GAMMA-M/M1/M2

GUIA RÁPIDA DE INSTALACIÓN
GUIDE RAPIDE D'INSTALLATION
QUICK INSTALLATION GUIDE

5 Years KOSMOS Warranty

INDICADOR DIGITAL ALTA VELOCIDAD ADQUISICIÓN

INDICATEUR NUMÉRIQUE D'ACQUISITION À GRANDE VITESSE

HIGH SPEED ACQUISITION DIGITAL INDICATOR

- Entradas / *Entrées* / Inputs
  - ..... Proceso / *Process* / Process
  - .....Célula de Carga / *Pont de Jau*ges / Load Cell
  - .....Potenciómetro / *Potentiomètre* / Potentiometer
- Display / *Affichage* / Display .....± 9999
- Linealización / *Linéarisation* / Linearization .....30 point
- Funciones lógicas / *Fonctions log*iques / Logic Functions 34
- Cadencia lectura / *Cadence de lectura* / Reading rate 555/s
- Función / *Fonction* / Function .....SAMPLE & HOLD
- Menú 7 / *Menu 7* / Menu 7 (Load Cell) ..... OVER - LOAD

Proceso. *Process.* Process

Rango *Plage* Range	±20mA ±1mA	±10V ±1V
Impedancia de entrada *Impédance d'entrée* Input impedance	15W	1MΩ
Precisión *Précisión* Accuracy	±(0.1% mv +3 digit)	
Excitación *Excitation* Excitation	24V@ 30mA	

mv = measured value

Célula de carga. *Pont de jauge.* Strain gauge

Rango *Plage* Range	±30mV	±60mV	±120 mV	±300mV	±500mV
Impedancia de entrada *Impédance d'entrée* Input impedance	100 MΩ				
Precisión *Précision* Accuracy	±(0.1% mv +2 digit)				
Excitación *Excitation* Excitation	10 V (±100mV) / 5 V (±100mV) @ 120 mA				

mv = measured value

CE

Conformidad CE. Conformité CE. CE Conformity.

Directivas *Directives* Directives	ROHS 2011/65/EU 2015/863/EU	EMC 2014/30/UE	LVD 2014/35/UE
Normas *Normes*		EN 61000-6-2 EN 61000-6-3	EN 61010-1

Potenciómetro. *Potentiomètre.* Potentiometer

Rango *Plage* Range	Min 200 Ω Max 100 kΩ
Impedancia de entrada *Impédance d'entrée* Input impedance	1MΩ
Precisión *Précision* Accuracy	±0.1% mv+ 1 digit
Excitación *Excitation* Excitation	1.65V @ 30mA

mv = measured value

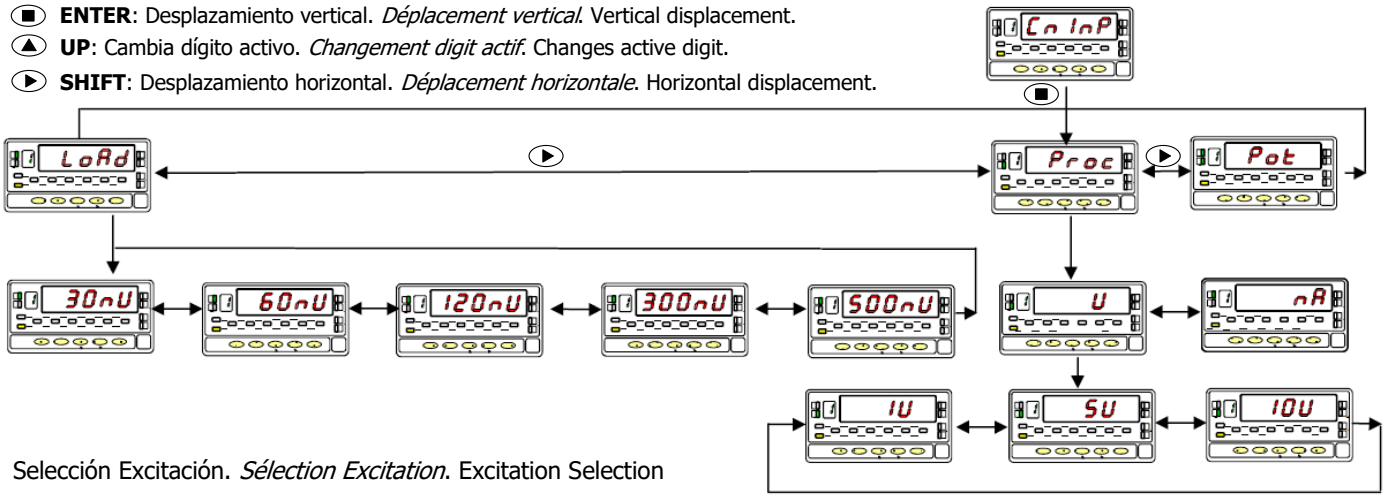
DOWNLOAD
USER MANUAL

Para una información más completa, por favor consulte el manual de instrucciones en nuestra web
Pour plus d'informations veuillez consultez le manuel dans nôtre site web
For complete instructions please refer to the user manual in our website

