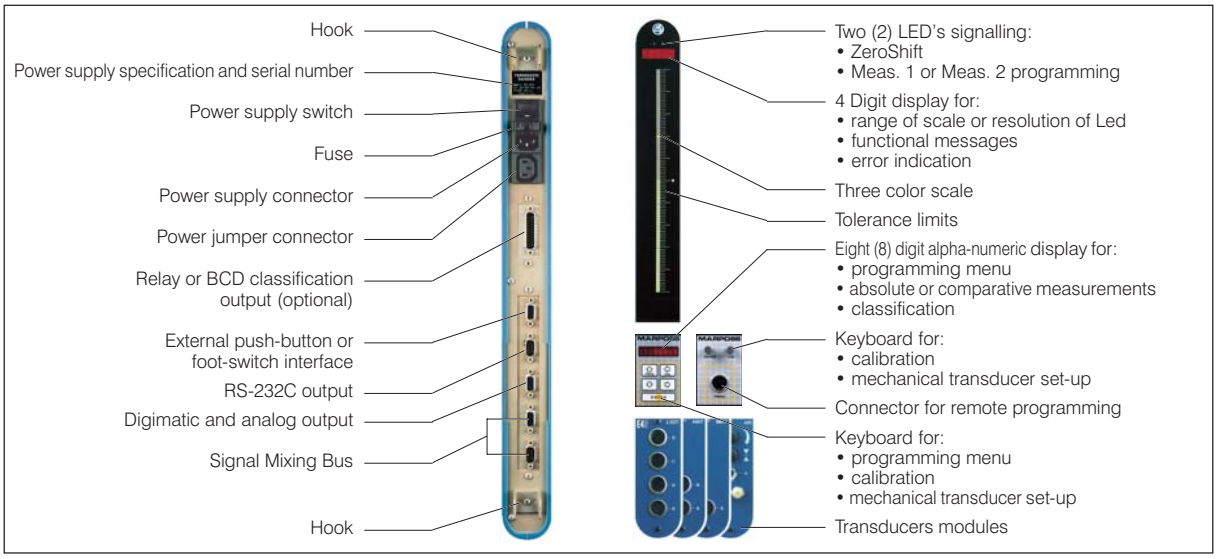
MICROPROCESSOR COLUMN

- 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).

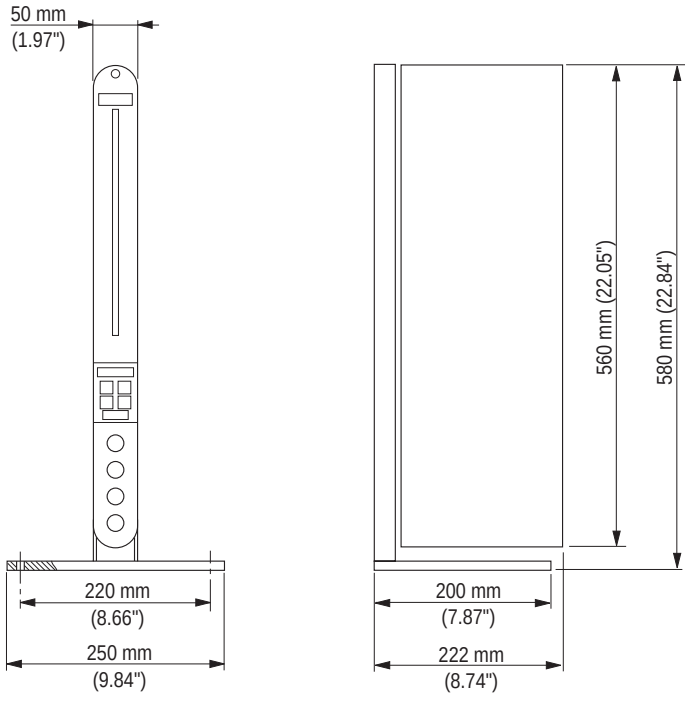
- The E4N features a wide range of interfaces:
  - Digimatic and analog to send data to statistical printers or data collectors.
  - RS232-C to send data to PC or standard printers.
  - Relay/BCD to provide a signal for alarms, resume lamps etc.
  - connector to interface external push-buttons or foot-switches.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



