

Technische Daten / Technical Data
Anzeige / Display LCD 2 x 6-stellig/digit
Übersteuerung / Overload Blink / 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

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

Rechtecksignal (typ.) / square wave (typ.)

	low: 1.0V high: 4.0V	low: 2.0V high: 30.0V
Add Sub	15 kHz	1.5 kHz
AddAr SubAr	5 kHz	1.2 kHz
Cnt.Dir	10 kHz	1.5 kHz
Up.Dn	10 kHz	0.7 kHz
Quad	10 kHz	2.4 kHz

Zeitähler / 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
Polarität / Polarity programmierbar NPN/PNP für alle Eingänge gemeinsam / programmable NPN/PNP for all inputs in common
Eingangswiderstand / Input resistance 5 kOhm
Impulsform / Pulse shape beliebig / any
Schaltpegel / Switching level 4-30 V-Pegel/level Low : 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
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) 20x10⁶
Anzahl der Schaltspiele / N° of switching cycles: 3 A/ 250 V AC 5x10⁶; 3 A/ 30 V DC 5x10⁶

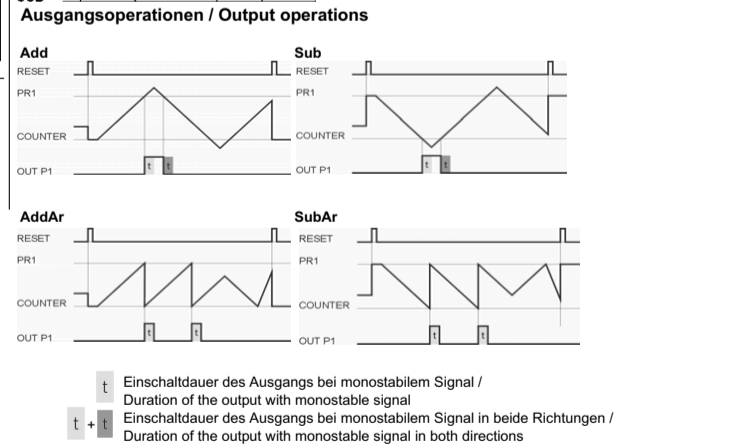
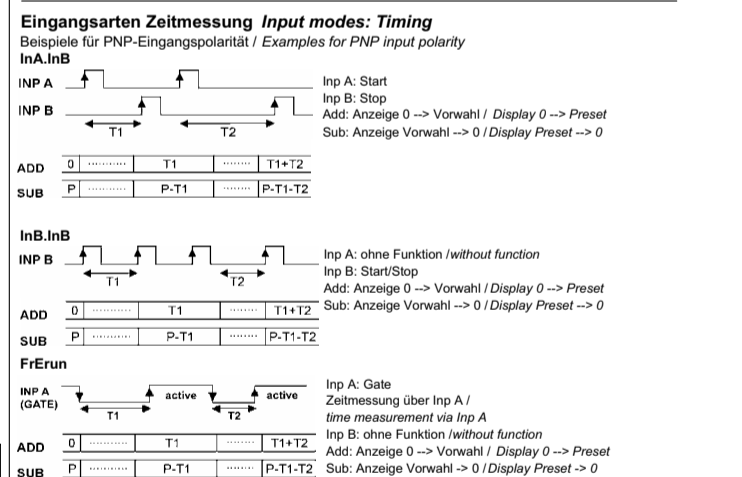
Spannungsversorgung / Supply voltage
AC: 115 VAC +/-10% /max. 6.5 VA 50/ 60 Hz
AC: 230 VAC +/-10% /max. 6.5 VA
DC: 11 ... 30 V DC/ max. 4.0 W mit Verpolschutz / with reverse polarity protection

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

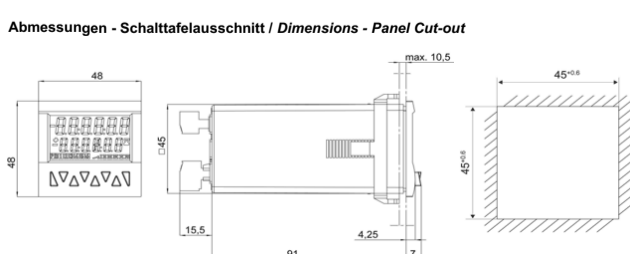
EMV / EMC
Störfestigkeit / Noise immunity EN61000-6-2 mit geschirmten Signal- und Steuerleitungen / with shielded signal and control cables
EN50111 Klasse / Class B

