



USER'S MANUAL

TRANSALIM



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I. GENERAL DESCRIPTION

TRANSALIM is an autonomous recorder designed to supervise and record the air temperature in transport gear under controlled temperature. *It allows a quick and easy application of the regulation in force (decree of the July 20th 1998).*

TRANSALIM comes in an impervious case equipped with a partly transparent cover allowing the reading of recording(s) in progress. The cover is equipped with a mechanism locking access to the mechanical parts as well as to the case's attachment points.

TRANSALIM can receive up to 2 measuring elements (gas thermometer) acting directly on the inscribing device and which does not require any source of energy. The sensitive element is a stainless-steel tube filled with a neutral gas linked to the case by a copper capillary tube \varnothing 1.4 mm.

TRANSALIM is equipped with a removable recording media that receives the diagram and its driving mechanism: a real time quartz clock, powered by a standard battery (LR6 type), assuring an automatic timing of the diagram when it is changed for as long as the battery is in a working state. An interchangeable recording media is available for 1 rotation per 7 days speeds.

Each TRANSALIM comes in an anti-shock package and is delivered with:

- 1 pack of 100 charts,
- 1 set of keys,
- 1 recording media with 1 battery preinstalled to be changed before starting up, 1 spare battery,
- 1 fibre tip pen per measuring channel, 1 user manual.

II. INSTALLATION

1) Advice

Before attaching the case on one of the sides:

- Place the recorder vertically (lock toward the bottom) and mark the housing's attachment points.
 - 1 upper side hole case closed,
 - 2 lower side holes case open.
- note the capillary's passage point
- drill the three holes.

2) Putting the pick up and the capillary in place

2.1 *Advice*

The capillary, supplied rolled in a circle of about \varnothing 10 cm, should be unrolled in the direction of the plan of the circle and not pulled out in a perpendicular way which would give it a twisting movement which could deteriorate it.

Putting the capillary in place should be done so as to avoid that the capillary be submitted to any rubbing or that it be in contact with products able of corroding it.

Warning : Don't pinch the capillary during the installation.

Any mounting that implies a direct and repeated flexion of the capillary will bring on its rupture and will consequently put the whole temperature measuring unit out of service.

Warning : the capillary's minimal curve radius is of 5 mm.

So as to ensure the metrological performances announces, the sensitive element should be introduced in the area to control together with the complete capillary minus 50 cm (+/- 30 cm).

The sensor should then be put in a place where the air circulates while avoiding that it be submitted to the direct influence of cold producing elements of the surroundings or of a source of heat.

2.2 *Procedure*

- The sensitive element having a diameter of 10 mm, drill a hole having a slightly larger diameter so as to allow the introduction of the sensor in the area where the temperature is to be monitored.
- Put in place the sensitive element together with the complete capillary and place it in the most representative location of the temperature to be monitored.
- Avoid any large influences (see advice).

3) Setting up the case

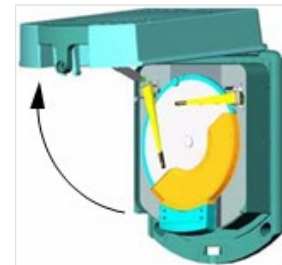
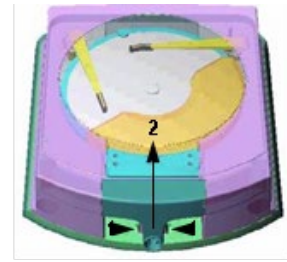
Once the sensitive element and the capillary are put in place in the housing, the case can then be attached on a side.

III. INSTALLATION

For the placing in service of the TRANSALIM, one should first put in place: the battery, the diagram, the fibre tip pen and proceed in setting the time.

