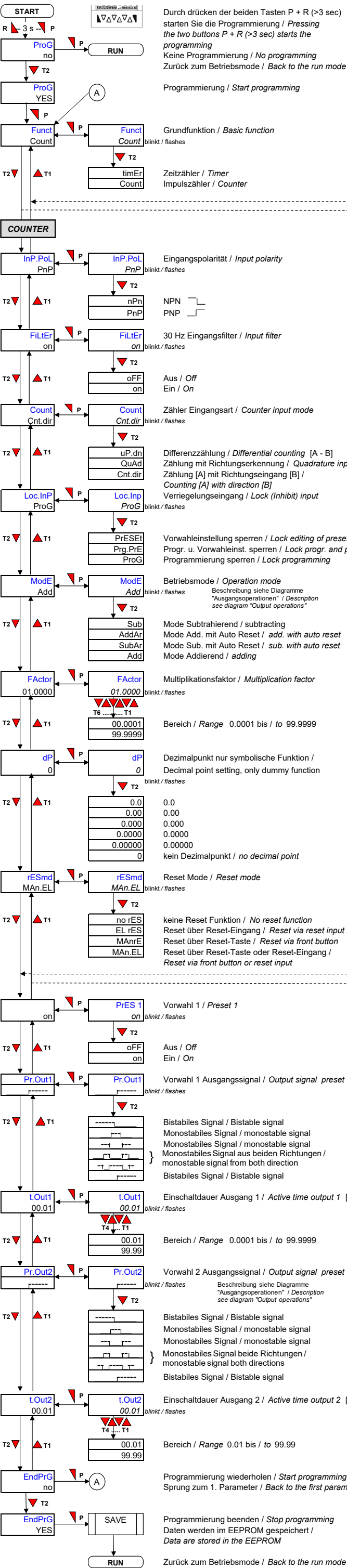
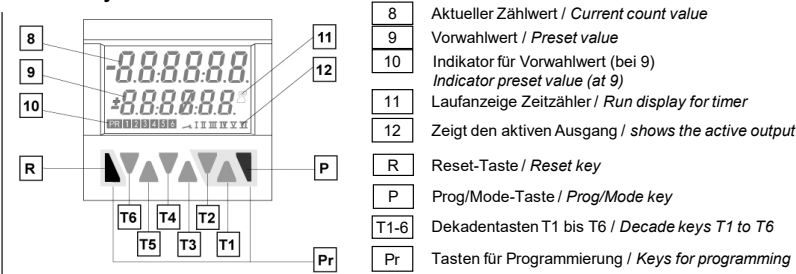


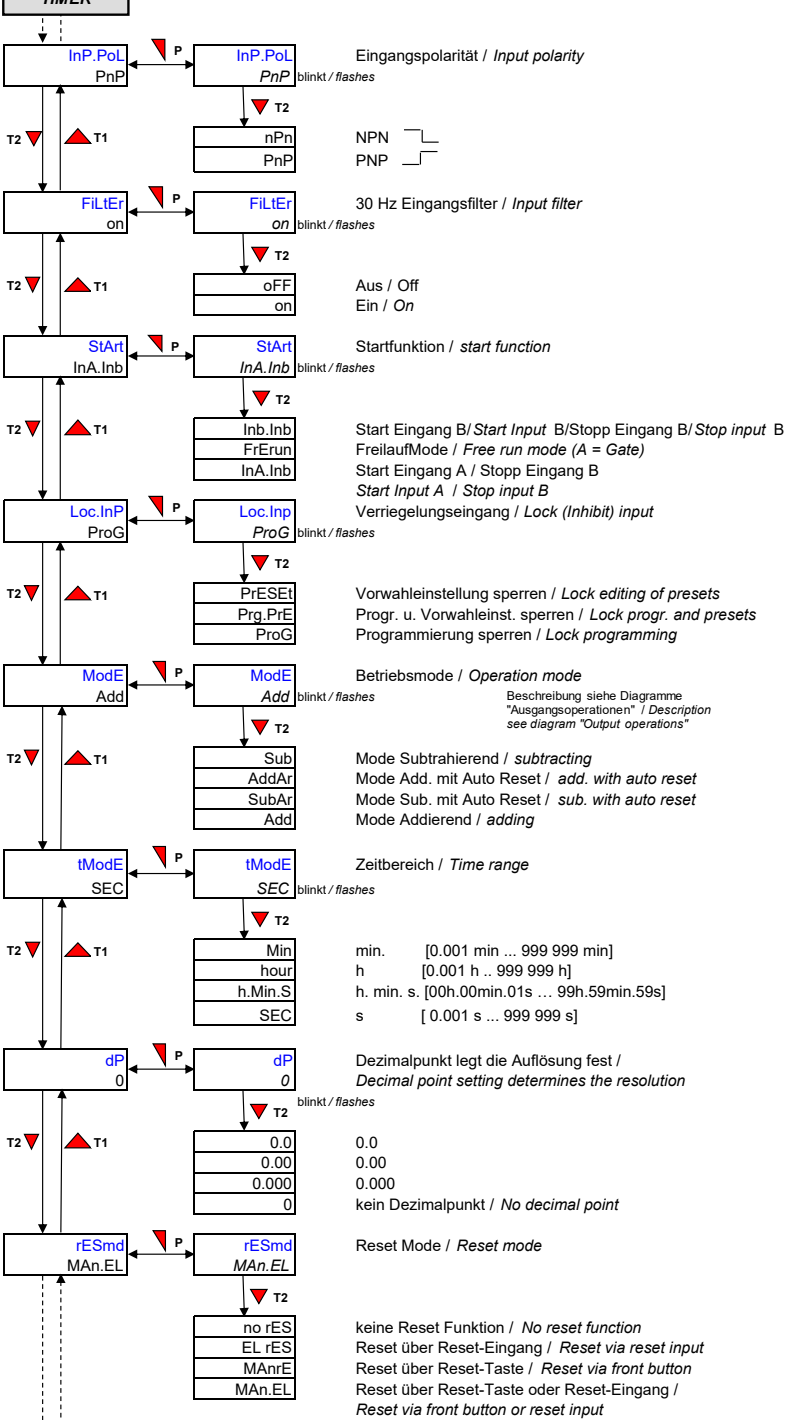
PROGRAMMIERUNG DEUTSCH / PROGRAMMING ENGLISH