Störaussendung / Noise emission
Gerätesicherheit / Device safety Auslegung nach / Design to Schutzklasse / Protection class EN61010 Teil / part 1
Einsatzgebiet / Application area Verschmutzungsgrad / Soiling level 2



Mechanische Daten / Mechanical data

Gehäuse / Housing: Schalttafelbaugehäuse nach / Panel mount housing to DIN 43 700, RAL 7021
Gewicht / Weight: AC: ca. 250 g; DC: ca. 150 g
Schutzart / Protection: IP 65 (frontseitig / front)
Gehäusematerial / Housing material: Polycarbonat / Polycarbonate UL94 V-2
Vibrationsfestigkeit 10 - 55 Hz / 1 mm / XYZ EN60068-2-6: 30 min in jede Richtung
Vibration resistance 10 - 55 Hz / 1 mm / XYZ EN60068-2-6: / 30 min. in each direction
Schockfestigkeit: EN60069-2-27 100G / 2ms / XYZ 3 mal in jede Richtung
Shock resistance: EN60069-2-27 100G / 2ms / XYZ / 3 times in each direction
Reinigung: Die Frontseite darf nur mit einem weichen, mit Wasser angefeuchteten Tuch gereinigt werden.
Cleaning: The front of the unit should only be cleaned using a soft damp (water) cloth.