1) Opening the case

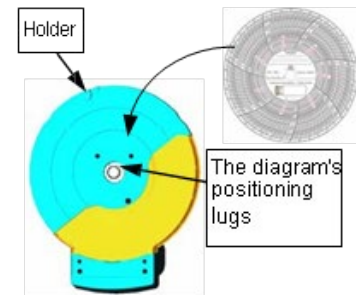
- Remove the sealing (if any), place the key in the lock and open the cover (the key remains inserted in the lock in the open position).
- Grip the opening device on either side of the lock (1).
- Pull up the cover (2) up to the locking of the support rod (the cover should be practically perpendicular to the rest of the case).
- The stylus(es) come up automatically



2) Installing the chart

It is recommended to change the battery before using the recorder at first time

- Take out the recording media if it is not already done.
- Slide the diagram under the chart transparent protector.
- Position the chart with the help of the 2 lugs.
- Slip the chart under the holder located in the upper part of the recording media.



3) Installing the battery

- Open the cover.
- Take out the recording media.
 - Grab the recording media's handle in the lower part (bulging part).
 - Pull it towards you to make its housing swivel.
 - Slide it down to take it out.
- Open the hatch located in the back of the recording media.
- Put the new battery in place.
- Check that the time is right.
- Close the hatch.



Battery compartment

It is recommended to change the battery every 6 months.

4) Setting up the chart's time

Setting up the chart's time is necessary when the recorder is used for the first time, when the battery is changed and at the passage to and from daylight saving time.

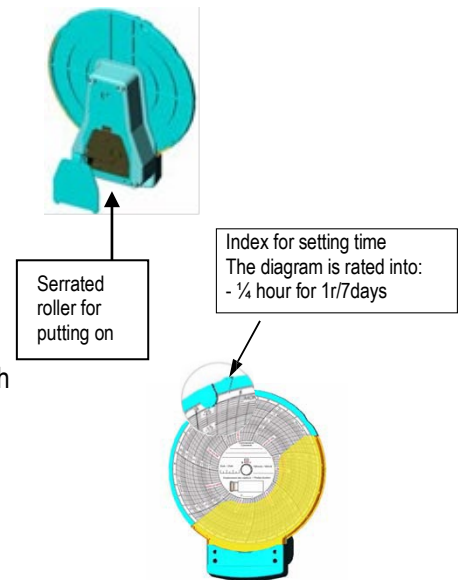
- Take the recording media out.
- Install a diagram
- Open the battery hatch located at the back of the recording media.
- Make the diagram turn with the help of the black serrated roller until the day and time are aligned with the index.

Advice

- If the diagram is late: Turn the serrated roller until the day and the time are aligned with the index.
- If the diagram advances:

Turn the serrated roller until the diagram shows a delay of at least 4h for 1r/7d in relation to the real time, then turn the serrated knob in the other direction until the diagram is on time.

- Close the battery hatch.



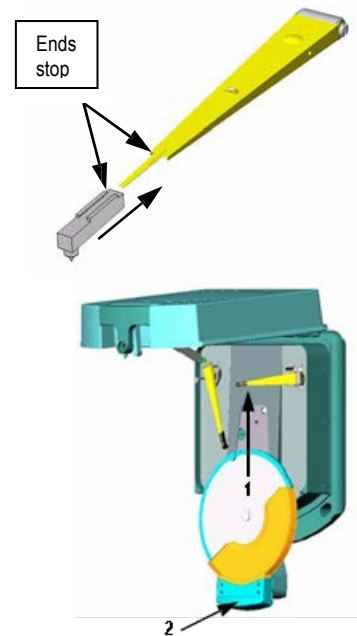
5) Installing the fibre tip pen(s)

- Open the cover if not already done.
- The stylus(es) come up automatically.
- Put the ends of each stylus in the fibre tip pen(s) slide(s) up to the end stop.
- Take out the pen(s) protection(s) by pulling and turning simultaneously.
- The fibre tip pen(s) will position itself/ themselves on the chart by closing the cover.

Warning: do not place the pen's fibre tip in contact with the fingers.

6) Installing the recording media

- Place the recording media facing the opening of the slide.
- Place the disk's support plate on the slide.
- Slide the recording media up to the end stop (1).
- Press on the recording media to lock it (2) (clamping noise).
- Close and lock the cover.