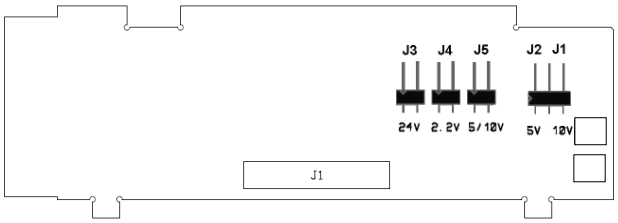
Según la Directiva 2012/19/UE, no puede deshacerse de este aparato como un residuo urbano normal. Puede devolverlo, sin coste alguno, al lugar donde fue adquirido para que de esta forma se proceda a su tratamiento y reciclado controlados.
Selon la Directive 2012/19/UE, l'utilisateur ne pout se défaire de cet appareil comme d'un residu urbain courant. Vous pouvez le restituer, sans aucun coût, au lieu où il a eté acquis afin qu'il soit procédé à son traitement et recyclage contrôlés.
According to 2012/19/EU Directive, You cannot dispose of it at the end of its lifetime as unsorted municipal waste. You can give it back, without any cost, to the place where it was adquired to proceed to its controlled treatment and recycling.

SEÑAL DE ENTRADA — *SIGNAL D'ENTRÉE* — INPUT SIGNAL

ENTER: Desplazamiento vertical. *Déplacement vertical*. Vertical displacement.
UP: Cambia dígito activo. *Changement digit actif*. Changes active digit.
SHIFT: Desplazamiento horizontal. *Déplacement horizontale*. Horizontal displacement.



Selección Excitación. *Sélection Excitation*. Excitation Selection

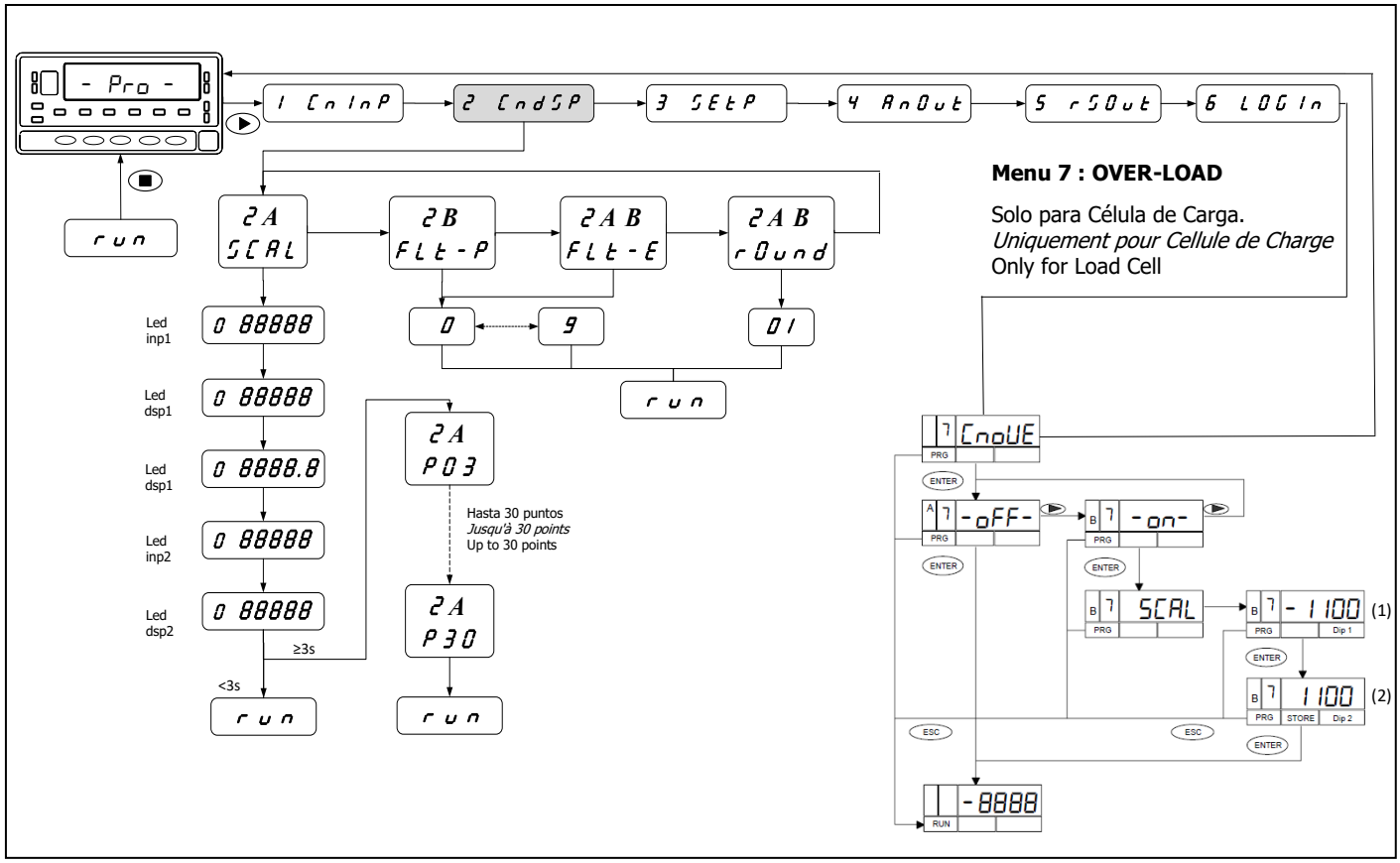


P2 = 10 V. fine reg.
P1 = 5 V. fine reg.