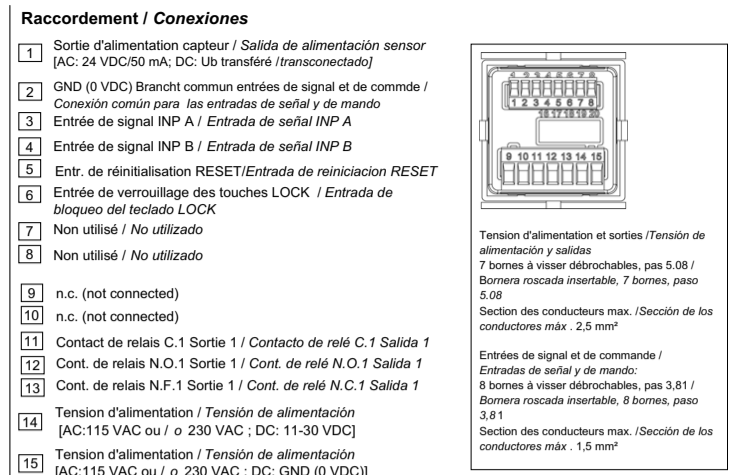
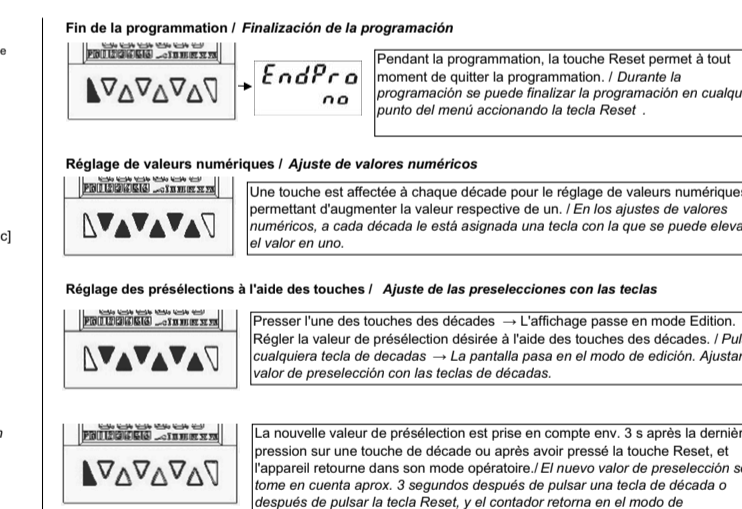
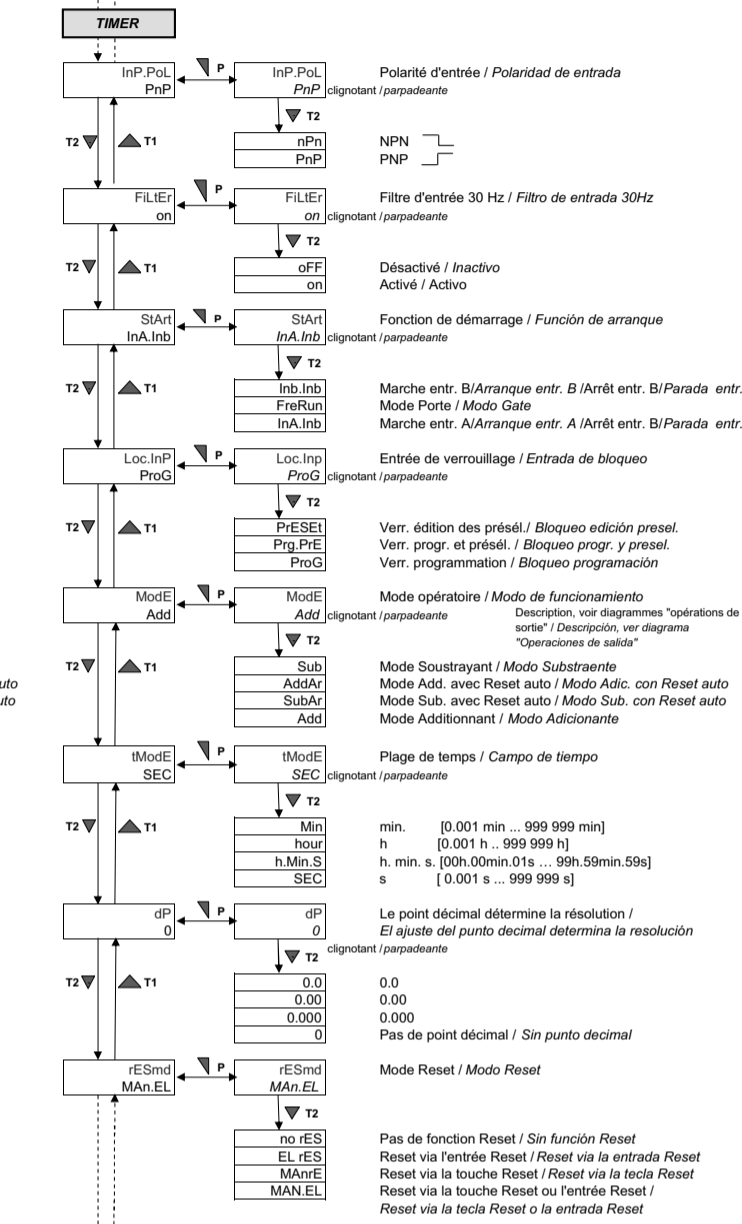
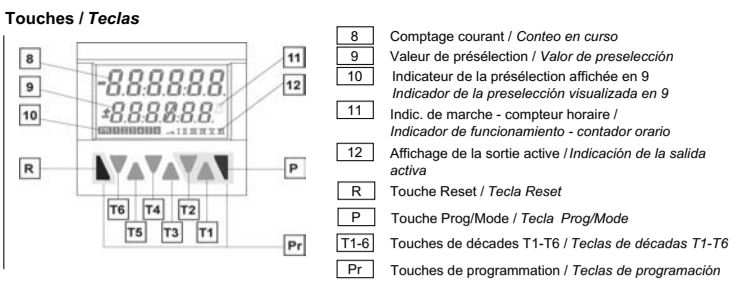
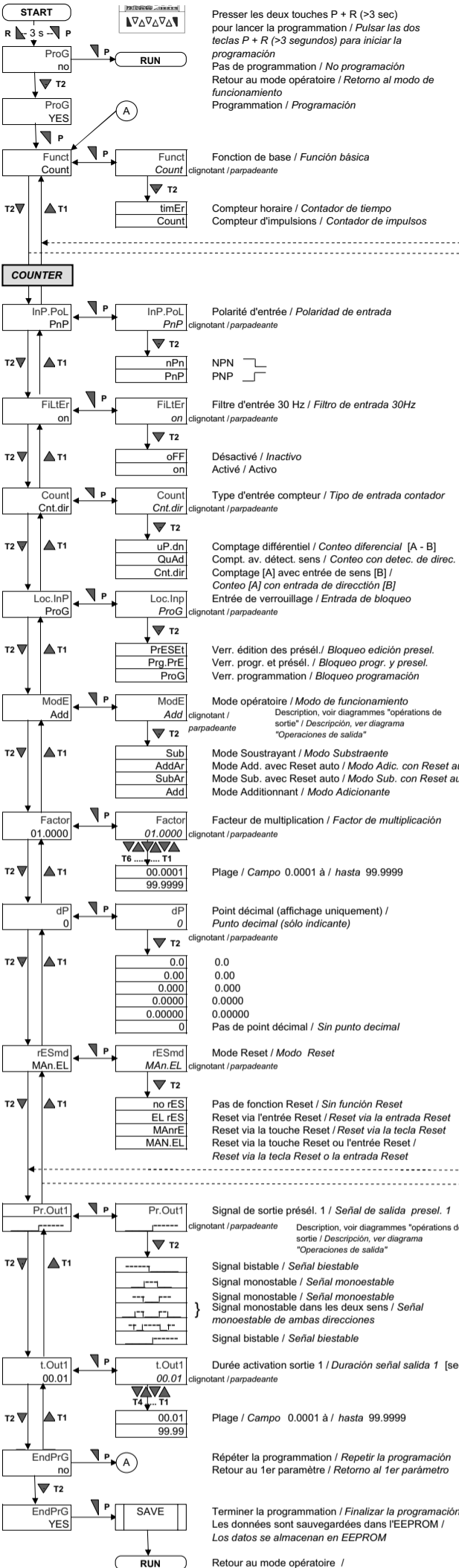
Bestellschlüssel / Order Code:
230 V AC: KC-LCD-48-1R-230VAC
24 V DC: KC-LCD-48-1R-24VDC

