ARPEGE MASTERK

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CONFIGURATION AND USER MANUAL

INDICATOR IDÉ 500-I INDUSTRY SOFTWARE

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Date	Edition number	Object of the modification
07/04/2006	00	Original.
21/12/2006	01	Addition of a precision on the weight formatting according to the type. (16bits⇒ according to the display, 32bits⇒ In grams)
15/04/2008	02	Addition of the ANYBUS Type S Board.
11/02/2009	03	Update of the configuration menu.
02/11/2010	04	Addition of the management for the AMK Ethernet Modbus TCP board. (XPort)
04/04/2013	05	Updates, details on the algebraic summation function and detail the traceability file.
27/06/2013	06	Addition of the AMK Modbus TCP Ethernet (XPort) setting from the front panel and the possibility of a slave IDé500-I indicator on the **MASTER CAN** network. (ST2)
06/02/2017	07	Addition of the ETHERNET/IP and PROFINET-IO network, correction of the memory restriction for DEVICE NET.
26/06/2018	08	Addition of the CanMK-MES transmitters (connection, current consumption, …)
21/11/2018	09	Add comments on In/Out size for Ethernet/IP.
11/02/2019	10	Update of the flow for Fieldbus commands execution. (Refer to "*2.2.2. Reception of a command*")
13/02/2020	11	Addition details on the Profinet-IO ANYBUS type S fieldbus option board driver with IP address seizure. (Refer to *10.4*)

SUMMARY

1. PRESENTATION

1.1. The Hardware

1.1.1. Technical characteristics

Maximum number of scale divisions (legal for trade) : 6000.
Sensitivity : 0.5 µV.
Power supply of the load cell : 5V square wave.
Number of measurements / second : 40 to 180.
Load impedance (analog load cells) : > 50 ohms.

Zero visualized at 1/4 scale division.
Digital adjustment conversational by the front panel.
Power supply 230 V / 50 Hz or 60 Hz + earth < 5 ohms.
DC power supply $12V_{DC}$. (Or $24V_{DC}$ in option)
Power consumption: 15 to 25VA max, according to the configuration.
Internal clock and memory backed up by a battery.

LCD screen 240 pixels by 128 pixels.
Keypad: - 4 metrological Keys used also for the seizures,
- 4 application keys used also for the seizures.

1.1.2. The peripherals

In standard version the "*IDé 500-I*" indicator disposes of:

❖ Two serial links:
COM1 : RS232 and/or RS485 2 wires. (Short distances link: 10 meters max.)
COM2 : Passive current loop, or in option: RS232, RS485, active or passive current loop, AMK Ethernet Modbus TCP (XPort). (Long distance link: the maximum length depends of the option board type)

❖ One parallel interface:
LPT : Not used.

❖ One input for analogue sensors:
M1 : Not used.

❖ One CAN bus interface:
MASTER CAN : Communication with the "*CANDY_Ex*" and/or "*CanMK-MES*" transmitters, slave "*IDé 500-I*" and the remote displays. (Long distance link: 500 meters max.)

1.1.3. The options

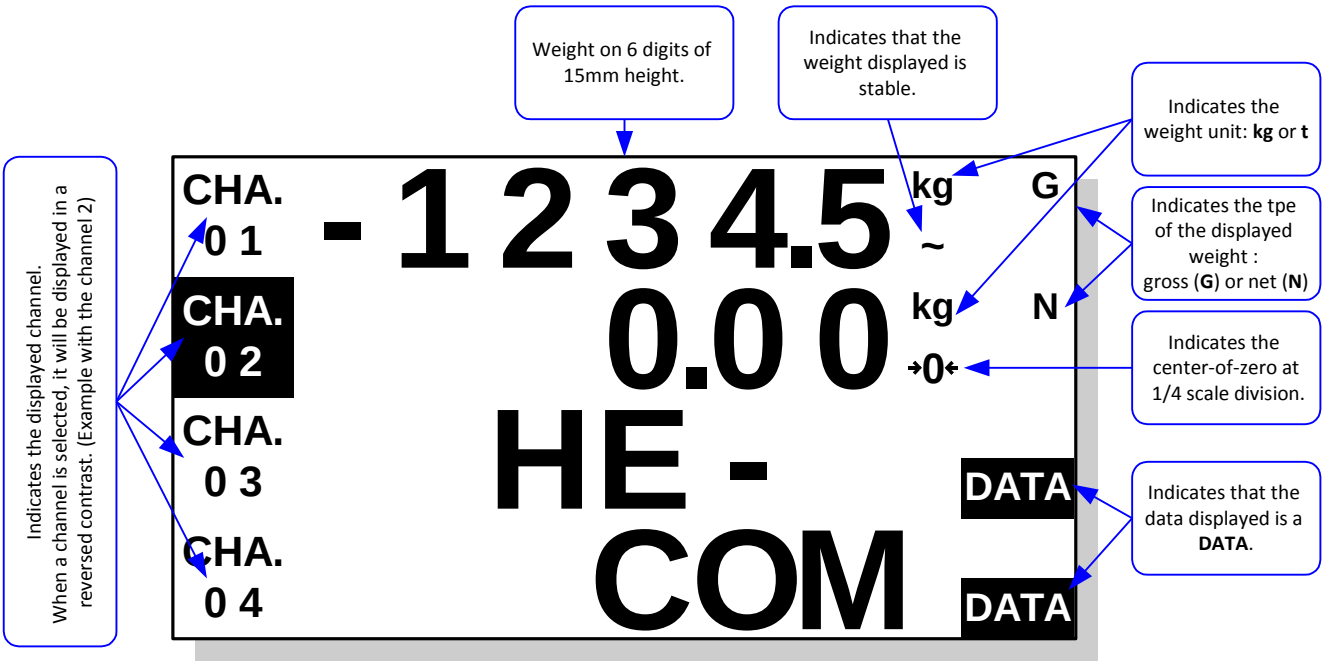
❖ Memory extension:
EXT. MEM : Memory extension. (USB stick)

❖ One optional fieldbus board (BDT type S board). Available fieldbuses: Profibus-DP, DeviceNet, Ethernet Modbus TCP, Profinet IO …

❖ 4 types of weight remote displays may be connected:
- RP 15M : Weight remote display of 15 mm height.
- RP 75 : Weight remote display of 75 mm height.
- RP 75_HL : Weight remote display of 75 mm height.
- IDé 500-I : Slave indicator (place the ST2 jumper), this indicator has the same characteristics of communication than the master "*IDé 500-I*".

1.1.4. The display

The "*IDé 500-I*" indicator disposes of a graphic LCD display that allows to the operator a great easiness of the system's use.
The weight present on the scales with its states (Gross / Net, weight unit, center-of-zero, …) will be displayed in real time on the LCD screen.



Example of a display with four channels:

1.1.5. The keypad

The "*IDé 500-I*" indicator is equipped with 8 keys (4 metrological keys, 4 application keys) used also for the seizures.

Keys	In the application mode	During the seizures (Menu)
→0←	Implementation of the semi-automatic zero device of the selected channel. (The semi-automatic zero device cancels the tare device)	Shift of the data to be seized of one digit to the right.
B/N	Reminds temporarily the GROSS weight value of the selected channel when a tare has been implemented.	Shift of the data to be seized of one digit to the left.
→T← EFF	Implementation of the tare device of the selected channel with the weight present on the scale.	Resets the value to be seized.
DSD VAL	Access to the configuration menu.	Validates the seizure.
↑	Selection of the previous channel.	Returns to the previous seizure. In case of a signed value, it allows the change of the sign.
↓	Selection of the next channel.	Goes to the next seizure, validates the seizure.
+	Increases the display contrast.	Increases the flashing digit by one.
-	Decreases the display contrast.	Decreases the flashing digit by one.

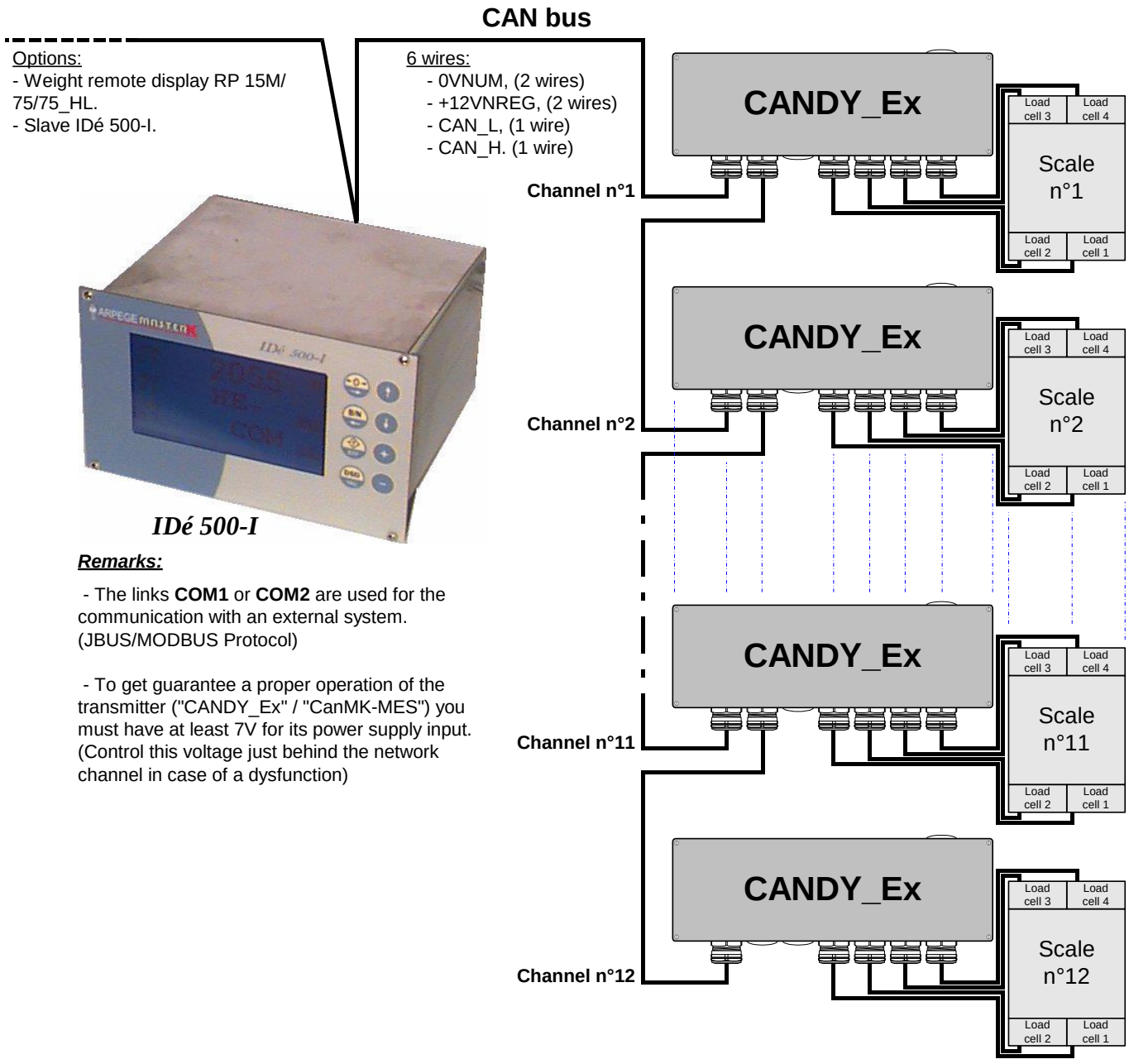
1.2. The software

The "*IDé 500-I*" indicator equipped with the "*INDUSTRY*" software was conceived to supervise 1 to 12 measurement channels, the measurement network is composed of the "*IDé 500-I*" indicator and of 1 to 12 "*CANDY_Ex*" and/or "*CanMK-MES*" micro-transmitters.

