



IPT[®]

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**ER 79 ECR
ELECTRONIC COUNTER REGISTER
USER MANUAL**



DO NOT OPERATE OR MAINTENANCE THE COUNTER REGISTER BEFORE READING THIS MANUAL.

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*IPT reserves the right to change the construction and design of the products at any time without being obliged to change previous models accordingly.



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1.INTRODUCTION

This manual includes important information about effective and reliable operation of the counter register. To obey the operation instructions brings effective operation, long device life and avoid of risks.

- Try to understand the contents,
- Follow the instructions and directions complete and accurate,
- Do not change the operation sequence,
- Keep the manual and its copy near the device in case the operator can use anytime.

1.1. Warnings

	This manual includes the necessary information as operation, maintenance, transportation etc. about electrical counter register. Make the operator to pay the necessary attention to the manual and to keep the manual where he can access in any time.
	This manual covers the operation and safety instructions have to be read before operating of the device. IPT can not be hold responsible in case of improper use of the device.
	The device subject of this manual is composed of electronic parts. Only the authorized persons must operate the system.
	Do not do any operation with the device before reading the manual. Consult IPT authorities in case of misunderstanding.
	This product has to be used according to its intended use. IPT can not be hold responsible for the damage occured in case of misuse.
	The necessary technical information about the operation and maintenance of the device are given in the title 1.5. Do not run out of this values.
	The subject of this manual, just hand over as a electronic counter register and no controlling equipment will be given. The customer is responsible for supplying the connections and/or the controlling equipments.
	Always work proper to the human health safety and environmental laws, regulations and instructions.



Safety Signs

	Hazardous liquid may result to dangerous health problems in case of spreading to hand, to face and to skin.
	Hazardous liquid may result to breathing problems.
	Situation may result to fire, explosion, property loss or death.
	Moving parts may result to woundings or rupture organs.

1.2. General Information

ER 79 ECR (Electronic Counter Register), was designed suitable for the positive displacement meters which can be easily installed and has a high accuracy in measurement.

Owing to the fact that ER 79 ECR is mainly put on in dangerous areas, it had been designed to be protected against explosions. Its case, in which electronic circuits (display card, pulser card, mainboard) are installed. There is a window on the case for screen and a membrane switch keyboard on the front panel. Entire system was designed as providing robustness, usage, installation and maintenance easiness.

1.3. Technical Specifications

Having a real clock processor, the device can keep the clock&date information even it is unplugged.

Against Electric disturbances, to increase the working stability, all the input / output sockets and communication ports are isolated from outer environment except usb socket

All the relay outputs are internally protected by snubbers. Thus, lower risky operation can be achieved by eliminating of Electric parasites sourced from solenoid valve or Electric motor by arc inhibitor circuit.

By the backup property, the fueling information is kept in the memory against Electric cut off problems which can be lived while fueling.

Type temperature compansation
Can be mounted on top of the measurement device or a distant place
Electrical connection (DC)

Operating Temp. -20 / +70°C

Storing Temp. -25 / +70°C

Humidit %96

Display Momentary : 6+2 digits
Totalizator : 8 digits

Weight 9.400 kg (±50 gr)

Dimensions (W x L x H) 250x270x200 mm

Cable Transition Ex-proof Glend

Impermeability Material Compressed fiber Gasket

Power source 12-24v ac/dc

Current 270ma(12v) – 130ma(24v)

Valve output 2 * open relay contacts (NO) (10A-240v ac / 30v dc)

Communication RS 485

Material :
Display Polycarbonate Glass

Casing Cast Aluminium (AlSi10Mg)



1.4. Marking



Figure 1. Product Label

Marking includes the type and serial number. In the reorder of register or order of the spare parts, use the label information (type and serial no). If you need further information, please get in touch with IPT.

2. SAFETY AND ENVIRONMENT

2.1. General

The ER 79 ECR counter register you have bought was produced with high technology under the continuous quality control process.

