

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

GENERAL CHARACTERISTICS

- Robust R2 withdrawable case with short-circuiters on the current inputs - bases rear or front connection
- 2 high power output units with 2 output contacts each + 1 “watchdog” relay
- Programming with the assistance of 4 keys and an illuminated digital display
- Permanent display of the supervised quantity (in primary value)
On tripping, flashing display of the quantity causing the trip (until reset)
- Ease of use: wide setting range of thresholds and time delays
Programmable choice of type of time curve
- Compatible with our PROSATIN Supervision-Control systems
Communication by current loop 0-20 mA - Modbus - Operating speed 1 200 - 2 400 or 4 800 Bauds
Data available on communication network:
Permanently:
 - Primary value of each input and their mean value (3 phases versions)
 - Setting valuesUnder fault conditions:
 - Phase concerned and threshold reached
- Wide range of operation between temperatures - 10° to + 55°C
- Auxiliary voltage: dc or ac
48 V - 60 V - 110 V - 125 V
for other values please consult us
Burden: 6 watts at 48 volts
- Complies with Standard IEC and CE marking according to EN 50081-2 and 50082-2
Susceptibility and Emission
- Insulation:
 - . Dielectric withstand: 2 kV - 50 Hz - 1 min
 - . Insulation resistance: > 10 000 MΩ at 500 volts
 - . Impulse voltage withstand: 5 kV - 1.2/50 μsec

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 2Ω ($1A$) $5VA$ 5 $P20$

• Current Ranges

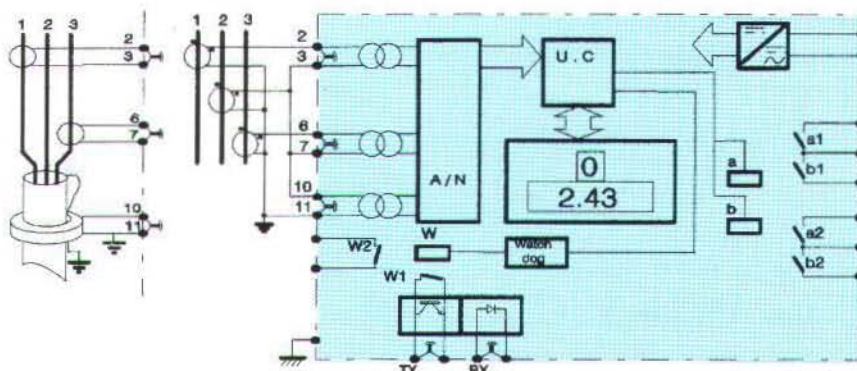
		Low setting		High setting	
Phases Inputs		0.5 to $4I_N$	(step 0,1 I_N)	1 to 25 I_N	(step 0.5 I_N)
Zero sequence Inputs	On TC	0.05 to $0.4I_N$	(step 0,01 I_N)	0.1 to 2.5 I_N	(step 0.5 I_N)
	On toridal (100/1)	1 to 8A	(step 0.5A)	5 to 40A	(step 1A) (other possibilities)
	or	5 to 40A	(step 1A)	10 to 250A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

