

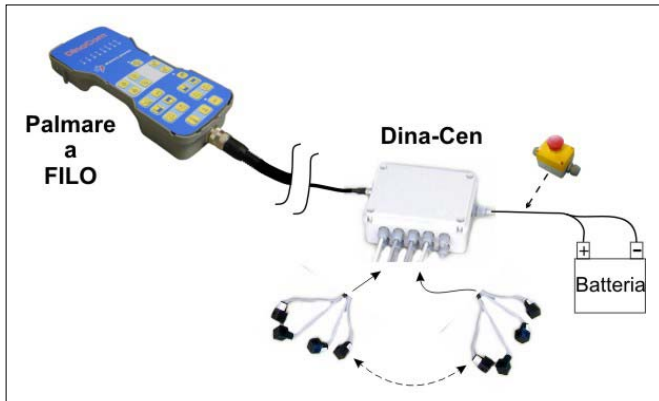
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TECHNICAL DATA

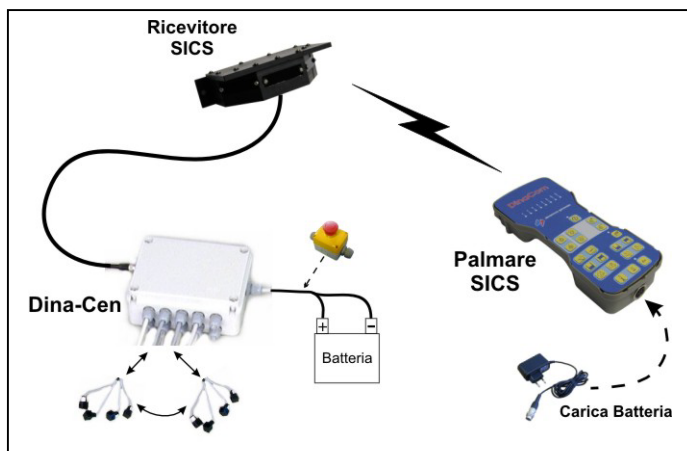
Number of available ports:	18 movements + 2 proportional
Working temperature:	- 20 / + 60 °C
Power tension Dina-Cen:	12 Vdc
Palm Power for SICS versions:	N° 2 rechargeable batteries DURACELL type AA NiMH 1800 mAh 1,2 V
Max current:	10 A
Power protection fuse:	Delayed fuse 10 A type T
Dina-Cen dimensions (mm): Dina-Cen holder:	220 x 155 x 80 Polycarbonate
Palm dimensions (mm): Palm holder: Palm weight (gr):	216 x 80 x 30 Polyamide (PA) 30% glass fibre 1000
Dina-Cen protection degree: Palm protection degree	Protection IP56 Protection IP66
SICS version range of use:	6 metres x 120° from SICS receiver

CONNECTION DIAGRAMS



Cable DINA-COM

- Cable Palm
- Dina-Cen
- Power cable
- Communication cable
- Emergency button
- Electro valve cables