Not to obey the safety instructions means to endanger the human life, environment and the device. Moreover the justs asking for the damage are being lost in case of not to obey the safety instructions. Not to obey the instructions may cause of the followings:

- Damage or failure in main functions of the device
- Failure in the maintenance
- Exposed of the human life to electrical damages



**THE CUSTOMER IS
RESPONSIBLE FOR OBEYING
THE LOCAL SAFETY LAWS AND
COMPANY INSTRUCTIONS!**

2.2. Users

The owner of the device is responsible for ensuring that everyone who works with the device has the necessary background.

The operator shall explain the personnel's responsibilities and authorities. If the operator troubles with some points, he/she can demand a course from the manufacturer firm. As a last word, the responsible personel must understand the operating instructions exactly.

2.3. Safety Rules

The device designed with high care. The original parts and the equipments meet the safety regulations. Making changes in design or not using original spare parts means to endanger the safety.



**BE SURE THE DEVICE IS
OPERATED IN THE TECHNICAL
SPECIFICATION LIMITS. ONLY IN
THIS CASE REGISTER
PERFORMANCE WILL BE
GUARANTEED!**

The signs and markings on the device are the parts of safety conditions. These markings shall not be closed or unstitched. The markings shall be stay over the device over the whole device life. The markings outwear or getting older shall be changed with the new ones.

2.4. Assembly, Maintenance and Repair

All the assembly, maintenance and repair works must be done by the authorized personnel. Obey the local regulations.



**OBEY THE INSTRUCTIONS
WRITTEN IN THE INSTALLATION
AND OPERATION SECTIONS
WHEN OPERATING THE DEVICE
AGAIN!**

2.5. Environmentally

The IPT electronic counter registers were designed to operate compatible to environment for all their lives.

Pay care when discarding an adr of the devices of which working life finished.



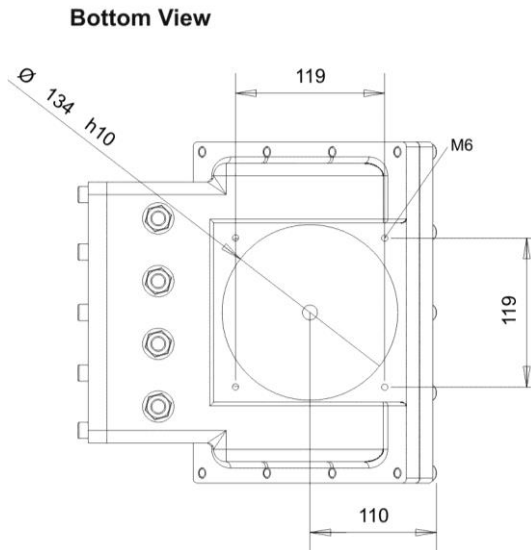
**CONSULT LOCAL
GOVERNMENT ASSOCIATIONS
FOR THE WASTE MATERIALS
AND RECYCLING!**

3. INSTALLATION

3.1. Counter Register

The electronic counter register is a system displaying 6 digits momentary and 8 digits total volume transferred. It is very dependable as its easy usage. If the electric current cuts off, the batteries in the counter register will keep the last transfer volume until the current is supplied. The totalizer is used to measure the volume of the liquid passed through the meter from the production of the meter till the last measurement. The totalizer can not be reset, it will reset itself after 99.999.999 liters.

3.2. Dimensions



Top View



Side View

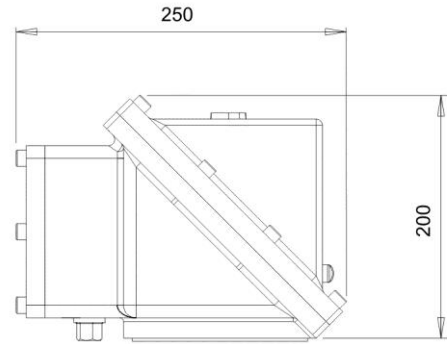


Figure 2. Dimensions

3.3. Connection and Assembly

The electric couplings must be done according to the instructions and related regulations by a qualified electrician.



**THE ELECTRIC COUPLINGS
ARE ALWAYS DONE BY
AUTHORIZED PEOPLE
ACCORDING TO THE
STANDARDS AND
REGULATIONS!**

Electric connection: The electronic counter register needs 12-24v dc current. It can be operated by the tanker battery or an adaptor.