$$t(s) = \frac{T}{(I)^\alpha} \times \text{set value}$$

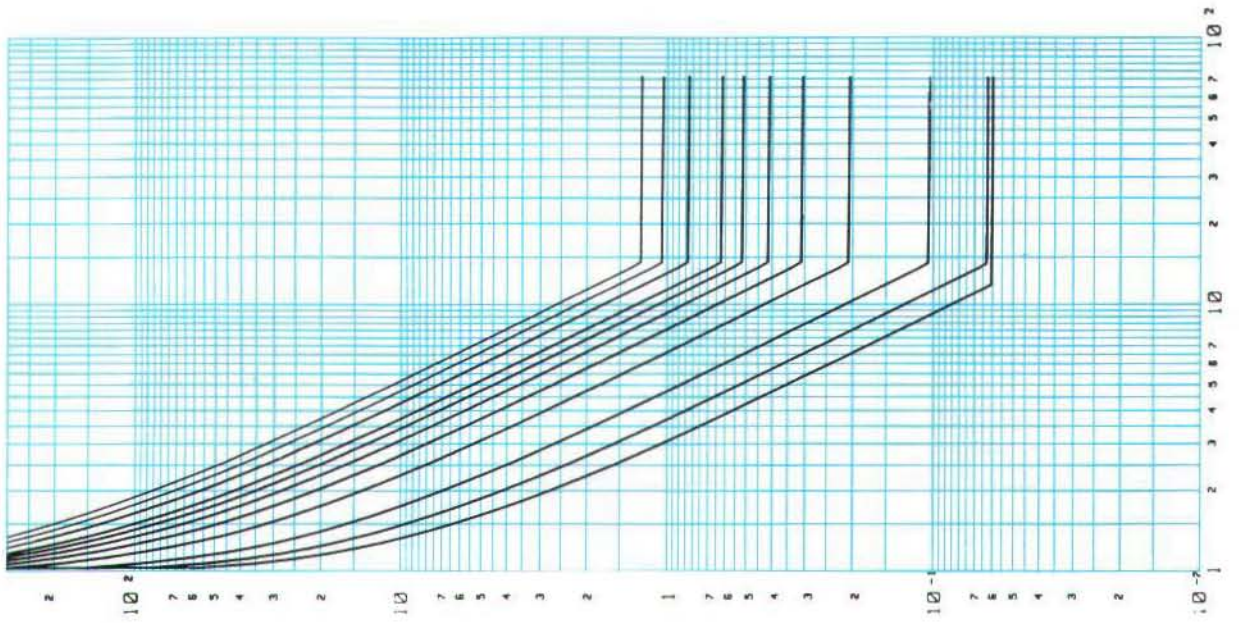
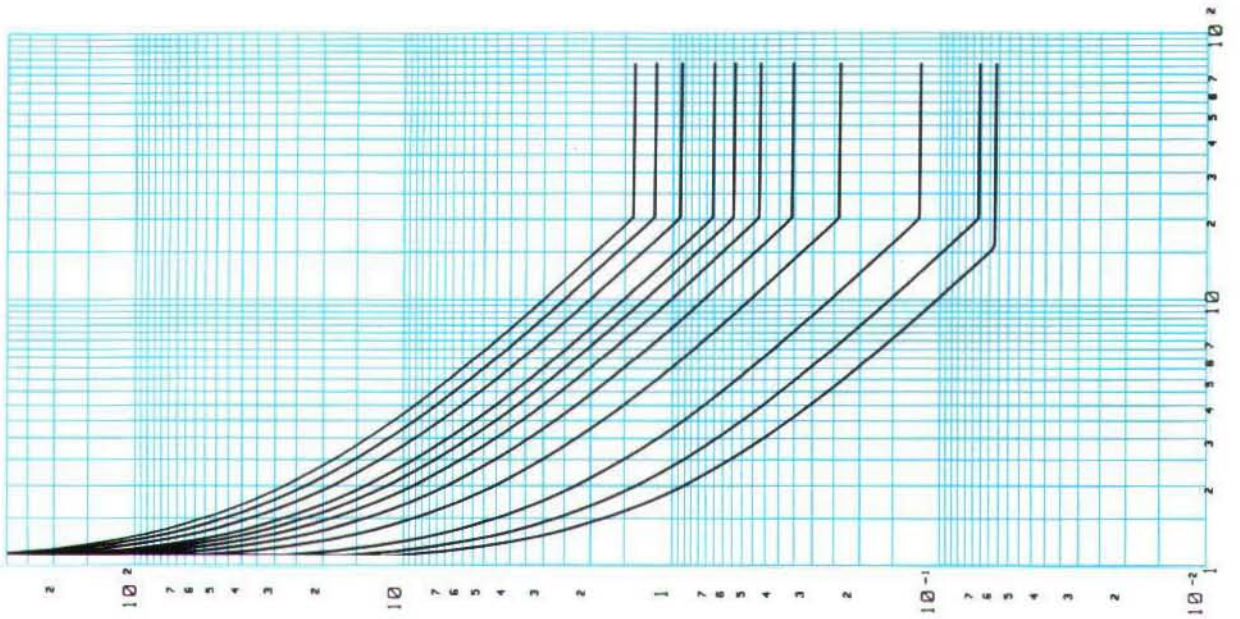
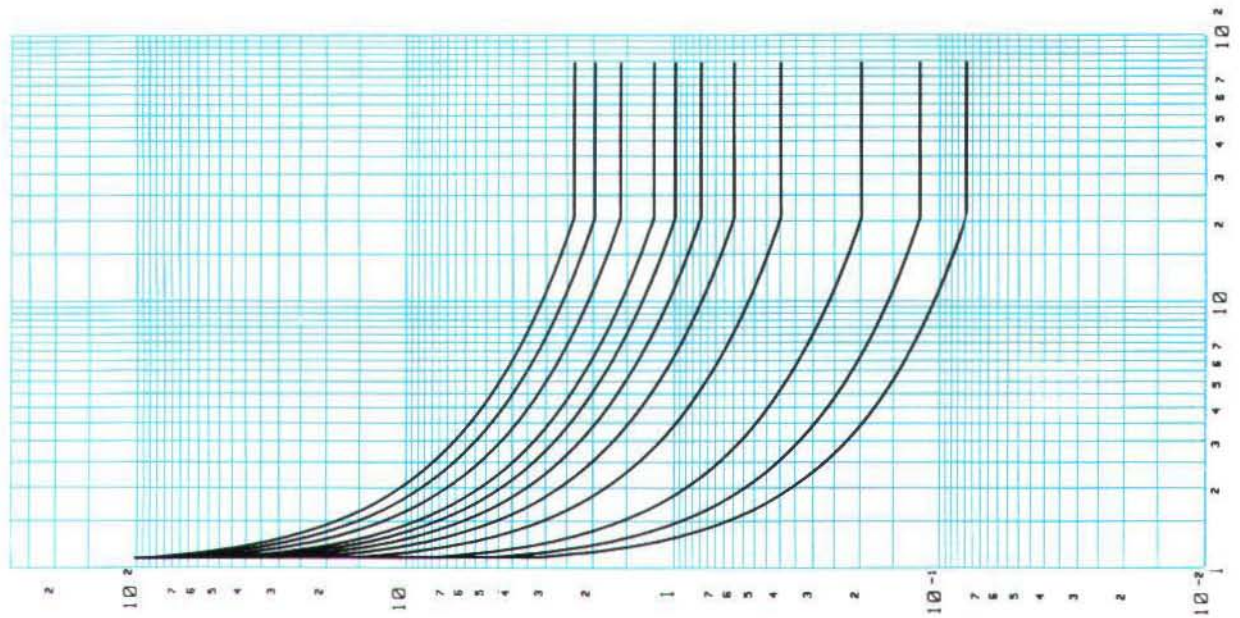
inverse time	$\alpha : 0.02$	$T : 0.0466$
very inverse time	$\alpha : 1$	$T : 9$
extremely inverse time	$\alpha : 2$	$T : 99$
- Time setting Range
 - Low setting
 - independant time 0.1 to 30s (step 0,05s up to 3s and 0,5s upper)
 - dependant time 0.1 to 3s at 10 time the setting (step 0,5s)
 - High 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