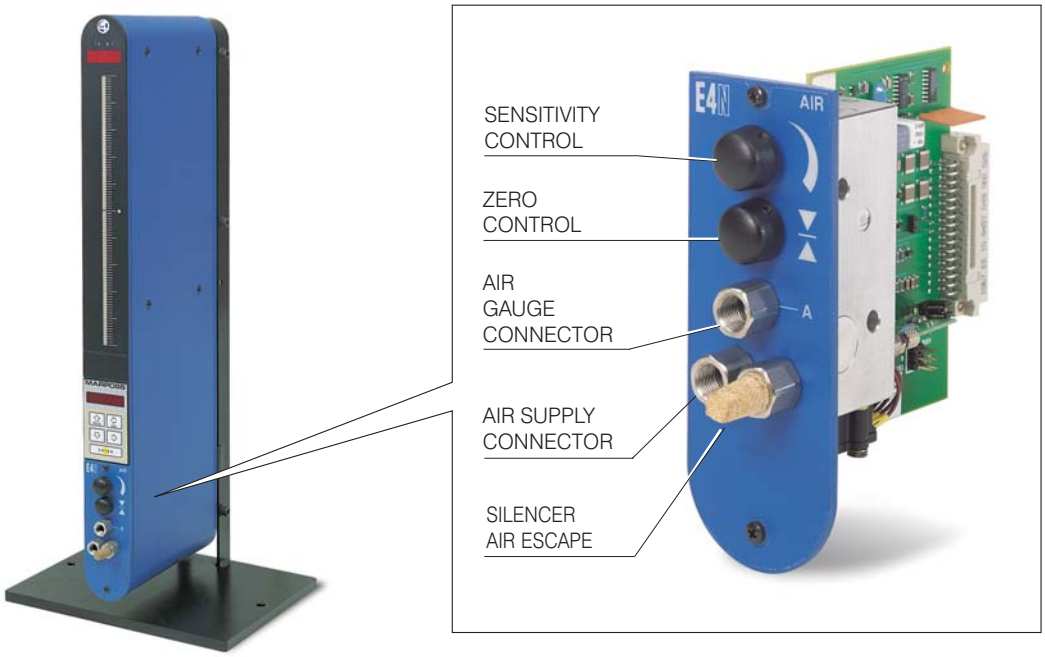
TECHNICAL SPECIFICATIONS

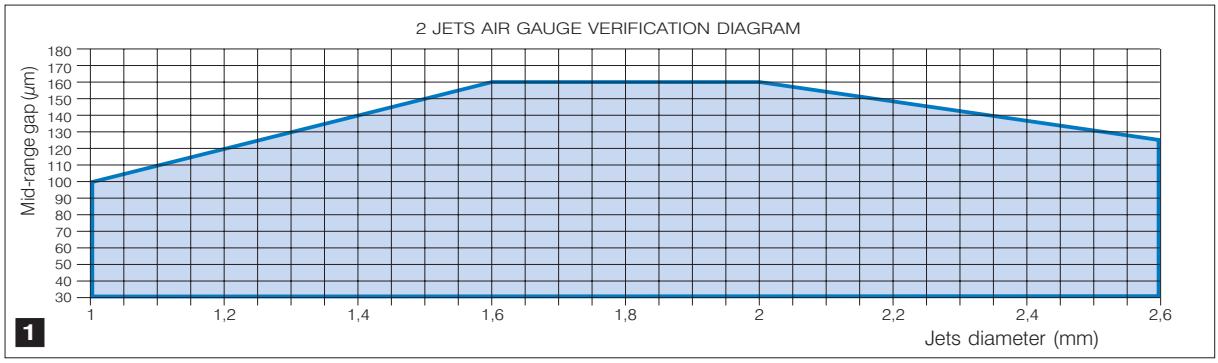
POWER CONTROL UNIT	85/265 VAC 50/60 Hz
VOLTAGE VARIATION	± 10%
MAX. CONSUMPTION	40 VA
FUSE	2A delayed
PROTECTION LEVEL	IP 50
STORAGE TEMPERATURE	-40/+60 °C
WORKING TEMPERATURE	0/+50 °C
WEIGHT	3,7 kg approx
DISPLAY	
BAR LED	101 LED scale
COLOR	3 color LED (auto switch)
HEIGHT	257 mm (bottom to central)
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