Connect (+) and (-) wires to the “12-24v dc” socket in the back cover of the register ((+) to right socket and (-) to left socket). If you use with the adaptör, then use the CE approved one.

Contact to IPT in case of malfunction even if obey the instructions.

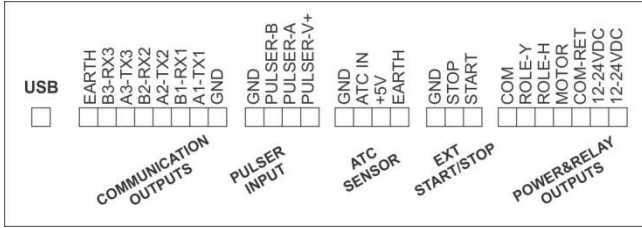


Figure 4. Counter Register Wiring Diagram

Motor Connection: On the connector group, there is a socket named “motor” which supplies energy to a contactor to start up an Electric motor.

Solenoid Valve Connection: Solenoid valves are the equipment which can be connected to register on order and are used to control the fuel flow and allows the sale with preset.

If a two stage solenoid valve is used, the transfer will be done gradually, so more controlled operation can be done.

The register can be used both single stage and double stage solenoid valves. The valves are normally open (NO) type and they will turned into closed position at the beginning of the delivery. It must be remembered that the voltage of both solenoid valve and supply of the register shall be same.

Single Stage Valve usage:

“ROLE-H” socket is not going to be used. One of the energized cables of the bobbin will be connected to the “ROLE-Y” socket, while the other will be connected to the “COM-RET” socket. The yellow cable (earthing) from the bobbin will be connected to the truck’s chassis for earthing. **A short circuit must be done between “12-24VDC” right socket (+) and “COM”.** **A short circuit must be done between “12-24VDC” left socket (-) and “COM-RET”.**

Double Stage Valve usage:

There are two kinds of valves as shared cabled and separated cabled.

For the shared cabled valve; the black cable is for the “COM-RET” socket, the blue cable is for the “ROLE-Y” socket and the brown cable is for the “ROLE-H” socket. The yellow cable (earthing) from the bobbin won’t be used. The yellow cable (earthing) from the bobbin will be connected to the truck’s chassis for earthing. **A short circuit must be done between “12-24VDC” right socket (+) and “COM”.** **A short circuit must be done between “12-24VDC” left socket (-) and “COM-RET”.** In case of slow and fast flow differencies can’t be seen, the places of blue and brown cables must be changed.

For the separated cabled valve; both of the brown cables will be tied and connected to the “COM-RET” socket, one of the blue cables will be connected to “ROLE-Y” socket and the other blue will be connected to “ROLE-H” socket. The yellow cable (earthing) from the bobbin will be connected to the truck’s chassis for earthing. **A short circuit must be done between “12-24VDC” right socket (+) and “COM”.** **A short circuit must be done between “12-24VDC” left socket (-) and “COM-RET”.** In case of slow and fast flow differencies can’t be seen, the places of the blue cables must be changed.

For the other connections, please consult IPT.

3.4. Paint

The paint used for the register is epoxi added dust paint. The case is put in the oven after paint for the best adhesion.



EVEN IF THE PAINT USED IS RESISTANT TO PETROLEUM PRODUCTS, DO NOT EXPOSE THE EQUIPMENTS EXTERIOR SURFACE TO THIS KIND OF SUBSTANCES!

4. OPERATION

4.1. Control List

The following clauses must be controlled before operating the device;

1. That the meter must be earthed.



2. Positive displacement meters operate under the principle of full hose system. Thereby the hose must be controlled prior to each measurement and must be filled completely.
3. That all isolating valves in the suction are fully open.
4. That all the equipments using after the meter such as vanes or nozzles must be opened.
5. That the electric current is feeding the electronic counter register.
6. That the counter register should be reset.
7. That there are no bends in any point of the hose.



THE METERS WORK UNDER THE POSITIVE DISPLACEMENT PRINCIPLE. BE SURE THAT THE HOSE IS COMPLETELY FULL OF LIQUID!

After controlling all these clauses, the system is ready for the measurement. The counter register must not be interfered at the time of measuring.

After the measuring operation, the nozzle, valve etc. equipment must be closed and the pump must be shut down immediately.