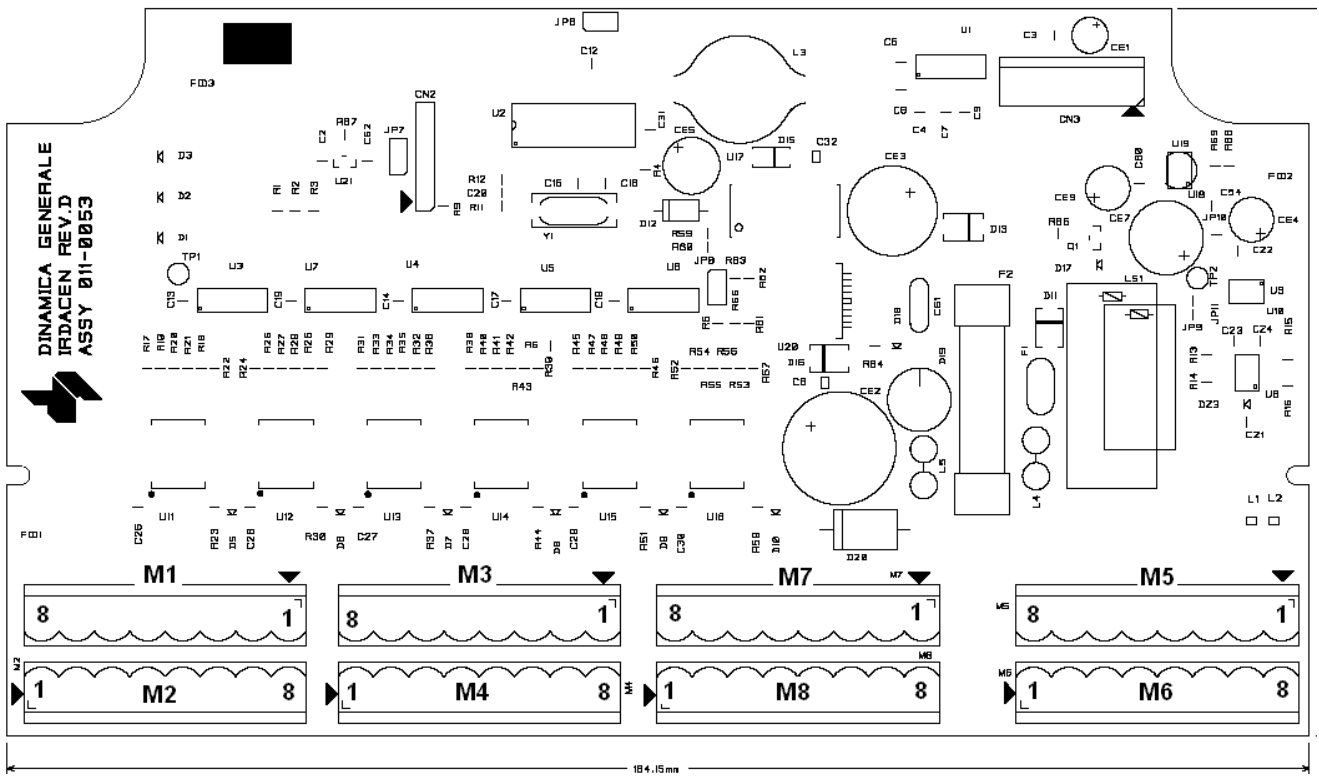


DINA-COM SICS (With range of action at controlled angle)

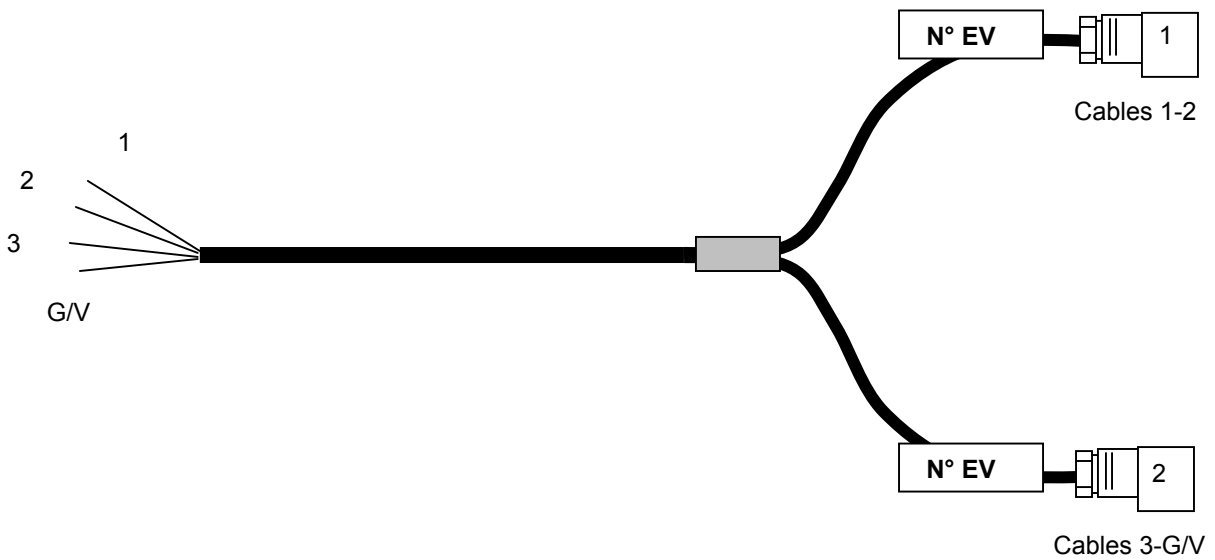
- SICS Palm
- Dina-Cen
- SICS receiver at controlled angle
- Power cable
- Communication cable
- Emergency button
- Electro valve cables
- Charger

