

LMCAN/ILC-CAN/SPB-CAN QUICK SET-UP.

Full access to the object dictionary (OD) of the device is defined in document:

MCAN_Release_2.eds.

Order to use this device correctly, we recommend that the user reads the instructions before connecting cables or installing the device. For any further information, please don't hesitate to contact our technical department.

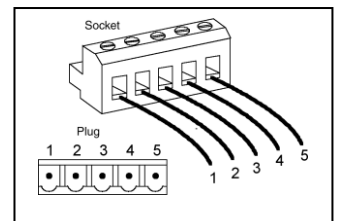
Installation and set-up (sections 1-10)

1. Mount the **Sensors** according to the procedure indicated.
2. Connect the node to the CANopen network according to the colour code and PIN-OUT.

Connection type (DS 303-1), (ILC-CAN length of the cable is 2 metres);

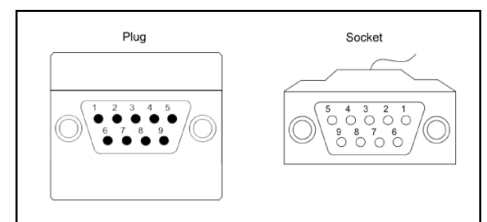
Open style connector;

Description	Signal	Colour Code	Pin-Out
Power Supply	CAN_GND	Black	1
(DC)0-24V	CAN_V+	Red	5
	CAN_SHLD	Mesh	3
CANopen Output	CAN_H	Green	4
	CAN_L	Yellow	2



9-pin D-sub connector;

Description	Signal	Pin-Out
Reserved	-	1
CAN_L bus line (dominant low)	CAN_L	2
CAN ground	CAN_GND	3
Reserved	-	4
Optional CAN shield	(CAN_SHLD)	5
Optional ground	(GND)	6
CAN_H bus line (dominant high)	CAN_H	7
Reserved	-	8
24Vdc	(CAN_V+)	9



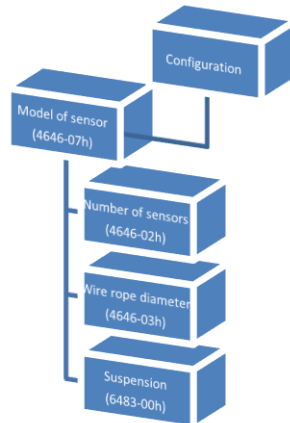
3. Check the bit-rate which by default is 250Kbit/s (in order to modify this value, please see point 6).
4. When the node is initiated it will send a BOOT-UP message and, from this point on, complete communication will be possible.
5. At this point the node will send error messages in the following cases:
 - When the device is not completely configured, see point 7
 - When the consumer heartbeat of node 1 is not received in the allocated time (default is, 3 seconds). This parameter can be modified in OD 1016h-1h. The node, however, will continue to function.
6. **Bit-rate** configuration. This parameter can be changed in two ways :
 - (OD 4646h-04h). In order for the communication speed modifications to take effect it should be saved in a non-volatile memory file (OD 1010-1h) and after that, the node should be restarted and the communications reset.

60Dh 8 2F 46 46 04 D0 00 00 00

 Where D0 (byte 4) can be the index values
 - LSS protocol. The device is compatible with LSS protocol according CiA 305.

Index	Bit rate	
0	1 Mbit/s	✓
1	800 kbit/s	✓
2	500 kbit/s	✓
3	250 kbit/s	✓
4	125 kbit/s	✓
5	reserved	
6	50 kbit/s	✓
7	20 kbit/s	✓
8	10 kbit/s	✓
9	Automatic bit rate detection	✗

7. Configuration.



- Select the sensor model: 4646-07h. If this parameter is modified, the values of the OD 4646-02h , 4646-03h and 6463-00h are reset automatically.

60Dh 8 2F 46 46 07 D0 00 00 00

Where D0 (byte 4) can be:

0x00 = No sensor selected.

0x01 = LMC.