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/ $\sqrt{3}$ - 110/ $\sqrt{3}$ - 120/ $\sqrt{3}$ volts
TMS 761		100 - 110 - 120 volts
		230 volts
TMS 714	(	100/3 - 110/3 - 120/3 volts
		100/ $\sqrt{3}$ - 110/ $\sqrt{3}$ - 120/ $\sqrt{3}$ volts

- Rated frequency: 50Hz or 60Hz

- Primary rated voltage:

TMS711-761	TMS714
100V to 240Kvolts	100/ $\sqrt{3}$ V to 240/ $\sqrt{3}$ KV

- Setting Range:

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

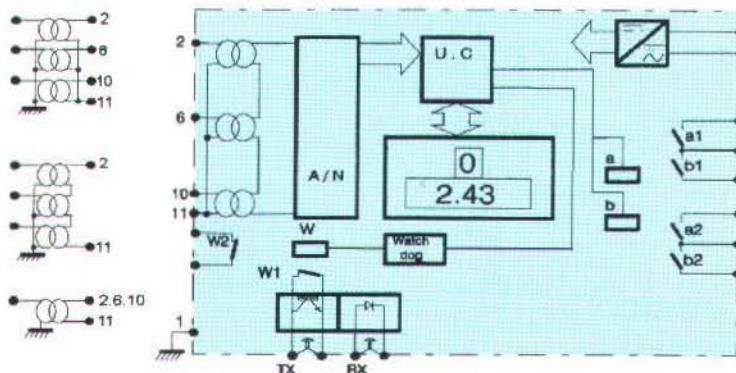
- Operatin levels 1% of VN in frequency range FN $\pm$ 5%
 - Time delays
 - independant time 2% or $\pm$ 30ms
 - dependant time 5% or $\pm$ 30msec

