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Find the *Marposs E4N* at our website: *Click HERE*

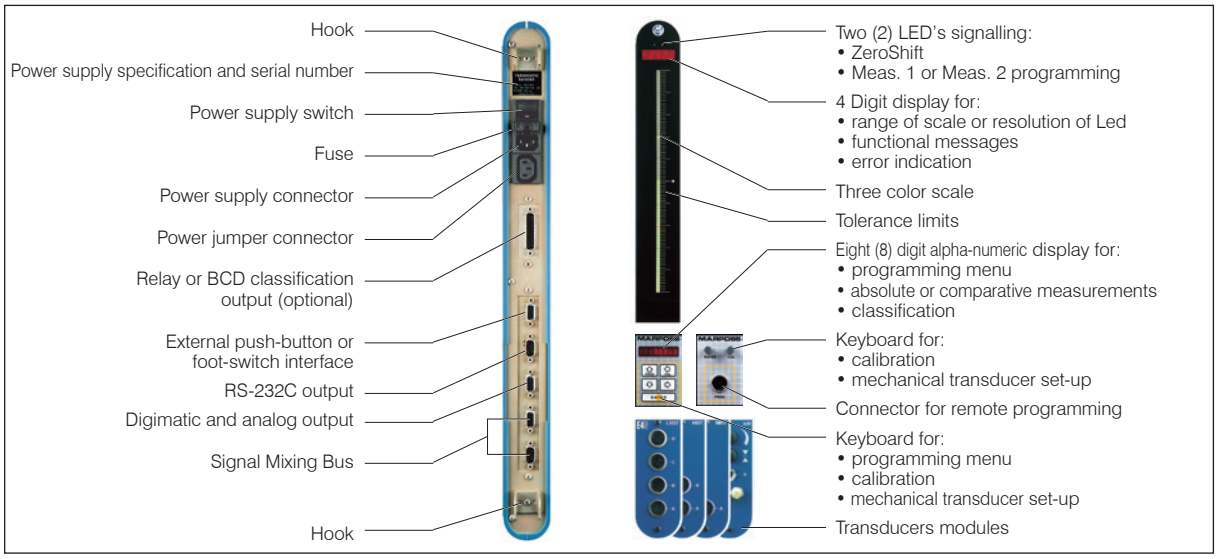


MICROPROCESSOR COLUMN

- Microprocessor column designed to display dimensional and geometrical measurements, in either static or dynamic elaboration.
- The measurement value is displayed:
  - in an analog way on the three-colour LED bargraph scale, showing the measurement status (green = good; red=scrap; yellow=prescrap).
  - in a digital way on the eight-digit display; in this second case the measurement can be comparative or absolute.
- Measuring unit, tolerance limits, range, resolution can also be displayed.
- It can be configured according to specific application needs, employing different transducer modules provided with 1, 2 or 4 input channels.

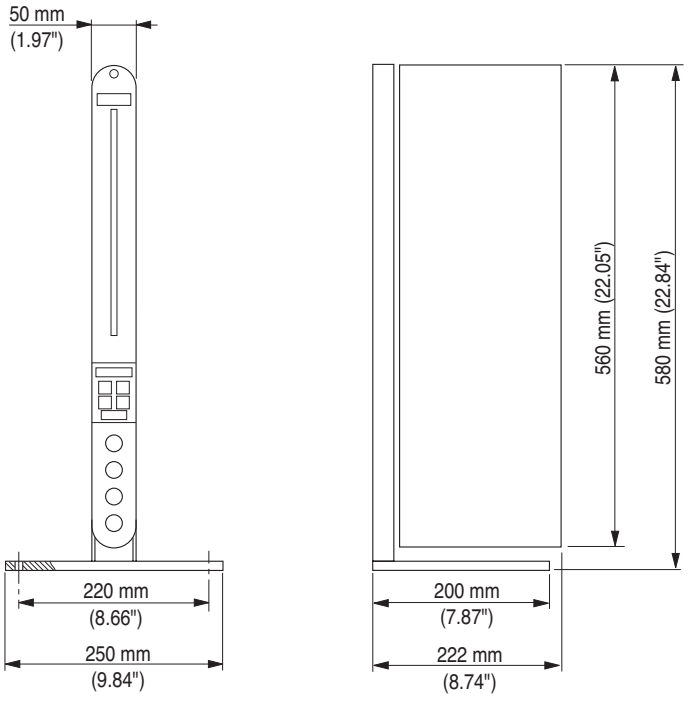
These modules can be either:
- Full-bridge (LVDT), half-bridge (HBT) with 1, 2 or 4 inputs.
- MRT (Marposs Resistance Transducer) with 1, 2 or 4 inputs.
- AIR, pneumo-electronic converter with 1 input. When supplied with this module, the E4N can easily and conveniently retrofit and upgrade a wide variety of air gauging applications. The converter card is perfectly interchangeable with the other modules (LVDT, HBT, MRT).