4.2. System Definition

Delivery Screen Symbols;



Delivery started



Register is in automation mode



ATC probe connected



Preset defined



Malfunction



Connected to Printer



THE SCREEN IS TURNED OFF IN CASE ELECTRIC IS SUPPLIED. TO OPEN THE REGISTER, PRESS ONE OF THE BUTTONS!

Menu

The adjustment of the device can be seen under 4 menu titles as pump, administrator, service and factory. Administrator and service menus can be reached by their passwords.

The min and max values can be accepted by the parametric adjustments are written in the menu. If a value exceeded the min or max value, the "EXCESSIVE MIN/MAX VALUE" descriptive notice will be seen on screen with the value that the parameter can get most.

Menu Arrangement Code

All the titles under the menus have a arrangement number. This can be defined as following;

Format : XYYZ

X – Menu group number

This is the main menu rank.

YY – Choice Number

The number of the parameter in the menu.

Z – Fueling Number

Dependent to operation type, it shows which fueling point, channel, nozzle or any other equipment is chosen.

MENU

To enter the menu, press MENU button while the device is not in operation mode.

The stand-by duration in a menu without doing any adjustments (the delay without pressing any of the buttons) is 60 seconds. If this duration is passed over, it will automatically go back to main screen.

1 - Pump Menu:

This menu can be achieved directly and have the records related to fueling operations and device information.

101 – Operation Total: Shows the operation information from volume, price and duration.

102 - Sale Record: The latest 100 deliveries's information as sold volume, price, weight, operation duration, average flow rate, average temperature. The last operation is shown at first.

Volume (ATC) : Compensated (net) volume



Volume(gross) : The volume without ATC applied.

Price : Price of the sale.

Weight : The weight of the sold volume.

Average coefficient : The average of the coefficients found due to temperature change which applied to calculation during the whole operation.¹

Average Temperature : The average of the temperatures measured during the whole operation.¹

Average Flow Rate : The averages of the flow rates measured during the whole operation.

Fueling Duration : The duration of the operation.

Suspend : The duration in an operation passed without delivery.

Pulse Amount : The total pulse amount generated by the pulsar card.

Time : The time and date of the operation.

¹Valid for the liquids defined in the ATC parameter and can be calculated if ATC probe is installed.

- While you're in one of the records, if you press PRESET button once, the printer prints the receipt of that record!

103 – Case Report: The last 50 malfunctions met during operations, system information, the description of malfunction recorded with time information.

Case name: the name of the case happened

Time happened : The time of the case happened

Case point: If the case is a malfunction, this is the fueling side and nozzle of the case happened.

104 – Information: The version number of the firmware, checksum number, production date, total operation duration etc are shown.

Version: Version info of the firmware

Authorization: Information of if the device operates in manual or automation mode.

Operation duration: The total duration of the register while it remains open.

Total Delivery : Total number of deliveries

Production : The production/revision date of the register

Calibration : The last calibration date of the register

Opening : The date/time info when the register was energized

Closing : The date/time info when the register was de-energized

Opening Amount : The total number of openings

CPUID : The serial number of cpu and equipment type

Checksum : Firmware checksum value

CPU Frequency : The frequency of the cpu

2 – Administrative Menu:

The administrator password must be entered to gain access to menu. The password is set as "11111" by factory. If requested by the responsible person, the password can be changed from the options menu.

201 - Liter Preset:

Format : 000.00 lt

The values of the program button are set to preset selling in liters. Program button values can be changed by "P2" and "P3" buttons. The changed values will be recorded after pressing "MENU" button. If you wish to cancel the operation in the menu, "STOP" button should be pressed.

Factory settings:

P1 - 1 liter

P2 - 10 liters

P3 - 100 liters

202 - Price Preset:

Format : 000.00 TL

The values of the program button are set to preset selling in currency. Program button values can be changed by "P2" and "P3" buttons. The changed values will be recorded after pressing "MENU" button. If you wish to cancel the operation in the menu, "STOP" button should be pressed.