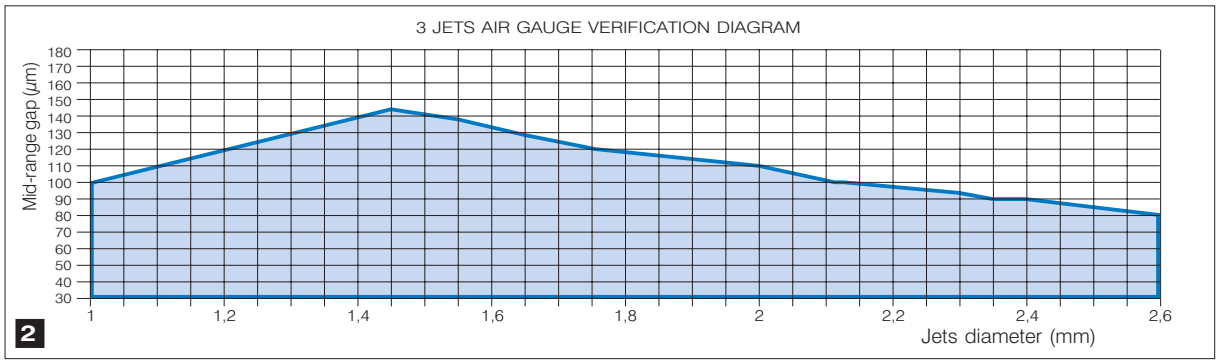
Reference Standards: EN61010-1 (safety); EN61326-1, EN 61326-A1, EN61000-3-2, EN61000-3-3 (EMC)



E4N Air / Electronic Converter





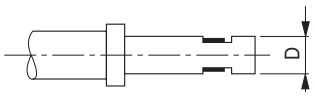


The MARPOSS and/or non-MARPOSS air gauges, with specifications inside the blue area of diagrams no.1 and 2, can be easily and immediately connected to the E4N column and take benefit by its power. The parameters to be considered are the following:

- 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 m^3/h
AIR MUST BE DRY AND UNOILED	

HOW TO ORDER

COLUMN WITH LOCAL PROGRAMMER	TRANSD. TYPE	TRANSD. INPUT	BASIC VERSION	BCD RELAIS	COLUMN WITH REMOTE PROGRAMMER (E4N PC-LINK)	TRANSD. TYPE	TRANSD. INPUT	BASIC VERSION	BCD RELAIS
	LVDT	1	76510020X0	76510021X0		LVDT	1	76510040X0	76510041X0
		2	76510120X0	76510121X0			2	76510140X0	76510141X0
		4	76510220X0	76510221X0			4	76510240X0	76510241X0
	HBT	1	76513020X0	76513021X0		HBT	1	76513040X0	76513041X0
		2	76513120X0	76513121X0			2	76513140X0	76513141X0
		4	76513220X0	76513221X0			4	76513240X0	76513241X0
	MRT	1	76516020X0	76516021X0		MRT	1	76516040X0	76516041X0
		2	76516120X0	76516121X0			2	76516140X0	76516141X0
		4	76516220X0	76516221X0			4	76516240X0	76516241X0
	AIR	1	76519020X0	76519021X0		AIR	1	76519040X0	76519041X0

X = *3* SW release 4.0
5 SW release 2.72
6 SW release 6.2

NOTE : THE 6.2 SOFTWARE RELEASE ALLOWS THE ELABORATION AND VISUALIZATION OF UP TO FOUR MEASUREMENTS CARRIED ON IN SWITCHING MODE OR SIMULTANEOUSLY.

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

D6E04N05G0 - *Edition 09/2007 - Specifications are subject to modifications*

Marposs has an integrated system to manage the Company quality, the environment and safety, attested by ISO 9001, ISO 14001 and OHSAS 18001 certifications. Marposs has further been qualified EAQF 94 and has obtained the Q1-Award.