



Automation Progetti



- ITALIAN MANUFACTURER -
since 1975

ELECTROMAGNETIC FLOWMETERS



**THE FIRST ITALIAN MANUFACTURER OF ELECTROMAGNETIC FLOWMETERS
FOR 33 YEARS IN BOTH ITALIAN AND FOREIGN HIGH-TECH MARKET**


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Italian version	
English version	X

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MODULAR CONVERTER FOR ELECTROMAGNETIC FLOWMETER AP219 – AP223



AP 219 – AP223
FOR RACK MOUNTING



AP 219 – AP223
FOR FIELD MOUNTING



AP 19xx – AP22xx
FOR COMPACT VERSION

Table of Working/ranges

DN (mm)	Min. maesurement (mc/h)	Min. F.S. (mc/h)	Max. F.S. (6m/s) (mc/h)	Max. F.S. (12 m/s) (mc/h)	DN (mm)	Min. maesurement (mc/h)	Min. F.S. (mc/h)	Max. F.S. (6m/s) (mc/h)	Max. F.S. (12 m/s) (mc/h)
3	0,0025	0,015	0,15	0,30	175	8,4	50	500	1000
6	0,01	0,06	0,6	1,2	200	14	80	800	1600
8	0,017	0,1	1	2	250	17	100	1000	2000
10	0,034	0,2	2	4	300	25	150	1500	3000
15	0,067	0,4	4	8	350	34	200	2000	4000
20	0,14	0,8	8	16	400	50	300	3000	6000
25	0,17	1	10	20	450	60	360	3600	7200
32	0,34	2	20	40	500	67	400	4000	8000
40	0,5	3	30	60	600	100	600	6000	12000
50	0,67	4	40	80	700	134	800	8000	16000
65	1	6	60	120	800	167	1000	10000	20000
80	1,7	10	100	200	900	200	1200	12000	24000
100	3,4	20	200	400	1000	250	1500	15000	30000
125	5	30	300	600	1100	280	1680	16800	33600
150	6,7	40	400	800	1200	334	2000	20000	40000

GENERAL TECHNICAL DATA

- Version : A) HI-TECH ,for industrial application , microprocessor based , with non-volatile memory (EEPROM); **i.c. with sockets**
 B) BASE, for general application, microprocessor based , with non-volatile memory (EEPROM); **welded i.c.**
- Mounting..... : field (**see optional**)
- Casing..... : painted aluminium die-cast (**see optional**)
- Zero..... : automatic compensation (autozero)
- Range..... : 0,1-12m/s
- F.S. : programmable (see table)
- Autorange..... : automatic
- Keyboard..... : 16 keys, antidust, multicolor with access key
- Language..... : Italian / English
- Data display..... : alphanumeric programmable on LCD (2 x 16)
- Input..... : from electromagnetic flowmeter
- DC Output : 4 ÷ 20 mA galvanically insulated active (max 600 Ω) ; 4 ÷ 20 mA galvanically insulated passive (10 ÷ 30 Vdc) (**see optional**)
- Digital Output : No.1-4 (**see optional**)
- Digital Input : No.1 (**see optional**)
- Serial Output..... : RS232/485 (**see optional**)
- Accuracy..... : ±0,1% HT version - ±0,15% BASE version
- Autotest..... : malfunction warning on LCD
- Cut-off..... : programmable (**see optional**)
- Empty pipe : (**see optional**)
- Electrodes auto-cleaning : (**see optional**)
- Connections..... : with terminal block and PG11/PG13,5 fittings cable (**see optional**)
- Electric protection : line filters, fuses, varistors on power supply (CE)
- Mec. protection..... : IP 65 (field); IP55 (rack) (CEI EN 60529)
- Humidity..... : 4 ÷ 95 % (non condensing) HT version / 5 ÷ 90% (non condensing) BASE version
- Ambient temp..... : -20 ÷ 60 °C HT version -10 ÷ 50 °C BASE version
- Power supply : std 220/110 Vac ± 10 % (3W) ; others on request (**see optional**)
- Dimensions..... : L192 H168 P83 mm (field version) ; L213 H128 P200 mm (rack version)
- Weight..... : 2 Kg
- Burn-in..... : 120 hours HT version / 40 hours BASE version
- MTBF..... : 100.000 hours HT version / 50.000 hours BASE version
- Optional** : **see bull.202**
 : **special functions on request**

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OPTIONAL AP219 – AP223 / B o HI-TECH

DESCRIPTION		TAG	
Rack mounting	3U 19" ½ rack standard (prot. IP55)	Q	
	3U 19" rack mounting frame for two equipments	B	
	3U 19" ½ rack closing panel for frame	C	
Keyboard and display	Clear 16 keys polychromatic anti-dust keyboard with mnemonic symbols and access keyword	D	
	16 characters 2 lines LCD with Italian/English messages Visualizations in volume and weight engineering units Instantaneous flow, resettable and absolute totalization, autotest, programming Back-lit LCD		
Totalizers	N ² -1 resettable	- it needs of the opt. D	G
	N ² -1 absolute (fiscal)	- it needs of the opt. D	H
	N ² -2 resettable + N ² -2 absolute (for bidirectional flow) + N ² -1 presetter for batch	- it needs of the opt. D	Y
Analog output	Mono/Bidirectional passive 4÷20 mA with galvanic separation		P
	Monodirectional active 4÷20 mA with galvanic separation (Max 700 Ω)		A1
	Mono/Bidirectional active 4÷20 mA with galvanic separation (Max 700 Ω)		A2
Digital outputs	N ² -1 o.c. (Max 50 Vdc 0,2A) for totalization	- non compatible with opt. R	M
	N ² -4 o.c. (Max 50 Vdc 0,2A) programmable as: - direct totalizer; - inverse totalizer; - minimum and maximum flow alarm; - malfunction - empty pipe alarm - flow direction - presetter (batch)	- it needs of the opt D - non compatible with: opt. M, 32, 45	R
Digital inputs	N ² -1 passive contact programmable as: - partial totalizers reset; - zero blockage of measure (for washing) - presetter reset	- it needs of the opt. G or Y	T
Serial output	RS485 – interface for P.C.	- non compatible with opt. M	4
	RS232 – interface for P.C. / modem / radio link	- it needs of the opt. D	3
	RS485 - with two digital outputs (see digital outputs)	- it needs of the opt. D	45
	RS232 - with two digital outputs (see digital outputs)	- it needs of the opt. D	32
Special functions	Calendar to enable time printing; Time counter for fiscal measurement Others on specific requirements	- it needs of the opt. D	U
Cut-off	Programmable (up to 20% of F.S.)	- it needs of the opt. D	K
Empty pipe device	- Zero blockage of measure		W
	- Signaling on display	- it needs of the opt. D	
	- Alarm on digital output	- it needs of the opt. R	
Electrodes auto-cleaning			16
Anti - tampering sealing			17
Connections to flowmeter	Industrial connector		18
Protection	IP67 (CEI EN60529)		7
Power supply	24Vac ±10%		N
	24Vdc ±10%		Z
	Others on request		S

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