Factory settings:

P1 - 1 TL

P2 - 10 TL

P3 - 100 TL

203 - Unit Price :

Format : TL 0000.00

The unit price of the fuel is adjusted manually. If the automation system is active, the unit price can be altered by the system. The value of the flashing digit can be changed by the buttons "P2" and "P3". The next digit is selected by pressing "P3". The changed values will be recorded after pressing "MENU" button. If you wish to cancel



the operation in the menu, "STOP" button should be pressed.

Factory setting: 1 TL

204 - Currency:

The country currency is adjusted. The adjusted currency is shown in the Menu.

TL: Turkish lira

EURO: European Currency Union

DOLLAR : US dollar

MANAT : Azerbaijan currency

LARA : Georgia currency

CAD : Canadian Dollar

GHC : Ghana currency

LEK : Albanian currency

KM: Bosnia and Herzegovina currency

LEVA : Bulgaria currency

DINAR : Iraqi currency

RSD : Serbian dinar

RUB : Russian ruble

LS: Lithuanian currency

LL: Lebanese Pound

DIRHAM : Morocco currency

RIAL : Saudi Arabia currency

Factory setting: TL

205 - Large display:

The major indicator type on the home screen is displayed. "Dependent to preset", "volume" and "price" values can be selected.

Factory settings: Dependent to Preset

206 - Waiting Indication:

The information is shown on the bottom row of the main screen while the register is energized but not delivering fuel.

Company name: Manufacturer name of the register

Date - Time: Current date and time information

Factory settings: company name

207 - Filling Indicator:

The information is shown on the bottom row of the main screen while the register is delivering fuel. The following information can be shown ;

Flow rate (l/min)

Density (g/cm³)

Ipt company logo

Date/Time

Factory setting: Flow

208 - Number of prints:

If the printer is connected to register, how many receipts will be printed is defined in this title.

Factory setting: 1

209 - Auto shutdown:

The automatic shutdown duration of the device if it is energized but not in use.

Factory settings: Open

210 - Auto shut-down time:

This is the amount of the duration if the auto shut-down is "open".

Factory setting: 600 sec

211 - Date setting:

Date setting is made. The format is as Day/Month/Year.

212 - Clock setting:

The time setting is made over 24 hours.

213 - Language selection:

Either in Turkish or English languages recorded in the device can be selected.

Factory settings: Turkish

214 - Administrator password:

To title where the password for the administrative menu can be changed.

Factory setting: 11111

Error Codes:

The register checks many of the failures that may occur on the hardware and shows on the screen in order and gives an audible warning. Fault occurred are stored in memory with hour / date details. These records can be seen later from the event report in the pump menu.

E00: NO ELECTRIC SUPPLY

E01: ATC FAULT

The temperature probe was not installed or probe malfunction

E02: NO PULSE

The pulse generator was not installed or generator malfunction. The 3rd party hardware system may not be detected by cpu(see E18)*.

E03: NO SCREEN

E04: NO AUTOMATION COMMUNICATION

Communication cable is disconnected or wires are connected in reverse position, the automation parameters may incorrect, automation system is defective or communication module may be faulty.



E05: NO MASS METER

Communication cable is disconnected or wires are connected in reverse position, mass flow system parameters are incorrect, mass measuring system is faulty or communication module may be faulty.

E06: PULSAR TURNS WRONG DIRECTION

Pulsar is turning in the wrong direction. The places of the wires of the pulsar must be changed.

E07: LOW TEMPERATURE

ATC probe measures a temperature below the setted bottom temperature.

E08: HIGH TEMPERATURE

ATC probe measures a temperature above the setted top temperature.

E09: VALVE LEAKS

While not delivering fuel, continuous pulse coming from generator. The solenoid valve may be leaking.

E10: FILLING TIMEOUT

No fuel was given from pressing "START" button until the defined timeout duration ended.

E11: NOZZLE OPEN

The nozzle is not in its place when the register first energized.

E12: LOW FLOW

The delivery flow rate is lower than the adjusted minimum flow rate level.

E13: HIGH FLOW

The delivery flow rate is higher than the adjusted maximum flow rate level.

E14: AUTHORIZATION TIMEOUT

If an authorization signal received from the authorization system but the delivery was not started until the defined duration passed, the authorization cancelled by the system.

E15: INVALID UNIT PRICE

The unit price is not recorded.