For a correct use of the SICS receiver it is necessary to keep the device isolated from the mass of the truck and connect it directly to the negative of the battery with the yellow-green cable provided by the Manufacturer.

Positioning of the Irdacen connection terminals



CABLE

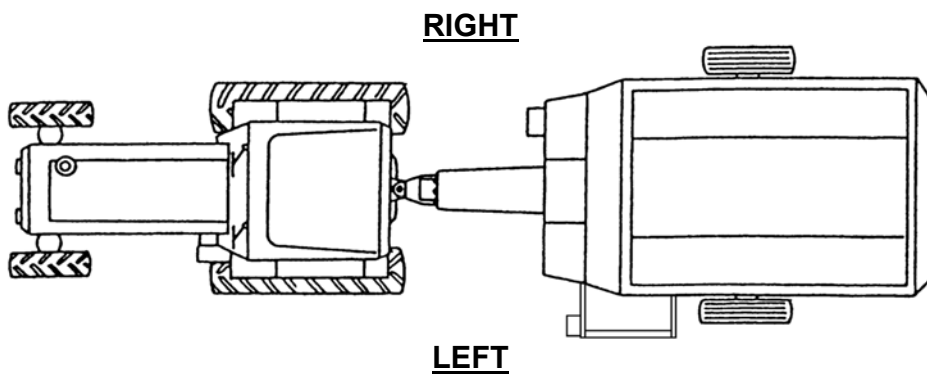


PALM CONFIGURATION























The Palm is provided in full version, so on the trucks where are used less functions than those available, blind stickers will cover the non-used buttons.

N.B. please find hereby in the TABLE the symbols of the different functions, indications of “Right ” and “Left ” are always intended with reference to the truck forward direction.



CONNECTIONS & FUNCTIONS TABLE

<u>No. con. EV</u> <u>Description</u>	<u>SYMBOL</u> <u>FUNCTION</u>	<u>Cent.</u> <u>Connectors</u> <u>conn. N°</u> <u>pin N°</u>		<u>Numbered</u> <u>Cables</u>	<u>Pin N°</u> <u>EV Connector</u>
1 Foot rest down		M1	8	1	1 Positive
		M2	1	2 Negative	2
2 Foot rest up		M1	7	3	1 Positive
		M2	2	Yellow / Green Negative	2
3 Discharge belt	 Left	M3	8	1	1 Positive
		M4	1	2 Negative	2
4 Discharge door closure	 Left	M1	4	1	1 Positive
		M2	5	2 Negative	2
5 Discharge door opening	 Left	M1	3	3	1 Positive
		M2	6	Yellow / Green Negative	2
6 Rear movable wall down		M3	6	1	1 Positive
		M4	3	2 Negative	2
7 Rear movable wall up		M3	5	3	1 Positive
		M4	4	Yellow / Green Negative	2
8 Silage cutter arm descent		M3	4	1	1 Positive
		M4	5	2 Negative	2
9 Silage cutter arm ascent		M3	3	3	1 Positive
		M4	6	Yellow / Green Negative	2
10 Silage cutter rotation		M3	2	1	1 Positive
		M4	7	2 Negative	2
11 Silage cutter rotation		M3	1	3	1 Positive
		M4	8	Yellow / Green Negative	2
12 Descent speed adjustment	 	M3	7	1	1 Positive
		M5	5	2 Negative	2
		M5	4	3	3 variation

