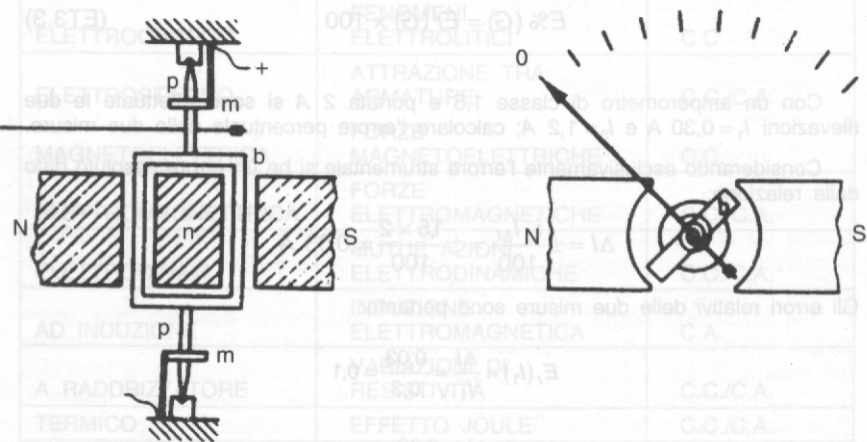


GRANDEZZA MISURABILE	STRUMENTO
INTENSITÀ DI CORRENTE	AMPEROMETRO
D.D.P. (TENSIONE)	VOLTMETRO
RESISTENZA	OHMETRO
POTENZA	WATTMETRO
POTENZA REATTIVA	VARMETRO
FATTORE DI POTENZA	COSFIMETRO
FREQUENZA	FREQUENZIMETRO
ENERGIA	CONTATORE
CAPACITÀ	CAPACIMETRO
INDUTTANZA	INDUTTOMETRO

TIPO DI STRUMENTO	PRINCIPIO DI FUNZIONAMENTO	TIPO DI CORRENTE
ELETTROCHIMICO	FENOMENI Elettrolitici	C.C.
ELETTROSTATICO	Attrazione tra armature	C.C./C.A.
MAGNETOELETRICA	Forze magnetoelettriche	C.C.
ELETTROMAGNETTRICA	Forze elettromagnetiche	C.C./C.A.
ELETTRODINAM.	Mutue azioni elettrodinamiche	C.C./C.A.
AD INDUZIONE	Induzione elettromagnetica	C.A.
A RADDRIZZATORE	Variazioni di resistività	C.C./C.A.
TERMICO	Effetto Joule	C.C./C.A.
A LAMELLE	Vibrazioni di lamelle	C.A.
OSCILLOSCOPIO	Effetto termoionico	C.C./C.A.



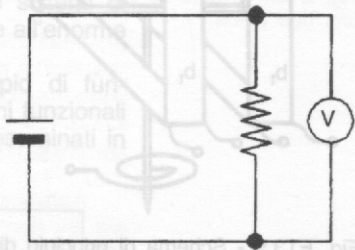
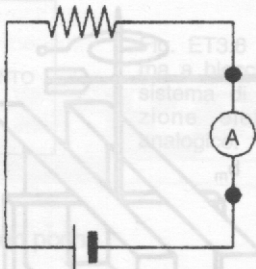
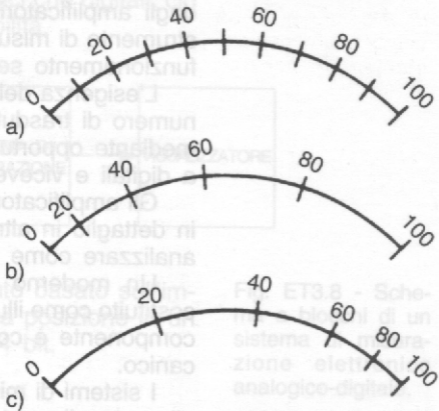
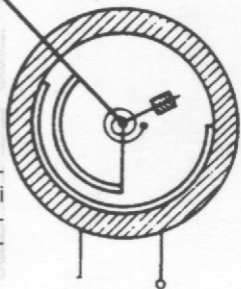
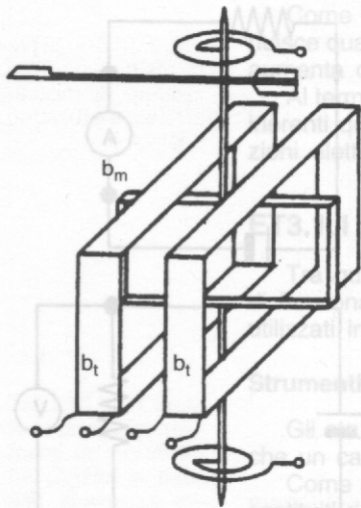