E16 RTC ERROR

System time malfunction.

E17: MEMORY ERROR

Failure occurred in system memory.

E18: HARDWARE INCOMPATIBLE

A different manufacturer's pulsars may incompatible with the cpu. Connect the pulsar ends with 4.7Kohm and connect + and - supply terminals with 470 ohms.

Solenoid Valve:

Filling control is performed by relay outputs on the register card which are connected to the solenoid. Some controls as malfunction, temperature compensation etc. is done at the very beginning of the delivery. If any malfunctions meet at the beginning, the bobbins of the solenoid will be energized and the delivery is started. If any malfunctions are met while delivery, the bobbins will be de-energized, so the delivery will be cut-off immediately and the related error code/description will be appeared on the screen. "STOP" button will be pressed to cancel the delivery.

Electronic register cut-off the energy of the solenoid valve when the presetted volume given, so the delivery will be stopped.

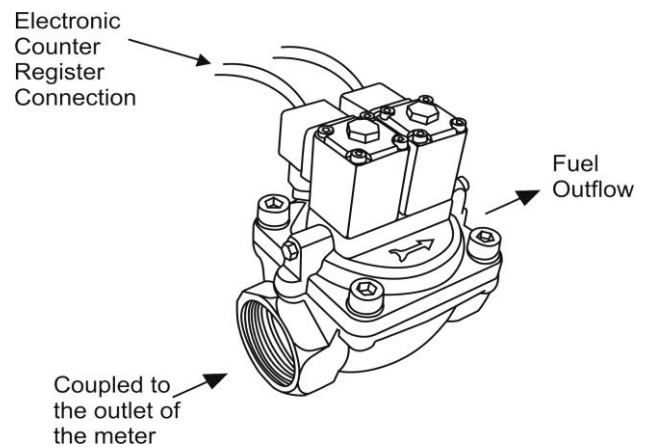


Figure 5. Solenoid Valve



THE REGISTERS WITHOUT CONNECTION TO A SOLENOID VALVE CAN NOT CUT OFF THE DELIVERY AUTOMATICALLY. THE DELIVERY VOLUME MUST BE CONTROLLED FROM THE DISPLAY!

By the two stage solenoid valve;

- Slow flow delivery start
- Slow down the delivery and fast delivery
- Prediction of cut off can be done.



**SINGLE STAGE VALVES MUST
BE USED FOR START AND CUT
OFF OPERATIONS. PRESET
VALUES CAN BE ACHIEVED
SUCCESSFULLY BY THE TWO
STAGE VALVES!**

The control of the system can be done by automation system as externally or a solenoid valve can not be used in the system (manual mode). The filling process is normally started by pressing "START" button, as well as it can be started by "Smart Flow Wake Up " feature.

If "START" button is not pressed intentionally or in case of it forgotten, the register will automatically bring itself to operation status by noticing the movement in pulsar. Thus, it is prevented to deliver fuel without measuring.

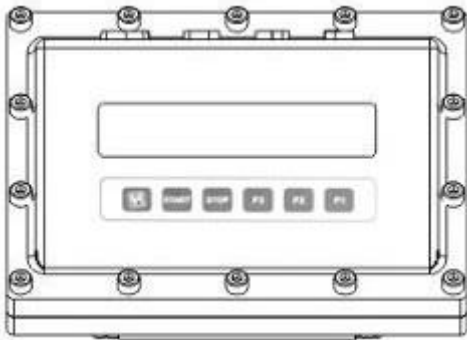


Figure 6. Counter register

1. Be sure the register is supplied by electric. Press STOP button.
2. Define the volume by using P1, P2 or P3 buttons.
 - P3 button is for 100 lt
 - P2 button is for 10 lt
 - P1 button is for 1 lt(in case of pressing wrong buttons, press STOP button to restart preset value.)
(This clause is only valid if a two stage valve is installed.)
3. Press START button after preset value is entered.
4. The register will be ready for delivery in two second time. The delivery will be cut off after preset value is given. **(If solenoid valve is installed)**
5. For new delivery, press STOP first and press START to reset the register.