- The E4N features a wide range of interfaces:
  - Digimatic and analog to send data to statistical printers or data collectors.
  - RS232-C to send data to PC or standard printers.
  - Relay/BCD to provide a signal for alarms, resume lamps etc.
  - connector to interface external push-buttons or foot-switches.
- It can be programmed via local keypad or PC (by means of the specific E4N-PC LINK software, which also allows data collection).

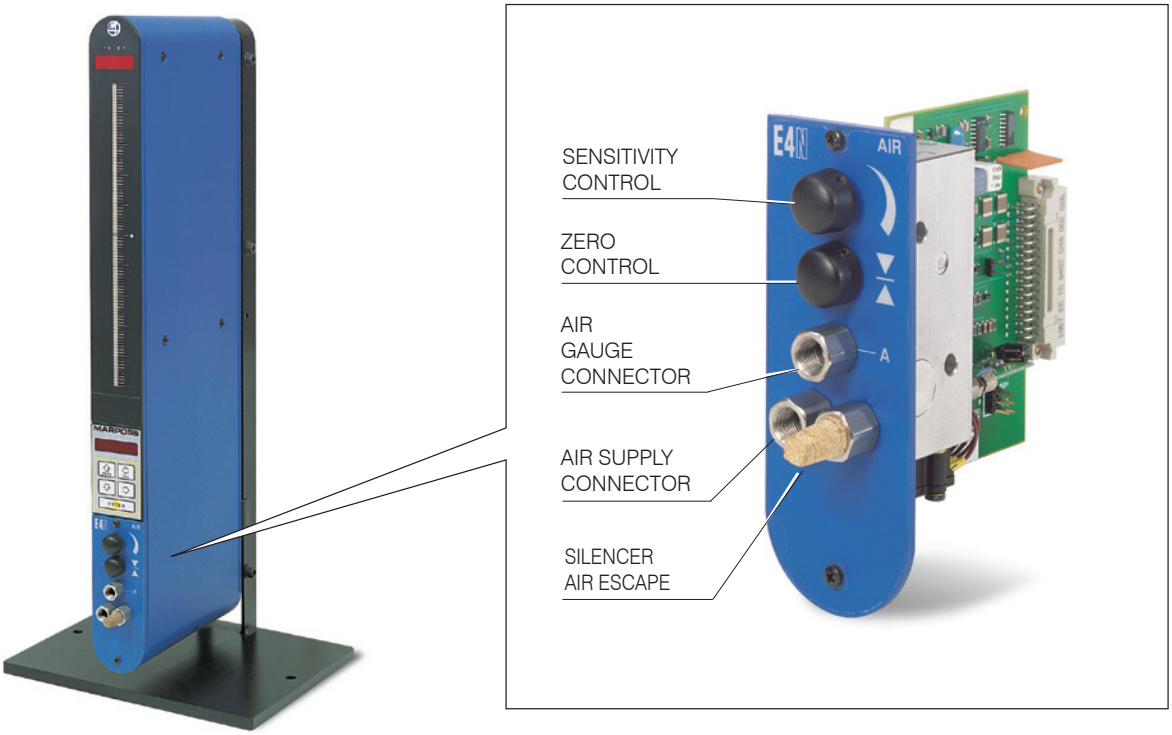


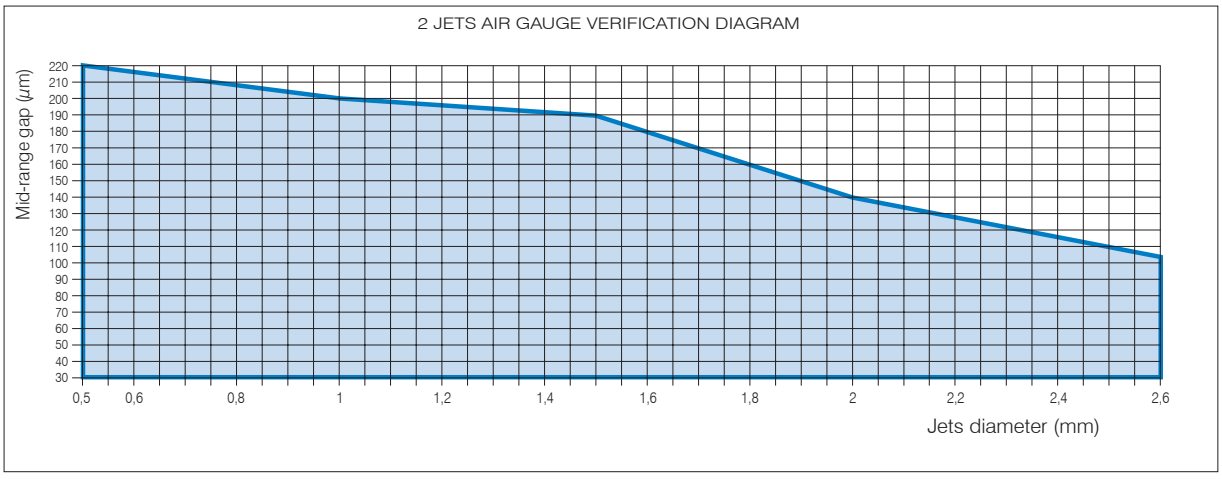
TECHNICAL SPECIFICATIONS

POWER CONTROL UNIT	85/265 VAC 50/60 Hz
VOLTAGE VARIATION	± 10%
MAX. CONSUMPTION	40 VA
FUSE	2A delayed
PROTECTION LEVEL	IP 50
STORAGE TEMPERATURE	-40/+60 °C
WORKING TEMPERATURE	0/+50 °C
WEIGHT	3,7 kg approx
DISPLAY	
BAR LED	101 LED scale
COLOR	3 color LED (auto switch)
HEIGHT	257 mm (bottom to central)
PROGRAMMING POSSIBILITY	Intensity, reponse speed