IV. TECHNICAL FEATURES

Designation: Temperature recorder M / B3 / -25°C + 25°C / NF E 18-150

Measurement range: -25°C to +25°C

Nominal use field: -30°C to +65°C

Limit conditions: -30°C to +70°C

Storage conditions: -40°C to +85°C

Accuracy: ±2°C class 2

Resolution: 0,5°C

Recording support: paper circular chart Ø 160 mm

Recording period: 7 days by changing the recording media

chart's running speed: 2 mm/h (1r/7d)

sensor: Stainless steel bulb linked to the case by a copper capillary

Capillary's length: V1 = 10 m (1 channel recorder)

Power supply : 1 dry battery 1.5 V LR6 type (6 month length)

Size: 282 mm x 234 mm x 83 mm

Protection index: IP65

Weight: 1 channel 1.5 kg

V. REFERENCES

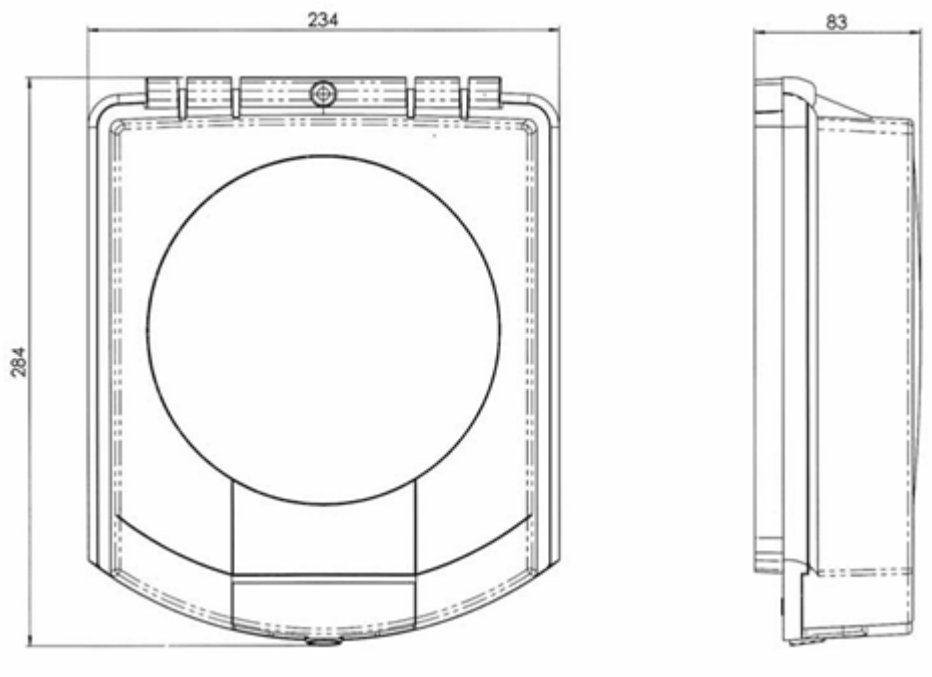
Accessories

Interchangeable recording media (7 days)	19904.00
Fibre tip pens (violet) x 5	S97601
Fibre tip pens (red) x 5	S97602
Charts 7 days 1 channel	D32980