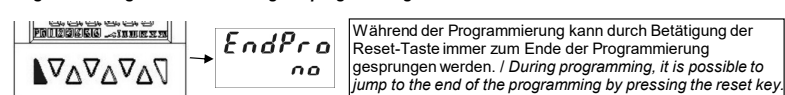
Tasten / Keys



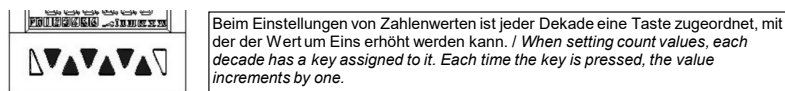
TIMER



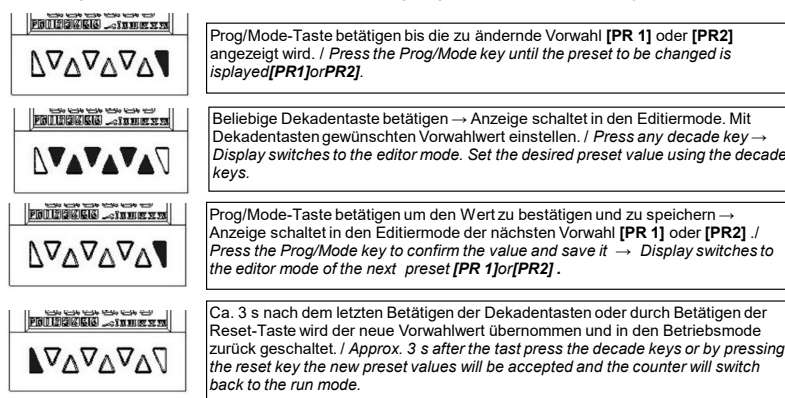
Programmierung beenden / Ending the programming



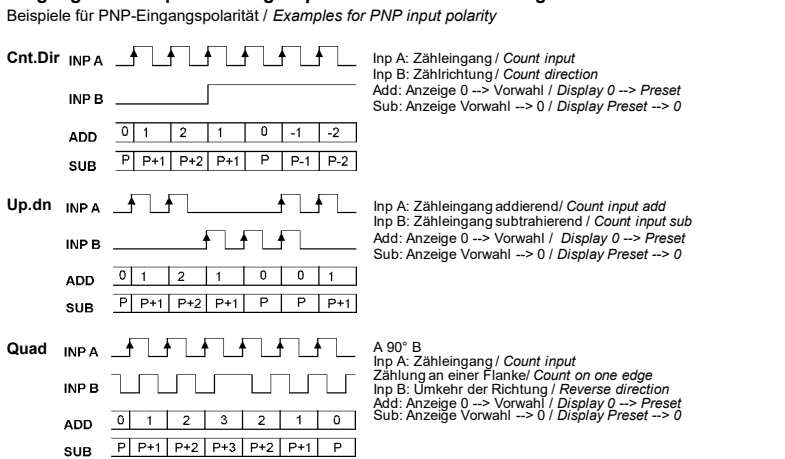
Einstellen von Zahlenwerten / Setting count values



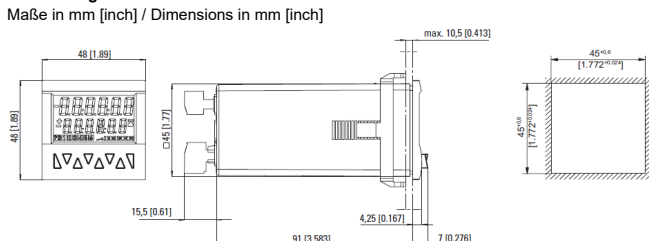
Einstellung von Vorwahlwerten über die Tastatur / Setting the preset values via decade keys



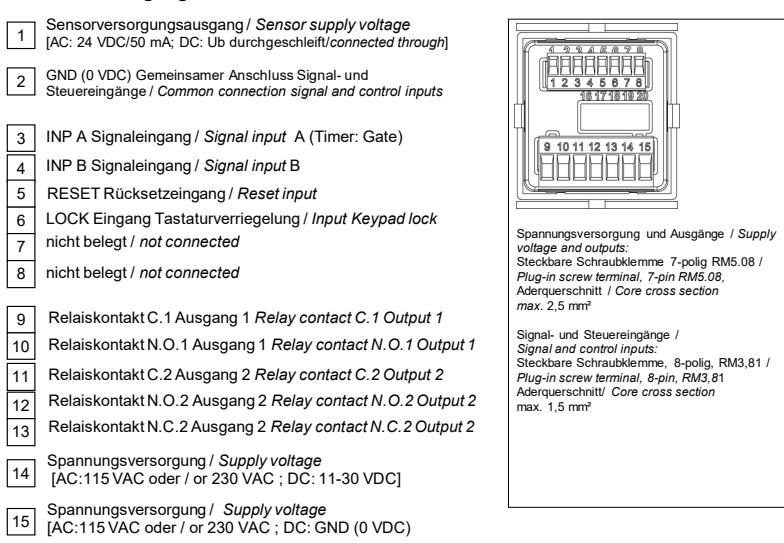
Eingangsarten Impulszählung / Input modes: Pulse counting



