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*Transducers and industrial measuring systems*

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**Portable instrument**

**SERIES *AN-601***



***Version 1 Rev. 0***  
*dated 09/10/07*

# ***INSTRUCTION MANUAL***

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REVISIONS		
HARDWARE	FIRMWARE VERSION	MANUAL VERSION
PR 100 MA V0	V.01.0	V 1.0

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## FOREWORD

1. This manual is integral part of the shipment and it is supplied with the Product even if not listed in the invoice.  
This manual can also be sent during purchase negotiation on Buyer's request provided that the Buyer states end application of the Product.  
Except as expressly request by the Buyer, only one copy of this manual may be attached to shipments consisting of more than one unit of the Product.  
Additional or updated copies of this document may be found on our web site at the following address: [www.dseurope.com](http://www.dseurope.com)
2. The Products, which are the subjects of this manual, are designed and manufactured for general use; therefore, being not possible to specify limits of use for all applications, the Buyer shall introduce safety measures in order to avoid personal injuries, damages to property or damages due to plants stoppage, etc.  
In case of use that can cause risk of damages, the Buyer shall immediately advise the Supplier in order that it can suggest safety solutions or can decide to reject the order and not to deliver the Product.
3. AN601 series of instruments are not certified instruments; it is Buyer's responsibility to check instrument suitability to the requirements of the specific application.
4. AN601 series of instruments, even when connected to transducers or other equipment, are only parts of more complex systems and plants; they are sold in thousands per year, for the most different applications which shall meet as many different norms that are not always known to the Supplier.  
For these reasons, DS Europe is obliged to disclaim all responsibility concerning the use of the instrument; however, a list of the most elementary and basic precautions for the correct use of the instrument is given in this manual.  
Besides, the need of a complete and specific insurance policy is highlighted, especially when systems and machinery are to be installed in Countries like United States or Canada.
5. AN401 series of instruments are designed and manufactured by DS Europe conforming to the highest quality standards; the instruments are rugged and designed to the highest possible safety and reliability: limitations and precautions listed in this manual are aimed to draw Buyer's attention to the importance of avoiding damages.
6. During manufacturing process, AN601 series of instruments are submitted to several intermediate tests and to a final test including performance test of all functions.  
Electrical, temperature and mechanical sampling tests are periodically carried out to check conformity of manufactured items to Product specifications.

**For the over mentioned it is thereby certified that the delivered Product is completely operating.**

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## ***SUMMARY***

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**CE DECLARATION**

**Applied Council's directives:** 89/336/CEE modified by directives 92/31/CEE, 93/68/CEE

**Conformity to Standards:** EMC:  
EN 50081-2: 1994 - Emissions, General Norm  
EN 55011  
EN 50082-2: 1995 - Susceptibility, General  
Norm  
ENV 50140  
ENV 50141  
EN 61000-4-4  
EN 61000-4-2  
EN 61000-4-8  
ENV 50204

**Manufacturer:** DS Europe srl

**Address:** via F. Russoli, 6 Milan (Italy)

**Equipment type:** Indicator Conditioner

**Model:** AN401 series

**Year of registered mark:** 2003

The equipment has been tested in the typical installation configuration, as described by the instruction manual of the Product.

DS Europe srl certify that the above defined equipment meets the requirements of above mentioned EMC directives.

Milan, 12/06/98

DS Europe srl  
Technical dept.