Fig. E1.3.3 - Schemi di principio di

Fig. ET3.3 - Schema di principio di uno strumento elettromagnetico a ferro mobile.





**GRANDEZZA**

**FISICA**

**TRASDUTTORE**

**AMPLIFICATORE**

**STRUMENTO**



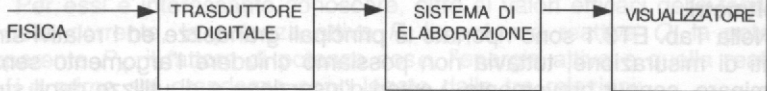
**GRANDEZZA**

**FISICA**

**TRASDUTTORE  
DIGITALE**


**SISTEMA DI  
ELABORAZIONE**

**VISUALIZZATORE**





**GRANDEZZA**  
FISICA



```
graph LR; A[GRANDEZZA FISICA] --> B[TRASDUTTORE DIGITALE]; B --> C[CONVERTITTORE ANALOGICO DIGITALE]; C --> D[SISTEMA DI ELABORAZIONE]; D --> E[VISUALIZZATORE];
```

The diagram illustrates a four-stage process for digital measurement. It begins with a physical quantity (GRANDEZZA FISICA) being input into a digital transducer (TRASDUTTORE DIGITALE). The signal then passes through an analog-to-digital converter (CONVERTITTORE ANALOGICO DIGITALE) to a digital processing system (SISTEMA DI ELABORAZIONE), which finally outputs the result to a display (VISUALIZZATORE). The background features a faint grid and a circuit diagram with various components like resistors, capacitors, and meters.

**TRASDUTTORE  
DIGITALE**

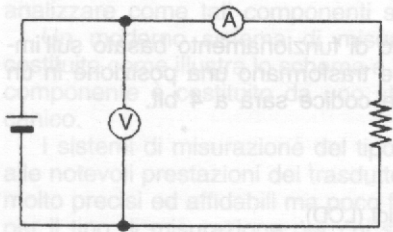
**CONVERTITTORE  
ANALOGICO  
DIGITALE**

**SISTEMA DI  
ELABORAZIONE**

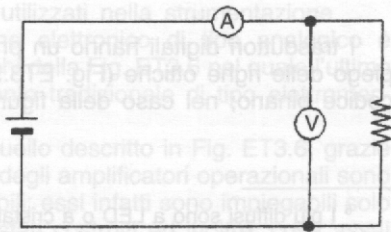
**VISUALIZZATORE**

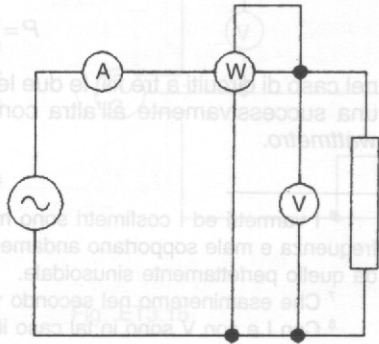
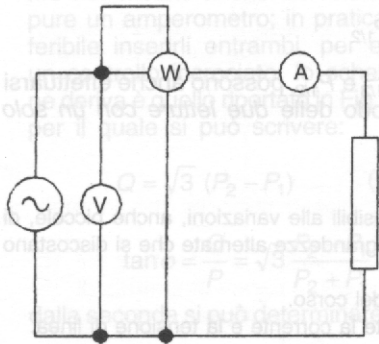


(A)



(B)