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Caractéristiques techniques / Datos técnicos
Affichage / Pantalla: LCD 2 x 6 digits / dígitos
Débordement par le haut / Overflow: Clignotant / Parpadeante 1 s
Débordement par le bas / Underflow: Jusqu'à 1 décade, le compteur ne perd pas d'impulsions / Hasta 1 década el contador no pierde impulsos
Sauvegarde données/Salvaguardia datos: > 10 ans / años EEPROM

Compt. d'impulsions / Cont. de impulsos		Signal carré (typ.) / Señal cuadrada (tip.)	
Freq. de comptage / Frec. de conteo	typ. / typ.	low: 1.0V high: 4.0V	low: 2.0V high: 30.0V
Temps de réponse des sorties / Tiempo de respuesta de las salidas	< 15 ms	ADD	ADD
		SubAr	SubAr
		ADD	ADD
		Sub	Sub
		ADD	ADD
		Sub	Sub

Compteur horaire / Contador de tiempo
Temps min. mesurable / Mínimo tiempo mensurable: 500µs
Erreur de mesure / Error de medición: < 100 ppm
Temps de réponse des sorties / Tiempo de respuesta de las salidas: < 10 ms

Entrées de signal et de commande / Entradas de señal y de mando
Polarité / Polaridad: Programmable, NPN/PNP commun pour toutes les entrées / Programable, NPN/PNP común para todas las entradas
Résist. d'entrée / Resist. de entrada: 5 kOhm
Forme des impuls. / Forma de impulsos: Quelconque / Cualquiera
Niveau commutation / Nivel conmutación: Niveau/Nivel 4-30 V Low: 0..2 V DC; High: 3.5..30 V DC
Durée min. de limp. sur l'entrée Reset / Duración min. de limp. en la entrada Reset: 1 ms

Sortie 1 / Salida 1: Relais av. contact inverseur / Relé con contacto inversor
Tension commut. / Tensión de conmut.: max. 250 V AC / 150 V DC
Courant commut. / Corriente de conmut.: max. 3 A AC / DC min. 30 mA DC
Puissance commut. / Potencia conmut.: max. 750 VA / 90 W
Durée de vie mécanique (commutations) / Vida mecánica (ciclos de conmutación): 20x10⁶
Nbre de commutations / Núm. de ciclos de conmutación: 3 A / 250 V AC 5x10⁴; 3 A / 30 V DC 5x10⁴

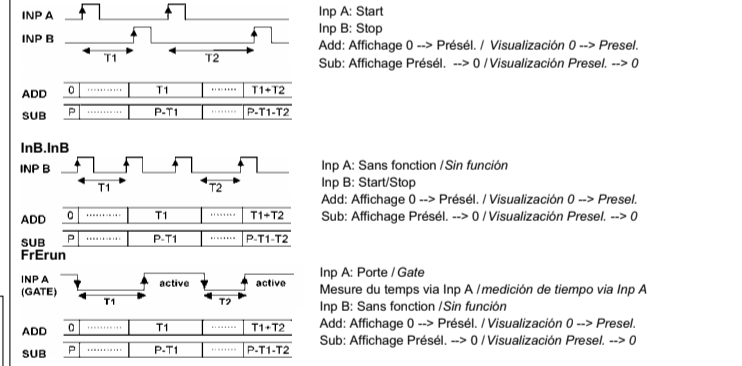
Tension d'alimentation / Tensión de alimentación: AC: 115 VAC +/-10% / max. 6.5 VA 50/ 60 Hz
DC: 230 VAC +/-10% / max. 6.5 VA
DC: 11 ... 30 V DC / max. 4.0 W, protection contre l'inversion de la polarité / con protección contra la inversión de la polaridad
115 V AC; T: 0, 125A; 230 V AC; T0, 1A; DC; T0, 2 A

