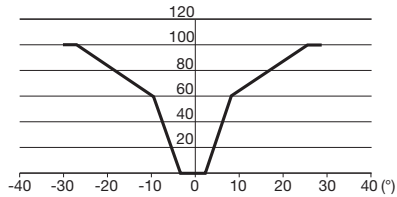
Die Programmierung der integrierten Elektronikkarte für die Handgriffe H/T ist kundenspezifisch für jede Anwendung in Bezug auf die Rampen mit dem Ziel der optimalen Bedienbarkeit der Maschine.
Daher muß der Kunde eine für seine Anwendung spezifische Variantennummer mit 3 Ziffern von HP Hydraulic SpA erhalten, wenn die Programmierung einmal freigegeben ist (Stromversorgung, % von Imax in Abhängigkeit von der Position des Rollpotentiometers, Drehwinkel).
Beachten Sie die Beispiele der verfügbaren Rampen in der Standard-Konfiguration und die zugehörigen Parameter Spannung, Strom und pwm-Frequenz der Elektronikkarte.

V

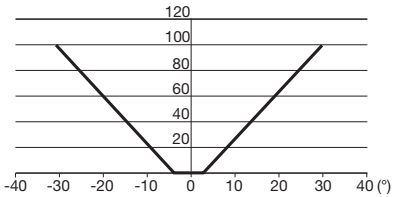
Z



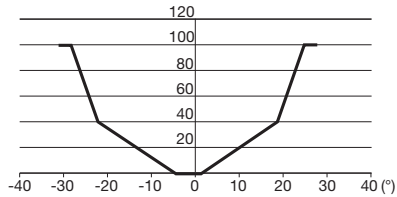
5 0 0



5 0 1



5 0 2



5 0 3

0 0 0

NESSUN SEGNALE PWM
NO PWM SIGNAL
KEIN PWM-SIGNAL

x= Angolo di rotazione del roller (gradi) - y= Corrente erogata, percentuale del max (%Imax)
x= angle of rotation of the roller switch (degrees)- y = current delivered, percentage of max (%imax)
x= Drehwiinkel des Rollgebers - y= Stromversorgung % von Imax

V
Z

ALIMENTAZIONE	*INPUT VOLTAGE*	VERSORGUNG
TENSIONE DI ALIMENTAZIONE	**POWER SUPPLY VOLTAGE**	**VERSORGUNGSSPANNUNG**
Batteria 12 Vdc nominali: 9-16 Vdc effettivi Batteria 24 Vdc nominali: 18-30 Vdc effettivi	*Nominal 12 Vdc battery:* *9-16 Vdc effective* *Nominal 24 Vdc battery:* *18-30 Vdc effective*	Batterie-Nennspannung 12VDC: 9-16 VDC effektiv Batterie-Nennspannung 24VDC: 18-30 VDC effektiv
USCITE ELETTRICHE DI POTENZA (PWM)	***POWER OUTPUTS (PWM)***	**ELEKTRONISCHE LEISTUNGSAUSGÄNGE PWM**
Corrente massima - 1 canale 3 A (@ 12 Vdc) 2 A (@ 24 Vdc)	*Maximum current - 1 channel* *3 A (@ 12 Vdc)* *2 A (@ 24 Vdc)*	Max. Strom - Kanal 3 A bei 12 VDC 2 A bei 24 VDC
Corrente massima - totale 6.5 A (@ 12 Vdc) 4.5 A (@ 24 Vdc)	*Maximum current - total* *6.5 A (@ 12 Vdc)* *4.5 A (@ 24 Vdc)*	Max. Gesamtstrom 6,5 A bei 12 VDC 4,5 A bei 24 VDC
Frequenza PWM 100 - 400 Hz	*PWM frequency* *100 - 400 Hz*	pwm-Frequenz 100 400 Hz
CONFIGURAZIONI STANDARD	***STANDARD CONFIGURATIONS***	**STANDARD KONFIGURATION**
Le configurazioni standard di programmazione hanno i seguenti parametri comuni:	*Standard programming configurations share the following parameters:*	Die Elektronikkarten haben folgende Parameter gemeinsam programmiert:
Tensione di alimentazione 12Vdc	*Supply voltage: 12V DC*	Versorgungsspannung 12 VDC
Corrente massima (per singolo canale) Imax 1.5A	*Maximum current (per single channel) Imax 1.5A*	Max. Ausgangsstrom (ein Kanal) Imax = 1,5 A
Frequenza PWM 200 Hz	*PWM frequency: 200Hz*	pwm-Frequenz 200 Hz
Rampe di corrente soft, sia in incremento che in decremento e diverse curve di uscita (corrente erogata in funzione della posizione del roller	*Soft current ramps both when increasing and decreasing, and different output curves (current supplied in accordance with the position of the roller switch).*	Sanfte Stromrampen, sowohl steigend als auch fallend, und verschiedene Ausgangskurven (Stromversorgung abhängig von der Position der Rollgeber)
GRADO DI PROTEZIONE	***PROTECTION RATING***	**SCHUTZART**
Nelle configurazioni con pulsanti e roller l'impugnatura presenta grado di protezione IP67	*In configurations with buttons and roller switches, the hand grip is IP67 protected.*	Alle Griffe mit elektrischen Druck-tastern und Rollpotentiometern haben die Schutzart IP67

ISTRUZIONI PER L'ORDINAZIONE
ORDERING INSTRUCTIONS
BESTELLANLEITUNG

HPCI T 1 01 1 0 000 000

SERIE
SERIES
SERIE

MODELLI
MODELS
MODELLE

T = Impugnatura multufunzione
H = Versione "T" + pulsante uomo presente

T = *Multifunction grip*
H = *Version "T" with No Operator contact*

T = Multifunktionsgriff
H = Version "T" mit Totmannschalter

V = Comando elettroproporzionale con uscita PWM
Z = Versione "V" + pulsante uomo presente

V = *Multifunction grip with proportional pwm signal*
Z = *Version "V" No Operator contact*

V = Multifunktionsgriff mit pwm Signal
Z = Version "V" + Totmannschalter

PERNI
PIVOTS
BEFESTIGUNGSGEWINDE

Vedere pag. 64
See page 64
Siehe Seite 64

COMANDI ELETTRICI
CONFIGURAZIONE SUPERIORE
ELECTRIC CONTROLS
TOP CONFIGURATION
ELEKTROSTEUERUNGEN
ANORDNUNG OBEN

Vedere pag. 65-66
See pages 65-66
Siehe Seite 65-66

VERSIONI SPECIALI
SPECIAL VERSIONS
SONDERAUSFÜHRUNGEN

PROGRAMMAZIONE PROFILO USCITA PWM (A)
PROGRAMMING OF OUTPUT CURRENT PWM (A)
PROGRAMMIERUNG DES STROMAUSGANGS PWM (A)

000 = Nessun segnale
500 = Vedere pag.(67) / *See pag. (67)* / Siehe Seite (67)
501 = Vedere pag.(67) / *See pag. (67)* / Siehe Seite (67)
502 = Vedere pag.(67) / *See pag. (67)* / Siehe Seite (67)
503 = Vedere pag.(67) / *See pag. (67)* / Siehe Seite (67)

CONNETTORE
CONNECTOR
STECKER

0 = Senza connettore
0 = *No connector*
0 = Ohne Schalter

COMANDI ELETTRICI
CONFIGURAZIONE FRONTALE
ELECTRIC CONTROLS
FRONT CONFIGURATION
ELEKTROSTEUERUNGEN
ANORDNUNG VORNE

Vedere pag. 66
See page 66
Siehe Seite 66