## 1 AN601 batteries

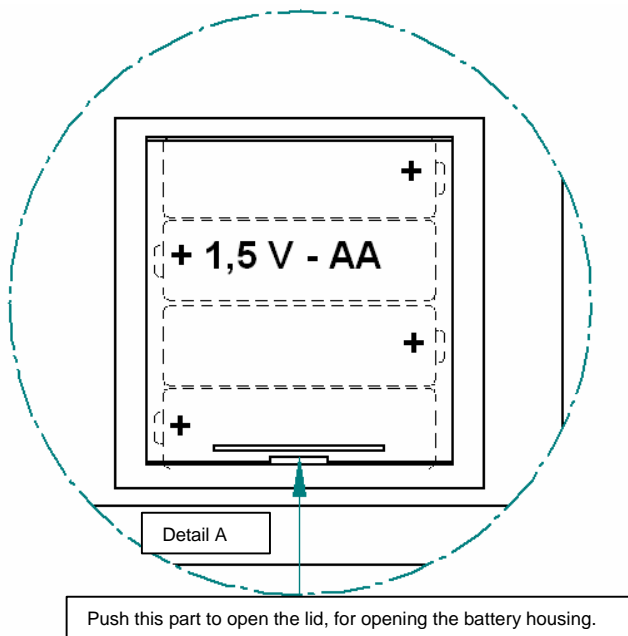
The AN601 instrument is to be powered with 4pcs AA 1,5V batteries. The operational autonomy of the instrument will depend on the battery type. It is advisable to use rechargeable batteries for digital cameras with high charge capability like 2600mA/hour or higher.

### 1.1 Instrument autonomy of operation

The AN601, when connected to a 350 Ohm strain gauge instrument, is consuming approximately 60mA.

The battery autonomy is directly proportional to their charge status and if it is used a 2600mA/Hour type then the autonomy is:  $2600\text{mA/hour}/60\text{mA}=40$  hours of continuous working.

### 1.2 Battery housing



To open the battery housing, on AN601 rear side, it is necessary to push upwardly the plastic lid and then lift it.

Insert batteries with correct polarity.

If batteries are inserted with wrong polarity, instrument is not damaged.

After having inserted batteries then close the lid.

Fig. 1 : AN601 battery housing.

### 1.3 Battery status led

A red led switches on when the batteries have low charge status.

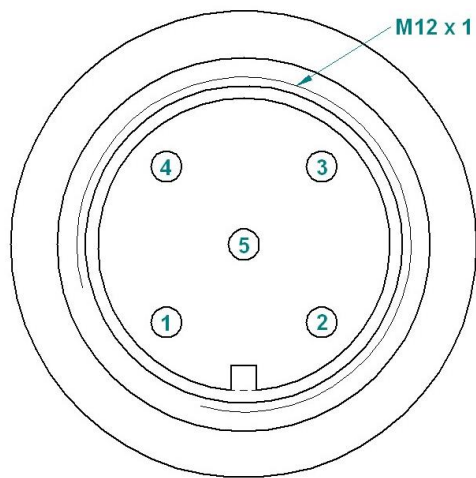
It is advisable to change the batteries when they are no more charged in order to avoid wrong readings on display (if batteries are rechargeable then recharge them).

Note:

The AN601 recognizes a battery low charge status by using memorized parameters referring to NiMa types with 2600mA, different models could change the activation of the signaling led.

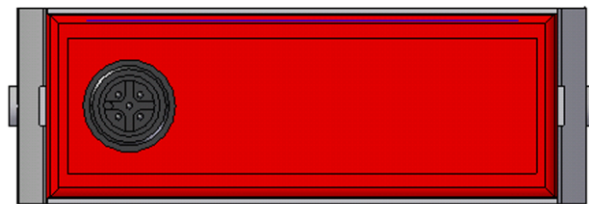
## 2 Transducer connections

Transducers are connected to AN601 instrument by means of M12 connector with 5 pins.



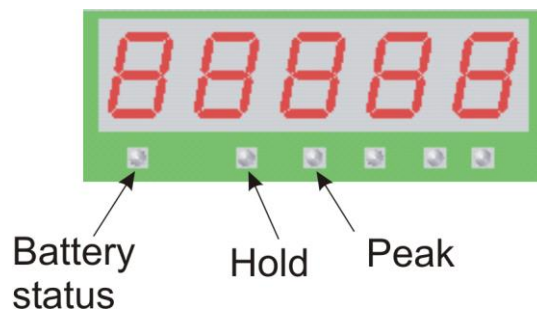
M12 MALE connector - Front view

PIN	DESCRIPTION
1	+ Power supply
2	- Power supply
3	+ Signal
4	- Signal
5	Not Connected



## 3 AN 601 display

AN601 instrument has a 5 digits high brightness 7 segments red LEDs display, a red LED for signaling low battery charge and 5 green LEDs.