Protection ext. / Protección ext.: Tension d'alimentation pour capteur / Tensión de alimentación de sensor
Exécution / Ejecución: 230VAC: 24 V DC -40%/+15%, 50 mA
Exécution / Ejecución: 115VAC: 24 V DC -40%/+15%, 40 mA
Exécution / Ejecución: DC: max. 50 mA
Tension d'alim. DC transférée / Tensión de alimentación DC transconectada

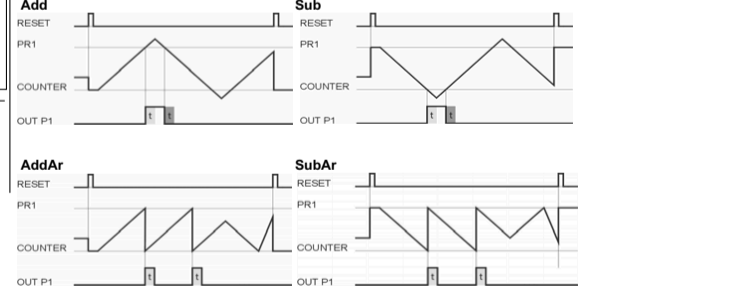
Conditions climatiques / Condiciones climáticas
Temp. de fonctionnement / Temp. de funcionamiento: -10°C .. +50°C
Temp. de stockage / Temp. de almacenamiento: -25°C .. +75°C
Humidité relative / Humedad relativa: 93% à +40°C, sans condensation / sin condensación
Altitude / Altura: jusqu'à 2000 m / hasta 2000 m

CEM / CEM: Résistance aux perturbations / Resistencia a interferencias: EN61000-6-2 avec lignes de signal et de commande blindées / con líneas de señal y de mando blindadas
Emission de perturbations / Emisión de interferencias: EN55011 classe I / clase B
Sécurité de l'appareil / Seguridad del aparato: Classe 1 / Clase 1
Conception selon / Diseño según: EN61010 Partie / Parte 1
Classe de prot. / Clase de protección: Classe / Clase 2
Domaine d'utilisation / Campo de trabajo: Degré de salissure / grado de suciedad 2

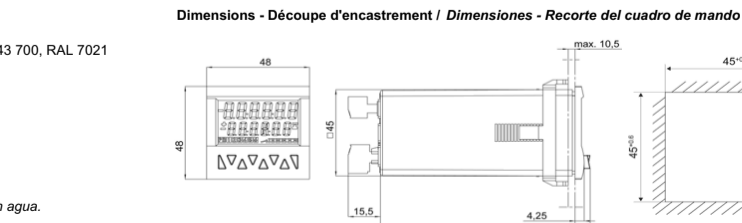
Types d'entrées - mesure de temps / Tipos de entradas - medición de tiempo
Exemples pour la polarité d'entrée PNP / Ejemplos para la polaridad de entrada PNP



