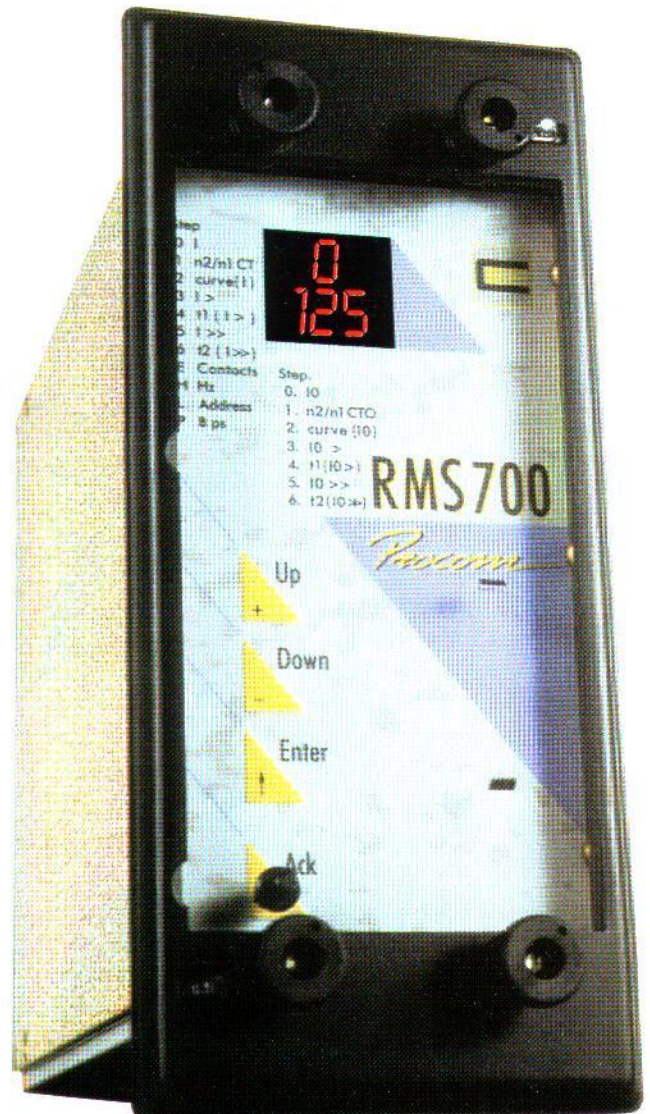


# 700 Series

- *Proven Digital Technology (PROCOM Series)*
- *Robust withdrawable case for flush mounting or mounted in a 19" C.E.E. rack*
- *Operating on RMS value*
- *Programmable dependent or independent time curves*
- *High power output units*
- *Serial communications*
- *Interchangeability with C.E.E. analogue technology relays*

**CURRENT  
RELAY**

**VOLTAGE  
RELAY**



*The ultimate in power network supervision*



# RMS 700

- **RMS711** single phase or zero sequence
- **RMS761** three phases
- **RMS771** two phases + zero sequence
- **RMS791\*** three phases + zero sequence

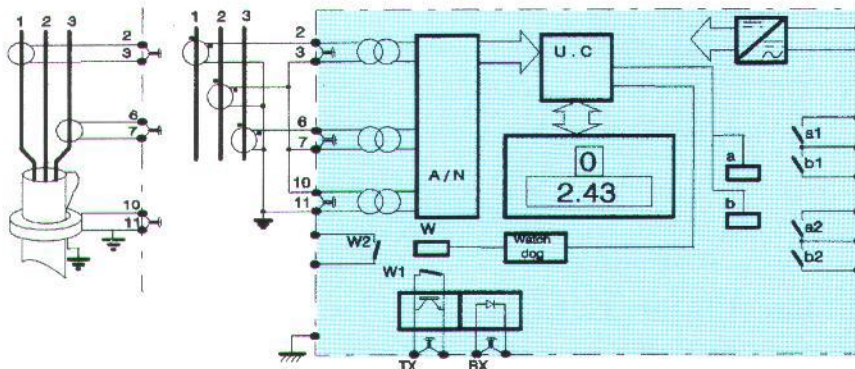
- Characteristic quantity: ..... phases inputs: RMS current  
zero sequence inputs: fundamental RMS current
- Rated Current .....  $I_N = 1A$  or  $5A$ 
  - Burden on phases input .....  $<0,2VA$  at  $I_N$
  - on zero sequence input .....  $<1VA$  at  $I_N$
  - Recommended current transformers, including a loop resistance of  $0,1\Omega$  ( $5A$ ) ou  $2\Omega$  ( $1A$ ) .....  $5VA$  5 P20