Abmessungen - Schalttafelanschnitt / Dimensions - Panel Cut-out



Anschlussbelegung / Connections



Technische Daten / Technical Data

Anzeige / Display	LCD 2 x 6-stellig / digit
Übersteuerung / Overload	Blinkt / blinking 1 s
Untersteuerung / Underload	Zähler verliert bis 1 Dekade keine Impulse / Counter loses no pulses up to 1 decade
Datensicherung / Data retention	> 10 Jahre / Years EEPROM

Impulsgeber / Pulse counter

Zählfrequenz / Count frequency	typ. 5 kHz
Ansprechzeit der Ausgänge / Response time of the outputs	< 15 ms

Zeitgeber / Timer

kleinste messbare Zeit / min. time measurable	500µs
Messfehler / Measuring error	< 100 ppm
Ansprechzeit der Ausgänge / Response time of the outputs	< 10 ms

Signal- und Steuereingänge / Signal and Control inputs

SELV Kreise, Reinforced / doppelte Isolierung / SELV circuits, reinforced / double insulation	programmierbar NPN/PNP für alle Eingänge gemeinsam / programmable NPN/PNP for all inputs in common
Polarität / Polarity	beliebig / any
Eingangswiderstand / Input resistance	5 kΩhm
Impulsform / Pulse shape	4-30 V-Peigebereich / Low: 0...2 V DC; High: 3,5...30 V DC
Schaltpegel / Switching level	Minimale Impulsdauer des Reseteingangs / Minimum pulse length of Reset input: 1 ms
Mindestimpulsdauer des Reseteingangs / Minimum pulse length of Reset input	Relais mit Schließkontakt / Relay with make contact
Ausgang 1 / Output 1	programmierbar als Öffner oder Schließer/programmable as NO or NC

Impulsform / Pulse shape	beliebig / any
Schaltpegel / Switching level	4-30 V-Pegel/Level : 0... 2 V DC; High: 3,5...30 V DC
Mindestimpulsdauer des Reseteingangs /	Minimum pulse length of Reset input: 1 ms
Ausgang 1 / Output 1	Relais mit Schließkontakt / <i>Relay with make contact</i> programmierbar als Öffner oder Schließer/programmable as NO or NC
Vorgeschriebene Absicherung: / Prescribed fuse:	3 A
Schaltspannung / Switching voltage	max. 250 VAC/ 110 VDC
Schaltstrom / Switching current	max. 3 A AC/ DC / min. 30 mA DC
Schaltleistung / Switching capacity	max. 750 VA / 90 W

Die Maximalen Werte dürfen auf keinen Fall überschritten werden! / The maximum values shall in no case be exceeded!

Mechanische Lebensdauer (Schaltspiele) / Mechanical Service life (switching cycles) 2x10⁷

Anzahl der Schaltspiele / N° of switching cycles: 3 A/ 250 V AC 1x10⁵; 3 A/ 30 V DC 1x10⁵

Ausgang 2 / Output 2 Relais mit Wechselschalter / Relay with changeover contact

Vorgeschriebene Absicherung: / Prescribed fuse: 3 A
Schaltspannung / Switching voltage	max. 250 V AC/ 150 V DC
Schaltstrom / Switching current	max. 3 A AC/ DC min. 30 mA DC
Schaltleistung / Switching capacity	max. 750 VA / 90 W

Mechanische Lebensdauer (Schaltspiele) / Mechanical Service life (switching cycles) 20x10⁵

Anzahl der Schaltspiele / N° of switching cycles: 3 A/ 250 V AC 5x10⁴; 3 A/ 30 V DC 5x10⁴

Die Maximalen Werte dürfen auf keinen Fall überschritten werden! / The maximum values shall in no case be exceeded!

Spannungsversorgung / Supply voltage AC: 115 VAC +/-10% / max. 6,5 VA 50/ 60 Hz

AC: 230 VAC +/-10% / max. 6,5 VA

DC: 11...30 V DC/ max. 4,0 W mit Verpolschutz / with reverse polarity protection

SELV, CLASS II (Limited Power Source)

Absicherung extern / ext. Fuse protection: 115 V AC: T 0,125A; 230 V AC: T0,1A; DC: T0,2 A

Sensorversorgungsspannung / Sensor supply voltage (Spannungsausgang für externe Sensoren) / (Voltage output for external sensors)

SELV Kreise, Reinforced / doppelte Isolierung / SELV circuits, reinforced / double insulation

230VAC-Ausführung / version: 24 V DC -40%/+15%, 50 mA

115VAC-Ausführung / version: 24 V DC -40%/+15%, 40 mA

DC-Ausführung / version: max. 50 mA

Spannungsversorgung DC ist durchverbunden / voltage supply DC connected through

Klimatische Bedingungen / Climatic Conditions

Betriebstemperatur / Operating temperature -10°C ... +50°C

Lagertemperatur / Storage temperature -25°C ... +75°C

Luftfeuchtigkeit: r.F. / Relative humidity RH 93% bei / at +40°C, nicht betauend / non condensing

Höhe / Altitude bis 2000 m / to 2000 m

EMV / EMC

Störfestigkeit / Noise immunity mit geschirmten Signal- und Steuerleitungen with shielded signal and control cables

Gerätesicherheit / Device safety

Schutzklasse / Protection class Schutzklasse / Class 2 (frontseitig / front side)

Nur die Frontseite ist Bedienerberührbar eingestuft. / Only the front side is classified as accessible for the operator.