Exc. = 24 V DC (**J3**)
Exc. = 1.65 V DC (**J4**)
Exc. = 5 V DC (**J5** + **J2**)
Exc. = 10 V DC (**J5** + **J1**)

NOTE = J3, J4, J5 only one

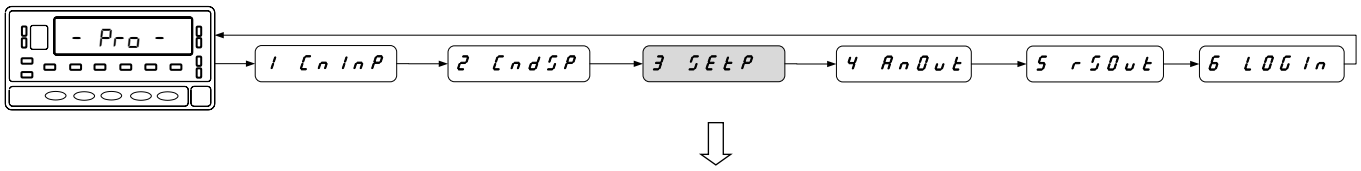
DISPLAY — *AFFICHAGE* — DISPLAY



(1) Valor de display programable para sobrecarga negativa
Valeur d'affichage programmable pour surcharge négative
Programmable display value for negative overload

(2) Valor de display programable para sobrecarga positiva
Valeur d'affichage programmable pour surcharge positive
Programmable display value for positive overload

OPCIÓN RELÉS — *RELAIS OPTION* — RELAYS OPTION

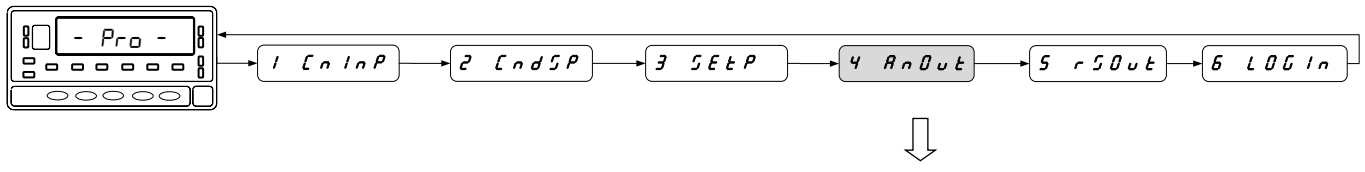


La configuración y programación de los valores de la Opción Relés/Optos está descrita en el quick-start o manual técnico de la Opción.

La configuration et la programmation des valeurs de l'Option Relais / Optos sont décrites dans le manuel rapide ou technique de l'Option.

The configuration and programming of the Relays / Optos Option is described in the quick-start or technical manual of the Option.

SALIDA ANALÓGICA — *SORTIE ANALOGIQUE* — ANALOG OUTPUT

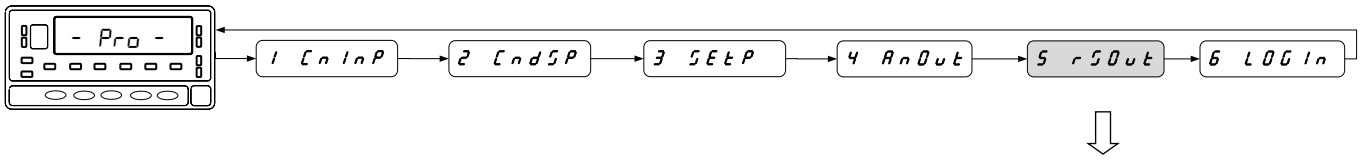


La configuración y programación de los valores de la Opción Analógica está descrita en el quick-start o manual técnico de la Opción.

La configuration et la programmation des valeurs de l'Option Analogique sont décrites dans le manuel rapide ou technique de l'Option.

The configuration and programming of the Analog Option is described in the quick-start or technical manual of the Option.

COMUNICACIONES — *COMMUNICATIONS* — COMMUNICATIONS

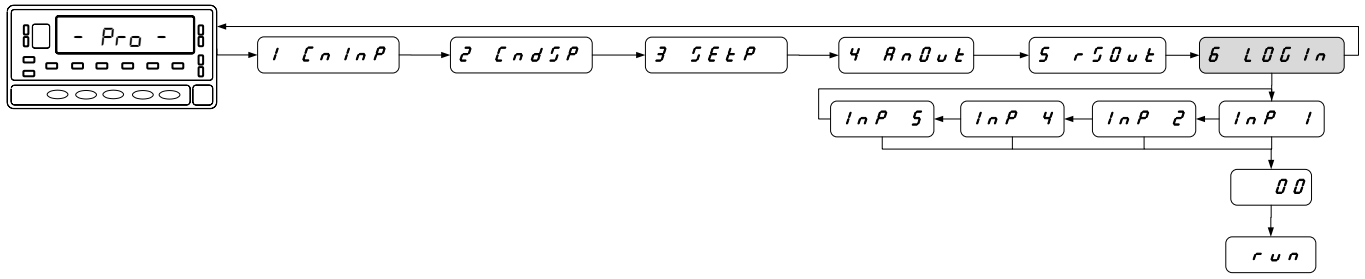


La configuración y programación de los valores de las opciones RS232C y RS485 está descrita en el manual técnico de la opción.

La configuration et la programmation des valeurs des options RS232C et RS485 sont décrites dans le manuel technique de l'option.