8 DIGIT DOT MATRIX DISPLAY	Differential, absolute measurements
MEASURING UNITS	Millimeters, inches, grams, degrees
TYPE OF MEASUREMENTS	Static or dynamic (Max + Min) /2 Max - Min (Max - Min) /2
MANAGEABLE TRANSDUCERS	1 - 8
TRANSDUCER PROGRAMMING : STANDARD MEASURING RANGE	Up to ± 1 mm (.04")
TRANSDUCER PROGRAMMING : WIDE MEASURING RANGE	Up to ± 5 mm (.2")
ARM RATIO AND SENSITIVITY ADJUSTMENT	- 4 +4 with 0,001 step
ACCURACY AT 20°C	± 0,5 % reading value ± resolution
MEASUREMENT THERMAL DRIFT	150 ppm/°C
MEASUREMENT THERMAL DRIFT/CHANNEL	50 ppm/°C
SCALE	Up to 10 programmable range, from ±0,005 to ±5 mm (.000250" to .2")
SCALE RESOLUTION	1/100 of range, from 0,1 to 100 µm (.000005" to .004")
CONNECTOR TYPE	
LVDT INPUT	6 Pin (DIN 45322) for gauges with Lumberg SV50/6 connector
HBT INPUT	6 Pin (DIN 45322) for gauges with Lumberg SV50/6 connector
MRT INPUT	7 Pin (DIN 45329) for gauges with Lumberg SV71 connector