Einsatzgebiet / Application area Verschmutzungsgrad / Soiling level 2

Überspannungskategorie II / over-voltage Category II

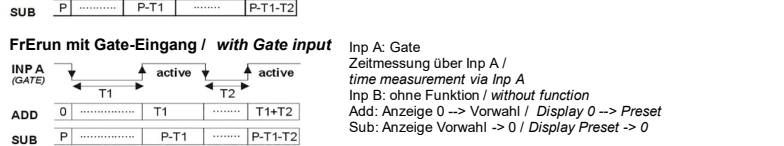
Isolation: / Insulation: Front: Doppelte Isolierung / double insulation

Rückseite: / Rear side: Basisisolierung / basic insulation

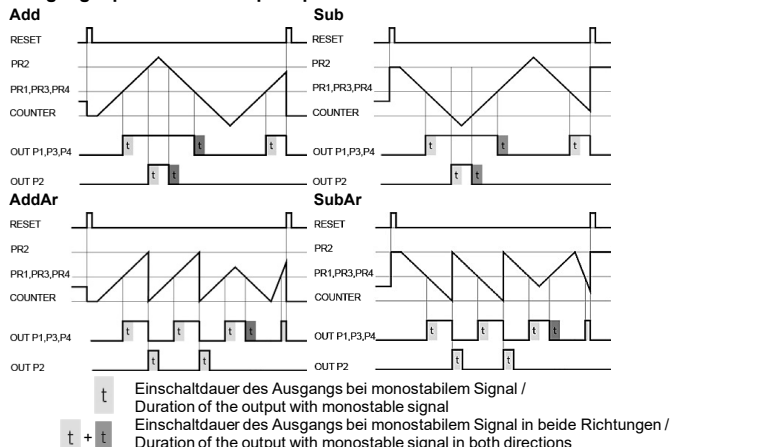
Signaleingänge und Sensorversorgung: / Signal inputs and und sensor power supply: SELV

Eingangsarten Zeitmessung / Input modes: Timing

Beispiele für PNP-Eingangspolarität / Examples for PNP input polarity



Ausgangsoperationen / Output operations



Bestellschlüssel / Order Code:

6.908.010X.XA0	Spannungsversorgung Supply voltage 0 = 230 V AC 1 = 115 V AC 3 = 11 ... 30 V DC	Kübler Group Fritz Kübler GmbH Schubertstrasse 47 D-78054 Villingen-Schwenningen Germany Phone: +49 7720 3903-0 Fax: +49 7720 21564 info@kuebler.com www.kuebler.com
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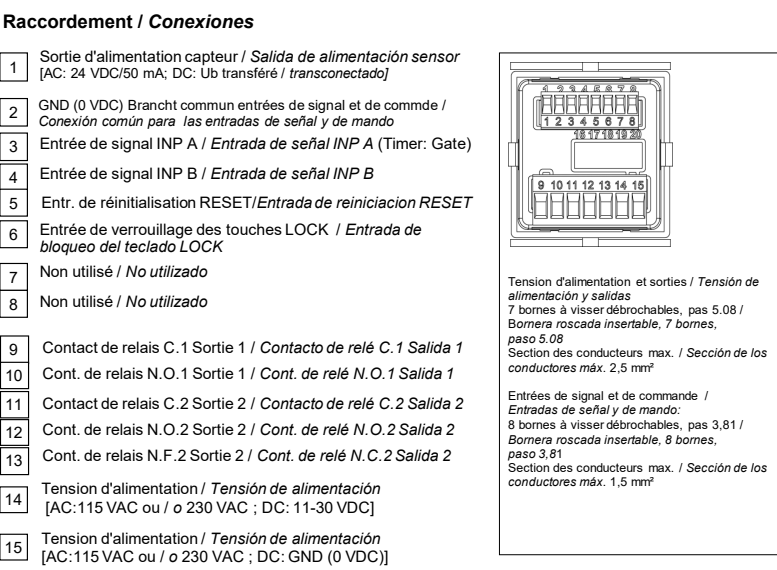
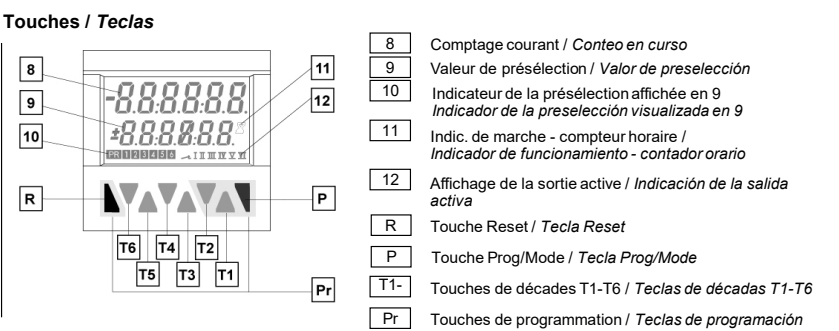
Zulassungen / Approvals

CE-konform gemäß: / CE compliant in accordance with

EMV-Richtlinie 2014/30/EU / EMC Directive 2014/30/EU

Niederspannungsrichtlinie 2014/35/EU / Low Voltage Directive 2014/35/EU

RoHS-Richtlinie 2011/65/EU / RoHS Directive 2011/65/EU



Compt. d'impulsions / Cnt. de impulsos Fréq. de comptage / <i>Frec. de conteo</i> Temps de réponse des sorties / <i>Tiempo de respuesta de las salidas</i>		typ. / <i>typ.</i> 5 kHz < 15 ms
Compteur horaire / Contador de tiempo Temps min. mesurable / <i>Tempo mín. medible</i>		500µs

Signal carré (typ.)		Señal cuadrada (tip.)	
low: 1.0V high: 4.0V		low: 2.0V high: 30.0V	
	Add Sub	Add Sub	Add Sub
Cnt.Dir	15 kHz 1.5 kHz	5 kHz 1.2 kHz	1.2 kHz
Up.Dn	10 kHz 1.5 kHz	5 kHz 1.2 kHz	1.2 kHz
Quad	10 kHz 0.7 kHz	2.4 kHz 0.5 kHz	0.5 kHz

 Ne dépasser en aucun cas les valeurs maximales! / Los valores máximos no se deberán sobrepasar en ningún caso!