The configuration and programming of the RS232C and RS485 Option values is described in the Option's technical manual.

ENTRADAS DIGITALES — *ENTRÉES NUMÉRIQUES* — DIGITAL INPUTS



Con la tecla ▲ seleccionar el número de función [0-34], consultando la tabla de funciones programables.

Sélectionnez le numéro de fonction [0-34] avec la touche ▲ en vous référant au tableau des fonctions programmables.

Select the function number [0-34] with the ▲ key, referring to the table of programmable functions.

0 to 9 : DISPLAY AND MEMORY FUNCTIONS

Nº	Name	Function	Action
0	NO	None	-
1	TARE (*)	Adds the current display value to the tare memory	Edge
2	RESET TARE	Clears the tare memory	Edge
3	PEAK	Recalls the peak value	Level
4	VALLEY	Recalls the valley value	Level
5	RESET PEAK/VALLEY	Resets peak and valley readings	Edge
6	PEAK/VALLEY (*)	1st press shows peak, 2nd press shows valley and 3rd press returns to reading.	Edge
7	RESET (*)	In combination with function (1) clears the tare memory. In combination with function (6) clears the peak or valley memories, or the totalizer or the batch counter	Edge
8	HOLD1	Holds the display	Level
9	HOLD2 (*)	Holds the display and the analog and BCD outputs	Level

10 to 12 : FUNCTIONS ASSOCIATED WITH THE MEASUREMENT DISPLAY

Nº	Name	Function	Action
10	INPUT	Displays the signal input value in V or mA	Level
11	GROSS	Displays the gross value (measurement value + tare substracted)	Level
12	TARE	Displays the value of the tare memory	Level

13 to 16 : FUNCTIONS ASSOCIATED TO THE ANALOG OUTPUT

Nº	Name	Function	Action
13	ANA GROSS	The analog output follows the gross value (measured value + tare).	Level
14	ANA ZERO	Puts the analog output to the zero state (0V or 4mA)	Level
15	ANA PEAK	The analog output follows the peak value	Level
16	ANA VALLEY	The analog output follows the valley value	Level

17 to 23 : PRINT FUNCTIONS TO USE WITH RS232C or RS485 OUTPUTS

Nº	Name	Function	Action
17	PRINT NET	Prints the net value	Edge
18	PRINT GROSS	Prints the gross value	Edge
19	PRINT TARE	Prints the value of the tare	Edge
20	PRINT SET1	Prints the value and the state of the setpoint 1	Edge
21	PRINT SET2	Prints the value and the state of the setpoint 2	Edge
22	PRINT SET3	Prints the value and the state of the setpoint 3	Edge
23	PRINT SET4	Prints the value and the state of the setpoint 4	Edge

24 to 25 : FUNCTIONS ASSOCIATED WITH THE SETPOINT OUTPUTS

Nº	Name	Function	Action
24	FALSE SETPOINTS	Allows programming and operation of four setpoints without setpoint card installed	Level
25	RESET SETPOINTS	Unlocks the setpoint latched outputs	Edge

Nº	Function	Description	Action
26	S & H SETPOINTS	Grants the setpoints run during the S&H function activation	Fixed Level
27	SAMPLE & HOLD	On activating this function, the measuring values peak,valley, peak-peak and actual value are hold on display as well as analog output, rs output and setpoints execpt if function 26 is active.	Fixed Level
28	ASCII SEND	Transmits the four last digits of the display to a remote ASCII indicator.By holding the input to a low level, transmission takes place every second.	Edge or fixed level
29	PEAK-PEAK	Display the peak-peak value	Edge
30	ANALOG Output Peak-Peak	The analog output follows the PEAK-PEAK value	Fixed Level
31	FAST RS	Sends by serial output RS2 or RS4 the display value at 200 per second.	Fixed Level
32	RELAY inhibit	Leaves the relays in their initial state and inhibits their operation while the function is activated	Fixed Level
33	S & H + TARE	It combines function 27 (S&H) with the Tare function so that when the display hold is deactivated, a tare of the internal value is performed.	Fixed Level
34	Function 27 + 32	Sample & Hold with reset and setpoint inhibition. Identical to function no. 27 but turning the setpoint outputs OFF when Hold is activated and inhibiting their operation during the Hold state.	Fixed Level

CN2 : CONFIGURACIÓN DE FABRICA / *CONFIGURATION USINE* / FACTORY CONFIGURATION

La programación de las funciones del conector CN2 sale de fábrica con las mismas funciones TARA, MAX/MIN y RESET realizables por teclado y además incorpora la función HOLD.
Cuando se efectúa un HOLD, el valor de display permanece congelado mientras el pin correspondiente este activado. El estado de HOLD, no afecta al funcionamiento interno del instrumento ni a las salidas de setpoint, pero sí a las salidas BCD y analógica.

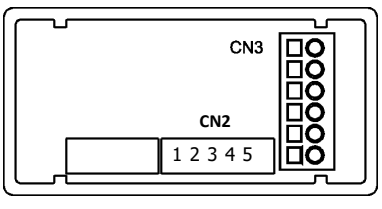
La programmation des fonctions du connecteur CN2 quitte l'usine avec les mêmes fonctions TARE, MAX / MIN et RESET qui peuvent être effectuées par clavier et intègre également la fonction HOLD.
Lorsqu'un HOLD est effectué, la valeur d'affichage reste figée tant que la broche correspondante est activée. L'état HOLD n'affecte pas le fonctionnement interne de l'instrument ou les sorties de consigne, mais affecte le BCD et les sorties analogiques.