Opérations de sortie / Operaciones de salida



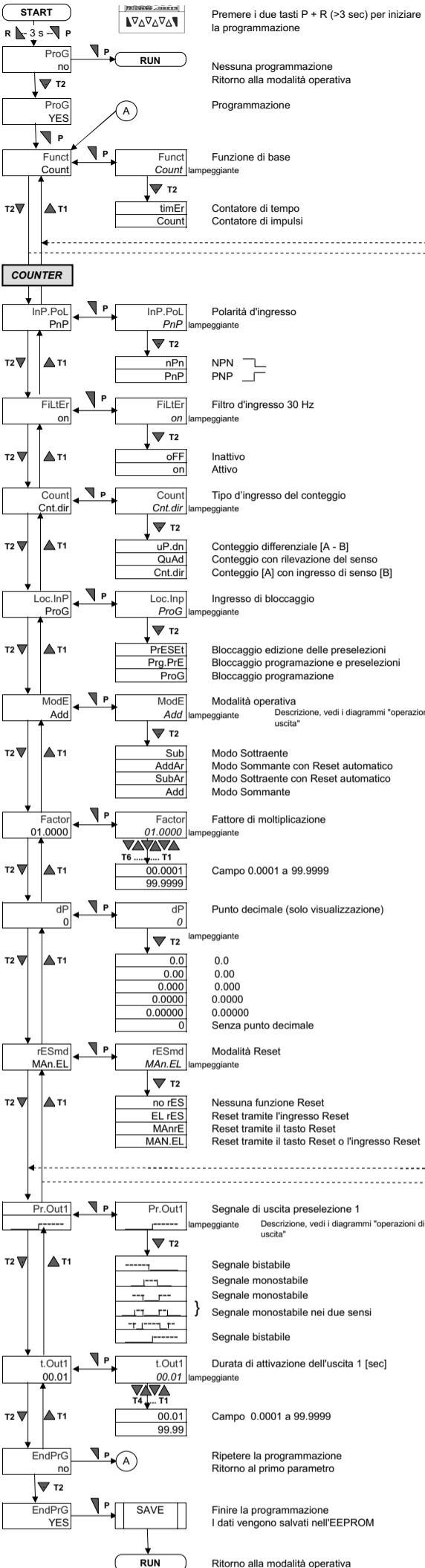
Caractéristiques mécaniques / Datos mecánicos
Boîtier/Carcasa: Boîtier à encastrer selon / Para montaje en cuadro de mando según DIN 43 700, RAL 7021
Poids/Peso: AC: env./aprox. 250 g; DC: env./aprox. 150 g
Protection/Protección: IP 65 face avant / cara frontal
Matière du boîtier / Material de la carcasa: Polycarbonate / Policarbonato UL94 V-2
Résist.aux vibrations: 10 - 55 Hz / 1 mm / XYZ EN60068-2-6: 30 min dans chaque direction
Resist.a vibraciones: 10 - 55 Hz / 1 mm / XYZ EN60068-2-6: 30 min. en cada dirección
Résistance aux chocs: EN60069-2-27 100G / 2ms / XYZ / 3 fois dans chaque direction
Resist.a sacudidas: EN60069-2-27 100G / 2ms / XYZ / 3 veces en cada dirección
Nettoyage: Ne nettoyer la face avant qu'avec un chiffon doux humide.
Limpieza: La parte frontal sólo se puede limpiar con un trapo blando humedecido con agua.



Référence de commande / Clave de pedido:
230 V AC: KC-LCD-48-1R-230VAC
24 V DC: KC-LCD-48-1R-24VDC

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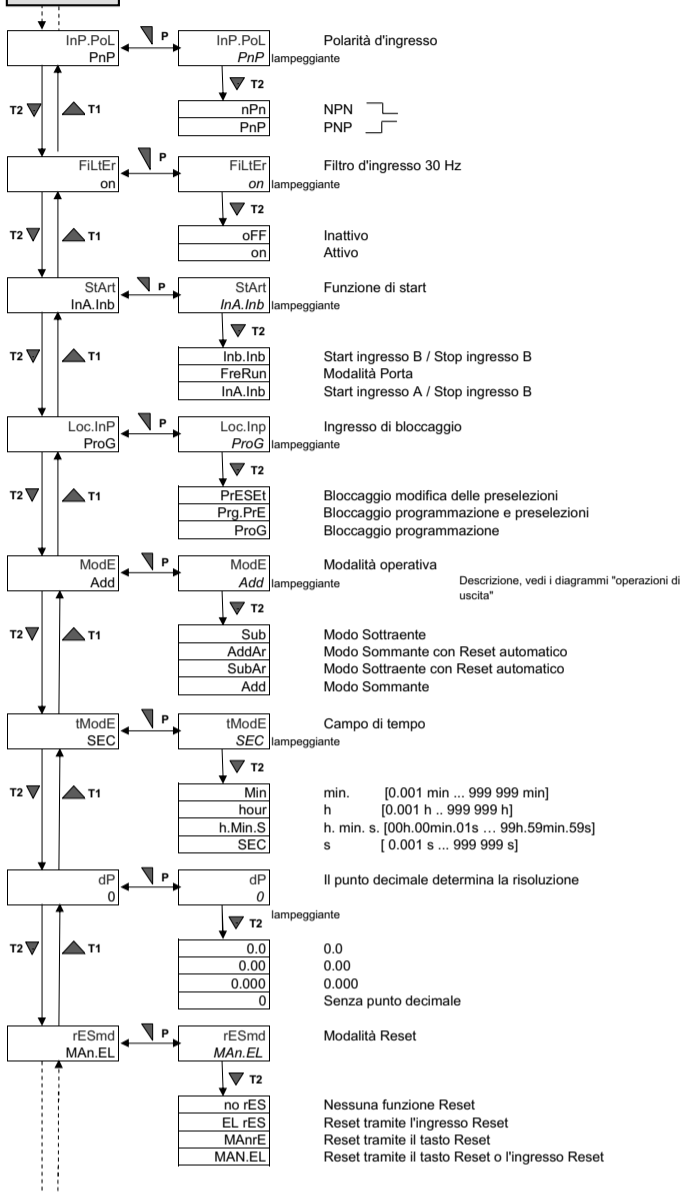
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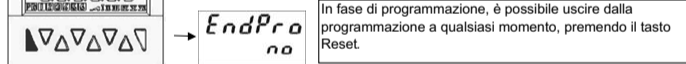
Tasti