17 Discharge door closure	 Right	M1	2	1	1	Positive
		M2	7	2 Negative	2	
18 Discharge door opening	 Right	M1	1	3	1	Positive
		M2	8	Yellow / Green Negative	2	
19 Belt descent	 Left	M1	6	1	1	Positive
		M2	3	2 Negative	2	
20 Belt ascent	 Left	M1	5	3	1	Positive
		M2	4	Yellow / Green Negative	2	
21 Belt descent	 Right	M7	8	1	1	Positive
		M8	1	2 Negative	2	
22 Belt ascent	 Right	M7	7	3	1	Positive
		M8	2	Yellow / Green Negative	2	
23 Discharge belt	 Right	M7	2	3	1	Positive
		M8	7	Yellow / Green Negative	2	
POWER CABLE		M5	3	Black		
		M5	3	Grey		
		M5	6	Brown		
		M5	6	Yellow / Green		

WARNING: NOTES FOR A CORRECT USE



The Dina-Cen (power box) is provided with a fuse on the inside to protect from the polarity inversion of power. If the Dina-Cen has been powered with inverse polarity it is necessary to replace the fuse. **REPLACE THE FUSE ONLY WITH A SUITABLE ONE AND WITH SAME CHARACTERISTICS.** Always check specifications indicated on the fuse.



Inside the box, no operations are allowed except adding cables for new hydraulic functions. During maintenance or any kind of operation to the system **IT IS NECESSARY** to take off the power from the whole system.



Before operating any welding onto the mixing truck **IT IS NECESSARY:**

- Take off battery power cable
- Take off all cables of the electro valves from the hydraulic distributors
- Take off the communication cable from the Palm, in case of cable system.

After completing maintenance operations, check if hydraulic controls are working. During the test, keep at safety distance.



The 2 power positive cables (Blue or Grey and Black) **MUST** always be connected **TOGETHER** to the Positive pole of the battery.

The 2 power negative cables (Brown and Yellow-Green) **MUST** always be connected **TOGETHER** to the Negative pole of the battery.

Do not power the control with a direct connection to the alternator. This kind of wrong connection may damage the system.



For safety reasons we strongly recommend the use of electro valves that do not require electric connection with the electro valve.



The device is provided with CE marking applied according to the reference Machines Directive in the agricultural field (Machines Directive 98/37/CEE), as the device is mainly destined to the agricultural market. The risk evaluation is applied according to same Directive. In any case, it is up to the Manufacturer of the machine, where the device will be installed, to provide the correct risks evaluation and grant the safety of the machine.



The remote control box can be opened by the Manufacturer's personnel only.



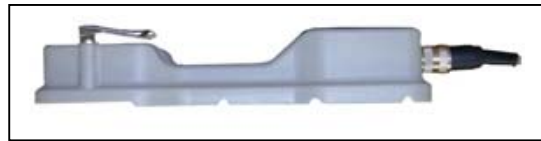
The connecting actuators must have the following features:

- Max absorbing current: 5 A;
- Nominal tension: 12Vdc;
- Max applicable tension: 15Vdc.



When operation is finished we suggest to store the Palm in the following positions.

PALM POSITIONING



In these positions the rainproof hold is granted.



In this position the rainproof hold is NOT granted.

USE OF THE DEVICE

1) POWER ON

Turn on the Dina-Cen gearcase releasing the emergency button (rotate the red knob clockwise).

In case of cable version, allow a few seconds for the gearcase to check the hardware.

In case of SICS version, allow a few seconds for the gearcase to check the hardware and hold the remote towards the receiver for the tracking alignment.

2) USE OF SERVICES

Press a key according to the required electro valve function to be activated .