 Ne dépasser en aucun cas les valeurs maximales! / Los valores máximos no se deberán sobrepasar en ningún caso!

Tension d'alimentation pour capteur / Tensión de alimentación de sensor
(Sortie de tension pour sondes externes) / (salida de tensión para sensores externos)
Circuita SFV / aislamiento referenciado / doble / Circuitos SFV / aislamiento referenciado a doble

Temp. de fonctionnement / Temp. de funcionamiento -10°C .. +50°C

Sécurité de l'appareil / Seguridad del aparato
Classe de prot. / Clase de protección Classe / Clase 2 (face avant / parte delantera)

Domaine d'utilisation / *Campo de trabajo* Degré de salissure / *grado de suciedad* 2
catégorie de surtension II / *categoría de sobretensión* II

Types d'entrées - mesure de temps / Tipos de entradas - medición de tiempo

ADD	0		T1		T1+T2
SUB	P		P-T1		P-T1-T2

ADD	0	XXXXXXXX	T1	XXXXXXXX	T1+T2
SUB	P	XXXXXXXX	P-T1	XXXXXXXX	P-T1-T2

Sub

Add

Sub

AddAr **SubAr**

RESET RESET

Référence de commande / Clave de pedido:	Kühler Group
--	--------------

Fin de la programmation / Finalización de la programación

Pendant la programmation, la touche Reset permet à tout moment de quitter la programmation. / Durante la programación se puede finalizar la programación en cualquier punto del menú accionando la tecla Reset.

Réglage de valeurs numériques / Ajuste de valores numéricos

Une touche est affectée à chaque décade pour le réglage de valeurs numériques, permettant d'augmenter la valeur respective de uno. / *En los ajustes de valores numéricos, a cada década le está asignada una tecla con la que se puede elevar el valor en uno.*

Presser l'une des touches des décades → L'affichage passe en mode Edition.
Régler la valeur de présélection désirée à l'aide des touches des décades. / Pulsar
cualquiera tecla de decadas → La pantalla pasa en el modo de edición. Ajustar el
valor de preselección con las teclas de décadas.


 Presser la touche Prog/Mode pour confirmer et mémoriser la valeur → L'affichage passe dans le mode Edition de la présélection suivante **[PR 1]** ou **[PR 2]** / Pulsar la tecla Prog/Mode para confirmar el valor y memorizarlo → La pantalla pasa en el modo de edición de la preselección siguiente **[PR 1]** o **[PR 2]**.

La nouvelle valeur de présélection est prise en compte env. 3 s après la dernière pression sur une touche de década ou après avoir pressé la touche Reset, et l'appareil retourne dans son mode opératoire. / El nuevo valor de preselección se toma en cuenta aprox. 3 segundos después de pulsar una tecla de década o después de pulsar la tecla Reset, y el contador retorna en el modo de funcionamiento.

Types d'entrées - comptage d'impulsions / Tipos de entradas - conteo de impulsos
Exemples pour la polarité d'entrée PNP / Ejemplos para la polaridad de entrada PNP

Cnt.Dir INP A
Inp A: Entrée de comptage / *Entrada de conteo*
Inp B: Sens de comptage / *Dirección de conteo*
Add: Affichage 0 → Préal. / *Visualización 0 → Préal.*

Sub: Affichage présél. -> 0 / Visualización Presel. -> 0

Up.dn  Inp A: Entrée de comptage add. / *Entrada de conteo add.*
 Inp B: Entrée de comptage sous. / *Entrada de conteo sub.*
 Affichage 0 → Présél. / *Visualización 0 → Presel.*
 Sub: Affichage présél. → 0 / *Visualización Presel. → 0*

ADD

0	1	2	1	0	0	1
---	---	---	---	---	---	---

SUB

P	P+1	P+2	P+1	P	P	P+1
---	-----	-----	-----	---	---	-----

Quad. WP-1 Δ 90° B

quad INP A 

INP B 

ADD

0	1	2	3	2	1	0
---	---	---	---	---	---	---

SUB

P	P+1	P+2	P+3	P+2	P+1	P
---	-----	-----	-----	-----	-----	---

INp A: Entrée de comptage / *Entrada de conteo*
Comptage sur un flanc / *Conteo con un flanco*
IN B: Inversion du sens / *Inversión de la dirección*
Add: Affichage 0 → Présél. / *Visualización 0 → Presel.*
Sub: Affichage présél. → 0 / *Visualización Presel. → 0*

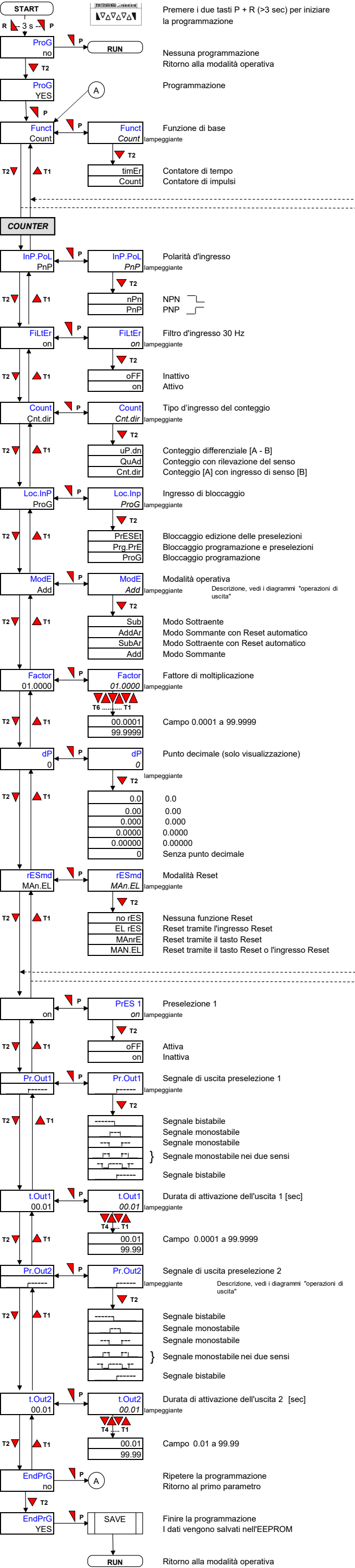
Dimensions - Découpe d'encastrement / Dimensiones - Recorte del cuadro de mando