## 4 Switch on and off

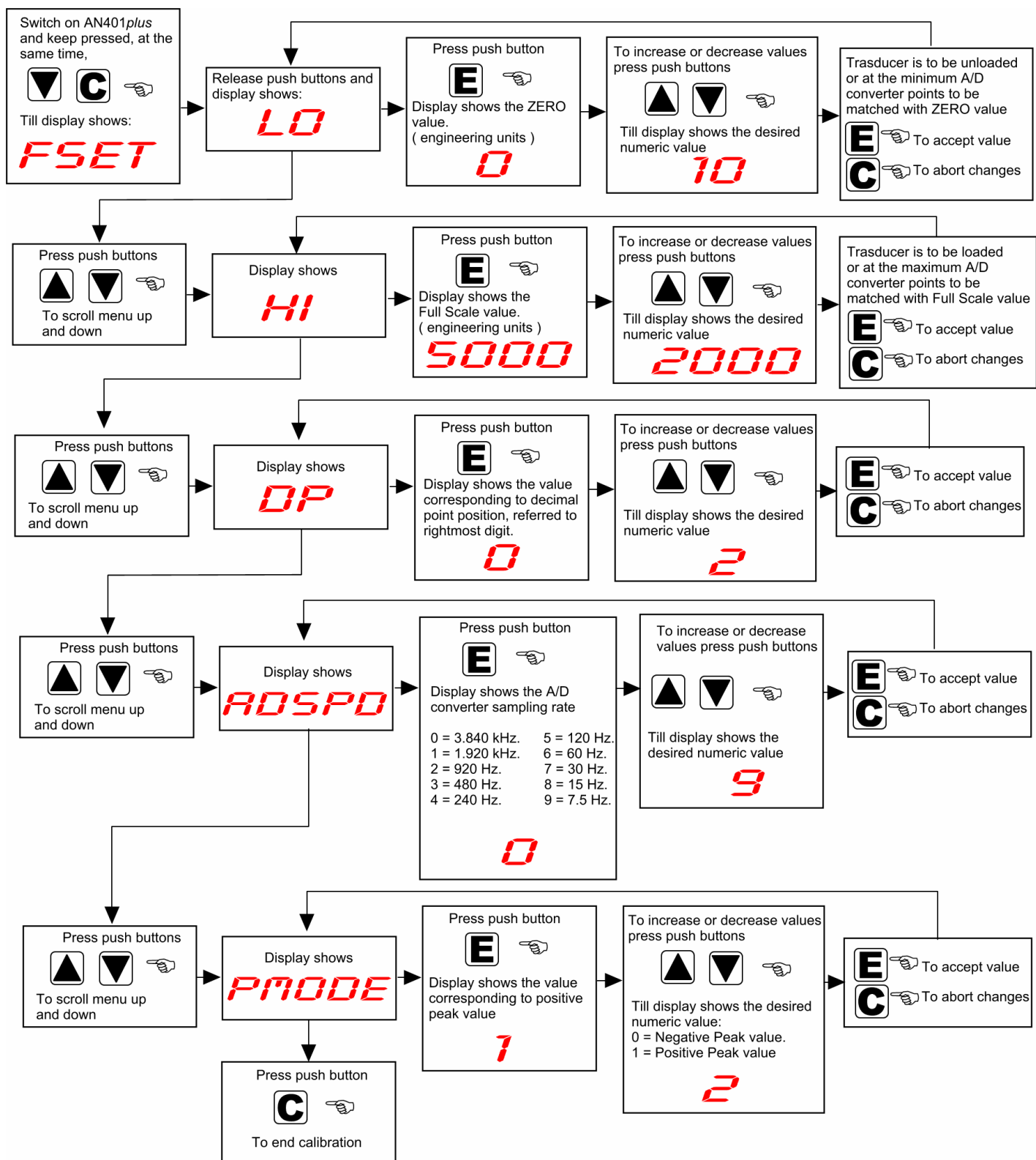


Use button to switch AN601 on and off.