Key controls can be of two types:

Push-button : it is necessary to push the button to activate the movement

Switch : a simple pressure activates the movement, and by pressing again it deactivates the movement.
These keys are unmistakable as they have a LED light (except for the “Err” key) that indicates the status:

Led on - activated command

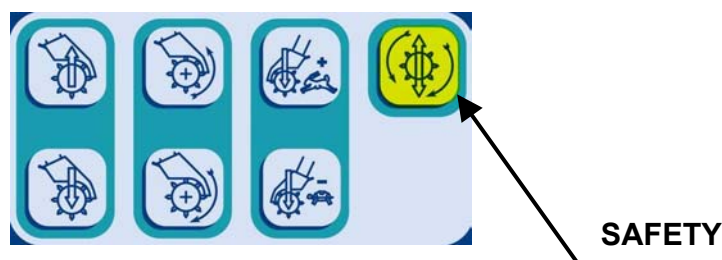
Led off - deactivated command.

SPECIAL FUNCTIONS:

- The controls “activation of discharge carpet” are independent from other functions (thus even with this activated control, it is possible to control other electro valves).
The Led over the button indicates the electro valve status:
Led on - activated command Led off - deactivated command.
This kind of buttons work as a switch and it is not necessary to push them during functioning (one pressure activates the control, following pressure deactivates the control).

HOW TO USE THE “SAFETY” BUTTON (Yellow BUTTON) PROCEDURE

(this procedure interests the mere use of functions : silage cutter rotation, silage cutter arm ascent and descent)



SILAGE CUTTER DESCENT SPEED ADJUSTING

The descent speed can be adjusted by using the buttons + (hare) & – (tortoise), according to the adjustment, the Led on the bar will turn on (all Led on=max speed, Led off=minimum speed).

The speed can be adjusted even before starting the de-silating and will be stored until the system is turned off.

LIFTING-DESCENT-ROTATION

1)- Push briefly the “SAFETY” button, within 5 seconds select desired function and hold it pushed for as long as necessary.

After releasing one of these two functions, there are 5 seconds more to reactivate one of the two without restarting the “safety” button; over 5 seconds the cycle is reset and operation must be restarted from the beginning.

DE-SILATING

Push briefly the “SAFETY” button, within 5 seconds push the silage cutter rotation button, release, and push either the ascent or descent button: at this point it will be activated the combined function of rotation and ascent or descent by holding one button only. During the descent function it is possible to vary the speed by using the proper buttons.

3) SYSTEM POWER OFF

Turn off the Dina-Cen gearcase pushing the emergency button.

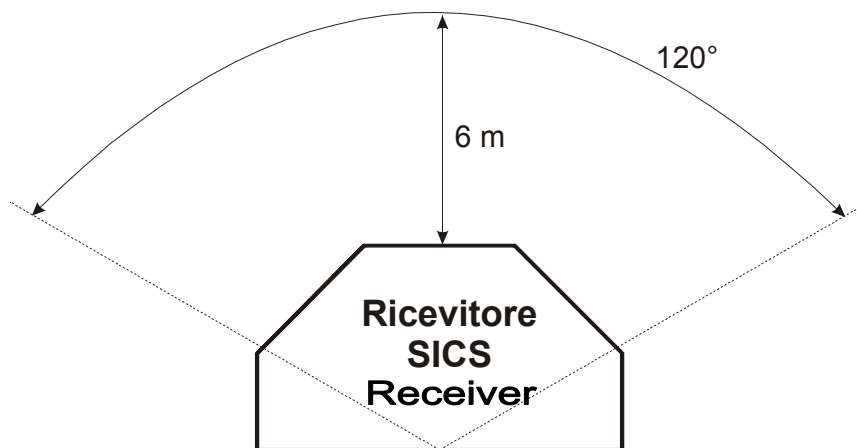
In case of cable version even the Palm will turn off.

In case of SICS version, the Palm will turn off automatically after 1 minute of standby.

RANGE OF ACTION SICS VERSION

The range of action is limited by the safety cone of the SICS receiver that grants the operator’s safety.

NOTE: for a proper functioning of the SICS receiver it is necessary to keep the device isolated by the mass of the truck and to connect it directly to the negative of the battery with the Yellow-Green cable provided by the manufacturer.



