

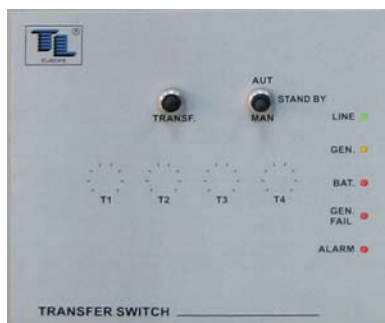
TRANSFER - SWITCH

TSM-100 UL / TSM-200 UL



DESCRIPTION OF THE PRODUCT

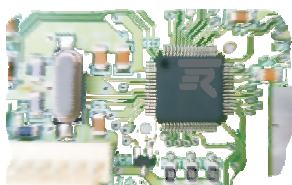
The INTELLIGENT CONTROL OF TENSION TRANSFERENCE (CITT) - brings together in one only device; quality, reliability, great performance features and price. Quality, from the design up to the smallest component that shapes it. Reliability on having had been conceived considering the most strict regulations of safety. Great performance features, powered by the most advanced technology in microprocessors of last generation. Price, which only a company with optimized management can offer. The CITT supervises continuously the voltage of the net, analyzing any failure or instability in it, if unsatisfactory readings are obtained the CITT initiates the electrogenerator and commutes the voltage of the net by the one that provides the electrogenerator, once stabilized. When the net voltage returns to the normality the CITT exchanges again to the net and switches off the electrogenerator after a prearranged and programmable time.



MICROPROCESSOR

A microprocessor controlled system governs the commutation between the supply sources, without being necessary either the intervention or supervision of any person.

The microprocessor constantly takes samples of the net voltage and voltage and frequency of the electrogenerator, in all the possible circumstances of work and failure. Of this sampling, there will be extracted the readings that will determine the need of commutation as well the work sequences of the CITT.



TSM-100 UL



TSM-200 UL

Supplier:



TECNOLOGIA
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SPECIFICATIONS

Modelo	Corrent	Voltage	Phases	Dimensions
*TSM - 100UL	100 Amp.	120/240	1 Phase	400x300x200 mm. 15,7 x 11,8 x 7,9 inches
*TSM - 200UL	200 Amp.	120/240	1 Phase	600x500x200 mm. 23,6 x 19,7 x 7,9 inches

All the models supplied with NEMA 3R

Enviromental specifications

- Operating temperature: -4°F(-20°C) to 149°F(65°C).
- Storage temperature: -22°F(-30°C) to 167°F(75°C).
- Relative humidity 95%, without condensation.
- Maximun operating altitude: 4500 m.

Approvals

- Complies with UL rules
- TSM-100 and TSM-200 UL n°
- CE (240Vac 50/60Hz)
- ISO 9001

Detections

Net supply

- Sampling: 100%
- Low voltage : 60% or 80% (Selectionable with SW2-1)
- Frequency deviation: \pm 4Hz. (Selectionable with SW2-3)

Electrogenerator supply

- Sampling: 100%
- Low voltage: 60% or 80% (Selectionable with SW2-1)
- Frequency deviation: \pm 4Hz. (Selectionable with SW2-3)

Delays

- T1 - 3"~ 10" Delay in electrogenerator start
- T2 - 10"~ 40" Delay in connection of the charge to the electrogenerator
- T3 - 1'~ 8' Delay in connection of the charge to the net supply.
- T4 - 1'~ 8' Delay in the electrogenerator stop.

Weekly start

- Factory set 5' every week since the start up of the system.

Extras and Accesories

Alarms indicator



It is used for electrogenerator operation remote monitoring by means of a 3 wire telephone cable. Indicates ON status and up to 10 alarms.

12 Step Sequencer



It is used for starting up to 12 transfers without control circuit CITT step by step with adjustable delay. Step number 12 can be used for starting another sequencer.

GSM Module



It is used for transfer interactive operation by means of a cellular phone or a personal computer.

Phase Detector



It is used for phase failures detection.

Programing Console



It is used for reprogramming some transfer parameters.