The programming of the CN2 connector functions leaves the factory with the same TARE, MAX / MIN and RESET functions that can be carried out by keyboard and also incorporates the HOLD function.
When a HOLD is performed, the display value remains frozen as long as the corresponding pin is activated. The HOLD status does not affect the internal operation of the instrument or the setpoint outputs, but does affect the BCD and analog outputs.

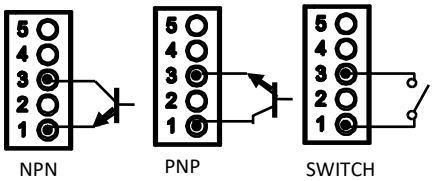
CONEXIONADO/ *RACCORDEMENT*/WIRING

CN2 DIGITAL INPUTS (Factory Configuration)

PIN (INPUT)	Function	Number
PIN 1 (INP-1)	RESET	Function nº 7
PIN 2 (INP-2)	HOLD	Function nº 9
PIN 3	COMMON	
PIN 4 (INP-4)	TARE	Function nº 1
PIN 5 (INP-5)	PEAK/VALLEY	Function nº 6

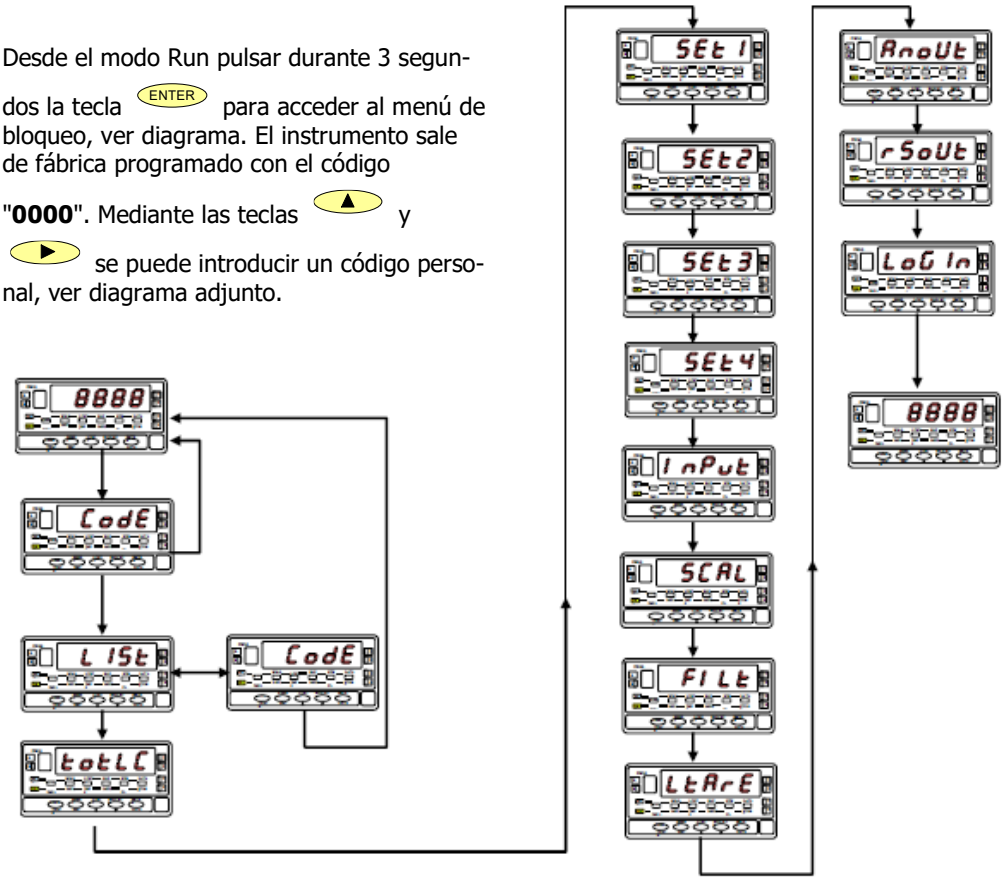


(Default config. NPN / Switch. For PNP see manual)



BLOQUEO — *VERROUILLAGE* — LOCK

Desde el modo Run pulsar durante 3 segundos la tecla ENTER para acceder al menú de bloqueo, ver diagrama. El instrumento sale de fábrica programado con el código "**0000**". Mediante las teclas ▲ y ▶ se puede introducir un código personal, ver diagrama adjunto.



BLOQUEO TOTAL : No será posible modificar datos. En este caso, cuando se entra en programación, aparecerá en el display la indicación "-dAtA-".

BLOQUEO PARCIAL : Se podrán modificar datos en aquellos menús o submenús que no estén bloqueados. En este caso, cuando se entra en los menús de programación, aparecerá en el display secundario la indicación "-Pro-".

VERROUILLAGE TOTAL : Il ne sera pas possible de modifier des données. Dans ce cas, lorsque la programmation est entrée, l'indication "-dAtA-" apparaît sur l'afficheur.

VERROUILLAGE PARTIEL : Les données peuvent être modifiées dans les menus ou sous-menus qui ne sont pas verrouillés. Dans ce cas, lorsque les menus de programmation sont entrés, l'indication "-Pro-" apparaît sur l'affichage secondaire.