BATTERY DISPOSAL

BATTERY RECHARGING IN THE SICS VERSION

In the SICS version the Palm is powered by no. 2 DURACELL type AA NiMH 1800 mAh 1,2 V rechargeable batteries.

The above mentioned battery type requires a 4 hours recharge (with completely discharged batteries).

To recharge correctly, please follow this procedure:

- Connect the charger to the 220V network, plug in the connector of the charger to the Palm .

WARNING: the recharge of the batteries must be operated using the recharging kit only , provided by the Manufacturer. Any other type of charger may damage the device.

WARNING: in case the batteries are not completely empty, the charging time could be shorter: the Palm remains on but automatically stops the charging process when the max tension is reached in order not to damage the batteries.

NOTE:

We recommend to recharge the Palm at the end of every working day.

We recommend not to recharge the remote at temperatures higher than 50 °C.

In case of batteries replacement, please check carefully their polarity as an inversion may damage the electronic card.

If the remote remains under charging for more than 4 hours, there is no damage nor problem as the Dina-Com manages automatically the charger turn off.

During the recharging phase the remote is operative.

If you use the remote during recharging, the batteries charge level at the end of the 4 hours may be less than the max value, according to the use of the remote during recharging.

In case the SICS receiver is not working it is possible to connect the same cable directly to the Palm and finish the working session (in this way the Palm is powered directly by Dina-Cen but while using it the batteries are not recharged).

ERROR CODES

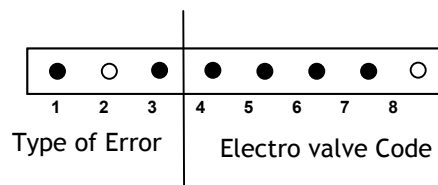
ELECTRO VALVE ERRORS

THE WHITE DOTS INDICATES “ON” LED.

SHORT CIRCUIT

The system is provided with an internal diagnostic able to advise a short circuit on the electro valves . If the system finds out a short circuit on the relative electro valve, when pushing a button, it will advise the operator of anomaly with a led on the “Err” button until the operator presses the button. By pressing the “Err” button on the led bar will appear the error related to the damaged electro valve.

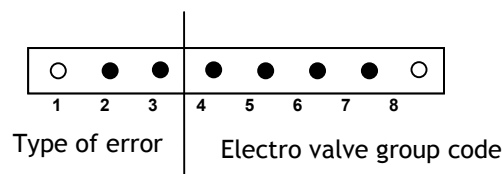
WARNING: after this signalling, the system will stop all the outputs (and thus all the movements) to avoid risks for the operators during maintenance, until the damaged electro valve is repaired.



The first three led report the type of error, in the example here above the error is related to an electro valve in short circuit. For the electro valve codes please refer to the “Short Circuit Error Codes” TABLE.

CABLES SET

In case the system has cable or other nature errors, for which an electro valve results powered, the system will check the button status and in case it is not activated, it will report to the operator an anomaly with the led over the “Err” button. By pressing the “Err” button, on the led bar will appear the error code related to the electro valves group where the problem is located.



The first three led report the type of error, in the example here above the error is related to a probable cables error. For the codes of the electro valve groups please refer to the “Cable error codes” TABLE.

COMMUNICATION ERRORS

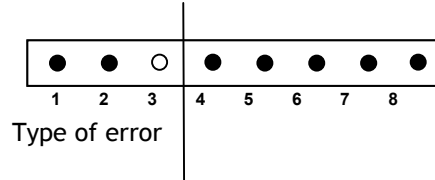
When pressing an electro valve button, if the led over the “Err” button blinks once, it means there is a communication error (see TROUBLESHOOTING TABLE).

BATTERY ERRORS

Another type of possible error is related to the battery in the RF and SICS versions:

The batteries are Duracell type AA NiMH 1800 mAh 1,2 V and grant a full charge working condition up to 6 hours (the test has been executed with constantly active valves; actually the 6 continuous hours will correspond to a 24 hours working condition).