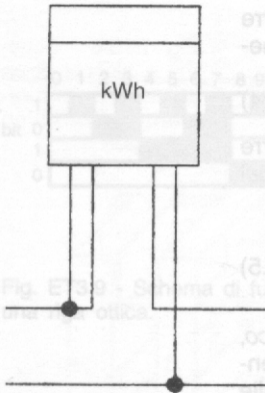
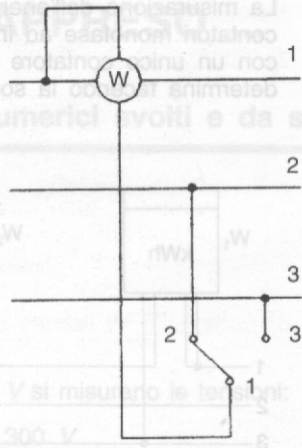
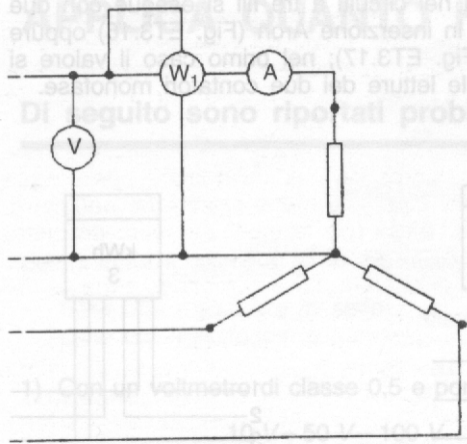


Fig. ET3.12 - Intersezione del contatore ad induzione.



1) Con un voltmetro di classe 0,5 e portata 300 V si misurano le tensioni:

$$V_{002} = V_{001} = V_{003} = 300 \text{ V}$$

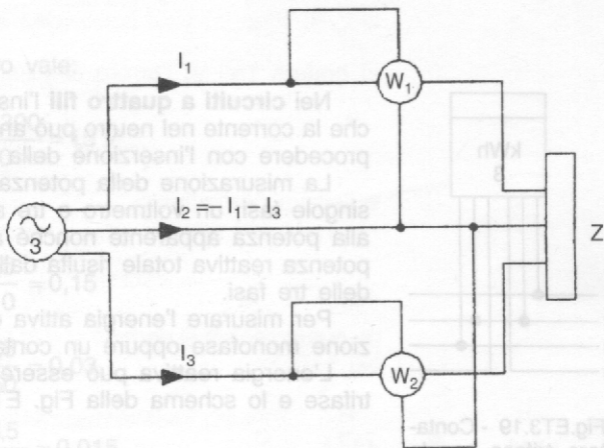
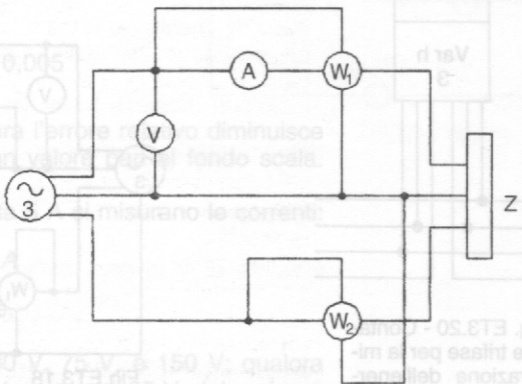


Fig. ET3.14 - Inserzione ARON di due wattmetri.



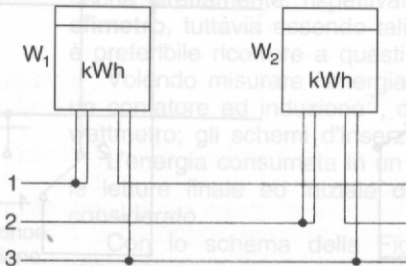


Fig.ET3.16 - Contatori in inserzione ARON.

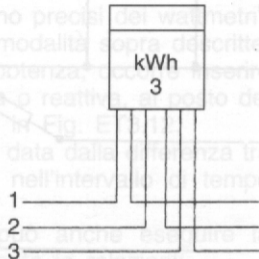


Fig.ET3.17 - Contatore trifase.