Buttons

- P1 : 1 liter programming button
P2 : 10 liters programming button
P3 : 100 liters programming button

STOP : Deletes wrong preset and stops the device

START: Starts the device

Note : If the device related to an electronic cash register or an automation system, when pressing the START button, the device displays 88888888 until the approval signal receives from this system and only after this signal, the register

starts delivering fuel. The symbol  will be seen on the screen.

Sale Without Preset :

Push START button, after the device reset itself, the sale starts. To finish the sale, use STOP button.

Sale With Preset :

Press START button after entering the desired volume by using P1/P2/P3 buttons while the device is in stop position. The device will shut down the fuel flow automatically when the desired volume is given. **(with solenoid valve only)**

If the delivery is not started after the pre-defined "preset timeout duration", the preset will be cancelled.

Sale with preset can also be done by the automation system.

To change the preset type as price or volume, it is need to be pressed the PRESET button. After entering PRESET value and type, START button will be pressed. The preset value will be seen on the screen before delivery starts.

Deleting Wrong Preset :

Use the STOP button to delete the wrong preset value.

5. STORING

The counter register has a casing protective against to the outer effects. The followings are



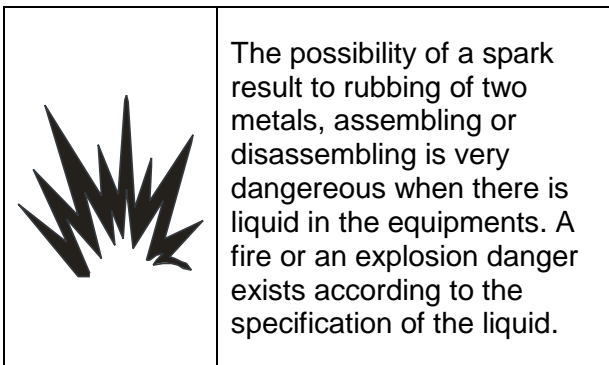
advised and will be enough for the long periods of storing time;

1. Detach the cables outgoing from the counter register and incoming to the power source, and fold them by the electric band in order not to oxidize. It is not necessary for the cables incoming to the counter register, because the glands can not put the moisture access inside of the casing.
2. To bandage the counter register with a clean clothe not to expose it to the excessive cold or hot temperatures.
3. There are seals on the counter register. Prevent seals from getting damage.
4. The counter register composes of electronic parts. Take the precautions not to expose to a shock.
5. When starting-up the system after the storing, do the control of calibration of the meters as told in the meter manual.

6. MAINTENANCE

The ER 79 ECR counter register has a protective casing against to the outer effects and thereby nothing can access into it. So it doesn't need to a detailed maintenance.

- If there are, changing damaged wires,
 - Changing the damaged polcarbonate glass or the membrane switch result of a shock,
 - Checking the tightness of the bolts periodically,
- will be enough for the electronic counter register.



6.1. Safety Seals

The counter register is protected by the seal against dismantling the equipments or the parts which can effect the measurement accuracy. The lead seal is used for the sealing. There is 1 point in the meter where the seal is used.

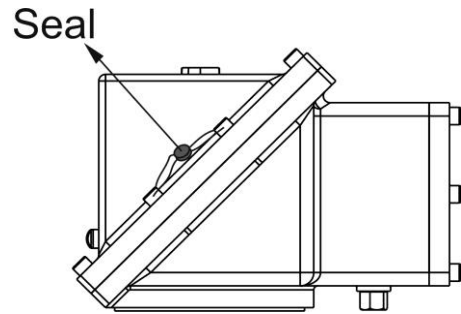


Figure 7. Place of the seal



THE DEVICE WILL BE OUT OF GUARANTEE IF THE SEAL IS BROKEN!



THE CASING SUITABLE FOR USING IN THE INDUSTRIAL ENVIRONMENT HAS THE IP 67 CLASS PROTECTION LEVEL.