The "I*Dé 500-I*" indicator executes the weight acquisition of the micro-transmitter (1 000 acquisitions per second) and it makes these information exploitable for a programmable logic controller "PLC":

- By the asynchronous RS485/RS232 serial link, (JBUS/MODBUS protocol)
- And/or via a fieldbus link: DeviceNet, Profibus-DP, Modbus TCP, Ethernet/IP, Profinet IO... (With the optional ANYBUS fieldbus board)
- And/or via the fieldbus link Modbus TCP. (With the optional Ethernet Modbus TCP AMK XPort fieldbus board)

The micro-transmitter communicates through a fieldbus (CAN bus) with the "*IDé 500-I*" indicator. On each micro-transmitter, you may connect from 1 to 8 load cells with a minimum impedance of 400Ω. (Minimum impedance for the micro-transmitter = 50 Ω)



Remarks:

- The links **COM1** or **COM2** are used for the communication with an external system. (JBUS/MODBUS Protocol)

- To get guarantee a proper operation of the transmitter ("CANDY_Ex" / "CanMK-MES") you must have at least 7V for its power supply input. (Control this voltage just behind the network channel in case of a dysfunction)

Example of the "IDé 500-I" / "CANDY_Ex" measurement network:

Attention: The power supply of the "*IDé 500-I*" indicator does not allows the supply of 12 measurement channels with 8 load cells of 400Ω each.

Max. current supplied by the IDé-500I =	600 mA			
Number of load cells by channel	Current consumption of the "CANDY_Ex" according to the load cell impedance		Current consumption of the "CanMK-MES" according to the load cell impedance	
	400 ohm	800 ohm	400 ohm	800 ohm
1	38,00 mA	32,00 mA	52,00 mA	49,00 mA
2	48,00 mA	38,00 mA	58,00 mA	52,00 mA
3	57,00 mA	43,00 mA	64,00 mA	55,00 mA
4	65,00 mA	48,00 mA	71,00 mA	58,00 mA
5	73,00 mA	52,00 mA	77,00 mA	61,00 mA
6	80,00 mA	57,00 mA	83,00 mA	64,00 mA
7	87,00 mA	61,00 mA	89,00 mA	67,00 mA
8	93,00 mA	65,00 mA	96,00 mA	71,00 mA

Table chart of the consumption of a "CANDY_Ex" and for a "CanMK-MES":

ATTENTION:

The values given in the table chart above are calculated with load cells having an input impedance of 400Ω and 800Ω. These values may be increased if the load cells impedance has a bigger value.
According to the CAN bus network length, you must check out the voltage drop in the cable. The more the network cable is long, the more the section of the used power supply must be important.

Remarks:

- A channel accepts from 1 to 8 load cells of 400Ω maximums. (Minimum impedance of 50Ω per channel)
- For installations requiring more load cells than authorized in the table above, it is possible to supply the CAN fieldbus directly through an external power supply.

2. THE CHARACTERISTICS OF THE FILED BUSES ON THE "*IDÉ 500-I*"

The "*IDé 500-I*" indicator can be equipped with:

❖ A primary network: *(ANYBUS option board S type, list of fieldbus scalable)*

- ➢ Profibus-DP fieldbus ***(from 1 to 12 channels maximum, see 3)***
- ➢ DeviceNet fieldbus ***(from 1 to 12 channels maximum, see 4)***
- ➢ Ethernet Modbus TCP fieldbus ***(from 1 to 12 channels maximum, see 5)***
- ➢ Ethernet/IP fieldbus ***(from 1 to 12 channels maximum, see 6)***
- ➢ Profinet IO fieldbus ***(from 1 to 12 channels maximum, see 7)***

❖ A first secondary network: *(Ethernet Modbus TCP AMK XPort option board)*

- ➢ Ethernet Modbus TCP fieldbus ***(from 1 to 12 channels maximum, see 8)***

❖ A second secondary network: *(Serial link with JBUS/MODBUS protocol)*

- ➢ JBUS/MODBUS fieldbus ***(from 1 to 12 channels maximum, see 9)***

These three network are cumulative for reading (see *2.1 Transmission table*) but for writing only one of these network can be used (see *2.2 Reception table*), to define the network to use for writing it's necessary to respect the following priority: primary network then first secondary network then second secondary network.

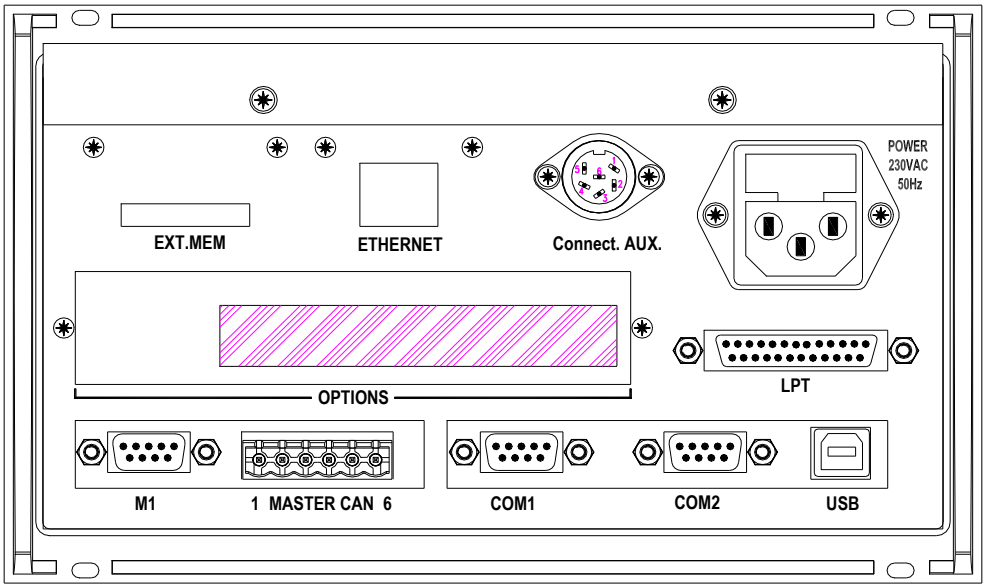
For these fieldbus boards, the "*IDé 500-I*" indicator is a slave node that can send or read data through a master of the network. The exchange of data with other slaves or between two "*IDé 500-I*" indicators can be easily established through a PLC or a computer.
The size of the data exchanged is 74 bytes in input and 74 bytes in output.

All the data of the frame are either a MOTOROLA format or an INTEL format. If they are read by a PLC with an INTEL processor, the most significant and the least significant bits are reversed:

	Byte (8bits)	*Word (16bits)*	*Double word (32bits)*
Motorola	*ab H*	*aabb H*	*aabbccdd H*
Intel	*ab H*	*bbaa H*	*ddccbbaa H*

Example of a memory coding of a byte, word or double word:

So a weight of 1000 will be coded in the frame **00 00 03 E8** H, it will be read by an Intel processor **E8 03 00 00** H. (≠ 1000)



Example of rear view of the indicator:

*The fieldbus board (ANYBUS S type board) are available in the crosshatched area (**OPTIONS**), the Ethernet Modbus TCP AMK (XPort) board is available in the area above the text **ETHERNET**.*

2.1. Transmission table

It is composed of 6 bytes for each channel, a total of 72 bytes, the two remaining bytes being a counter

Reading address for:

- The JBUS protocol : **2900** h, **10496** d,
- The Ethernet Modbus TCP network : **0000** h, **0** d.

	2 bytes	4 bytes
Cha. n°1	**Channel state**	**Measured weight**
Cha. n°2	**Channel state**	**Measured weight**
Cha. n°3	**Channel state**	**Measured weight**
Cha. n°11	**Channel state**	**Measured weight**
Cha. n°12	**Channel state**	**Measured weight**
	Counter	

*

:** *In case of a fieldbus, the size of this block is variable according to the* ***"OUTPUT LENGTH" *parameter. (See 10.4)*

*Example: With 8 channels and the life counter, you will have "**OUTPUT LENGTH**" = 8 x 6 + 2 = 50.*

State of the channel: (2 bytes)

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Nat weight	Gross weight	Power supply default	Reset in progress	Zero	Immobility	Overload	Underload	Configuration in progress	Communication error	Information on the command		Command code			
n	g	A	R	z	i	S	D	C	E	f	t	c	c	c	c

- Net weight: (**n**) = **1** ⇒ if the measured weight is a net weight.
  = **0** ⇒ if not.

- Gross weight: (**g**) = **1** ⇒ if the measured weight is a gross weight.
  = **0** ⇒ if not.

- Supply default: (**A**) = **1** ⇒ if there is a power supply default on the concerned channel.
  = **0** ⇒ if not.

- Reset in progress: (**R**) = **1** ⇒ if there is a reset in progress on the concerned channel.
  = **0** ⇒ if not.

- Zero : (**z**) = **1** ⇒ if the channel have a center-of-zero at ¼ scale division.
  = **0** ⇒ if not.

- Immobility: (**I**) = **1** ⇒ if the weight of the channel is stable.
= **0** ⇒ if not.

- Overload: (**S**) = **1** ⇒ if the weight of the channel is greater than + 9 scale divisions above the range.
= **0** ⇒ if not.

- Un-tare: (**D**) = **1** ⇒ if the weight of the channel is greater than - 9 scale divisions below the zero.
= **0** ⇒ if not.

- Configuration : (**C**) in progress = **1** ⇒ if you are configuring the channel.
= **0** ⇒ if not.

- Communication : (**E**) error = **1** ⇒ if there is a communication error with the concerned channel.
= **0** ⇒ if not.

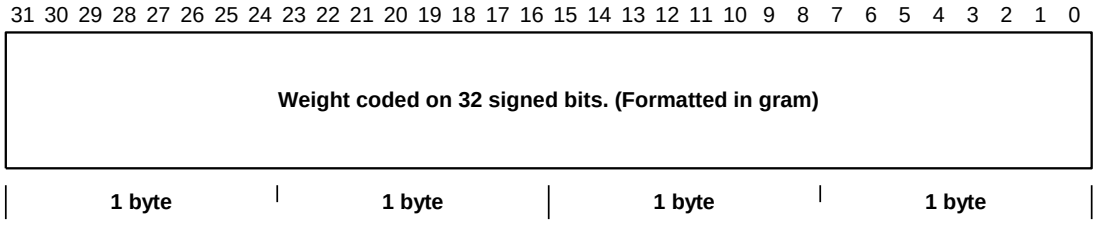
- Information on : (**f t**) the command = **11** ⇒ if there is a command in progress on the concerned channel.
= **01** ⇒ if the command have been executed.
= **10** ⇒ if the command could not been executed.
= **00** ⇒ if the command VOID is received.

- Command code: (**cccc**) Number of the command in progress.

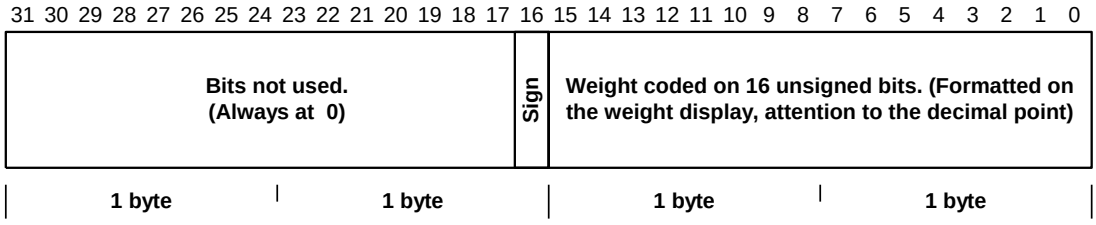
Remark: The bits marked with a capital letter represent a default, so you must not interpret the weight.