Dimensions - Découpe d'encastrement / Dimensiones - Recorte del cuadro de mando
Cotes en mm [pouces] / Cotas en mm [inch]

The technical drawing illustrates the dimensions for the control panel assembly. It includes three views: a front view, a side view, and a top view. The front view shows a rectangular panel with a width of 48 [1.89] and a height of 43 [1.69]. The side view shows a depth of 15.5 [0.61] and a mounting bracket width of 91 [3.583]. The top view shows a square panel with a side length of 45 [1.772] and a mounting bracket width of 7 [0.276]. The dimensions are provided in both millimeters and inches.

48 [1.89]
43 [1.69]
15.5 [0.61]
91 [3.583]
45 [1.772]
7 [0.276]

/// pulses for automation



Caratteristiche meccaniche

Scatola: Scatola ad incastro secondo DIN 43 700, RAL 7021

Peso: AC: ca.250 g; DC: ca. 150 g

Protezione: IP65 (frontale, solo l'apparecchio)

Materiale della scatola: Policarbonato UL94 V-2

Resist.alle vibrazioni: 10 - 55 Hz / 1 mm / XYZ EN 60068-2-6; 30 min in ogni direzione

Resist. agli urti: EN 60068-2-27 100G / 2ms / XYZ / 3 volte in ogni direzione

Pulizia: Per la pulizia della parte anteriore, utilizzare solo uno straccio morbido ed umido.