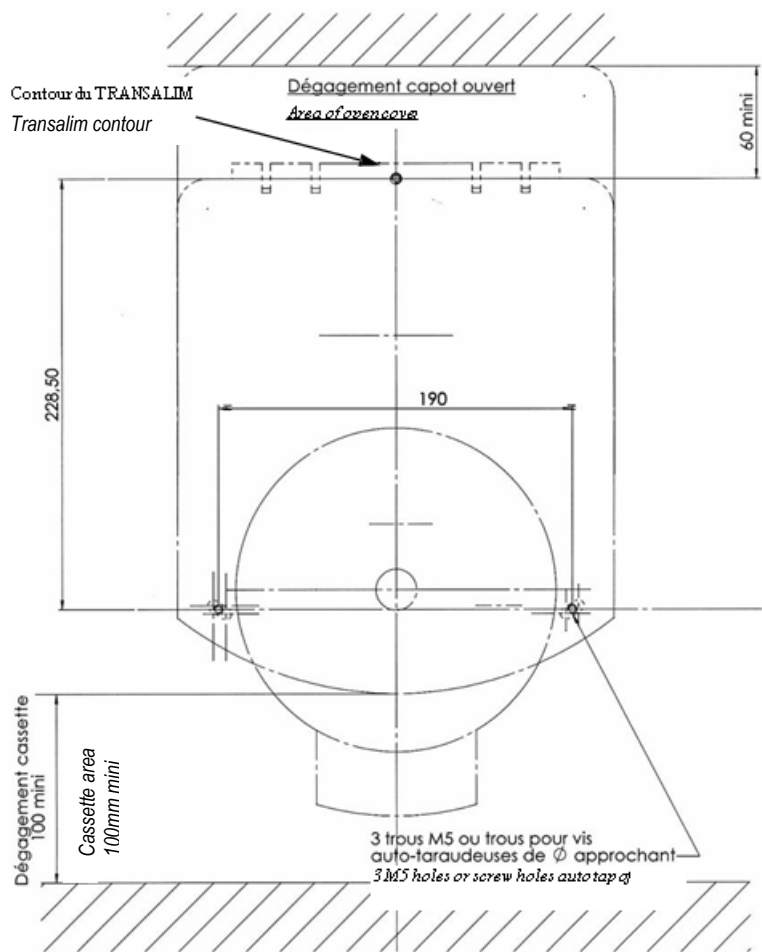
Option

Hard pouch for diagram Ø160mm	19906.00
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VI. DIMENSIONS



VII. DRILLING PLAN



FICHE TECHNIQUE DESCRIPTIVE D'APTITUDE A L'EMPLOI NORME EN12830 ENREGISTREUR JRI TRANSALIM

Organisme d'essais :	N° de rapport	Date	
CEMAGREF	E34b	06/1999	
LCIE	5825010	05/1999	
EMITECH	RQ98-70048	11/1998	
J. R. I.	REMT9017	01/2000	
Type d'enregistreur			Type B
Adapté à l'entreposage			-
Adapté au transport			-30°C +65°C
I - Prescriptions générales			
Etendue de mesure (voir 4.2)			-25°C +25°C
Support d'enregistrement (disque, bande) (voir 4.4.3)			Disque papier
Alimentation autonome (voir 4.5)			Pile LR6
Degré de protection procuré par l'enveloppe (voir 4.6 et 5.6.7)			Conforme IP65
Tension d'alimentation (voir 4.8.1 ou 4.8.2 et 5.6.2)			Non applicable
Fréquence (voir 4.8.3)			Non applicable
Coupures d'alimentation (voir 4.8.4)			Non applicable
II - Prescriptions relatives aux caractéristiques métrologiques			
Erreurs maximales tolérées et résolution (voir 4.9.2.1) et erreur de mesure de la température (voir 5.3)			Conforme à la classe 2 ±2°C
Intervalle d'enregistrement (voir 4.9.2.2)			Enregistrement continu
Durée d'enregistrement (voir 4.9.2.3)			7jours
Erreur relative maximale sur le temps (voir 4.9.2.4) et erreur relative à l'enregistrement du temps (voir 5.5)			Conforme <0.1%
Temps de réponse (voir 4.9.2.5 et 5.4)			Conforme <10mn
Environnement climatique (voir 4.9.3.1) et influence de la température ambiante (voir 5.6.3)			Conforme à la classe 2 ±2°C
Vibrations mécaniques (voir 4.9.3.3 et 5.6.5)			Conforme
Résistance aux chocs (voir 4.9.3.3 et 5.6.6)			Conforme
Environnement climatique (voir 4.9.3.1) et essai de température de l'enregistreur en conditions de stockage et de transport (voir 5.6.4) <small>(Hors plumes et piles)</small>			Conforme -40°C +85°C
Perturbations électriques de l'alimentation et susceptibilité au champ électromagnétique rayonné (voir 4.8.5) et rigidité diélectrique voir 5.6.9)			Conforme

Annexe REMT9017



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17/01/2000

E. SERRE