Measured weight: (4 bytes)

According to the "**WEIGHT 0=32bits 1=16bits**" parameter value (see *10.4*) the 4 bytes of the weight are presented according to one of the two following forms:



"**WEIGHT 0=32bits 1=16bits**" = **0**: (See *10.4*)
(Weight coding on 32 signed bits)



"**WEIGHT 0=32bits 1=16bits**" = **1**: (See *10.4*)
(Weight coding on 16 unsigned bits + sign coding on bit 16, **b16** = **0** positive weight, **b16** = **1** negative weight)

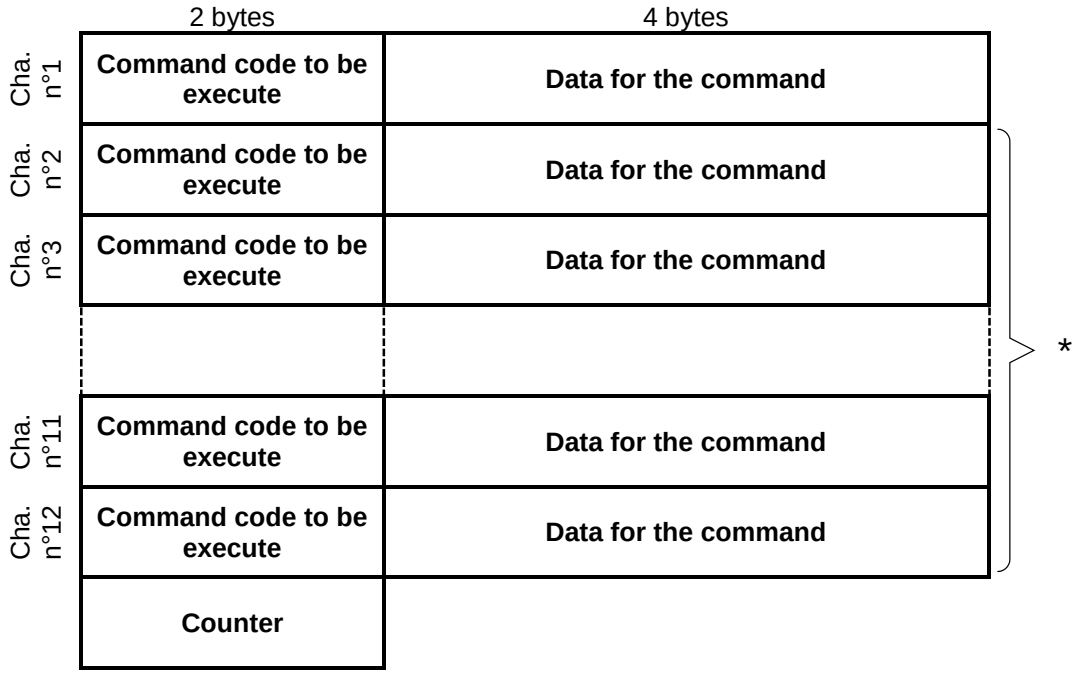
*Example: Weight displayed 10,05kg, value coded on 16 bits **03ED** h / **1005** d, weight displayed 100,5kg, value coded on 16 bits **03ED** h / **1005** d)*

2.2. Reception table

It is composed of 6 bytes for each channel, a total of 72 bytes, the two remaining bytes being a counter.

Writing address for:

- The JBUS protocol : **2800** h, **10240** d,
- The Ethernet Modbus TCP network : **0400** h, **1024** d.



***:** *In case of a fieldbus, the size of this block is variable according to the "**INPUT LENGTH**" parameter. (See 10.4)*
*Example: With 8 channels and the life counter, you have "**INPUT LENGTH**" = 8 x 6 + 2 = 50.*

2.2.1. Values of the commands

The commands are coded on 16 bits: (2 bytes)

- Nothing..... = 0
- Re-zero ..... = 1
- Semi-automatic tare..... = 2
- Erasing of the tare ..... = 3
- Passage to Gross/Net ..... = 4
- Passage to Gross (Always the gross weight on the network)..... = 5
- Zero calibration (No legal for trade mode only)..... = 6
- Gain calibration (No legal for trade mode only)..... = 7

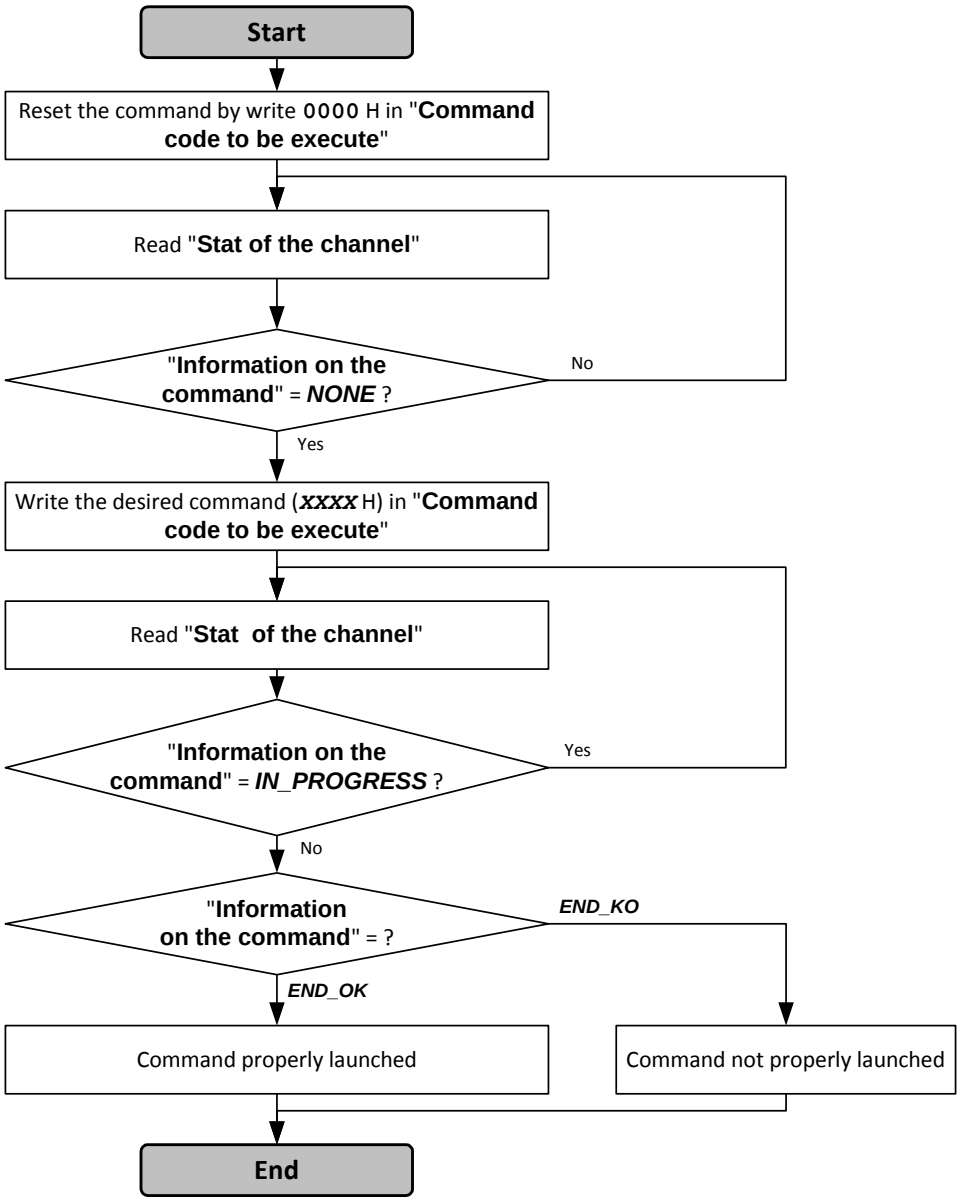
Attention:

- The command 7 « Gain calibration » requires the updating of the **Data for the command** field. The format of the data is the following, 32 bits with the weight coded as follows: XXX…XXX,X kg.
- An error can be returned according to the required command and to the state of the command. This error is placed in the **State of the channel** field when the **Information on the command** field is at END_KO.

2.2.2. Reception of a command

It is possible to send commands from the "*IDé 500-I*" indicator by writing in the **Command code to be execute** zone.

To be sure of the validity and the correct execution of command, it's important to manipulate it as described in the flow below.



Values of the states of the command:

	(f t)
- NOTHING	= 0, (00)
- END_OK	= 1, (01)
- END_KO	= 2, (10)
- IN_PROGRESS	= 3. (11)

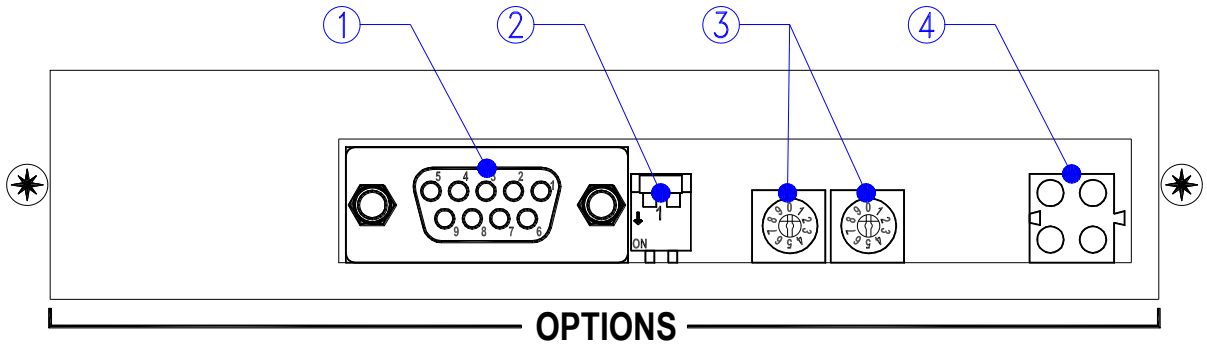
Information on the command is read in the frame sent by the "*IDé 500-I*" indicator. (See *2.1*)

3. INSTALLATION ON THE PROFIBUS-DP NETWORK

The connection to the fieldbus is done through the intermediary of a D-SUB 9 points socket. The used media is a shielded cable composed of a twisted pair that allows transporting the information. A switch allows connecting the termination resistors.

A part of the backside of the "*IDé 500-I*" indicator is reserved for the use of the PROFIBUS-DP bus. It allows the configuration of the station number, the physical connection to the fieldbus and the visualization of the indication LEDs.

Representation of the backside of the "IDé 500-I" indicator:

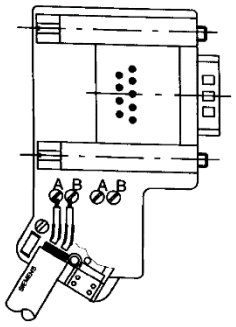


Legend:

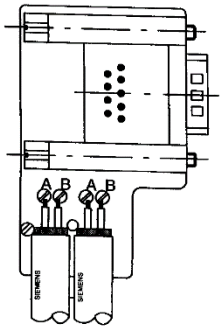
1 ⇒ PROFIBUS-DP connector. (D-SUB 9 points)
2 ⇒ Switch termination resistor.
3 ⇒ Switches to the station number.
4 ⇒ Status LED of the board / network.

Physical connection to the PROFIBUS-DP bus:

Connection of the bus cable for the first and last station of the bus. The cable can be connected to the left or to the right.



Connection of the bus cable for all the other stations of the bus.



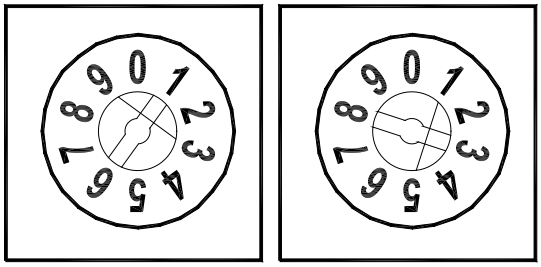
A switch on the socket allows positioning the termination resistor in or out of the circuit. The termination resistor must be connected on the stations mounted at the beginning or the end of a segment.

D-SUB 9 points Pin number	Description
8	Line A
3	Line B
Outline	Shield
5	GND
6	Vcc
4	RTS

Configuration of the station number:

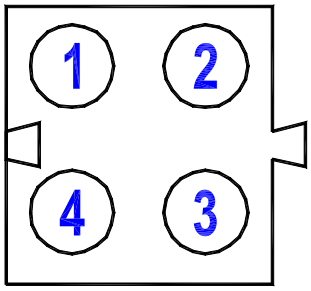
You can configure the station number for the indicator with a value between 0 and 99.