### Current Ranges

		Low setting		High setting	
Phases Inputs		0.5 to $4I_N$	(step 0,1 $I_N$ )	1 to 25 $I_N$	(step 0.5 $I_N$ )
Zero sequence Inputs	On TC	0.05 to $0.4I_N$	(step 0,01 $I_N$ )	0.1 to 2.5 $I_N$	(step 0.5 $I_N$ )
	On toridal (100/1)	1 to 8A	(step 0.5A)	5 to 40A	(step 1A) (other possibilities)
		or		or	
		5 to 40A	(step 1A)	10 to 250A	(step 5A)

- Operating Values
  - independant time ..... 100 % of setting
  - dependant time ..... 110 % of setting
- Drop-off .....  $> 95 \%$
- Operating Curves (low setting) ..... according to IEC255-3: independent or dependent time:
 
$$t(s) = \frac{T}{(I)^{\alpha}} - 1 \times \text{set value}$$
  - inverse time  $\alpha : 0.02$  T: 0.0466
  - very inverse time  $\alpha : 1$  T: 9
  - extremely inverse time  $\alpha : 2$  T: 99
- Time setting Range
  - Low setting - independant time ..... 0.1 to 30s (step 0,05s up to 3s and 0,5s upper)
  - dependant time ..... 0.1 to 3s at 10 time the setting (step 0,5s)
  - High setting: independant time ..... 0.1 to 3s or instantaneous (step 0,05s)
- Overshoot .....  $\approx 30ms$
- Accuracy
  - Phases Setting ..... 5% of the set value or 0.5% of  $I_N$
  - Zero Sequence Setting ..... 0.5% of the set value or 0.5% de  $I_N$
- Time
  - independent ..... class 5% or  $\pm 30ms$
  - dependent ..... class 5% or 30msec for inverse or very inverse curves
  - class 7.5% or 30msec for extremely inverse curves

