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MECHANICAL

Mechanical recorders are devices to measure temperature and/or relative humidity or pressure. The continuous-line recording is performed by an interchangeable fibre-tip pen, while the pre-printed paper is propelled by a mechanical or quartz clockwork movement. Autonomous, reliable, robust and easy to use, these recorders require no outside energy source and allow the measurements carried out to be instantly visualized.

SPECIAL PRESSURIZED TRANSPORT, HEATING/AIR CONDITIONING, MAINTENANCE, AGRONOMY...

AMBIENT and REMOTE PANORAMIQUE

The PANORAMIQUE are paper-strip recorders designed to record variations in temperature, relative humidity, pressure and/or level. Fitted with a handle, this device is easy to transport. Moreover, it is simple to set the recording time and speed (24 hours, 7 days or 4×7 days). The AMBIENT model allows temperature and/or hygrometry to be recorded. The REMOTE model can measure the temperature (1 or 2 channels) of liquids or gas. As for the PRESSURE-LEVEL model, it measures the relative pressure of liquids (sprinkler, vapor pressure...) as well as water levels.



Did you know?

To optimize the reading of a measurement, a diagram should be chosen with range extremities as close as possible to the measurement to be performed.



RECORDERS



SPECIAL FOOD AND MEDICAL COLD CHAIN, LABORATORIES...

AMBIENT and REMOTE MINIDISQUE

The MINIDISQUE are self-contained circular chart recorders designed to record variations in temperature and/or relative humidity.

According to the model chosen, three different technologies are used to take measurements: bimetallic and gas expansion for temperature and hair for relative humidity. These three technologies work by deformation on the stylus, fitted with a pen to write on the diagram.

THERMALIM II R and S

These are temperature recorders designed to monitor the cold chain. Particularly adapted to the monitoring of cold rooms, these recorders are in keeping with a strict quality-control process (HACCP method). Both in compliance with the NF EN 12830 standard, the THERMALIM II R is recommended for the storage and warehousing of refrigerated goods, while the II S model is specifically intended for frozen foodstuffs.

TRANSALIM

Specially designed for the transport of perishable foodstuffs under controlled temperature conditions, the 1- or 2-channel TRANSALIM uses gas expansion technology. In compliance with the NF EN 12830 standard, this recorder is easily fixed either outside or inside the compartment to be monitored and it is vibration- and weather-resistant.

loading a TRANSALIM cassette

Did you know?

In compliance with CE regulation N° 37/2005 of 12/01/05, negative cold rooms used for the storage or the transport of foodstuffs must be equipped with a temperature recorder in compliance with the EN 12830 standard from 01/01/2006. These recorders must also be checked at regular intervals, according to the EN 13486 standard.