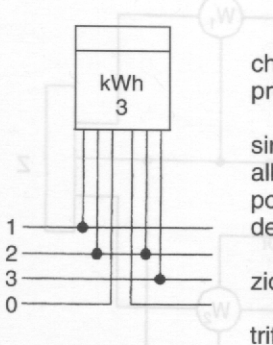


Fig.ET3.19 - Contatore trifase per la misurazione dell'energia attiva.

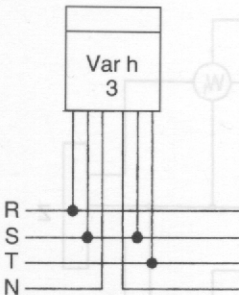


Fig. ET3.20 - Contatore trifase per la misurazione dell'energia reattiva.

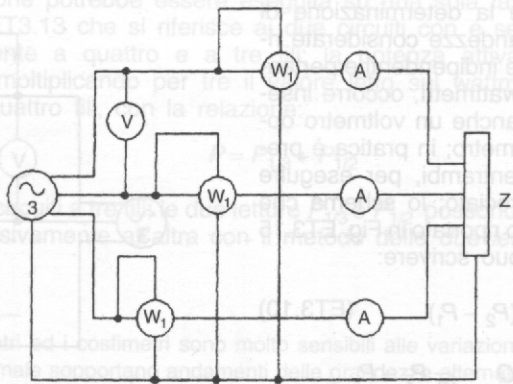


Fig.ET3.18

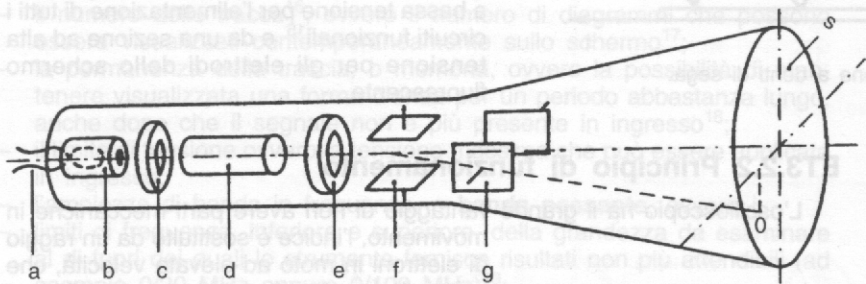
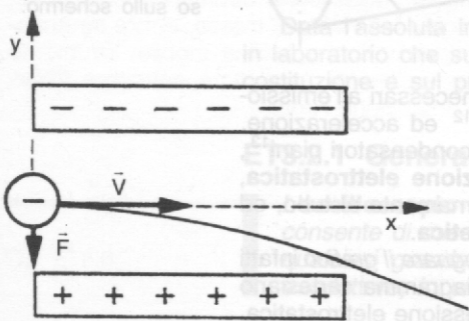




Fig. ET3.22 - Tensione a denti di sega.



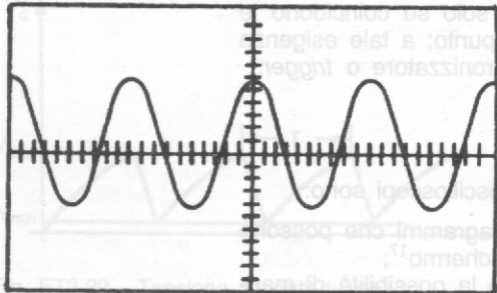


Fig. ET3.24 - Quattro periodi.

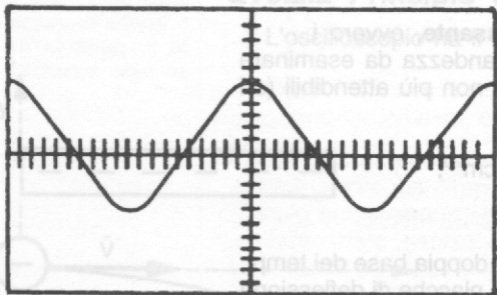


Fig. ET3.25 - Due periodi.