If the battery tension is below a certain level (the minimum value that grants at least 15 minutes more of working) the system report to the operator an anomaly with the led over the "Err" button. By pressing this button on the led bar will appear error code related to the battery:



It is possible to visualize the approx battery charge level:

If the led over the "Err" button does not blink, and there is no error report, by pressing this button the battery charge level will appear on the led bar.

ERROR CODES TABLE

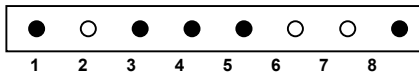
SHORT CIRCUIT ERROR CODES TABLE

<i>Codes on the LED bar</i>	<i>short circuited electro valve</i>	<i>Connection clamps</i>
	Electro valve 1	M1 - 8 / M2 - 1
	Electro valve 2	M1 - 7 / M2 - 2
	Electro valve 19	M1 - 6 / M2 - 3
	Electro valve 20	M1 - 5 / M2 - 4
	Electro valve 4	M1 - 4 / M2 - 5

Codes on the LED bar

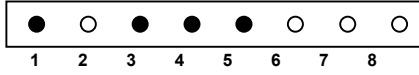
Electro valve in short circuit

Connection clamps



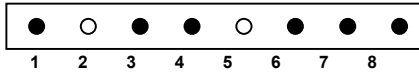
Electro valve 5

M1 - 3 / M2 - 6



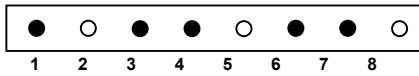
Electro valve 17

M1 - 2 / M2 - 7



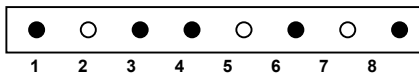
Electro valve 18

M1 - 1 / M2 - 8



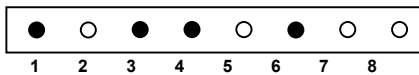
Electro valve 3

M3 - 8 / M4 - 1



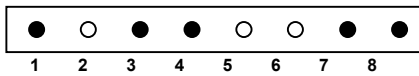
Proportional qualification

M3 - 7 / M5 - 5 / M5 - 4



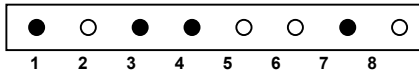
Electro valve 6

M3 - 6 / M4 - 3



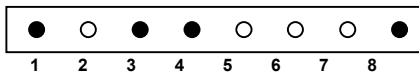
Electro valve 7

M3 - 5 / M4 - 4



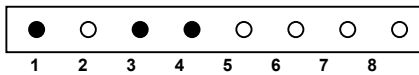
Electro valve 8

M3 - 4 / M4 - 5



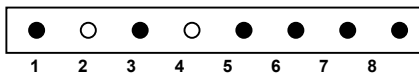
Electro valve 9

M3 - 3 / M4 - 6



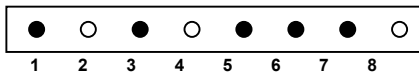
Electro valve 10

M3 - 2 / M4 - 7



Electro valve 11

M3 - 1 / M4 - 8



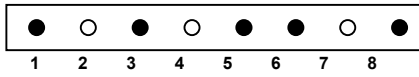
Electro valve 21

M7 - 8 / M8 - 1

Codes on the LED bar

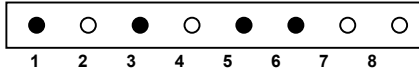
short circuited electro valve

Connection clamps



Electro valve 22

M7 - 7 / M8 - 2



Electro valve 23

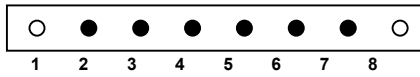
M7 - 2 / M8 - 7

CABLE ERROR CODES TABLE

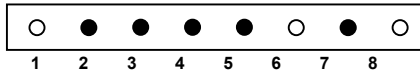
Codes on the LED bar

short circuited electro valve

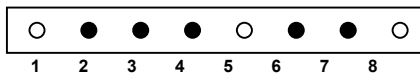
Connection clamps



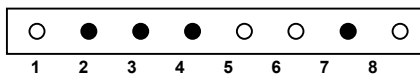
Electro valve 1 - 2 - 3 - 4



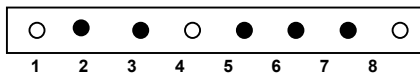
Electro valve 5 - 6 - 7 - 8



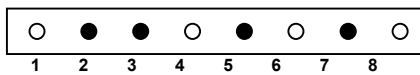
Electro valve 9 - 10 - 11 - 12



Electro valve 13 - 14 - 15 - 16



Electro valve 17 - 18 - 19 - 20



Electro valve 21 - 22 - 23 - 24

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
<p>COMMUNICATION ERROR</p> <p>Error led blinking when pressing an electro valve button</p>	<p>Cable version</p> <ol style="list-style-type: none"> 1 the connector may not be plugged in correctly to the Palm . 2 the communication cable may be interrupted 3 the Dina-Cen gearcase does not receive data 	<p>Solution1: screw in tight the closure ring nut</p> <p>Solution2: after visually checking that the cable is not integral send to Service for repair</p> <p>Solution3: send the system to Service for repair</p>