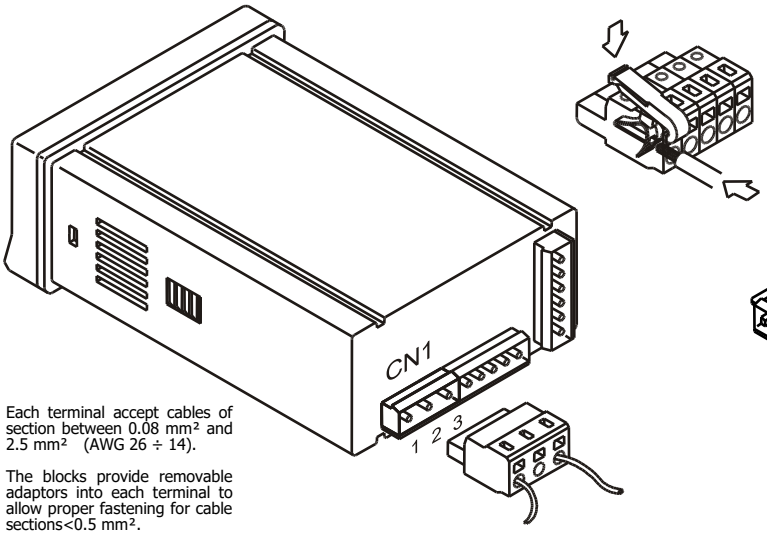
TOTAL LOCK : It will not be possible to r modify data. In this case, when programming is entered, the indication "-dAtA-" will appear on the display.

PARTIAL LOCK : Data can be modified in those menus or submenus that are not locked. In this case, when the programming menus are entered, the indication "-Pro-" will appear on the secondary display.

Depuis le mode Run, appuyer 3 secondes sur la touche ENTER pour accéder au menu de blocage, voir schéma. L'instrument quitte l'usine programmé avec le code "0000". A l'aide des touches ▲ et ▶ vous pouvez saisir un code personnel, voir schéma ci-joint.

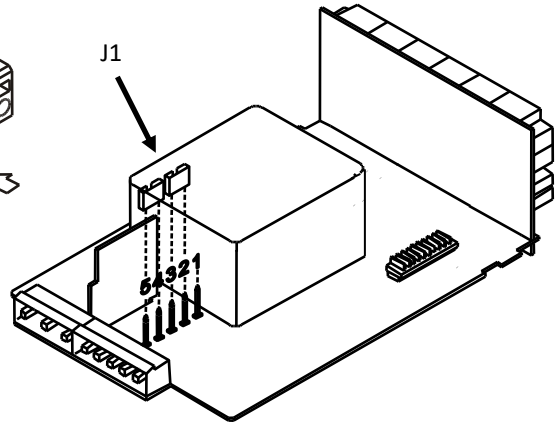
From Run mode, press the ENTER key for 3 seconds to access the blocking menu, see diagram. The instrument leaves the factory programmed with the code "0000". Using the ▲ and ▶ keys you can enter a personal code, see attached diagram.

CONEXIONADO — *RACCORDEMENT* — CONNECTIONS



Each terminal accept cables of section between 0.08 mm² and 2.5 mm² (AWG 26 ÷ 14).

The blocks provide removable adaptors into each terminal to allow proper fastening for cable sections<0.5 mm².



CN1 WIRING

AC VERSIONS

PIN 1 - AC LINE

PIN 2 - GND (GROUND)

PIN 3 - AC NEUTRAL

CN1 WIRING

DC VERSIONS

PIN 1 - DC POSITIVE

PIN 2 - NOT CONNECTED

PIN 3 - DC NEGATIVE

POWER SUPPLY RANGE

GAMMA-M 115VAC 5W 50/60Hz (J1= 1-2 / 3-4)
GAMMA-M2 24VAC 5W 50/60Hz (JI = 1-2 / 3-4)

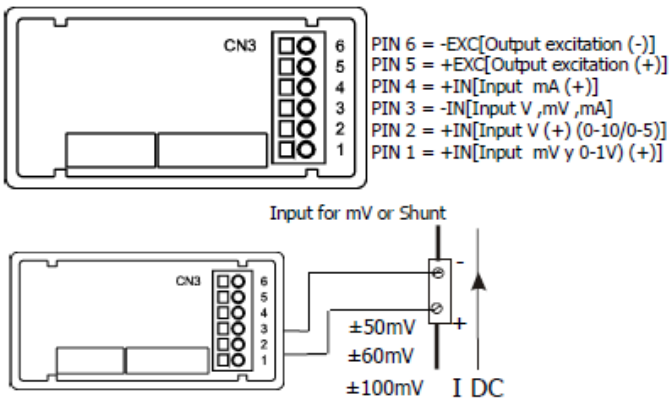
GAMMA-M1 10-30VDC5W

GAMMA-M 230VAC 5W 50/60Hz (J1 = 2-3 / 4-5)
GAMMA-M2 48VAC 5W 50/60Hz (J1 = 2-3 / 4-5)