Example with the station number 13:



(Tens calibration) x 10 (Units calibration) x 1

Significance of the indication LEDs:



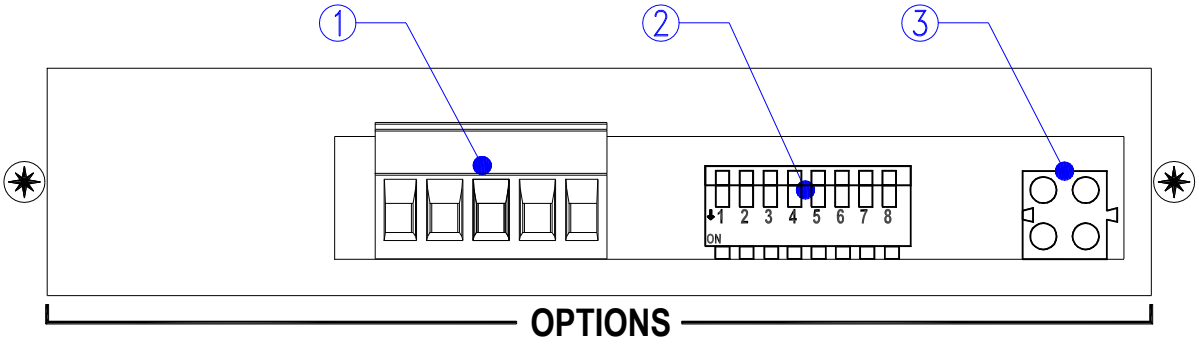
LED	Colour	Description
LED 1	Green	PROFIBUS-DP communication in progress.
	Off	No PROFIBUS-DP communication in progress, or device power off.
LED 2	Green	Indicator connected to the network. (Bus online)
	Blinking green	Initialization mode.
	Red	Stopping the application.
	Off	Indicator not connected to the network, or device power off.
LED 3	Red	Default on the PROFIBUS-DP network. (Bus offline)
	Off	No default on the PROFIBUS-DP network.
LED 4	Off	No initialization error of the ANYBUS module, or device power off.
	Blinking red (1 Hz)	Initialization error of the ANYBUS module. (Configuration Data)
	Blinking red (2 Hz)	Initialization error of the ANYBUS module. (Parameter Data)
	Blinking red (4 Hz)	Initialization error of the ANYBUS module. (Communication)

4. INSTALLATION ON THE DEVICENET NETWORK

A part of the backside of the "*IDé 500-I*" indicator is reserved for the use of the DeviceNet bus. It allows the configuration of the station number, the physical connection to the fieldbus and the visualization of the indication LEDs.

ATTENTION: ***For a previous generation of "DeviceNet" fieldbus board (ANYBUS Type DT) the parameters "`Input length`" and "`Output length`" must be less than 64. (Refer to 10.4)***

Representation of the backside of the "IDé 500-I" indicator:



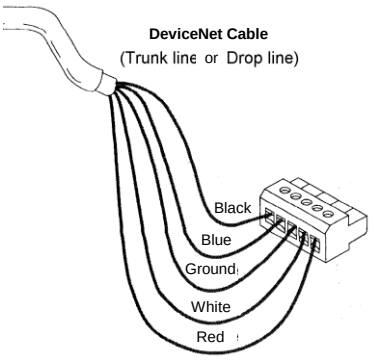
Legend:

1 ⇒ DEVICE NET connector unpluggable. (5,08 mm step)

2 ⇒ Configuration DipSwitch of the transmission rate (1-2) and station number. (3-8)

3 ⇒ Status LED of the board / network.

Physical connection to the DEVICE NET bus:



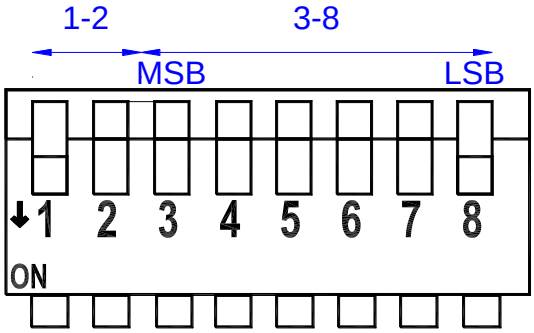
Pin number	Cable's colour	Description
1	**Black**	V-
2	**Blue**	Data low
3	**Shield**	Shield
4	**White**	Data high
5	**Red**	V+

Configuration of the station number and of the transmission rate:

Address	DipSwitch 3 to 8
0	0 0 0 0 0 0
1	0 0 0 0 0 1
2	0 0 0 0 1 0
...	...
...	...
61	1 1 1 1 0 1
62	1 1 1 1 1 0
63	1 1 1 1 1 1

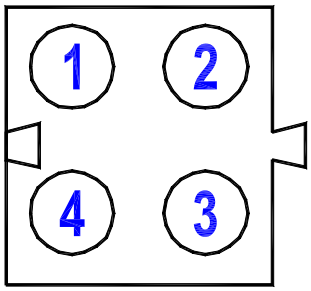
Rate	DipSwitch 1 and 2
125 kbits/s	0 0
250 kbits/s	0 1
500 kbits/s	1 0

Example with a transmission rate of 500kbits/s and a station number of 01:



DipSwitch 1 and 8 to "**1**" (down) and the other to "**0**". (Up)

Significance of the indication LEDs:

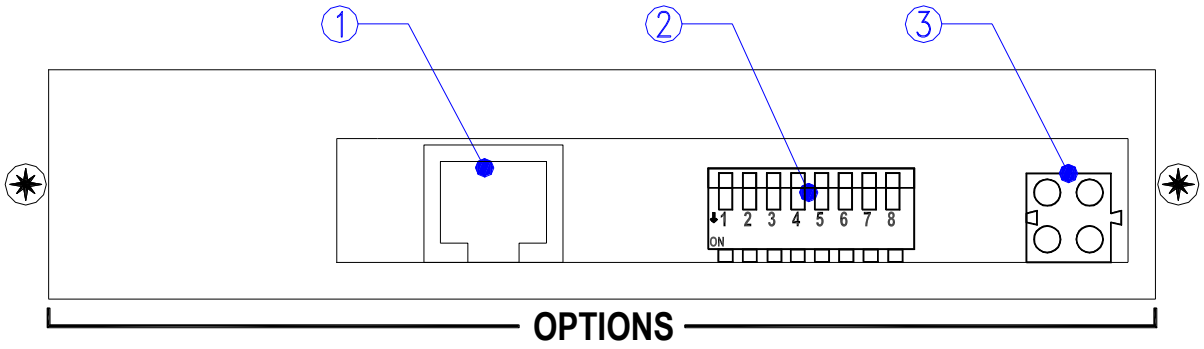


LED	Colour	Description
LED 1	-	Reserved for a future use.
LED 2 Bus stat	Off	Power Off / Off Line.
	Green	Online, connected, Correct link.
	Blinking green	Online but not connected.
	Red	Critical error on the bus.
	Blinking red	Default on the bus.
LED 3 Module stat	Off	No power supply.
	Green	Configured and no error.
	Blinking green	Configuration error. (Auto baud in progress)
	Red	Critical error.
	Blinking red	Default.
LED 4	-	Reserved for a future use.

5. INSTALLATION ON THE ETHERNET MODBUS/TCP NETWORK

A part of the backside of the "*IDé 500-I*" indicator is reserved for the use of the ETHERNET MODBUS/TCP bus. It allows the physical connection to the fieldbus and the visualization of the indication LEDs.

Representation of the backside of the "IDé 500-I" indicator:



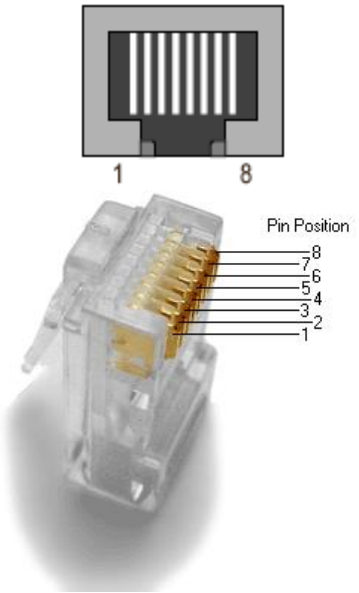
Legend:

1 ⇒ Ethernet Modbus TCP connector. (RJ45)

2 ⇒ Configuration DipSwitch. (Not used, keep them in the 0 position, up)

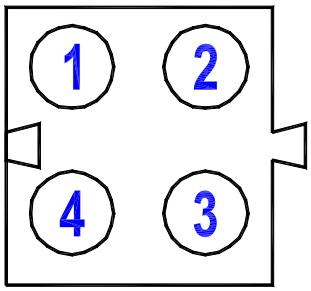
3 ⇒ Status LED of the board / network.

Physical connection to the Ethernet Modbus TCP bus:



Pin number	Signal	Description
1	TD+	Transmission of the data +
2	TD-	Transmission of the data -
3	RD+	Reception of the data +
4	NC	Not connected
5	NC	Not connected
6	RD-	Reception of the data -
7	NC	Not connected
8	NC	Not connected
Case	PE	Ground

Significance of the indication LEDs:

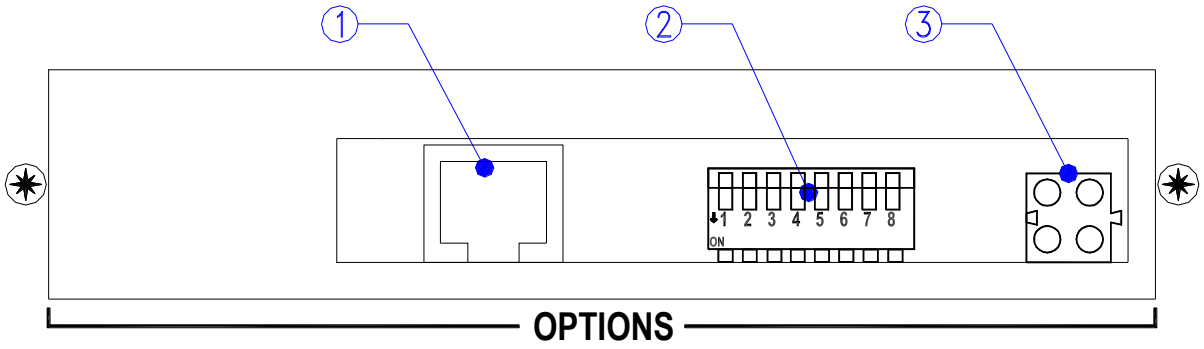


LED	Colour	Description
LED 1	Green	Indicates that the indicator is connected to the ETHERNET network.
LED 2	Off	Power Off / Off Line.
	Blinking green (1 Hz)	Indicates that the used IP address is the one given by the indicator.
	Blinking red (1 Hz)	Invalid MAC address, the indicator is not properly initialized.
	Blinking red (2 Hz)	The initialization of the ETHERNET board is incorrect.
	Blinking red (4 Hz)	The ETHERNET board does not start up.
	Red	IP address conflict.
LED 3	Off	No Modbus/TCP connections established.
	Blinking green	The number of flashes on this led indicates the number of established Modbus/TCP connections.
LED 4	Blinking green	Communication on the ETHERNET network in progress.

6. INSTALLATION ON THE ETHERNET/IP NETWORK

A part of the backside of the "*IDé 500-I*" indicator is reserved for the use of the ETHERNET/IP bus. It allows the physical connection to the fieldbus and the visualization of the indication LEDs.

Representation of the backside of the "IDé 500-I" indicator:



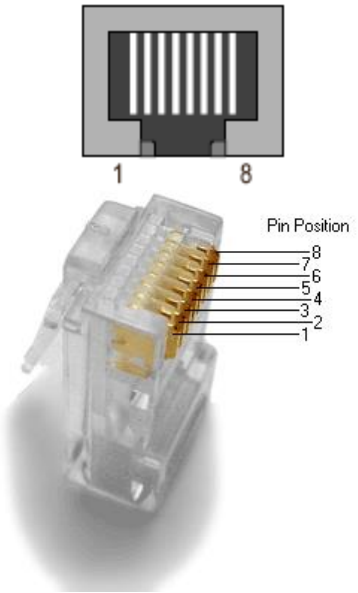
Legend:

1 ⇒ Ethernet/IP connector. (RJ45)

2 ⇒ Configuration DipSwitch. (Not used, keep them in the 0 position, up)

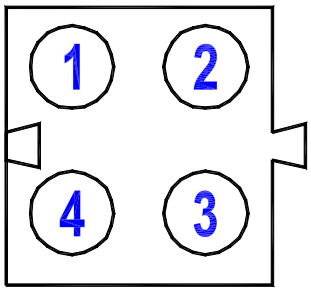
3 ⇒ Status LED of the board / network.