	<p>SICS version</p> <ol style="list-style-type: none"> 1 the connector may not be plugged in correctly to the SICS receiver 2 the communication cable may be interrupted 3 the battery charge level is low 4 the emergency button is pushed in 5 you are out of the range of action of the Palm 6 Others 	<p>Solution1: screw in tight the closure ring nut</p> <p>Solution2: after visually checking that the cable is not integral send to Service for repair</p> <p>Solution3: recharge the Palm batteries or connect the communication cable directly to the Palm</p> <p>Solution4: release the emergency button</p> <p>Solution5: return to the range of action of the Palm (6 m – 120°)</p> <p>Solution6: send the system to Service for repair</p>
<p>THE DINA-CEN GEARCASE DOES NOT TURN ON</p>	<p>No power arrives to the Dina-Cen gearcase.</p>	<p>Solution1: make sure that the emergency button has been released.</p> <p>Solution2: check the efficiency of the power system.</p> <p>Solution3: check the status of the protection fuses</p> <p>Solution4: send the gearbox to the Manufacturer for repair.</p>

<p>CABLE VERSION PALM DOES NOT TURN ON</p>	<p>1 the connector may not be plugged in correctly to the Palm. 2 the communication cable may be interrupted 3 Others</p>	<p>Solution1: screw in tight the closure ring nut Solution2: after visually checking that the cable is not integral send to Service for repair Solution3: send the system to the Service for repair</p>
<p>SICS VERSION PALM DOES NOT TURN ON</p>	<p>1 the battery charge level is low 2 Others</p>	<p>Solution1: recharge the Palm batteries Solution2: send the system to the Manufacturer for repair</p>
<p>LOW BATTERY ALARM Error Led on</p>	<p>The battery charge level is below the safety level, the device will have a further autonomy of 15 minutes more.</p>	<p>Solution1: connect the charger and recharge the Palm batteries Solution2: if the alarm is repeating after recharging, replace the batteries with new ones with the same characteristics.</p>
<p>ELECTRO VALVE ALARM Press the “Err” button to check the code and the related electro valve</p>	<p>One electro valve may be short circuited</p>	<p>Solution1: disconnect the electro valve from the distributor and replace it.</p>

WARRANTY

The Manufacturer grants, for a 12 months period from date of delivery, the good quality of materials, the perfect production and the correct functioning of the device manufactured by the Manufacturer and marked with the Manufacturer brand or the serial number. During the WARRANTY period the Supplier grants the reparation or replacement, ex works, of the defective parts for bad materials or construction defects, as far as said parts are delivered free of charge to the Supplier.

The WARRANTY does not include deficiencies and defects due to wrong use of the equipments, wrong maintenance, tampering and/or modifications made without prior approval of the Supplier, and due to common wear.

Responsibilities and indemnities for damages, direct or indirect to people, objects or production, by the Supplier are excluded even as consequence of a defect functioning of the supplied equipment or of defect materials or manufacturing.

NOTE