- User allocation of the outputs units



Connection diagram RMS771

\* Case type R3

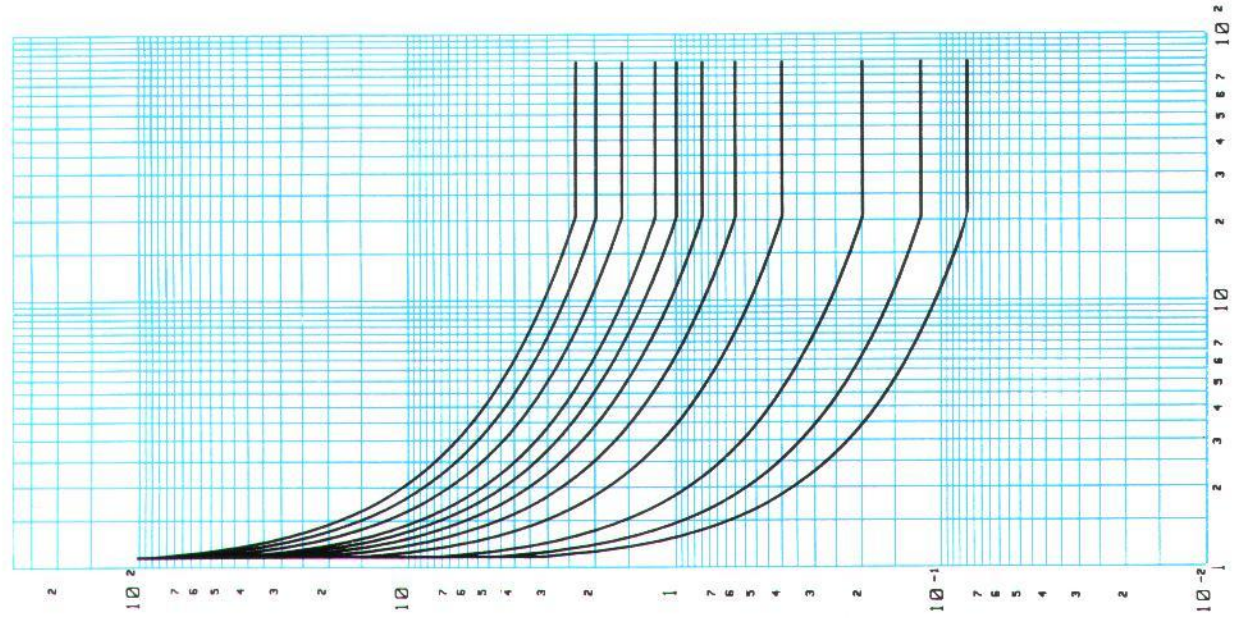


Fig. 1 - RMS 700 - Inverse time curves  
- IEC 255-4

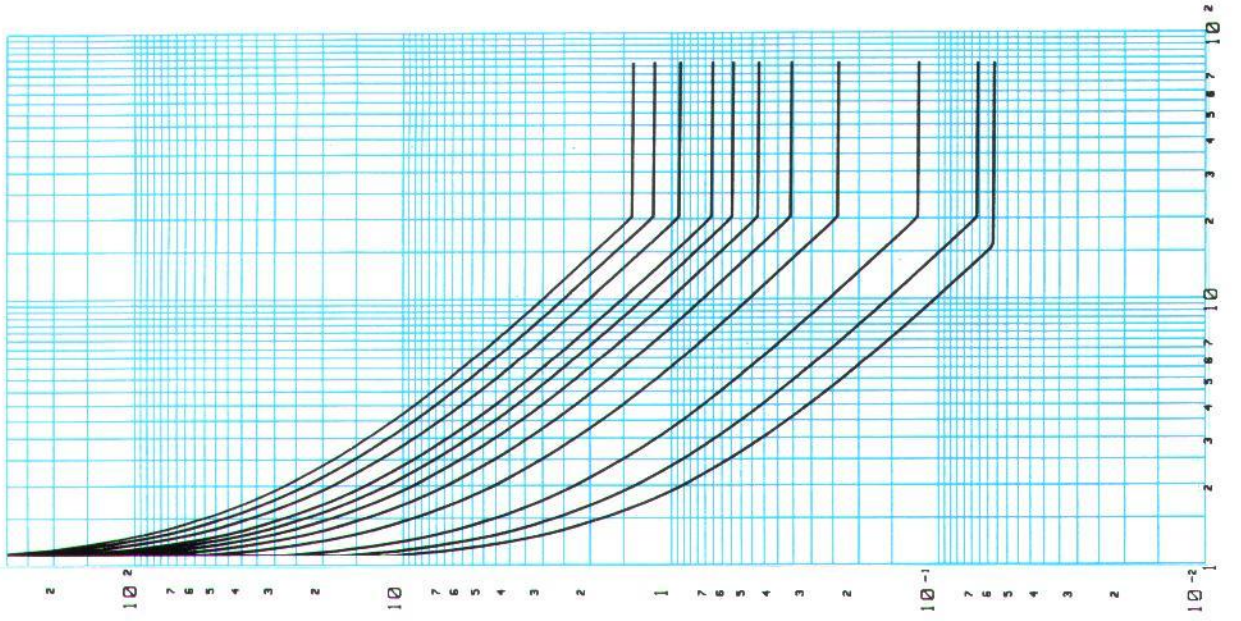


Fig. 2 - RMS 700 - Very inverse time curves  
- IEC 255-4

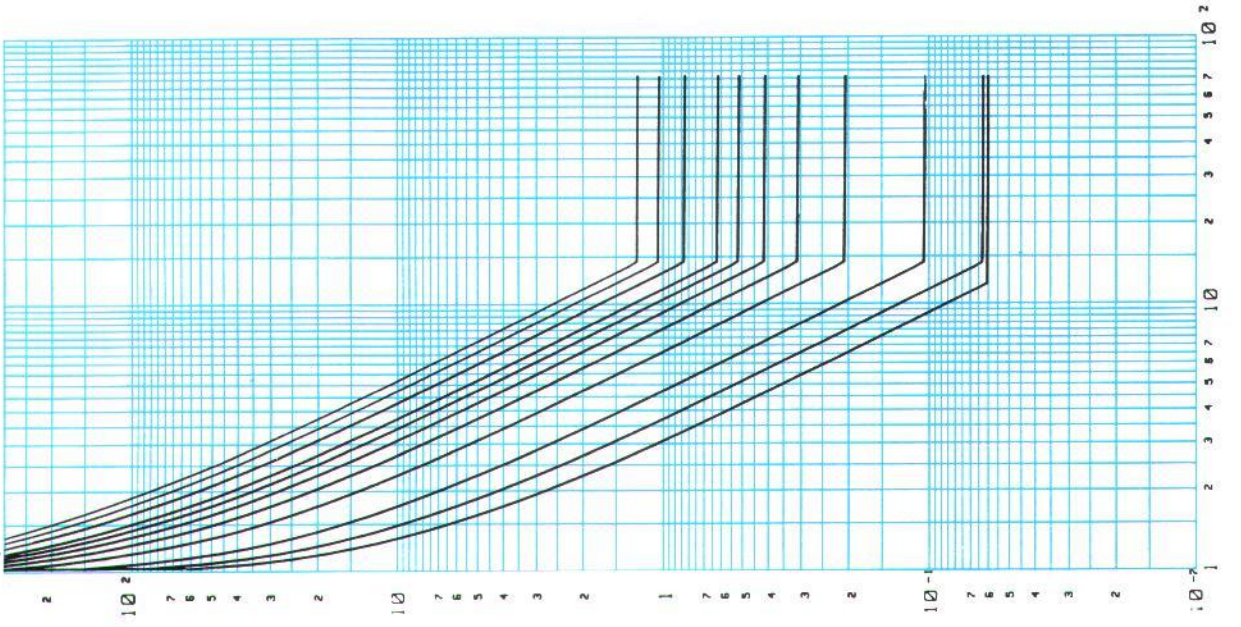


Fig. 3 - RMS 700 - Extremely inverse time curves  
- IEC 255-4

# TMS 700

- TMS711 single phase: 2 maxi or mini settings
- TMS761 three phases: 2 maxi or mini settings
- TMS714 zero sequence single phase

- Characteristic Quantity: ..... RMS fundamental value
- Rated voltage: ..... *(identical to V.T.s secondary nominal voltage)*

TMS 711	}	100/√3 - 110/√3 - 120/√3 volts
TMS 761		100 - 110 - 120 volts
		230 volts
TMS 714	}	100/3 - 110/3 - 120/3 volts
		100/√3 - 110/√3 - 120/√3 volts

- Rated frequency: ..... 50Hz or 60Hz

- Primary rated voltage:

TMS711-761	TMS714
100V to 240Kvolts	100/√3 V to 240/√3 KV

- Setting Range:

15 to 150% of VN (step 1%)	3 to 60% of VN (step 1%)