E4N Air / Electronic Converter



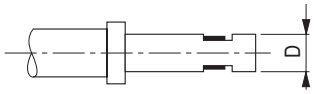


The MARPOSS and/or non-MARPOSS air gauges, with specifications inside the blue area of the diagrams, can be easily and immediately connected to the E4N column and take benefit by its power. The parameters to be considered are the following:

- air supply pressure
- number of air gauge jets
- diameter of air gauge jets
- "mid-range gap", as to the difference between the mid-tolerance diameter of the part to be measured and the distance between the air gauge jets.

EXAMPLE OF MEASUREMENT WITH AIR-PLUG

- air supply pressure: 3 bar ± 0.1
- number of jets : 2
- diameter of jets: 2mm (.0787")
- diameter of the part to be measured = 10 mm ± 0.030 (.3937" ± .0012")
- mid tolerance diameter = 10 mm (.3937")
- distance between the jets D = 9.90 mm (.3898")



We obtain:

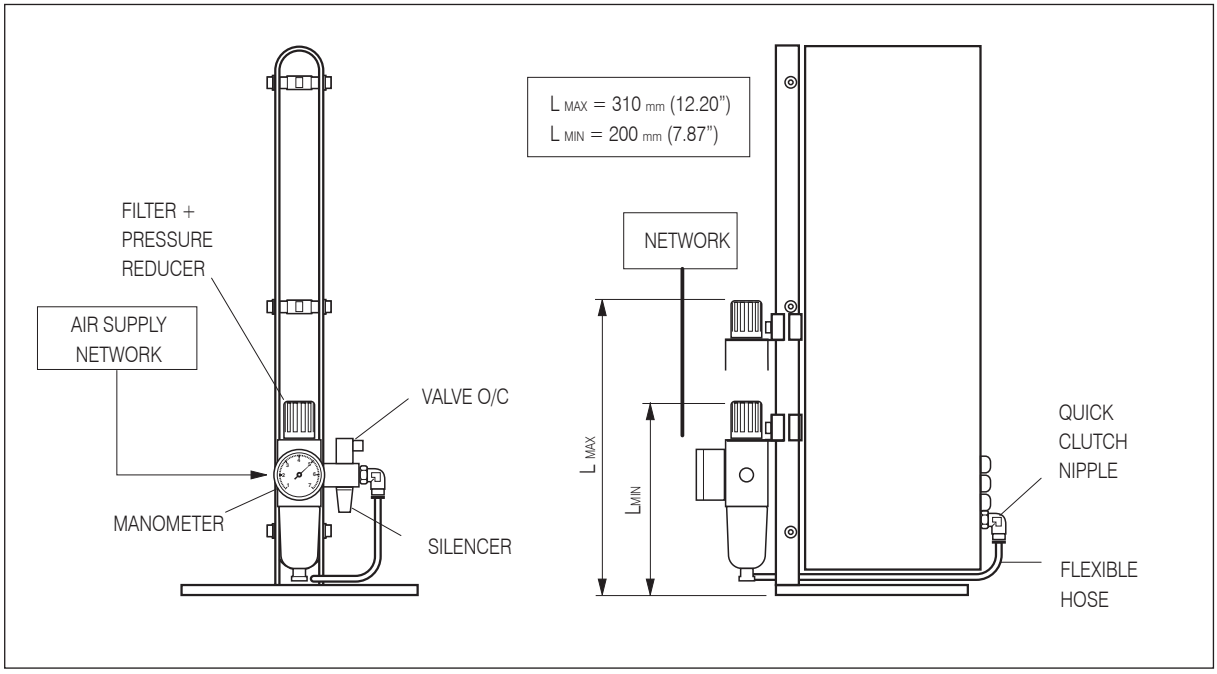
- "mid tolerance gap": (10 - 9.90) = 0.10 mm = 100 μm
  As shown in the diagram no.1 the intersection between the value of the "mid-range gap", 100 μm (.0039"), and the diameter of the jet, 2 mm (.0787"), stays inside the blue area: the application can be therefore realized.