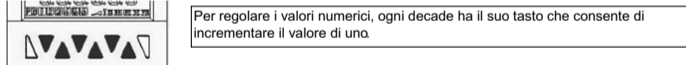
COUNTER



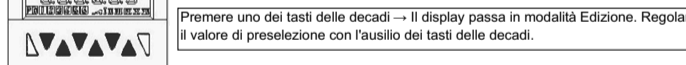
Fine della programmazione



Regolazione di valori numerici

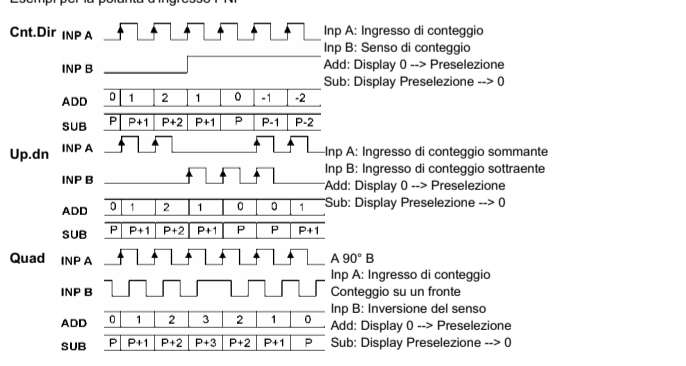


Regolazione delle preselezioni con l'ausilio dei tasti



Il nuovo valore di preselezione viene preso in conto ca. 3 s dopo l'ultima pressione su un tasto delle decadi o dopo una pressione sul tasto Reset, e l'apparecchio ritorna nella sua modalità operativa.