-------------------------------	-----------------------------

- Each setting can be selected in Max. or mini function

- Operating Curves:

- . Independant Time - Maxi and mini: ..... 50msec to 99sec    step 10msec to 3sec  
step 0.5sec upper
- . Dependant Time
  - function Max: extremely inverse ..... 0.1 to 3sec to 2 Vsetting    step 0.05sec
  - function mini: inverse ..... 0.1 to 3sec to 0,2 Vsetting    step 0.05sec

- Drop-off:

- . function mini: ..... 102% < V < 104%
- . function maxi: ..... 96% < V < 98%

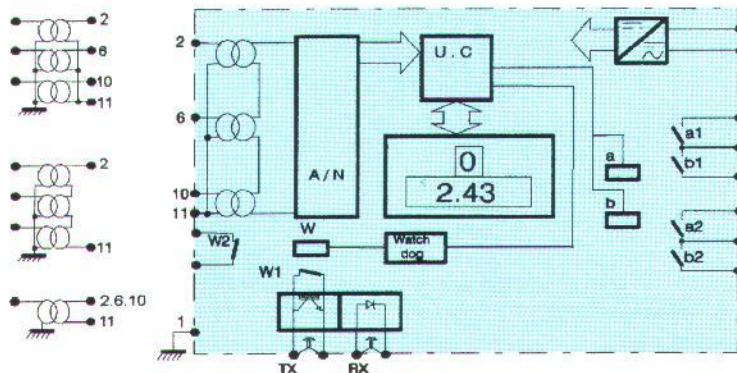
- Accuracy:

- Operatin levels ..... 1% of VN in frequency range FN ± 5%
- Time delays
  - independant time ..... 2% or ±30ms
  - dependant time ..... 5% or ±30msec

- Continous withstand:    TMS 711 - TMS 761    1.9 Vn  
   TMS 714                            3 Vn

- Inhibition : (TMS 761)

The TMS761 can be programmed to inhibit the operation of the minimum settings on simultaneous disappearing of the 3 phases inputs (<10 %)