Physical connection to the Ethernet/IP bus:



Pin number	Signal	Description
1	TD+	Transmission of the data +
2	TD-	Transmission of the data -
3	RD+	Reception of the data +
4	NC	Not connected
5	NC	Not connected
6	RD-	Reception of the data -
7	NC	Not connected
8	NC	Not connected
Case	PE	Ground

Significance of the indication LEDs:

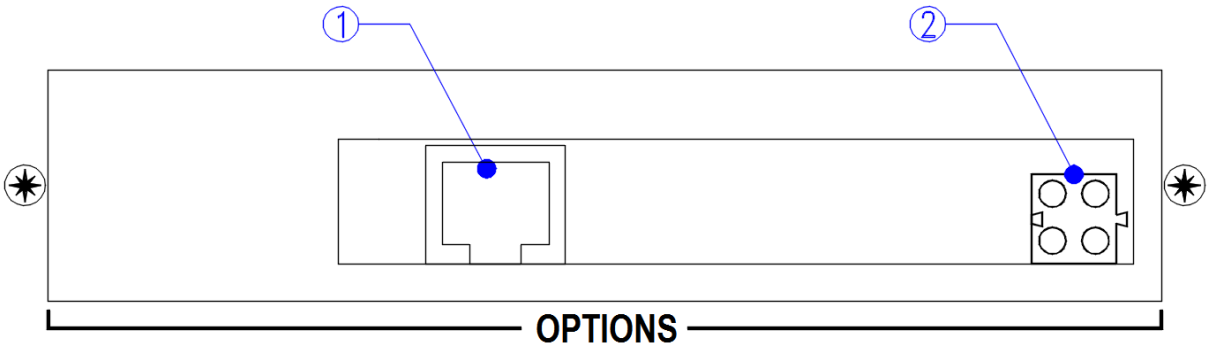


LED	Colour	Description
LED 1	Green	Indicates that the indicator is connected to the ETHERNET network.
LED 2 **Module Status**	Off	Power Off / Off Line.
	Blinking green (1 Hz)	Controlled by a Scanner in Run state.
	Blinking red (1 Hz)	Not configured, or Scanner in Idle state.
	Blinking red (2 Hz)	A minor recoverable fault has been detected.
	Blinking red (4 Hz)	A major unrecoverable fault has been detected.
	Red	Self-test in progress.
LED 3 **Network Status**	Off	No power or no IP address.
	Green	On-line, one or more connections established.
	Blinking green	On-line, no connections established.
	Red	Duplicate IP address or fatal error.
	Blinking red	One or more connections timed out.
	Blinking red/green	Self-test in progress.
LED 4	Blinking green	Communication on the ETHERNET network in progress.

7. INSTALLATION ON THE PROFINET-IO NETWORK

A part of the backside of the "*IDé 500-I*" indicator is reserved for the use of the Profinet-IO bus. It allows the physical connection to the fieldbus and the visualization of the indication LEDs.

Representation of the backside of the "IDé 500-I" indicator:

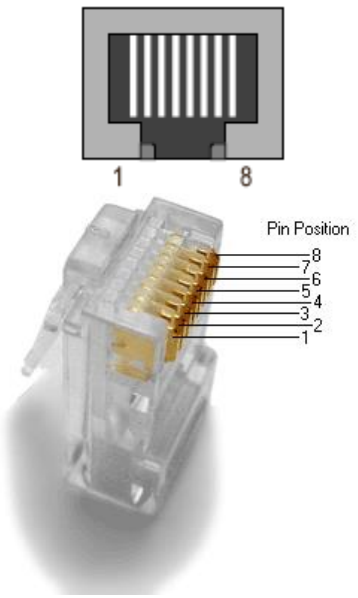


Legend:

1 ⇒ Profinet-IO connector. (RJ45)

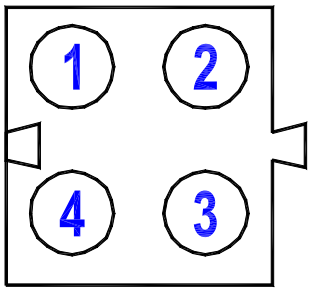
2 ⇒ Status LED of the board / network.

Physical connection to the Profinet-IO bus:



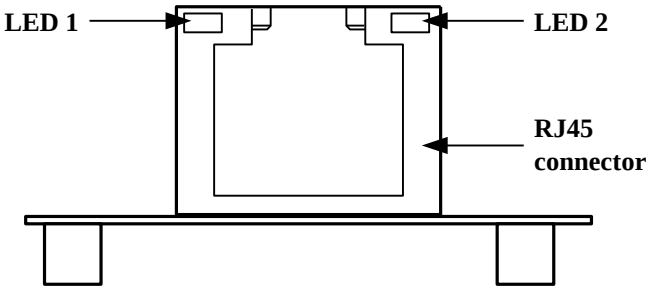
Pin number	Signal	Description
1	TD+	Transmission of the data +
2	TD-	Transmission of the data -
3	RD+	Reception of the data +
4	NC	Not connected
5	NC	Not connected
6	RD-	Reception of the data -
7	NC	Not connected
8	NC	Not connected
Case	PE	Ground

Significance of the indication LEDs:

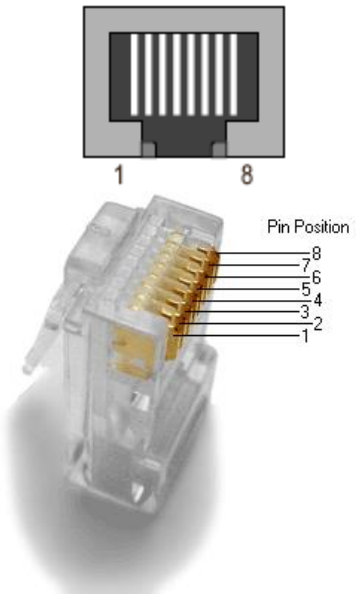


LED	Colour	Description
LED 1	Green	Indicates that the indicator is connected to the ETHERNET network.
	Blinking green	Communication on the ETHERNET network in progress.
LED 2	Off	Off line, no connection with IO Controller.
	Green, 1 flash	On line (connection with IO Controller established), IO Controller in "STOP" state.
	Green	On line (connection with IO Controller established), IO Controller in "RUN" state.
LED 3	Off	No power or not initialized.
	Green	Initialized, no error.
	Green, 1 flash	Diagnostic data available.
	Green, 2 flashes	Engineering tool in use.
	Red, 1 flash	Configuration Error: - Too many modules/submodules - I/O size derived from IO Controller configuration is too large - Configuration mismatch (No module, wrong module)
	Red, 3 flashes	No Station Name or no IP address assigned
	Red, 4 flashes	Internal error
LED 4	-	Reserved for a future use.

8. INSTALLATION ON THE ETHERNET MODBUS/TCP NETWORK (XPORT BOARD)



Physical connection to the Ethernet Modbus TCP bus:



Pin number	Signal	Description
1	TD+	Transmission of the data +
2	TD-	Transmission of the data -
3	RD+	Reception of the data +
4	NC	Not connected
5	NC	Not connected
6	RD-	Reception of the data -
7	NC	Not connected
8	NC	Not connected
Case	PE	Ground

Significance of the indication LEDs:

LED	Colour	Description
LED 1 Connection type	Off	No connection.
	Amber	Connection in 10 Mbps.
	Green	Connection in 100 Mbps.
LED 2 Communication state	Off	No communication.
	Amber	Communication in Half Duplex.
	Green	Communication in Full Duplex.

9. INSTALLATION ON JBUS/MODBUS NETWORK

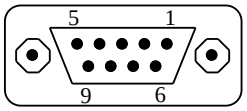
A part of the backside of the "*IDé 500-I*" indicator is reserved for the use of the JBUS/MODBUS bus. It allows the physical connection to the fieldbus

Specifications of the link:

- Format:

The JBUS protocol requires obligatory an 8 bits transmission.

- Connection:



D-SUB 9 points female on the backside of the "*IDé 500-I*" indicator.

Pin number	**COM 2/COM1** RS485 2 wires	**COM2** RS485 4 wires	**COM2/COM1** RS232	**COM2** Current loop
1	Earth	Earth	Earth	Earth
2			RxD	
3			TxD	
4	RxTx+	Rx+		Rx+
5	RxTx-	Rx-		Rx-
6				
7	Ground	Ground	Ground	Ground
8		Tx+		Tx+
9		Tx-		Tx-

Memory space:

The information's exchange under JBUS is realized through the intermediary of memory zone, called 'table', accessible by the indicator and the external system.

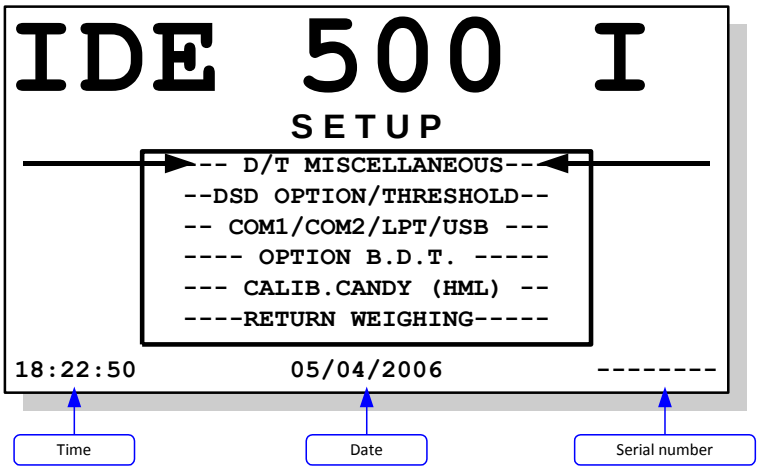
The first table is reserved for the emission. It is only accessible in read mode by the external system. The address of this table is **2900** h (**10496** d) and its length is 36 words. (For more details on this table see *2.1 Transmission table*)

The second table is reserved for the reception. It is accessible in read and write modes by the external system. The address of this table is **2800** h (**10240** d) and its length is 36 words. (For more details on this table see *2.2 Reception table*)

10. PARAMETERS MENU

To access to the parameters menu of the "*IDé 500-I*" indicator, you must:

- Press on the key DSD VAL and the massage "**KEY CODE ?**" will be displayed,
- Enter the key code +, -, ↑, ↓, (only 10 seconds for this seizure)
- Then the indicator displays the following menu:



Remarks:

- Use the key ↓ to go to the next function and the key ↑ to return to the previous function.
- The selected function is indicated by the arrows. (⟶ ⟵)
- To enter inside the selected function, press on the key DSD VAL.

10.1. D/H Miscellaneous

Enter the parameters values for each data and validate with DSD VAL or ↓. The key ↑ allows returning to the previous seizure, and when you are in the seizure of the first data, it allows quitting the function.

No CHANNELS DISPL. 1..12 : *XX* Enter the number of channels that you want to display in the application mode.

NAME V01: *XXXX* Enter the name of the channel 1. (4 alphanumeric characters)
NAME V02: *XXXX* Enter the name of the channel 2. (4 alphanumeric characters)
…
NAME V11: *XXXX* Enter the name of the channel 11. (4 alphanumeric characters)
NAME V12: *XXXX* Enter the name of the channel 12. (4 alphanumeric characters)

DAY : *XX* Enter the day for the date update. (**05** for the 5th of April 2006)
MONTH : *XX* Enter the month for the date update. (**04** for the 5th of April 2006)
YEAR : *XXXX* Enter the year for the date update. (**2006** for the 5th of April 2006)
HOUR : *XX* Enter the hour for the time update. (**18** for 18h22min50s)
MINUTE : *XX* Enter the minutes for the time update. (**22** for 18h22min50s)

CHANNELS SUMMA. 0=NO 1=YES: *X* Activate or not the algebraic summation function of the channels. (See *11.1 Algebraic summation function of the channels*)
0 = Algebraic summation function of the channels disabled.
1 = Algebraic summation function of the channels enabled.

10.2. DSD option/Threshold

Enter the parameters value for each data and validate with DSD VAL or ↓. The key ↑ allows returning to the previous seizure, and when you are in the seizure of the first data, it allows quitting the function.

DSD VALIDATION (0/1): *X* Activate or not the traceability file, see *11.2 Traceability file of the scales activity (DSD File)*
0 = Traceability file disabled.
1 = Traceability file enabled.

THRESH. C01 VALUE: *XXXXX.XXX***kg** Enter the threshold value of the channel 1. (Trigger threshold for the traceability file)
THRESH. C02 VALUE: *XXXXX.XXX***kg** Enter the threshold value of the channel 2. (Trigger threshold for the traceability file)
…
THRESH. C11 VALUE: *XXXXX.XXX***kg** Enter the threshold value of the channel 11. (Trigger threshold for the traceability file)
THRESH. C12 VALUE: *XXXXX.XXX***kg** Enter the threshold value of the channel 12. (Trigger threshold for the traceability file)

Remarks:
- Put a threshold value not less than 10 scale division of the channel.
- If the threshold value of a channel is set to 0, the traceability file will not monitor the scale activity of this channel.