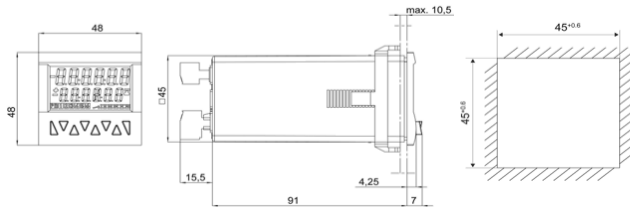
Tipi di ingressi - conteggio d'impulsi



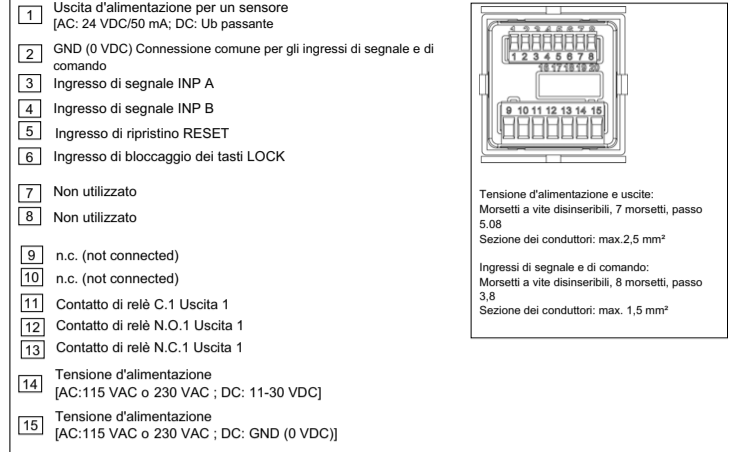
10.12 Caratteristiche meccaniche

Scatola: Scatola ad incastro secondo DIN 43 700, RAL 7021
 Peso: AC: ca.250 g; DC: ca. 150 g
 Protezione: IP 65 frontale
 Materiale della scatola: Policarbonato UL94 V-2
 Resist.alle vibrazioni: 10 - 55 Hz / 1 mm / XYZ EN60068-2-6: 30 min in ogni direzione
 Resist. agli urti: EN60069-2-27 100G / 2ms / XYZ / 3 volte in ogni direzione
 Pulizia: Per la pulizia della parte anteriore, utilizzare solo uno straccio morbido ed umido.

Dimensioni - Apertura d'incastro



Collegamento

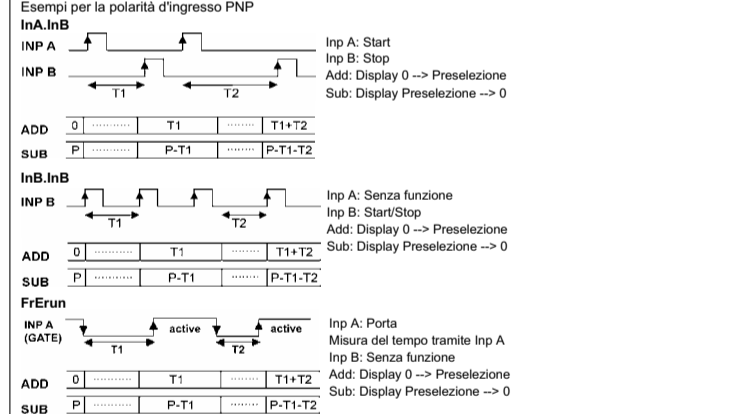


Tensione d'alimentazione e uscite:
 Morsetti a vite disinseribili, 7 morsetti, passo 5,08
 Sezione dei conduttori: max.2,5 mm²
 Ingressi di segnale e di comando:
 Morsetti a vite disinseribili, 8 morsetti, passo 3,8
 Sezione dei conduttori: max. 1,5 mm²

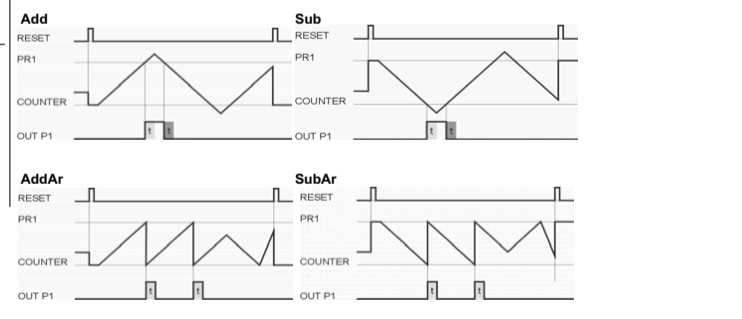
Caratteristiche tecniche

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	
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	
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	
Tensione di commutazione	Relè con contatto di scambio max. 250 V AC/ 150 V DC
Corrente di commutazione	max. 3 A AC/ DC min. 30 mA DC
Polena di commutazione	max. 750 VA / 90 W
Durata di vita meccanica (commutazioni)	20x10 ⁶
Numero di commutazioni	3A/ 250 V AC 5x10 ⁴ ; 3 A/ 30 V DC 5x10 ⁴
Tensione d'alimentazione	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 con protezione contro le inversioni di polarità
Protezione esterna	115 V AC: T 0, 125A; 230 V AC: T0, 1A; DC: T0, 2 A
Tensione d'alimentazione per un sensore	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
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 EN61000-6-2 con linee di segnale e di comando schermate Emissione di interferenze EN55011 classe B
Sicurezza dell'apparecchio	Progetto in conformità con EN61010 Parte 1 Classe di protezione Classe 2 Area d'utilizzo Grado di sporco 2

Tipi di ingressi - conteggio di tempo



Operazioni di uscita



t Durata di attivazione dell'uscita per un segnale monostabile
 t + t Durata di attivazione dell'uscita per un segnale monostabile nei due sensi

Codificazione per l'ordinazione:
 230 V AC: KC-LCD-48-1R-230VAC
 24 V DC: KC-LCD-48-1R-24VDC

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