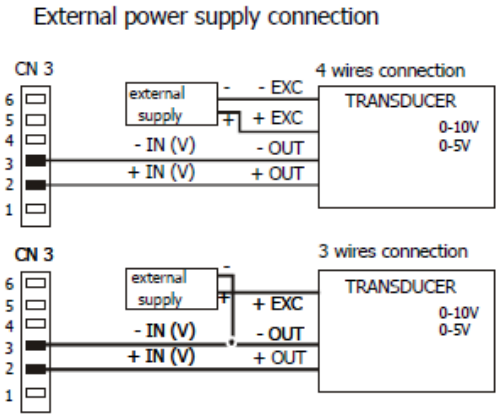
Recommended fuse : GAMMA-M (0.5A)
GAMMA-M2 (1A)
GAMMA-M1 (2A)

CONEXIONADO *RACCORDEMENT* WIRING

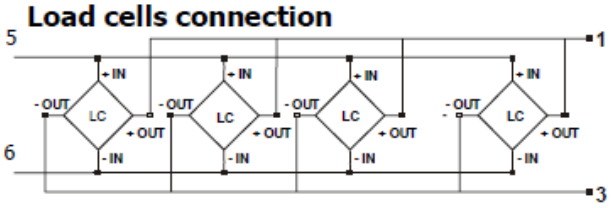
Input type connection



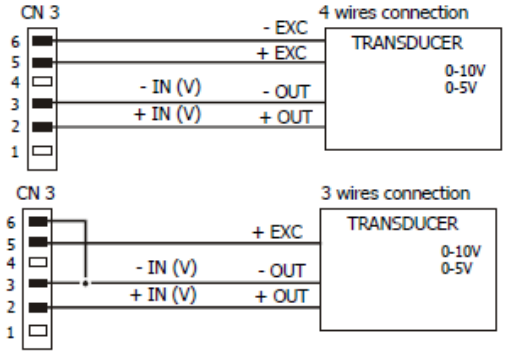
Transmitter connection 0-10V or 0-5V



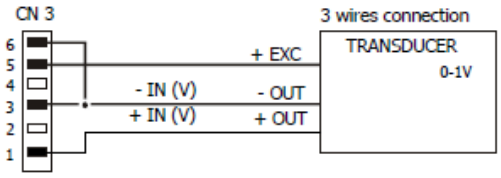
Load cells connection



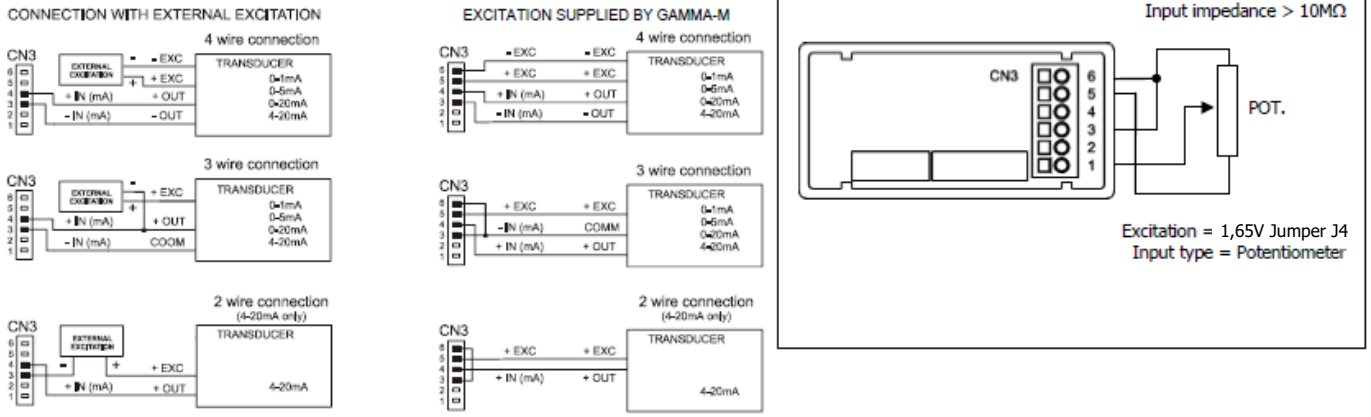
Excitation from Gamma-M



Transmitter connection 0-1V



For input process signal mA



CÉLULA DE CARGA : Para conexión a 6 HILOS el +SENSE y el –SENSE se conectan a los bornes (5) +EXC y (6) -EXC.

PONT DE JAUGE *: Pour une connexion à 6 FILS, + SENSE et –SENSE sont connectés aux bornes (5) + EXC et (6) -EXC.*