WORKING RANGE	
AIR SUPPLY PRESSURE	1,5 - 4 bar
MEASURING RANGE	± 50 μm (± .0020")

NOMINAL PERFORMANCES	
AIR SUPPLY PRESSURE	3 bar
MEASURING RANGE	± 30 μm (± .0012")
REPEATABILITY	0,7 μm (.0000275")
ACCURACY	1,5 μm (.00006")

AIR TREATMENT SPECIFICATIONS	
FILTERING	5 μm
HOURLY CONSUMPTION	2 m³/h
AIR MUST BE DRY AND UNOILED	

ACCESSORIES



How to Order

Transd. Type	Transd. Input	Column with local Programmer			Column with remote programmer (E4N PC-link)		
		Basic Version	BCD Relais	Optoinsulated digital output	Basic Version	BCD Relais	Optoinsulated digital output
LVDT	1	76510020X0	76510021X0	7651002232	76510040X0	76510041X0	7651004232
	2	76510120X0	76510121X0	7651012232	76510140X0	76510141X0	7651014232
	4	76510220X0	76510221X0	7651022232	76510240X0	76510241X0	7651024232
HBT	1	76513020X0	76513021X0	7651302232	76513040X0	76513041X0	7651304232
	2	76513120X0	76513121X0	7651312232	76513140X0	76513141X0	7651314232
	4	76513220X0	76513221X0	7651322232	76513240X0	76513241X0	7651324232
MRT	1	76516020X0	76516021X0	-	76516040X0	76516041X0	-
	2	76516120X0	76516121X0	-	76516140X0	76516141X0	-
	4	76516220X0	76516221X0	-	76516240X0	76516241X0	-
AIR	1	76519020X0	76519020X0	7651902232	76519040X0	76519041X0	7651904232

X = 3 SW release 4.0 replacing previous version 3.3
5 SW release 2.72, replacing previous versions 2.71, 2.7, 2.3, 2.1, 2.0
6 SW release 6.3 allowing elaboration and visualization of up to four measurements.

Accessories

Description			Order Code
3 - colour meter module with local programmer (basic version)			76519920X0
3 - colour meter module with local programmer (BCD relais)			76519921X0
3 - colour meter module with local programmer (optoinsulated digital output)			7651992232
3 - colour meter module with remote programmer (basic version)			76519940X0
3 - colour meter module with remote programmer (BCD relais)			76519941X0
3 - colour meter module with remote programmer (optoinsulated digital output)			7651994232
Amplifier module 1 LVDT input transducer			6876004013
Amplifier module 2 LVDT input transducer			6876004012
Amplifier module 4 LVDT input transducer			6876004011
Amplifier module 1 HBT input transducer			6876004005
Amplifier module 2 HBT input transducer			6876004004
Amplifier module 4 HBT input transducer			6876004003
Amplifier module 1 MRT input transducer			6876004008
Amplifier module 2 MRT input transducer			6876004007
Amplifier module 4 MRT input transducer			6876004006
Amplifier module 1 AIR input transducer			6876004009
E4N AIR USA with local programmer (basic version)			76519120X0
E4N AIR USA with local programmer (BCD relais)			76519121X0
E4N AIR USA with local programmer (optoinsulated digital output)			7651912232
E4N AIR USA with remote programmer (basic version)			76519140X0
E4N AIR USA with remote programmer (BCD relais)			76519141X0
E4N AIR USA with remote programmer (optoinsulated digital output)			7651914232
BCD relais interface card			6344360100
Optoinsulated digital output card			6344360200
Bus cable for signals exchange among E4N columns			6738057011
Y-cable	Connecting cable from 1 LVDT transducer to 2 E4N inputs (L= 1,2 m)		6735932014
	Connecting cable from 1 MRT transducer to 2 E4N inputs (L= 1,2 m)		6739796001
RS232-cable	From remote programming module to a PC (L= 3 m)	25 pin	6735916001
		9 pin	6735957001
	From rear serial output to a PC (L= 3 m)	25 pin	6737916000
		9 pin	6737957002
	Chain serial cable from 2 E4N to a PC		6739797030
	Chain serial cable from 3 E4N to a PC		6739797029
	Chain serial cable from 4 E4N to a PC		6739797028