Keep pressed the **O/I** push button for some seconds and then release it for switching it on and then repeat the procedure for switching it off.



## 5 Setting of working parameters



## 6 Instrument working

Measure	• NET	
	• GROSS	
	• TARE	
Display	• NET (GROSS – TARE) and PEAK if activated	
Keyboard	• C push button	• Sets Dynamic ZERO = Measured value
	• E push button	• When pressed display shows TARE value
	• ▲ push button	• Not Used
	• ▼ push button	• When pressed display shows GROSS value
Functions	• F1	• Hold function
	• F2	• Peak value is shown if it is active
	• F3	• Not Used
	• F4	• Not Used

## 7 Instrument functions

### 7.1 Hold **F1**

The hold function is activated by pressing the **F1** and LED 1 is switched on.

Hold function is freezing the measured value on AN601 display that constantly shows the same value till this function is deactivated and LED1 is switched on.

The value shown on display is frozen till the **F1** push button is released.

### 7.2 Peak memory function **F2**.

Peak memory function is showing on display the maximum measured value after the **F2** push button has been pressed a first time.

LED2 will be switched on when Peak function is active.

To erase the memorized value, press **C** push button.

To switch off the Peak function just press a second time the **F2** push button, till LED2 is switched off and display shows the normal measured values.

## 8 Sales conditions

(for all DS Europe products)

### 8.1 *Warranty:*

Several electrical and mechanical tests carried out during manufacturing process and the final test carried out on each unit warrant that delivered Product is free from defects in materials, workmanship and performance.

During the warranty period of six months from delivery, at no additional charge, Product rendered defective under normal use will be repaired or replaced at DS Europe factory.

The Product shall be forwarded at Buyer's expense concerning shipping, insurance, customs duties or any other charges associated with transportation of the Product.

This Limited Warranty does not extend to any Product that has been damaged or rendered defective as a result of accident, misuse, or abuse.

Moreover, in case of heavy or non-reparable damages, the Product may be rendered disassembled to the Buyer if the cost to re-assemble the Product will not be paid.

The Product contains firmware that is provided on an "AS IS" basis: essentially, firmware is in accordance with the description of the Product manual.

Except as expressly set forth in this warranty, DS Europe makes no other warranties, expressed or implied, including any implied warranties of merchantability and fitness for a particular purpose, concerning hardware and firmware of the Product and its relevant documentation.

This Limited Warranty does not extend to any semiconductors: integrated circuits, transistors, diodes, microprocessors, memories and whatever else not covered by semiconductor Manufacturers' warranty.

The Buyer shall check the delivered Product within 10 days from receipt; after this limit, the Product shall be considered accepted.

DS Europe liability is limited to the above; DS Europe is not liable for any personal injuries, damages to property or damages due to stoppage of machinery or plants caused by installation and use of supplied Product (including, without any limits, any lost profits, lost savings, stoppage of activities, lost information or any other economic losses).

### 8.2 *Damage responsibility:*

DS Europe products are parts of more complex systems and plants; these are sold in thousands per year, for thousands different applications with thousands of norms and precautions concerning installation and use that are not known to the Manufacturer.

In case of installation or use that can directly or indirectly cause personal injuries, damages to property or damages due to stoppage of machinery or plants, before installation the Buyer shall immediately advise DS Europe that will stop purchase negotiation or suspend deliveries of the Product.

However, to minimize or to avoid risk of damages, DS Europe is available, without any responsibility, to suggest solutions and protection accessories, test certifications, competent Bodies or consultant Institutes.

Moreover, it is recommended to read carefully installation and use instructions attached to Product delivery. These instructions can also be sent during purchase negotiation on Buyer's request.

#### **NOTICE:**

Even if not expressly mentioned, these "Terms of Sale" are integral and complementary part of any bulletin, invoice or instruction manual.

DS EUROPE S.R.L.

Terms of Sale no. 140998 of September 14th, 1998..