10.3. COM1/COM2/LPT/USB

Enter the parameters value for each port and validate with DSD VAL or ↓. The key ↑ allows returning to the previous seizure, and when you are in the seizure of the first data, it allows quitting the function.

DRIVER : *XX* Enter the driver type for **COM1**, **COM2**. (Keep the **LPT** driver to **00**)
0 = Nothing.
2 = JBUS/MODBUS Protocol.
4 = MODEM Protocol. (TransFic software)

TYPE 0/../4 : *X* Enter the type for **COM1** and **COM2**.
0 = RS232 without DTR test.
1 = RS232 with DTR test.
2 = RS485 2 wires.
3 = Current loop. (Only on **COM2**)
4 = RS485 4 wires. (Only on **COM2**)

SPEED : *X* Enter the communication speed for **COM1** and **COM2**.
1 = 1200 bauds.
2 = 2400 bauds.
4 = 4800 bauds.
9 = 9600 bauds.
0 = 19200 bauds.
5 = 57600 bauds.
6 = 115200 bauds.

BITS 8/7 : *X* Enter the number of bits for **COM1** and **COM2**.
7 = 7 bits.
8 = 8 bits.

PARITY 0/1/2 : *X* Enter the parity type for **COM1** and **COM2**.
0 = No parity.
1 = Odd parity.
2 = Even parity.

STOP 1/2 : *X* Enter the number of stop bits for **COM1** and **COM2**.
1 = 1 stop bit.
2 = 2 stop bits.

Remark: Some combinations of number of bits and parity do not operate properly. Choose, if possible, 8 bits, no parity, and 1 stop.

DRIVER USB (0/2) : 0 Keep this parameter to **0**, use in future release.

PAPER LENGTH (LF) : 00 Keep this parameter to **00**, use in future release.

IDE No (JBUS/USB) : *XX* Enter the indicator's station number for the JBUS/MODBUS communication protocol.

10.4. Fieldbus option (OPTION B.D.T)

Enter the parameters value for each port and validate with DSD VAL or ↓. The key ↑ allows returning to the previous seizure, and when you are in the seizure of the first data, it allows quitting the function.

WEIGHT 0=32bits 1=16bits : *X* Enter the coding type for the required weight.
0 = Coding of the weight on 32 bits signed.
1 = Coding of the weight on 16 bits unsigned + coding of the sign.

OPTION BOARD x0/x1/x2/x3 : *XY* Enter the type of the required option board.
X ⇒ AMK Ethernet Modbus TCP board. (XPort)
0 = No AMK Ethernet Modbus TCP board. (XPort)
1 = AMK Ethernet Modbus TCP board. (XPort)
Y ⇒ ANYBUS fieldbus option board.
0 = No ANYBUS fieldbus option board.
1 = ANYBUS type DT fieldbus option board. (Previous generation)
2 = Ethernet Modbus TCP, Ethernet/IP or Profinet-IO ANYBUS type S fieldbus option board. (With IP address seizure)
3 = ANYBUS type S fieldbus option board. (PROFIBUS DP, DeviceNet,…)
4 = Profinet-IO ANYBUS type S fieldbus option board. (IP address assigned by the Profinet-IO controller)

FREQUENCY ACCES BUS (ms) : *XX* Enter the frequency of the data refresh on the fieldbus in milliseconds. (Minimum value 5ms)

CODING (0=MOTO 1=INTEL) : *X* Enter the data coding type on the fieldbus.
0 = MOTOROLA coding.
1 = INTEL coding.

INPUT LENGTH (8..74 BYTE) : *XX* Choose the length of the reception table from 8 to 74(*) bytes. (See *2.2 Reception table*)

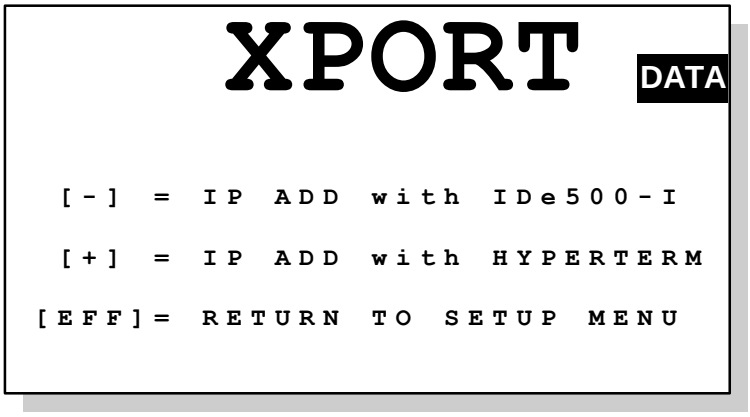
OUTPUT LENGTH(8..74 BYTE) : *XX* Choose the length of the transmission table from 8 to 74(*) bytes. (See *2.1 Transmission table*)

(*) **Special case :** In the case of using the Ethernet/IP fieldbus the parameters "**INPUT LENGTH**" and "**OUTPUT LENGT**" only affect the structure of tables reception (see *2.2*) and transmission (see *2.1*), the IN/OUT size to declare for the Ethernet/IP communication are always 74 bytes in Input and 74 bytes in output.

If the parameter "**OPTION BOARD x0/x1/x2/x3**" is set to *X***2** (⇒Ethernet Modbus TCP ANYBUS type S fieldbus option board enable) the following parameters will be required.

IP ADDRESS 1	: *XXX*	Enter the first part of the IP address, **150** for an IP address = 150.168.200.002.
IP ADDRESS 2	: *XXX*	Enter the second part of the IP address, **168** for an IP address = 150.168.200.002.
IP ADDRESS 3	: *XXX*	Enter the third part of the IP address, **200** for an IP address = 150.168.200.002.
IP ADDRESS 4	: *XXX*	Enter the fourth part of the IP address, **002** for an IP address = 150.168.200.002.
SUBNET MASK 1	: *XXX*	Enter the first part of the subnet mask, **255** for a subnet mask = 255.255.255.0.
SUBNET MASK 2	: *XXX*	Enter the second part of the subnet mask, **255** for a subnet mask = 255.255.255.0.
SUBNET MASK 3	: *XXX*	Enter the third part of the subnet mask, **255** for a subnet mask = 255.255.255.0.
SUBNET MASK 4	: *XXX*	Enter the fourth part of the subnet mask, **000** for a subnet mask = 255.255.255.0.
GATEWAY ADDRESS 1:	*XXX*	Enter the first part of the gateway address, **172** for a gateway address = 172.017.000.001.
GATEWAY ADDRESS 2:	*XXX*	Enter the second part of the gateway address, **017** for a gateway address = 172.017.000.001.
GATEWAY ADDRESS 3:	*XXX*	Enter the third part of the gateway address, **000** for a gateway address = 172.017.000.001.
GATEWAY ADDRESS 4:	*XXX*	Enter the fourth part of the gateway address, **001** for a gateway address = 172.017.000.001.

If the parameter "**OPTION BOARD x0/x1/x2/x3**" is set to **1***Y* (⇒AMK Ethernet Modbus TCP option board enable) the following screen will be displayed.



You can abort the setting of the Ethernet option with the key EFF.
If the appropriate option board is properly installed you can access to the setting of the Ethernet Modbus TCP AMK board (XPort) by the front panel with the key - or by HyperTerminal with the key +.

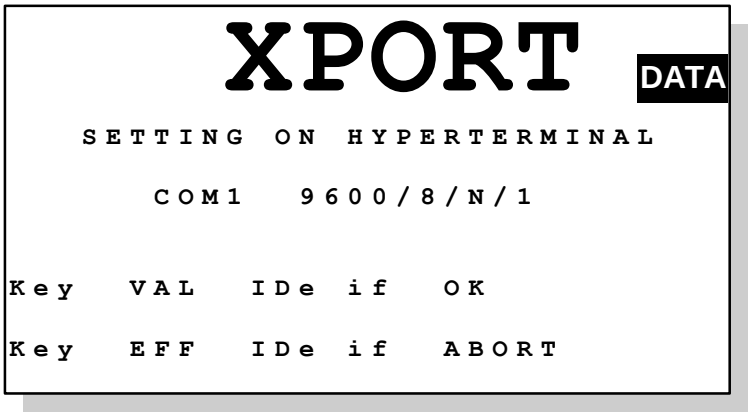
By the front panel -: the message «**XPORT RESET XPort WAIT...**» is displayed and the following parameters will be required:

IP Add	= *XXX.XXX.XXX.XXX*	Enter the IP address into four parts, and validate each parts.
Mask	= *XXX.XXX.XXX.XXX*	Enter the subnet mask into four parts, and validate each parts.

GW Add = *XXX.XXX.XXX.XXX* Enter the gateway address into four parts, and validate each parts.

The indicator displays «**XPORT *** OK *****» and you return to the parameters menu.

By HyperTerminal : the following screen will be displayed.



To access the settings of the AMK Ethernet Modbus TCP board (XPort) by HyperTerminal validate with the key DSD VAL and the message "**SETTING IN PROGRESS**" is displayed on the indicator, otherwise validate with the key EFF to return to setup menu.

Connect a PC with the software HyperTerminal on **COM1** 9600/8/N/1/no flow control, then follow the instructions displayed on the indicator to obtain the following menu on the PC.

On the PC with HYPERTERMINAL:

```
Change Setup:
  0 Server
  1 Channel 1
  3 E-mail
  5 Expert
  6 Security
  7 Defaults
  8 Exit without save
  9 Save and exit              Your choice ?
```

The function "**0 Server**" is used to set the IP address, the gateway (Gateway IP Address) and the subnet mask. (Netmask)
Tabulate **0** and validate to change these parameters. Once the parameters changed we return to the setup menu of the Ethernet board.

Configuration example:

```
IP Address : (172) .(020) .(000) .(002)
Set Gateway IP Address (N) ?
Netmask: Number of Bits for Host Part (0=default) (8)
Set DNS Server IP addr  (N) ?
Change telnet config password (N) ?
```

The function "**1 Channel 1**" is used to define **the module communication speed** (**Baudrate**) for the TCP/IP **it should be to 115200**, **the port (Port No)** for the TCP/IP **it should be to 502** and **the communication mode** (**Send '+++' in Modem Mode** : it should be to **N**, **FlushMode** : it should be to **A2** and **Pack Ctnrl** : it should be to **20**). Tabulate **1** and validate to change these five parameters, don't change other parameters. Once the parameters changed we return to the setup menu of the Ethernet board.

Configuration example:

```
Baudrate (9600) ? 57600
I/F Mode (4C) ?
Flow (00) ?
Port No (10001) ? 502
ConnectMode (C0) ?
Send '+++' in Modem Mode  (Y) ? N
Show IP addr after 'RING'  (N) ?
Auto increment source port  (N) ?
Remote IP Address : (000) .(000) .(000) .(000)
Remote Port  (0) ?
DisConnMode (00) ?
FlushMode   (00) ? A2
Pack Cntrl  (00) ? 20
DisConnTime (00:00) ?:
SendChar 1  (00) ?
SendChar 2  (00) ?
```

The function "**7 Defaults**" is used to put the Ethernet option board in its default configuration in the case where the entered parameters were unknown. Tabulate **7** and validate we return to the setup menu of the Ethernet board.

To exit this menu we use the function "**8 Exit without save**" that allows to exit without saving the modifications or the function "**9 Save and exit**" that allows to exit with saving the modifications.

Remark: It's possible to use the Web page of the board to access to its settings.
To do this, simply open a web browser and enter the board IP address that we want to access.

10.5. CANDY_Ex / CanMK-MES calibration (HML)

The validation of this function allows accessing to the calibration menu of the system, then the indicator displays the calibration menu. *(This function is only accessible if the parameter «**LEGAL FOR TRADE (0/1)**" is set to 0 ⇒ Operation of the installation in the none legal for trade mode)*
Refer to the calibration manual of the "*IDé 500-I*" indicator

10.6. Return weighing

Once the return to the weighing menu function is validated, the system asks if you want to save the newly entered parameters yes or no:

```
CONFIRM THE SAVING
  Key    VAL  = YES
  Key    EFF  = NO
```

To start the saving, you must press on the key DSD VAL and to avoid the saving you must press on the key EFF.
The message "**SAVING IN PROGRESS**" will be displayed during the saving period of time (around 10 seconds) and you will return to the application mode.