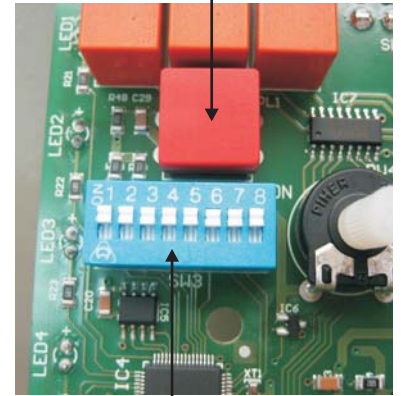


CONNECTION DIAGRAM CITT-2 CONTROL BOARD

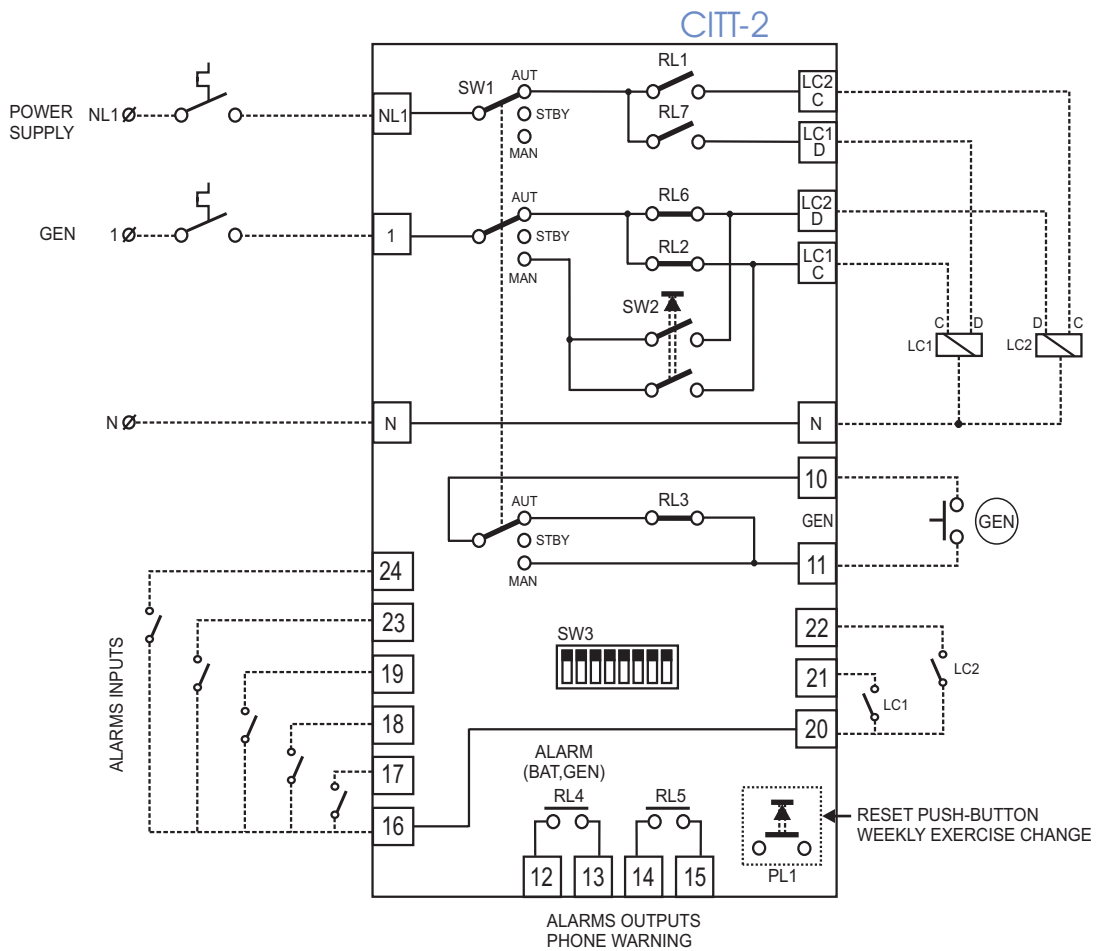
SW3

- 1 — ON = No frequency deviation control.
OFF= Frequency deviation $\pm 4\text{HZ}$. (Off margins for more than 10sec.)
- 2 — ON = Voltage limit $-40\% +20\%$ (Off margins for more than 10sec.)
OFF= Voltage limit $\pm 20\%$ (Off margins for more than 10sec.)
- 3 — ON = Weekly exercise with transference
OFF= Weekly exercise without transference
- 4 — ON = Net/Electrogenerator out of levels before transference 3sg.
OFF= Net/Electrogenerator out of levels before transference 6sg.
- 5 — ON = 10' test duration (Weekly exercise)
OFF= 5' test duration (Weekly exercise)
- 6 — ON = 50 Hz
OFF= 60 Hz
- 7 — ON = PROGRAM n° 1 CITT
OFF= PROGRAM n° 2 CITT-2
- 8 — ON = Fast delays.(Only for test)
OFF= Specified delays

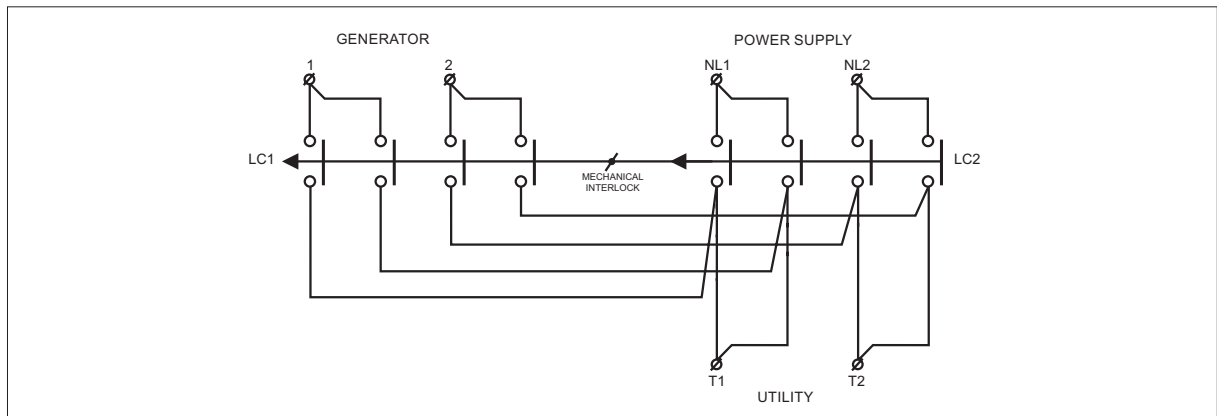
RESET PUSH-BUTTON
WEEKLY EXERCISE CHANGE