6.2. Periodic Maintenance

NO	OPERATION	CONTROL PERIOD		
		DAILY	3 MONTHS	ANNUAL
1	Control the STOP button	X		
2	Control the keyboard (key-pad)	X		
3	Control the lcd display		X	
4	Control the impermeability gasket, seals			X

Table 1. Periodic Maintenance Plan



Poz No	Code	Description	Qty.	Poz No	Code	Description	Qty.
01	06.077	M4*20 bolt	13	15	06.023	M6*10 bolt	1
02	07.002	Maincard	1	16	06.180	Ø6 washer	1
03	05.023	Bushing	13	17	03.133	Pulsar disc	1
04	06.311	Gasket	1	18	03.269.Y1	Shaft	1
05	03.134	Transmission clow	1	19	06.181	Washer	1
06	03.204	Pin	1	20	08.183	Bushing	1
07	ALM 171.036.Y1	Back case	1	21	07.001	Display card	1
08	06.322	Gasket	1	22	06.003	M4*8 bolt	12
09	ALM 171.037.Y1	Back cover	1	23	03.111.Y1	Screen frame	1
10	06.433	M8*30 bolt	12	24	08.001.Y1	Polycarbonate glass	1
11	06.415	M4*6 bolt	2	25	ALM 171.035.Y1	Front case	1
12	02.302.Y2	Disc guard	1	26	06.432	M8*35 bolt	14
13	06.448	Ø4 washer	2	27	07.053	Membrane switch	1
14	07.004	Pulsar card	1				

Table 2. Electronic Counter Register Spare Parts

7. TROUBLESHOOTING

Problem	Possible Reason	Possible Solution
The meter allows fluid pass through but the counter register does not work	The counter register lacks of electric current.	Control the electric connections.
	The screws or retaining rings that hold the gears on the gear plate may be untighten.	In case of untighten of these screws, both the momentary and totalizator will not record. Tighten the screws.
	Transmission clow or the transmission gear may be broken.	The transmission clow of the counter register or the gears on the meter must be changed. Consult to IPT.
The meter transfers more liquid than the counter register counts.	Meter calibration broke down.	The meter should be tested for the repeatability. If the meter is in good condition, calibrate the meter. For calibration consult to IPT.
	Counter register broke down.	Consult to IPT.
The meter transfers less liquid than the counter register counts.	A leakage in the inlet of the pump.	Control all the connections included the pump gaskets. The air sucked to the system and pumped to the meter effects the counter.
	Meter calibration broke down.	The meter should be tested for the repeatability. If the meter is in good condition, calibrate the meter. For calibration consult to IPT.
	Counter register broke down.	Consult to IPT.

Table 3. Solution Table



8. GUARANTEE

- ✓ ER 79 ECR is guaranteed for 2(two) years.



THE COUNTER REGISTER IS ONLY GUARANTEED IF IT IS OPERATED APPROPRIATE TO THE CLAUSES WRITTEN INSIDE THIS MANUAL. THE DEVICE IS NEVER OPERATED OTHER THAN THE OPERATING LIMITS (DEFINED IN THE TECHNICAL SPECIFICATION TITLE)!

Guarantee Conditions

- Guarantee duration starts at the shipping of the item to the customer and enclose for a time of **2 years**.
- The product with all the parts included is under guarantee of our firm.
- In case of malfunctions in the period of guarantee, the time passed for the repair work will be added to the guarantee time. The repair time is at most **30 business days**. This period starts with getting the information by the factory, service station or to the importer (if there isn't any service station)
- The importer must destine a similar product to the customer until the the repair work is completed.
- The seller has the responsibility to repair or made it repaired without demanding any charges in the name of changing parts, labor cost or anything else if the product breaks down due to assembly, material or workmanship in the period of guarantee.
- From the date of shipping to the customer, on condition of being in guarantee period; if the product breaks down twice for the same reason or breaks down 4 times because of different reasons in a year or breaks down 6 times, and moreover the break downs prevent benefiting to the product,
- Excessing the maximum duration for the repair work,
- In the case of determining with a report by the service station (if there isn't a service station by the seller, the dealer, the agent or the manufacturer orderly) that the repair of the product can not be possible, the customer claims changing the product to a new one free of charge, refund of money or cost discount at the same amount of fault amount.
- The malfunctions result to operating the pump contrary to the clauses written in the manual is out of guarantee.
- The customer could consult to the Ministry of Industrial and Commerce and Protected of Consumer and Competition General Management about the occuring problems .

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	STAMP/SIGNATURE :