0x03 = CAB800.

0x04 = BEAM.

0x06 = WR.

(With SPB-CAN and ILC-CAN sensors it is not necessary to change this parameter, because the sensors have integrated electronics and they are preconfigured in the factory)

- Select number of sensors connected to the control unit. 4646-02h.

Where D0 (byte 4) is the number of sensors connected.

60Dh 8 2F 46 46 02 D0 00 00 00

(if the sensor model is 0x00, the parameter cannot be changed. The control unit will send an error code)

- Wire rope diameter: OD 4646-3h. Where D0 (byte 4) is the wire rope diameter.

60Dh 8 2F 46 46 03 D0 00 00 00

if the sensor model is 0x00, the parameter cannot be changed. The control unit will send an error code)

- Suspension: OD 6463-00h. This object contains the suspension of the lift car. Where D0 (byte 4) is the **value** of table.

60Dh 8 2F 63 64 00 D0 00 00 00

if the sensor model is 0x00, the parameter cannot be changed. The control unit will send an error code)

Value	Description
00 _n	1:1
01 _n	2:1
02 _n	3:1
03 _n	4:1
04 _n	reserved
to	
FE _n	reserved
FF _n	not valid

8. Calibration.

- **SPB-CAN, CAB800, LMC, ILC-CAN or WR** sensors: Mount the sensors according to the installation procedure in the manual. Make the zero setting with an empty cabin by writing **1h** (byte 4) and **FFh** (byte 5) in the OD 4646-1h . It is recommended to jump inside the cabin before doing the zero setting, in order to avoid any possible cabin "hooks" on the guide rails. The lift must be located on the lowest floor, when we do the zero setting.

60Dh	8	2B 46 46 01 01 FF 00 00
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- **Beam or CCP** sensors. **(Known weight)**

- First step: Mount the sensors according to the installation procedure in the manual. Make the zero setting with an empty cabin by writing **1h** (byte 4) and **FFh** (byte 5) in the OD 4646-1h . It is recommended to jump inside the cabin before making the zero, in order to avoid any possible cabin "hooks" on the guide rails. The lift must be located on the lowest floor, when we do the zero setting.

60Dh	8	2B 46 46 01 01 FF 00 00
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- Second step: a known weight has to be used to set up this kind of sensor. Place a known weight, which must be -at least- half the useful load, inside the cabin and proceed to the weight settings by writing the weight value in KG in the OD 4646-09h.

60Dh	8	2B 46 46 09 E8 03 00 00
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(In this case, the weight introduced into the cabin is 1000kg)

9. Load range configuration: OD 6483h;

- **6483-1h** Zero.
- **6483-2h** Normal.
- **6483-3h** Full.
- **6483-4h** Overload.

10. The configuration settings should be saved in a non-volatile memory: OD 1010h-1h.

60Dh	8	23 10 10 01 73 61 76 65
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By configuring these settings correctly, the device should be in full working mode.

QUICK SET-UP



Additional information:

- A. View the positive/negative status of the readings by accessing: OD **4646h**. The value displayed appears as:
- 2Bh = positive
 - 2Dh = negative
- **4646h-5h**: Positive/negative state of the load weigher. (Refers to value of 6484h)
 - **4646h-6h**: Positive/negative state of the installation. . (Refers to value of 6480h)
- B. LED indicators (according to DS 303-3 indicator specification):

Colour Led	RED	GREEN
Off	No error	
Blinking		PRE-OPERATIONAL
Single flash	Warning limit reached	STOPPED
Double flash	Error control event	
On	Bus off	OPERATIONAL

- C. Emergency error codes (CEE):

CEE	ER	MSEF	Description
0000h	00	0h	Reset error <u>or</u> no error
1000h	01	1h	Generic error
5000h	81	3h	Sensor internally damaged or disconnected from the controller
6200h	81	2h	Device setting config not performed
8130h	11	7h	Heartbeat consumer error
8140h	11	5h	Buss Off