- 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

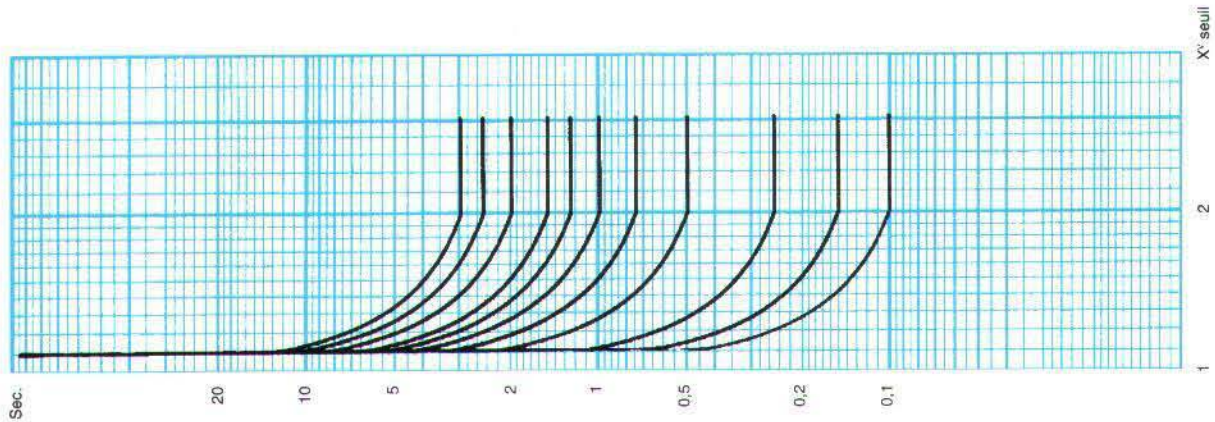


Fig. 5 : TMS - Over voltage
Extremely inverse time curves

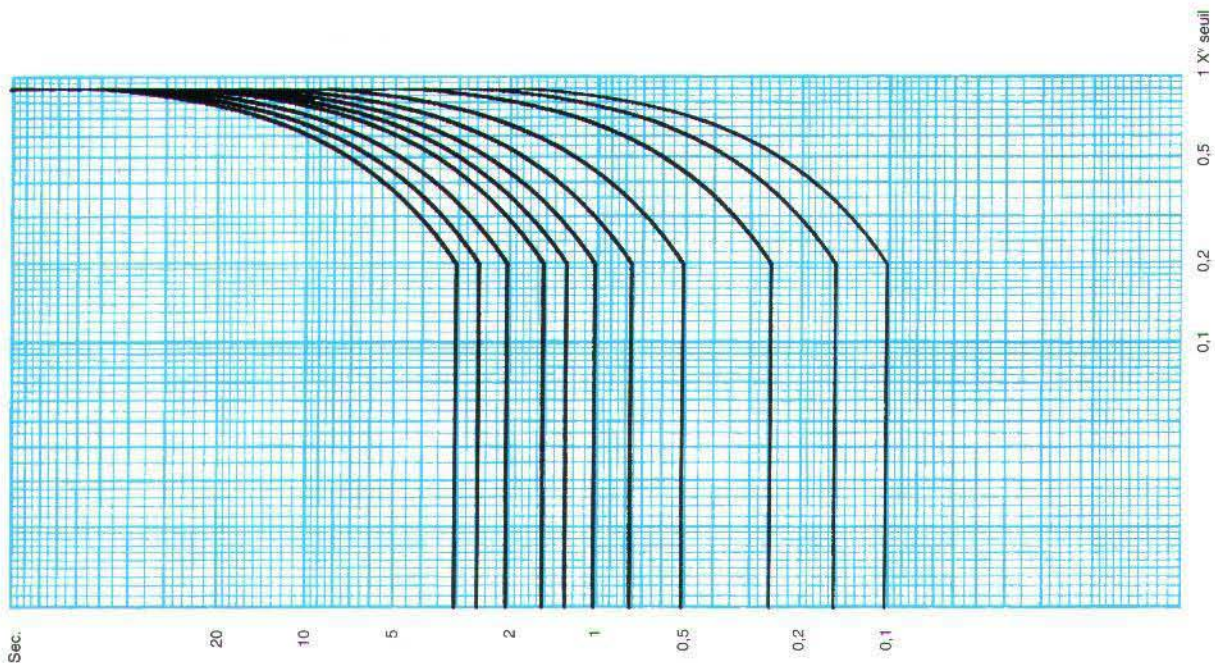


Fig. 4 : TMS - Under voltage
Inverse time curves

		projecting front connection	projecting rear connection	flush rear connection
CASE DIMENSIONS	CONNECTING SCREWS Ø M4			
		height width	height width	height width

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



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