11. APPENDICES

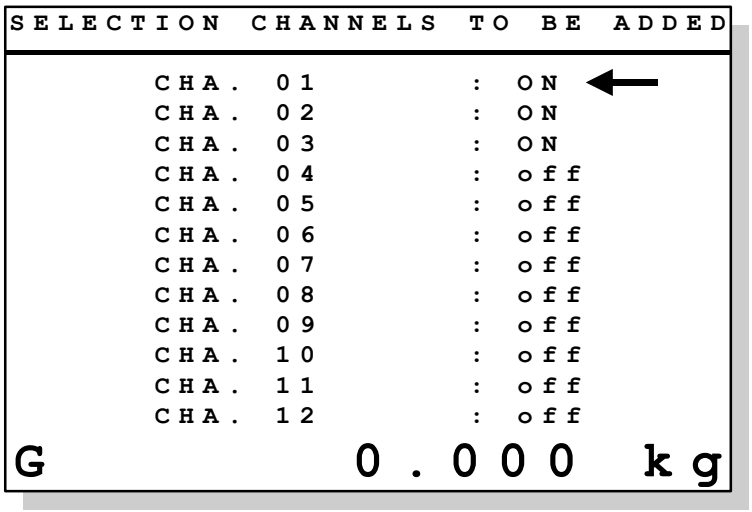
11.1. Algebraic summation function of the channels

Once the algebraic summation function of the channels is enabled (parameter "**CHANNELS SUMMA. 0=NO 1=YES**" sets to **1**, see *10.1 D/H Miscellaneous*) it's possible to perform the algebraic summation of the desired channels.

For access to this function you must tabulate the key ↑ when no channel is selected.

Remark: Tabulate successively the key ↑ up to have no selected channel, a new tabulate of the key ↑ allows to access to the function.

Then the indicator displays the following screen:



Example of algebraic summation in Gross weight of the channels 1, 2 and 3

Remarks:

- The result of the algebraic summation is displayed at the end of the available channels list, the first character identifies if the summation is done on the **G**ross weight or on the **N**et weight.
- Used the key B/N ← to toggle the algebraic summation on the **G**ross weight or on the **N**et weight.
- The currently selected channel is indicated by the arrow: ← .
- Use the key ↓ to go to the next channel and the key ↑ to return to the previous channel.
- Use the key + for add the channel to the summation (**ON**) and the key - for remove the channel to the summation. (**off**)
- Use the key DSD VAL to exit the function and return in application mode.

11.2. Traceability file of the scales activity (DSD File)

11.2.1. Operating mode

When is activated (see *10.2 DSD option/Threshold*) this file allows you to trace:

- The activity on the channel *XX* ⇒ Run if "**DSD VALIDATION**" sets to **1** and "**THRESH. C***XX* **VALUE**" > **0**.
- Access to the parameters menu ⇒ Run if "**DSD VALIDATION**" sets to **1**.
- Restarts of the installation ⇒ Run if "**DSD VALIDATION**" sets to **1**.

11.2.1.1. Tracing the activity of a channel

This tracing is running for the channel *XX* if the parameter "**DSD VALIDATION**" sets to **1** and the parameter "**THRESH. C***XX* **VALUE**" is greater than **0** with *XX* identifying the channels 01 to 12. (See *10.2 DSD option/Threshold*)
So it's possible to enable the activity tracing on one or more channels as it's desired.

Once the channel gross weight is stable higher than the channel threshold value a record is stored in the DSD file (record type = **PES**) with the channel number concerned and the Gross/Tare/Net values in progress.

11.2.1.2. Tracing the parameters menu access

This tracing is running if the parameter "**DSD VALIDATION**" sets to **1**. (See *10.2 DSD option/Threshold*)

Once you access to the parameters menu (see *10*) a record is stored in the DSD file (record type = **PAR**) with the channel number and the Gross/Tare/Net value set to 0.

11.2.1.3. Tracing the installation restarts

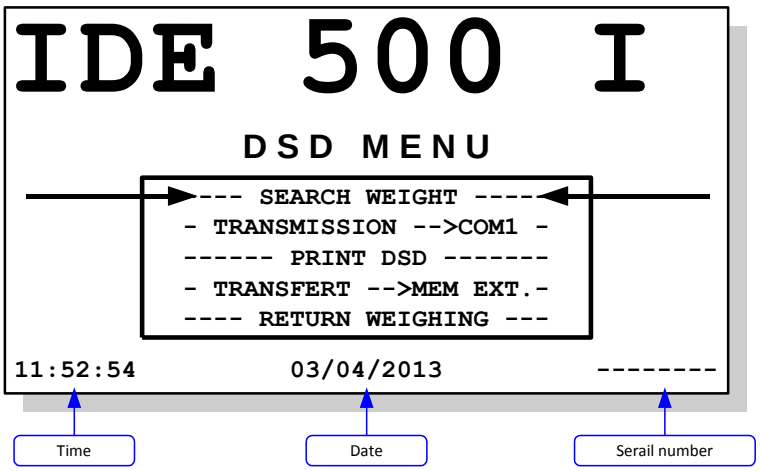
This tracing is running if the parameter "**DSD VALIDATION**" sets to **1**. (See *10.2 DSD option/Threshold*)

Once the indicator is powered off and then powered on a record is stored in the DSD file (record type = **STD**) with the channel number and the Gross/Tare/Net set to 0.

11.2.2. Access to the file's menu

For access to the traceability file menu (DSD file), you must:

- Press on the key DSD VAL and the massage "**KEY CODE ?**" will be displayed,
- Press again on the key DSD VAL,
- Then the indicator displays the following menu:



Remarks:

- Use the key ↓ to go to the next function and the key ↑ to return to the previous function.
- The selected function is indicated by the arrows. (⟶ ⟵)
- To enter inside the selected function, press on the key DSD VAL.

11.2.2.1. Search for a recording by its DSD number

Once this function is validated, the message "**DSD NUMBER TO SEARCH FOR ?** *XXXXXX*" will be displayed, with "*XXXXXX*" corresponding to the last used DSD number.

Enters the required DSD number and validate with DSD VAL. The informations about the entered DSD number appear as shown below:

DSD No : *NNNNNN*
DATE : *JJ*/*MM*/**20***AA*
HOUR : *hh*:*mm*:*ss*

TYPE : *ttt*

CH. No : *VV*
GROSS : *BBBBB*.*BBB***kg**
TARE : *TTTTT*.*TTT***kg**
NET : *NNNNN*.*NNN***kg**

With:
NNNNNN ⇒ DSD number of the record.
JJ/*MM*/**20***AA* ⇒ Date of the record.
hh:*mm*:*ss* ⇒ Time of the record.
ttt ⇒ Type of the record. (**PAR**/**MST**/**PES**)
VV ⇒ Channel of the record. (From **00** to **12**)
BBBBB.*BBB* ⇒ Gross value of the record.
TTTTT.*TTT* ⇒ Tare value of the record.
NNNNN.*NNN* ⇒ Net value of the record.

Remarks:

- The keys ↑/- allow the access to the previous record.
- The keys ↓/+ allow the access to the next record.
- The key DSD VAL allows returning to the file's menu.

11.2.2.2. Transmission of the file to a computer

For this you must:

- Connect the computer (on ***COM1***) with the ***IDe***. (On **COM1**)
- Launch the HyperTerminal software. (Access path of hyperterm.exe: **"C:\Program Files\Accessories\HyperTerminal\HYPERTRM.EXE"**)
- Give a name to the connection and validate (TERMINAL.IDE)
- Then in the header "***Connect using***" you must validate "***Direct to Com1***".
- Then, configure the connection in ***9600 Bauds, 8 bits, no parity, one stop, and no flow control***.
- Always under HyperTerminal, go to "***Transfer***" then "***Capture the text***", define the name of the file to save and validate "***Start***".
- The computer is ready to communicate with the indicator.
- On the indicator, launch the function "**TRANSMISSION -->COM1**" then enter the following parameters:

Begin date Choose the begin date for the file transmission and validate with DSD VAL.
JJ/*MM*/**20***AA*

End date Choose the end date for the file transmission and validate with DSD VAL.
JJ/*MM*/**20***AA*

- During the transfer the file scrolls on the computer screen.
- When the transfer is finished, close the capture. For this you must go to "***Transfer***" then "***Capture the text***" and "***Stop***".
- You will return to the file's menu.

Remark: The .TXT file is directly exploitable under EXCEL.

11.2.2.3. Printing of the file

Once this function is validated enter the following parameters:

Begin date Choose the begin date for the file printing and validate with DSD VAL.
JJ/*MM*/**20***AA*

End date Choose the end date for the file printing and validate with DSD VAL.
JJ/*MM*/**20***AA*

The message "**PRINTING ....**" will be displayed and the file is printing.

After the printing you will return to the file's menu.

Printing example:

```
|000062|03/04/2013|11:18:52|PES|01|    87.390kg|     0.000kg|    87.390kg|
|000063|03/04/2013|11:30:15|MST|00|     0.000kg|     0.000kg|     0.000kg|
|000064|03/04/2013|14:31:17|PAR|00|     0.000kg|     0.000kg|     0.000kg|
```

The first field corresponds to the DSD number of the record, the second field corresponds to the date of the record, the third field corresponds to the time of the record, the fourth field corresponds to the type of the record, the fifth field corresponds to the channel of the record, the sixth field corresponds to the Gross value of the record, the seventh field corresponds to the Tare value of the record, the eighth field corresponds to the Net value of the record.

11.2.2.4. Transmission of the file to EXT.MEM (USB stick)

Once this function is validated enter the following parameters:

Begin date Choose the begin date for the file transmission and validate with DSD VAL.
JJ/*MM*/**20***AA*

End date Choose the end date for the file transmission and validate with DSD VAL.
JJ/*MM*/**20***AA*

The transfer is launched, the message "**WRITING...**" will be displayed during the transfer.
After the transfer you will return to the file's menu.

Remark: The file "*FIC_PES_.TXT*" is directly exploitable under EXCEL.

11.2.2.5. Return Menu

Once this function is validated you will return to the application mode.

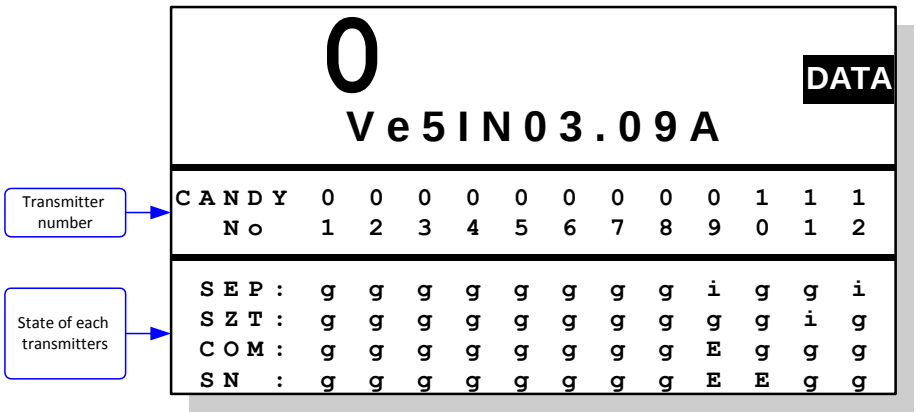
11.3. Error Messages / Defaults

Message	Designation	Actions / Solutions
ALIM	Power supply problem.	Too low or too high voltage, verify the voltages of the power supply.
N SERI	Problem with the serial number of the transmitter.	You must remake a zero calibration.
COM	Communication problem with the transmitter.	You must control the cabling, the connections.
REF	Error on the measurement input channel of the transmitter.	Verify that the load cell cable is connected properly.
HE	Error scale overflow.	Scale overflow on the transmitter.
HE-	Error scale underflow.	Weight under zero on the transmitter.
HG	Error converter range overflow.	Overflow of the converter capacity of the transmitter.
HG-	Error converter range underflow.	Underflow of the converter capacity of the transmitter.
IDE SLAVE	"*IDé 500-I*" in slave mode, no communication with an master "*IDé 500-I*".	Verify the connection with the master "*IDé 500-I*" indicator.