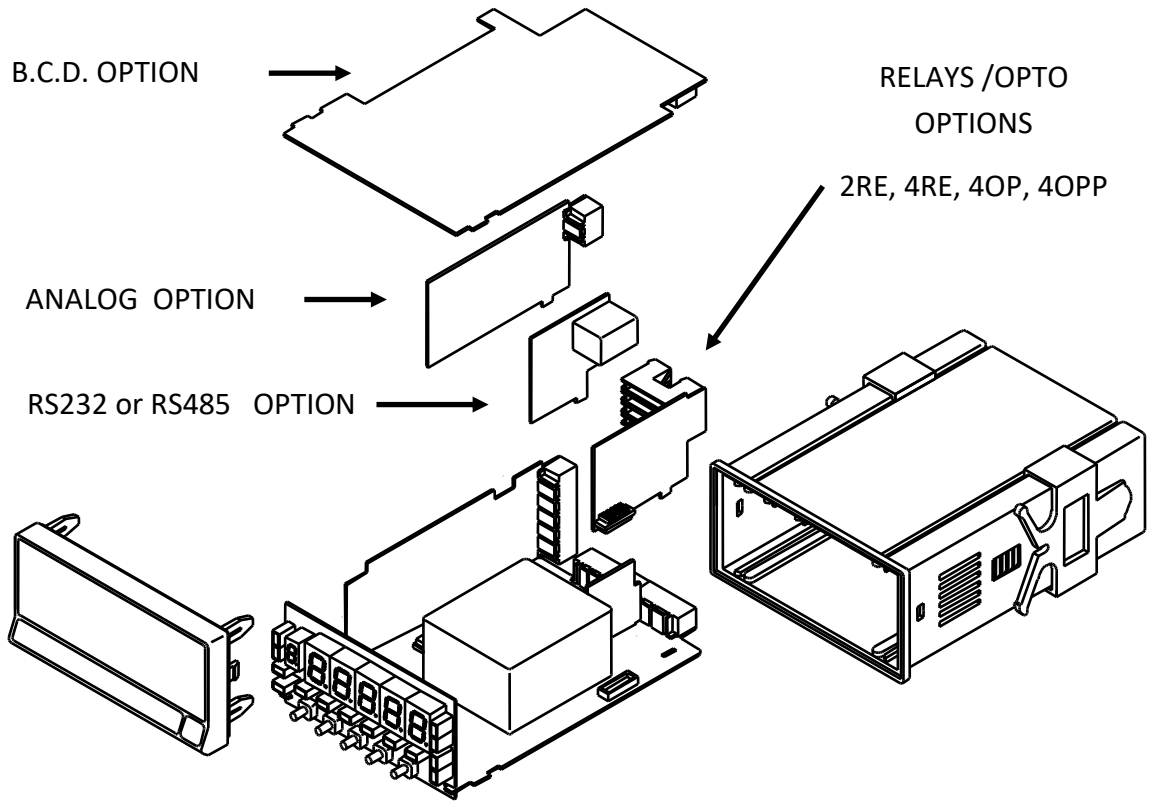
LOAD CELL : For 6-WIRE connection the + SENSE and –SENSE are connected to terminals (5) + EXC and (6) -EXC.

Nota: Para obtener información adicional sobre el cableado, descargue el manual completo de nuestro sitio web
Remarque*: Pour plus d'informations sur le câblage, téléchargez le manuel complet sur notre site Web*
Note: For additional wiring information download complete manual from our website

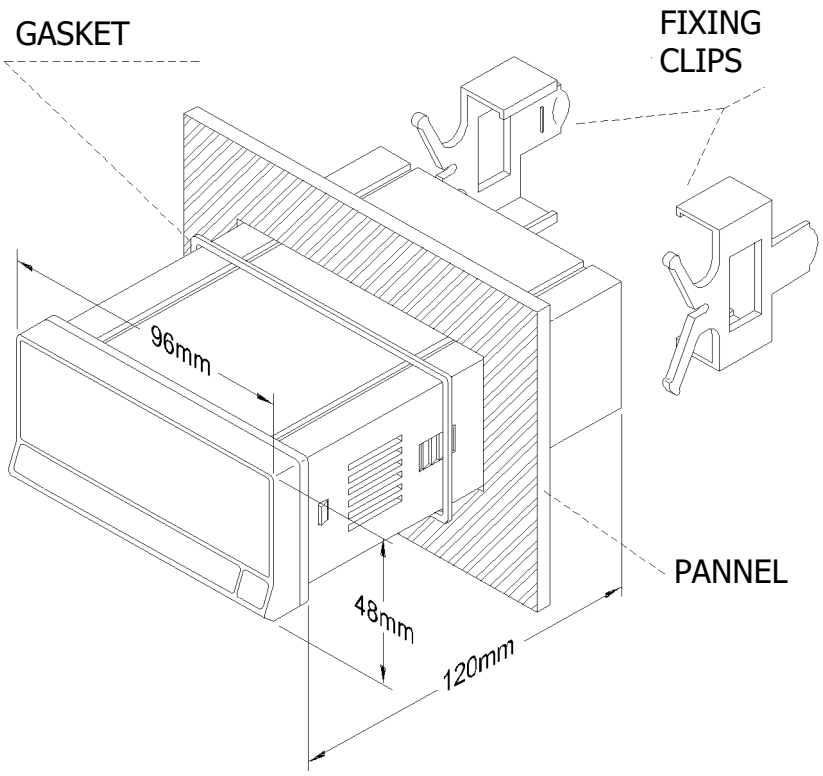
**** IMPORTANTE! / *IMPORTANT!* / IMPORTANT! / *WICHTIG!***

Para garantizar la seguridad eléctrica de acuerdo con EN 61010-1 deberá instalarse como protección un fusible externo.
Pour garantir le sécurité électrique selon EN 61010-1 il faut installer un fusible externe de protection.
To guarantee electrical safety according to EN 61010-1 a protective external fuse must be installed.

OPCIONES DE SALIDA OPTIONS DE SORTIE OUTPUT OPTIONS



MONTAJE EN PANEL MONTAGE SUR PANNEAU PANEL MOUNTING



Estanqueidad frontal
Étanchéité du frontal
Frontal protection degree

IP65

Dimensiones y montaje
Dimensions et montage
Dimensions and mounting

Orificio en panel
Orifice dans le panneau
Pannel cutout

92 x 45 mm

DITEL
DISEÑOS Y TECNOLOGÍA, S.A.
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Fax +34 934 903 145
Email: comercial@ditel.es ; web: www.ditel.es