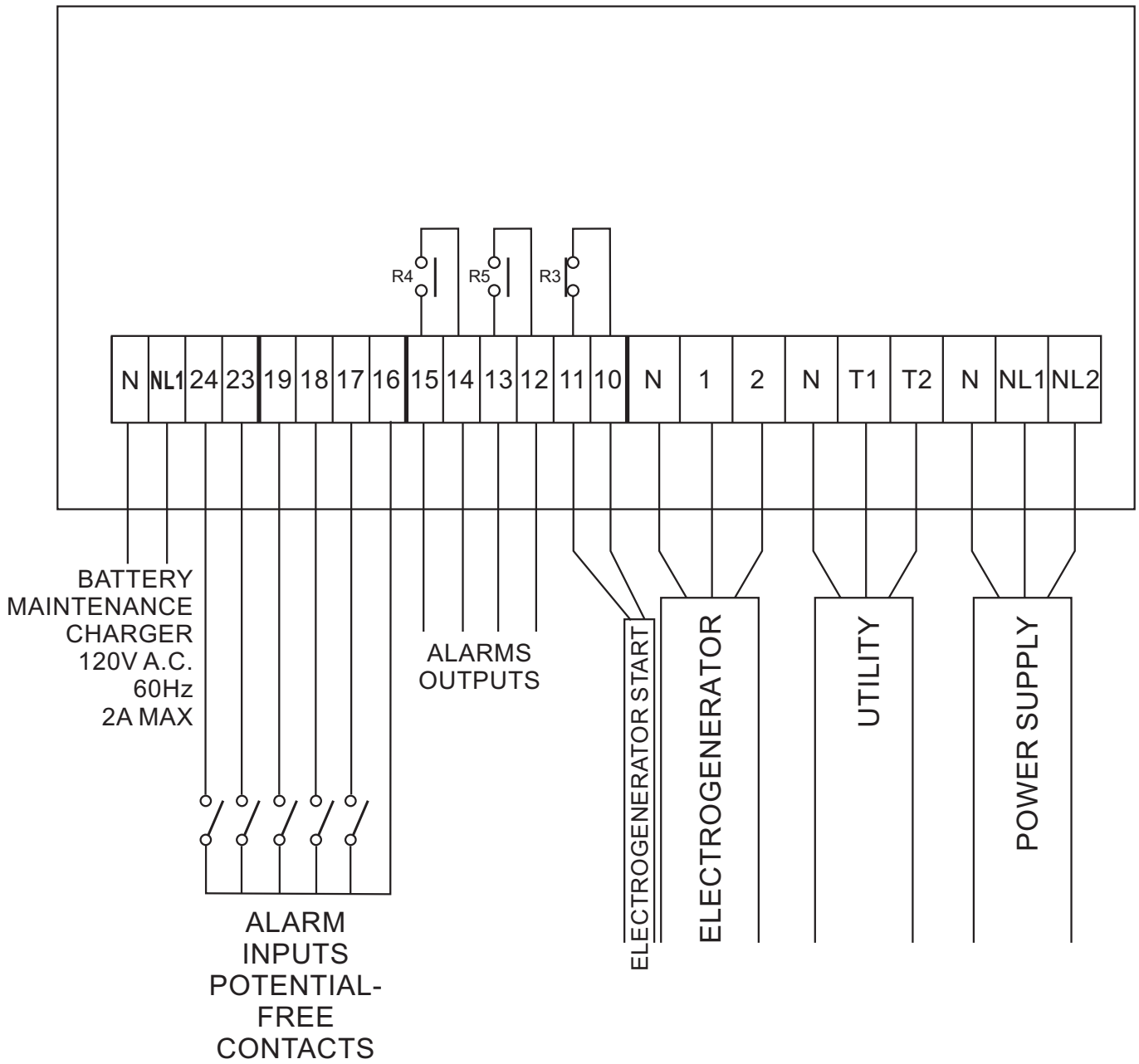
SW3



TSM100UL / TSM200UL



CONNECTION DIAGRAM TSM-100UL - TSM-200UL



R4 and R5 are potential-free contacts, we can use it for an external signals. If the telephonic adviser is used the connection will be internal directly the CITT.

16-17-18-19 are alarm inputs for the signaling of alarms, coming from the electrogenerator (fuel, oil...) or from any other external alarm (house alarm...), in any case the relay R5 will be activated.

A connection between 16 and 17 generate a transference cycle.

N-NL1 generator battery maintenance charger supply 120V A.C. 60Hz 2Amax.