X = 3 SW release 4.0 replacing previous version 3.3
5 SW release 2.72, replacing previous versions 2.71, 2.7, 2.3, 2.1, 2.0
6 SW release 6.3 allowing elaboration and visualization of up to four measurements.

Description		Order Code
Connecting cable from Digimatic output to Mitutoyo DP1 - DP2 - DP3 (L= 1 m)		6738099016
Connecting cable from Digimatic output to Datamyte 862		92162 (Datamyte-code)
Connecting cable from Digimatic output to Datamyte 529-15		92160 (Datamyte-code)
Cable for analog output		6738098009
External pushbutton panel (4 buttons) with cable (L= 1,5 m)		6139012600
Footswitch with connecting cable to the column or to the pushbutton panel (cable L= 2 m)		6738099015
Connecting cable of 2 E4N columns to pushbutton or footswitch keyboard		6738097009
Connecting cable of 3 E4N columns to pushbutton or footswitch keyboard		6738097010
Connecting cable of 4 E4N columns to pushbutton or footswitch keyboard		6738097011
Connecting cable of 5 E4N columns to pushbutton or footswitch keyboard		6738097012
Power supply cables (L= 2 m)	USA	4709009003
	WITHOUT PIN	6739696566
	ITALY	4709009002
	F/D	4709009001
Power jumper cable from E4N to E4N		4709009004
Adapter extension from Lumberg S3 to 6 pin connector on E4N for LVDT input (L= 400 mm)		6738536000
Adapter extension from Lumberg S7 to 7 pin connector on E4N for MRT input (L= 400 mm)		6738536001
Support stand (for up to 5 columns)		6131410040
Support stand link studs (2 required for each additional module)		1529040210
Card with adhesive stickers (Graphic symbols)		1529040460
Air filtering and adjusting unit		2915490053
2 x 90° quick clutch nipple		2915490052
2 x straight quick clutch nipple		2915490050
sensitivity adjustment knob cover		1015420614
sensitivity and zero adjustment knob cover		1015420615

External Air/Electronic Converters for E4N (Pressure sensor type)

Through the external A/E converters pneumatic measuring gauges can be connected to E4N columns with LVDT or MRT inputs.

Type of converter	LVDT	MRT
Measuring range	± 50 µm	
Nominal sensitivity at buffer output	230 µV / µm / V ± 25%	5 mV / µm ± 25%
Linearity error in the range ± 30 µm	≤ 2 µm	
Linearity error in the range ± 50 µm	≤ 5 µm	
Noise	≤ 0,3 µm	
Measure stability in 3 minutes	≤ 0,2 µm	



Description	Order code			
	W/O Junction box		With junction box	
	LVDT	MRT	LVDT	MRT
Group with 1 air/ electronic converter	3072486110	3072486210	3072486115	3072486215
Group with 2 air/ electronic converters	3072486120	3072486220	3072486125	3072486225
Group with 3 air/ electronic converters	3072486130	3072486230	3072486135	3072486235
Group with 4 air/ electronic converters	3072486140	3072486240	3072486145	3072486245

For a full list of address locations, please consult the Marposs official website

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