Remark: When the "*IDe 500-I*" indicator ***beeps continuously at a frequency of 1 second,*** this means there is a default on the fieldbus board, verify the parameters as well as the board itself.

11.4. Table of the states of the transmitters "*CANDY_Ex*"/"*CanMK-MES*"

At the start-up of the "*IDé 500-I*" indicator, the following table will be displayed for a few seconds, it allows visualizing all the connected channels and their various states.



Example of a table of the states:

Legend:

SEP : State of the **S**aving of the **E**E**P**ROM of the transmitter.

- **SEP = g** : The saving of the EEPROM parameters of the transmitter on the "*IDé 500-I*" indicator is good.
- **SEP = i** : The saving of the EEPROM parameters of the transmitter on the "*IDé 500-I*" indicator is wrong. (***Weighing still possible***)

SZT : State of the **S**aving of the **Ze**ro and **T**are values of the transmitter.

- **SZT = g** : The saving of the zero and tare values of the transmitter on the "*IDé 500-I*" indicator is good.
- **SEP = i** : The saving of the zero and tare values of the transmitter on the "*IDé 500-I*" indicator is wrong. (***Weighing still possible***)

COM : State of the **Com**munication with the transmitter.

- **COM = g** : The communication between the transmitter and the "*IDé 500-I*" indicator is good.
- **COM = E** : The communication between the transmitter and the "*IDé 500-I*" indicator is wrong. (***Weighing not possible on this channel***)

SN : State of the correspondence of the **S**erial **N**umber of the transmitter.

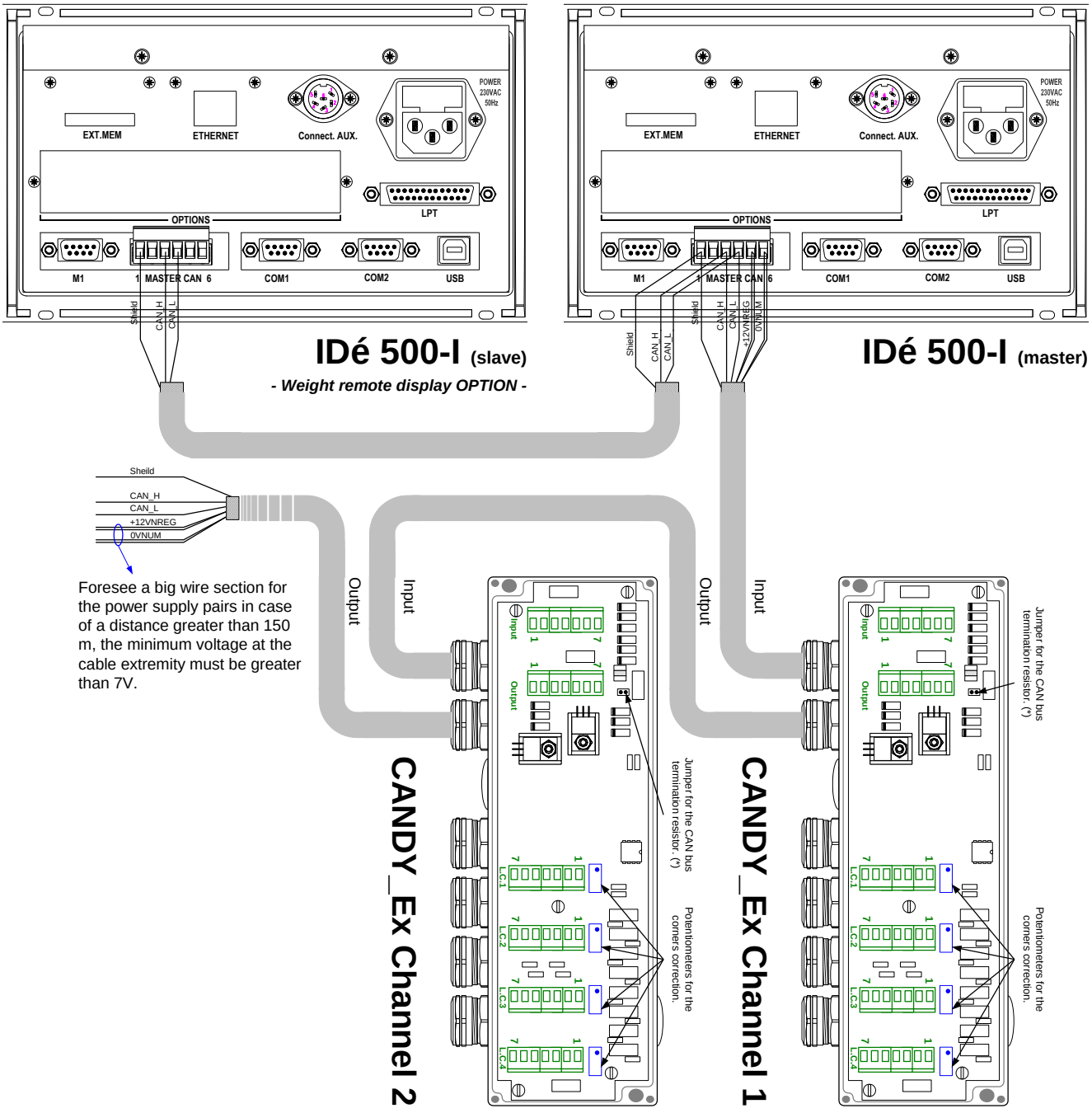
- **SN = g** : The serial number of the transmitter corresponds to the one already registered on the "*IDé 500-I*" indicator.
- **SN = E** : The serial number of the transmitter does not correspond to the one already registered on the "*IDé 500-I*" indicator. (***Weighing still possible only in HML mode***)

Remark: The states marked with a capital letter represent a default, therefore you must not interpret the weight.

On the previous example, you have:

- The transmitter N°1 to N°8 :
  Operation is OK.
- The transmitter N°9 :
  ERROR: the communication between the transmitter and the "*IDé 500-I*" indicator is faulty.
- The transmitter N°10 :
  ERROR: the serial number of the transmitter doesn't correspond to the one registered on the "*IDé 500-I*" indicator.
- The transmitter N°11 :
  Default: On the saving of the zero and tare values of the transmitter N°11 on the "*IDé 500-I*" indicator.
- The transmitter N°12 :
  Default: on the saving of the EEPROM parameters of the transmitter N°12 on the "*IDé 500-I*" indicator.

11.5. Connection of the "*IDé 500-I*"/"*CANDY_Ex*" Bus

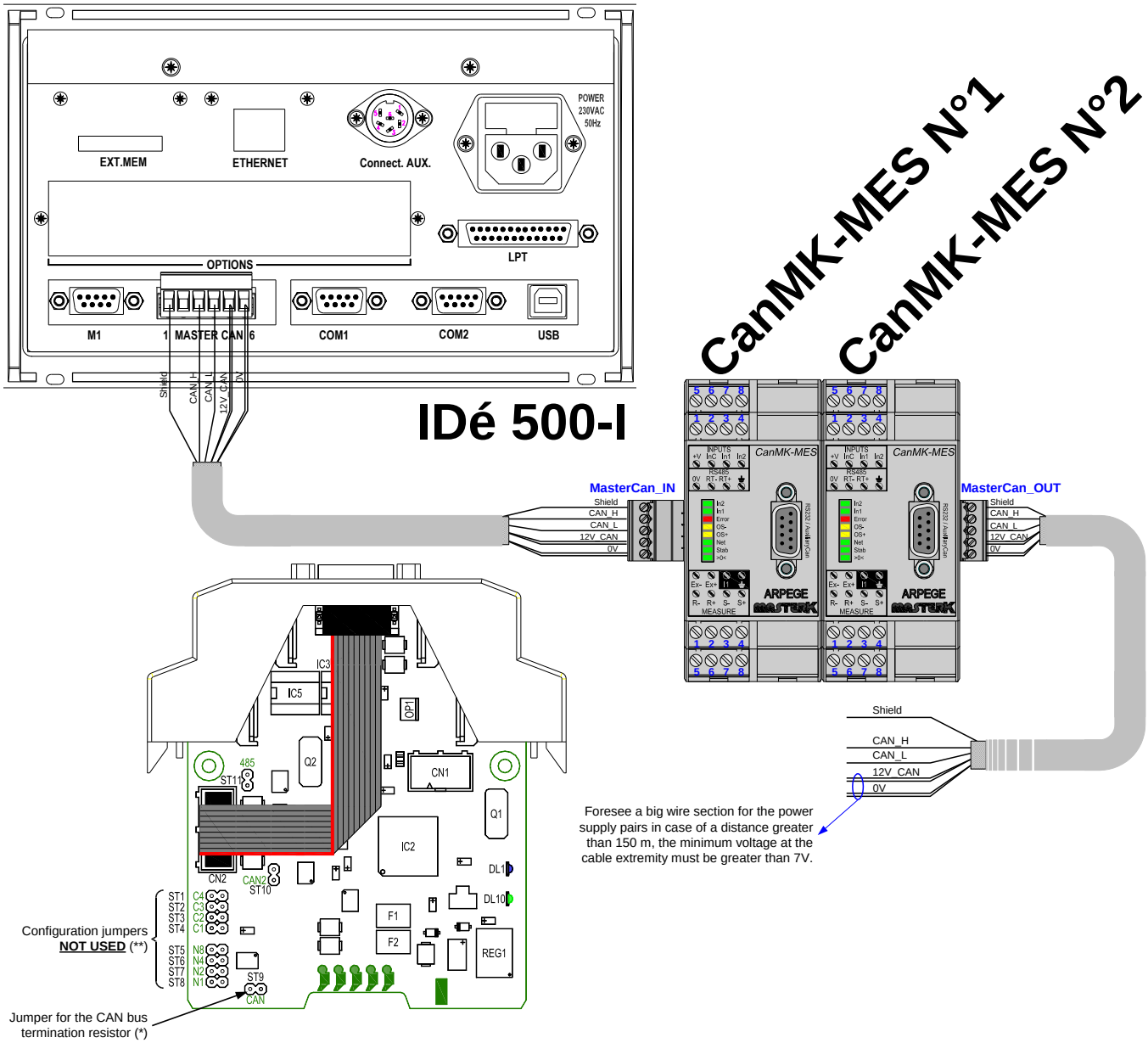


(*): You must set a termination resistor on the last "*CANDY_Ex*" (ST1) to polarize correctly the CAN bus.

Sockets pin out		IDe 500-I connector
		MASTER CAN
N° of the pin	1	⏚
	2	N.C.
	3	CAN_H
	4	CAN_L
	5	+12VNREG
	6	0VNUM
	7	

Sockets pin out		CANDY_Ex connectors					
		Input	Output	Load cell N°1	Load cell N°2	Load cell N°3	Load cell N°4
N° of the pin	1	⏚	⏚	A+	A+	A+	A+
	2	+12VNREG	+12VNREG	R+	R+	R+	R+
	3	0VNUM	0VNUM	A-	A-	A-	A-
	4	CAN_H	CAN_H	R-	R-	R-	R-
	5	CAN_L	CAN_L	M+	M+	M+	M+
	6	+12VNREG	+12VNREG	M-	M-	M-	M-
	7	0VNUM	0VNUM	⏚	⏚	⏚	⏚

11.6. Connection of the "*IDé 500-I*"/"*CanMK-MES*" Bus



(*): You must set a termination resistor on the last "*CanMK-MES*" (ST9) to polarize correctly the CAN bus.

(**): You must **REMOVE ALL configuration jumpers** to operate with the IDé 500-I indicator.

Marks of the Sockets		IDE 500-I Connector MASTER CAN
N° of the pin	1	⏚
	2	N.C.
	3	CAN_H
	4	CAN_L
	5	+12VNREG
	6	0VNUM

Marks of the Sockets		CanMK-MES Connectors			
		MasterCan_IN	MasterCan_OUT	INPUTS / RS485	MEASURE
N° of the pin	1	⏚	⏚	0V	Ex-
	2	CAN_H	CAN_H	RxTx- (RS485)	Ex+
	3	CAN_L	CAN_L	RxTx+ (RS485)	N.C.
	4	+V	+V	⏚	⏚
	5	0V	0V	+V	R-
	6			InC (inputs common)	R+
	7			Input In1	S-
	8			Input In2	S+

11.7. Configuration and layout of the "*IDé 500-I*" board