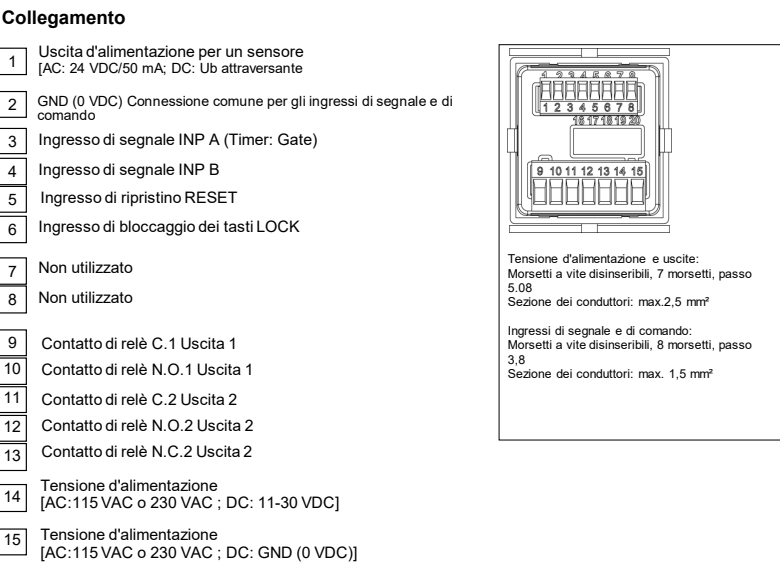
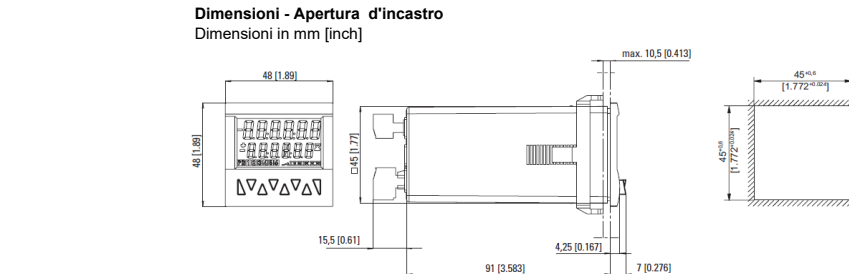
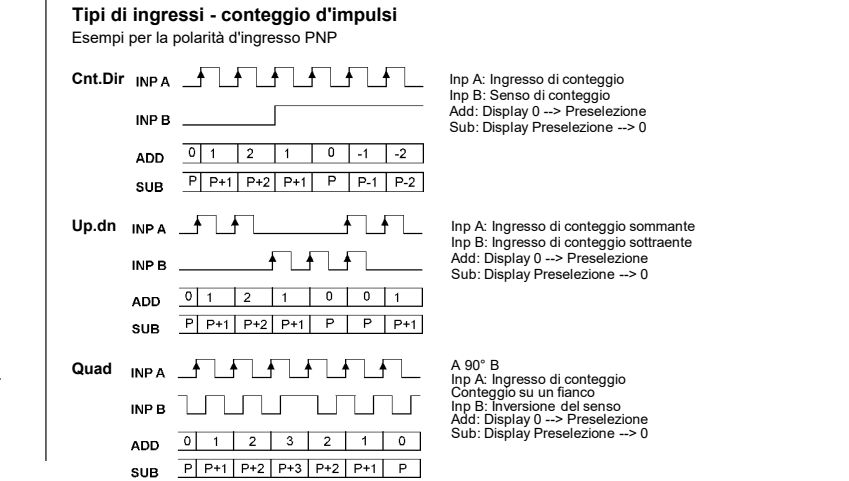
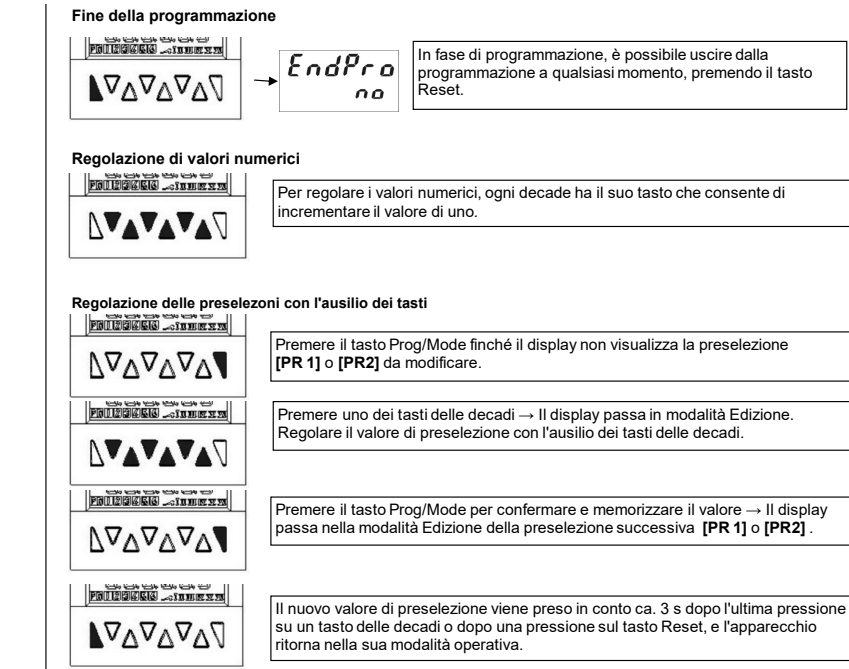
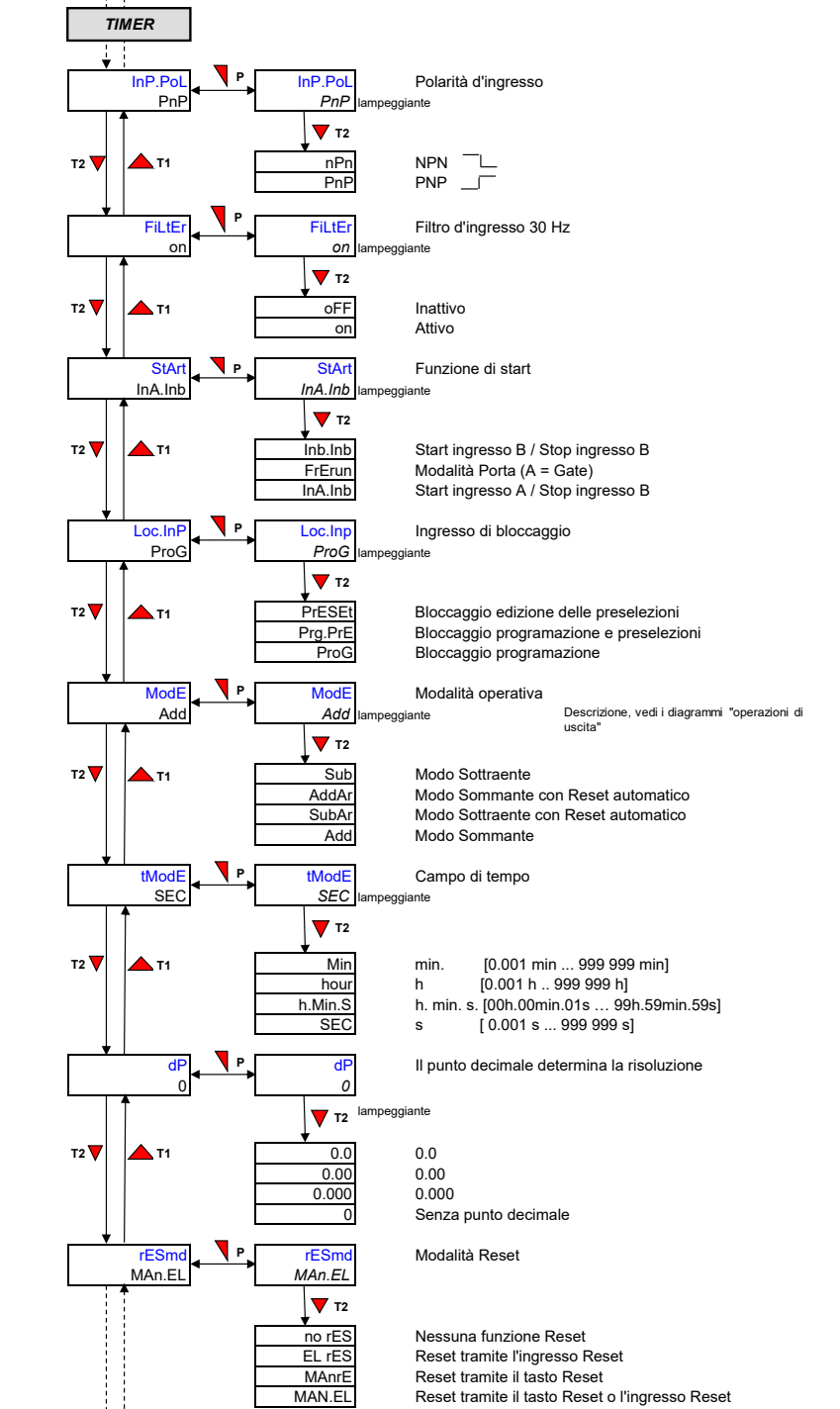
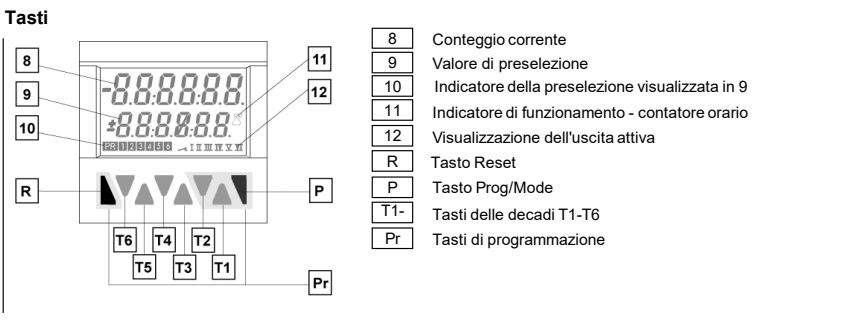
Omologazioni