Connection diagram TMS714

# TMS 711-761

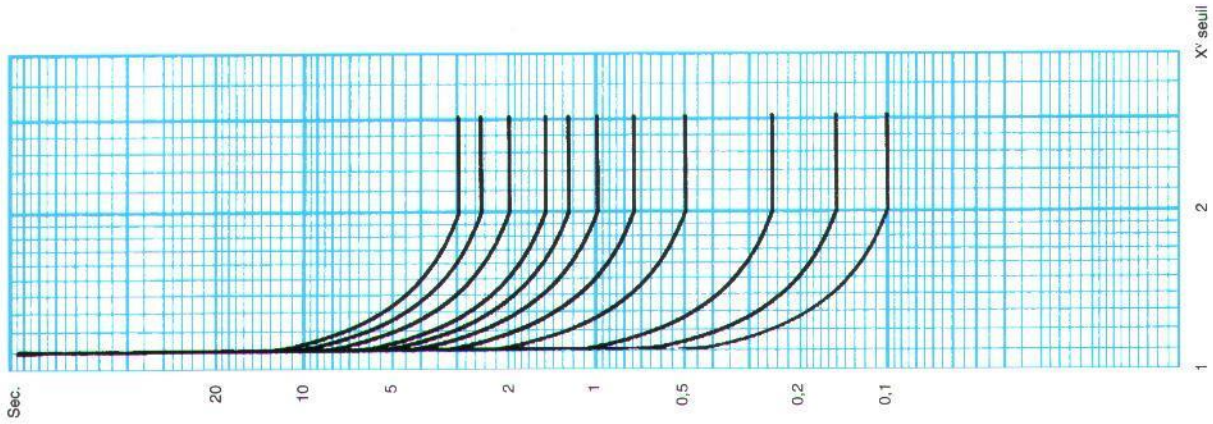


Fig. 5 : TMS - Over voltage  
Extremely inverse time curves

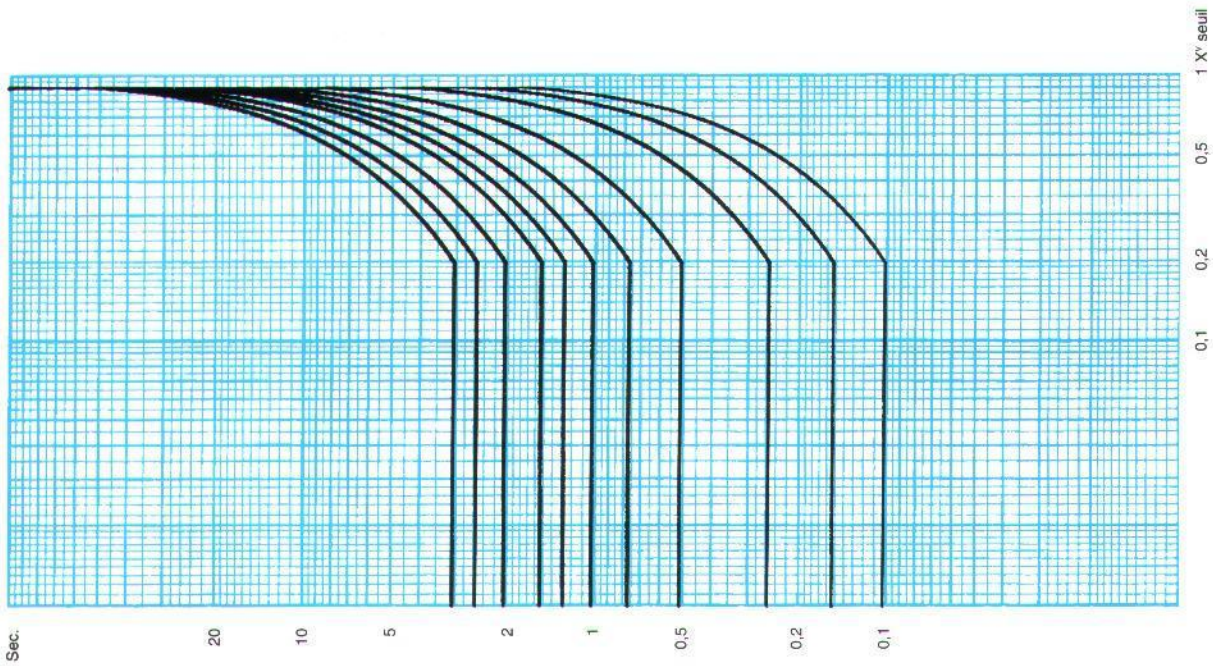


Fig. 4 : TMS - Under voltage  
Inverse time curves

		<i>projecting front connection</i>	<i>projecting rear connection</i>	<i>flush rear connection</i>	
CASE DIMENSIONS	CONNECTING SCREWS $\varnothing$ M4				
		height	172 mm		206 mm
	width	R2 = 83 mm R3 = 125 mm		R2 = 92 mm R3 = 134 mm	

Only documents supplied with our acknowledgment are to be considered binding.



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