Conformità CE secondo

Direttiva CEM 2014/30/EU

Direttiva Bassa Tensione 2014/35/EU

Direttiva RoHS 2011/65/EU



Caratteristiche tecniche

Display LCD 2 x 6 decadi

Overflow Lampeggiante 1 s

Underflow Fino ad 1 decade, il contatore non perde impulsi

Salvataggio dati > 10 anni EEPROM

Contatore di impulsi		Segnale quadrato (tip.)			
Frequenza di conteggio	tip. 5 kHz				
Tempo di risposta delle uscite	< 15 ms				
Contatore di tempo					
Tempo minimo misurabile	500µs				

Errore di misura < 100 ppm

Tempo di risposta delle uscite < 10 ms

Ingressi di segnale e di comando

Circuiti SELV, isolamento doppio/rinforzato

Polarità Programmabile, NPN/PNP comune a tutti gli ingressi

Resistenza d'ingresso 5 kOhm

Forma degli impulsi Qualsiasi

Livello di commutazione Livello 4-30 V Low: 0...2 V DC; High: 3,5...30 V DC

Durata d'impulso min. sull'ingresso Reset 1 ms

Uscita 1

Relè con contatto di chiusura programmabile all'apertura o alla chiusura

Fusibile prescritto: 3A

Tensione di commutazione max. 250 VAC/ 110 VDC

Corrente di commutazione max. 3 A AC/ DC / min. 30 mA DC

Potenza di commutazione max. 750 VA / 90 W

Uscita 2

Relè con contatto di scambio

Fusibile prescritto: 3A

Tensione di commutazione max. 250 V AC/ 150 V DC

Corrente di commutazione max. 3 A AC/ DC min. 30 mA DC

Potenza di commutazione max. 750 VA / 90 W

Condizioni climatiche

Temperatura di funzionamento -10°C .. +50°C

Temperatura di immagazzinamento -25°C .. +75°C

Umidità relativa dell'aria 93% à / a +40°C, senza condensa

Altitudine Fino a 2000 m

CEM

Resistenza alle interferenze con linee di segnale e di comando schermate

Protezione esterna

Tensione d'alimentazione per un sensore (Uscita di tensione per sensori esterni)

Circuiti SELV, isolamento doppio/rinforzato

Esecuzione 230VAC: 24 V DC -40%/+15%, 50 mA

Esecuzione 115VAC: 24 V DC -40%/+15%, 40 mA

Esecuzione DC: max. 50 mA

Tensione d'alimentazione DC attraversante

Sicurezza dell'apparecchio

Classe di protezione Classe 2 (parte anteriore)

Area d'utilizzo

Grado di sporco 2 categoria di sovratensione II

Isolamento: Anteriore: doppio isolamento, Posteriore: isolamento di base, Ingressi di segnale e alimentazione sensori: SELV

Tipi di ingressi - conteggio di tempo

Esempi per la polarità d'ingresso PNP

InA.InB

INP A

INP B

ADD 0 T1 T1+T2

SUB P P-T1 P-T1-T2

InB.InB

INP B

ADD 0 T1 T1+T2

SUB P P-T1 P-T1-T2

FrErIn con ingresso Gate

INP A (GATE)

ADD 0 T1 T1+T2

SUB P P-T1 P-T1-T2

Operazioni di uscita

Add

RESET

PR2

PR1,PR3,PR4

COUNTER

OUT P1,P3,P4

OUT P2

Sub

RESET

PR2

PR1,PR3,PR4

COUNTER

OUT P1,P3,P4

OUT P2

AddAr

RESET

PR2

PR1,PR3,PR4

COUNTER

OUT P1,P3,P4

OUT P2

SubAr

RESET

PR2

PR1,PR3,PR4

COUNTER

OUT P1,P3,P4

OUT P2

Operazioni di uscita

Add

RESET

PR2

PR1,PR3,PR4

COUNTER

OUT P1,P3,P4

OUT P2

Sub

RESET

PR2

PR1,PR3,PR4

COUNTER

OUT P1,P3,P4

OUT P2

Operazioni di uscita

Add

RESET

PR2

PR1,PR3,PR4

COUNTER

OUT P1,P3,P4

OUT P2

Sub

RESET

PR2

PR1,PR3,PR4

COUNTER

OUT P1,P3,P4

OUT P2

Operazioni di uscita

Add

RESET

PR2

PR1,PR3,PR4

COUNTER

OUT P1,P3,P4

OUT P2

Sub

RESET

PR2

PR1,PR3,PR4

COUNTER

OUT P1,P3,P4

OUT P2

Operazioni di uscita

Add

RESET

PR2

PR1,PR3,PR4

COUNTER

OUT P1,P3,P4

OUT P2

Sub

RESET

PR2

PR1,PR3,PR4

COUNTER

OUT P1,P3,P4

OUT P2

Codificazione per l'ordinazione:

6.908.010X.XA0

Tensione d'alimentazione

0 = 230 V AC

1 = 115 V AC

3 = 11 ... 30 V DC

Esecuzione LCD

0 = senza retroilluminazione

1 = retroilluminazione verde

Kübler Group

Fritz Kübler GmbH

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D-78054 Villingen-Schwenningen

Germany

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