THERMALIM II R and S	FEAT	URES	PRODUCT REFERENCE	DIAGRAM REFE
Movement	Model	Measurement range		
Quartz 7 days	THERMALIM II R	-35°C to +15°C	00006	00001
	THERMALIM II S	+15°C to -35°C	00060	00059
AMBIENT MINIDISQUE		FEATURES		PRODUCT REFE
Movement	Number of channels	-10°C to +40°C	ient range	00066
Quartz 7 days	1 channel	-10°C to +40°C		00066
	r channet	-10°C to +20°C		00007
		-10°C to +40°C		00067
	2 channels	-15°C to +60°C	20% to 100% RH	00099
REMOTE MINIDISQUE		FEATURES		PRODUCT REFE
Movement	Number of channels	Measurem	ent range	
		-25°C to +25°C +30°C to +130°C		01012 00135
		0°C to +120°C		00093
		0°C to -100°C		00077
Quartz 7 days	1 channel	-90°C to +10°C		00097
		-100°C to +50°C		00088
		-35°C to +15°C		00071
	2 shannals	-10°C to +40°C -35°C to +15°C	-10°C to +40°C	00069
Quartz 24 hours	2 channels 2 channels	-35°C to +15°C	-10°C to +40°C	00107 01376
AMBIENT PANORAMIQUE		FEATURES		PRODUCT REFE
Movement	Number of channels	Measurem	ent range	
Mechanical 7 days	1 channel	-35°C to +45°C		00092
		-25°C to +30°C		00124
Quartz 7 days, 24 hours and 4 x 7 days	1 channel	0°C to +30°C		00084
	1 channel	-15°C to +40°C -15°C to +65°C		00082
		-20°C to +40°C		00073
		-10°C to +65°C	20% to 100% RH	00087
Quartz 7 days, 24 hours and 4 x 7 days	2 channels	+5°C to +35°C		00108
	2 Chamlets	-20°C to +40°C		00081
		-10°C to +65°C	0% to 100% RH	00080
	1 channel	+5°C to +35°C		00129 00171
REMOTE PANORAMIQUE	i chamet	FEATURES		PRODUCT REFE
Movement	Number of channels	Measurem	ent range	
Movement				
		0°C to +120°C *		00096
	1 channel	-30°C to +30°C *		00116
Quartz 7 days, 24 hours and 4 x 7 days	1 channel	-30°C to +30°C * -20°C to +50°C *		
Quartz 7 days, 24 hours and 4 x 7 days	1 channel	-30°C to +30°C * -20°C to +50°C * 0°C to +75°C *	0°C to 120°C th	00116
Quartz 7 days, 24 hours and 4 x 7 days	1 channel 2 channels	-30°C to +30°C * -20°C to +50°C * 0°C to +75°C * -20°C to +40°C ***	0°C to +120°C ** 0°C to +120°C *	00116 00132 00814
Quartz 7 days, 24 hours and 4 x 7 days PRESSURE PANORAMIQUE	2 channels	-30°C to +30°C * -20°C to +50°C * 0°C to +75°C *	0°C to +120°C *	00116 00132
	2 channels	-30°C to +30°C * -20°C to +50°C * 0°C to +75°C * -20°C to +40°C *** 0°C to +120°C *		00116 00132 00814
PRESSURE PANORAMIQUE Movement Mechanical 7 days	2 channels	-30°C to +30°C * -20°C to +50°C * 0°C to +75°C * -20°C to +40°C *** 0°C to +120°C * 'URES Measurement range 0 mb to +40 mb	0°C to +120°C * PRODUCT REFERENCE 01731	00116 00132 00814 00112 7 days 00336
PRESSURE PANORAMIQUE Movement Mechanical 7 days Mechanical 4 x 7 days	2 channels	-30°C to +30°C * -20°C to +50°C * 0°C to +75°C * -20°C to +40°C *** 0°C to +120°C * 'URES Measurement range 0 mb to +40 mb 0 mb to +60 mb	0°C to +120°C * PRODUCT REFERENCE 01731 00115	00116 00132 00814 00112 7 days 00336 00304
PRESSURE PANORAMIQUE Movement Mechanical 7 days	2 channels	-30°C to +30°C * -20°C to +50°C * 0°C to +75°C * -20°C to +40°C *** 0°C to +120°C * 'URES Measurement range 0 mb to +40 mb 0 mb to +60 mb 0 mb to +100 mb	0°C to +120°C * PRODUCT REFERENCE 01731 00115 01736	00116 00132 00814 00112 7 days 00336 00304 00306
PRESSURE PANORAMIQUE Movement Mechanical 7 days Mechanical 4 x 7 days	2 channels	-30°C to +30°C * -20°C to +50°C * 0°C to +75°C * -20°C to +40°C *** 0°C to +120°C * 'URES Measurement range 0 mb to +40 mb 0 mb to +60 mb	0°C to +120°C * PRODUCT REFERENCE 01731 00115 01736 00812	00116 00132 00814 00112 7 days 00336 00304
PRESSURE PANORAMIQUE Movement Mechanical 7 days Mechanical 4 x 7 days Quartz 7 days and 24 hours	2 channels	-30°C to +30°C * -20°C to +50°C * 0°C to +75°C * -20°C to +40°C *** 0°C to +120°C * 'URES Measurement range 0 mb to +40 mb 0 mb to +60 mb 0 mb to +100 mb 0 mb to +250 mb	0°C to +120°C * PRODUCT REFERENCE 01731 00115 01736	00116 00132 00814 00112 7 days 00336 00304 00306 00332
PRESSURE PANORAMIQUE Movement Mechanical 7 days Mechanical 4 x 7 days Quartz 7 days and 24 hours Mechanical 7 days	2 channels	-30°C to +30°C * -20°C to +50°C * 0°C to +75°C * -20°C to +40°C *** 0°C to +120°C * 'URES Measurement range 0 mb to +40 mb 0 mb to +60 mb 0 mb to +100 mb 0 mb to +250 mb	0°C to +120°C * PRODUCT REFERENCE 01731 00115 01736 00812 00150 00111 00102	00116 00132 00814 00112 7 days 00336 00304 00306
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DENCE		
RENCE	DIAGRAM R	EFERENCE
	7 days	24 hours
	00002	00400
	00338	00434
	00003	00576
	00058	03361
	00366	03374
DENCE		
RENCE	DIAGRAM R	
	7 days	24 hours
	00325	00529
	00404	00340
	00377	00344
	00303	00387
	00350	
	00438	
		00282
	00001	00382
	00002	00400
	00423	
		00420
RENCE		DIAGRAM REFERENCE
	7 days	24 hours
	00310	00381
	00365	00354
	00376	00445
	00297	00379
	00361	
	00294	00381
	00309	[
	00385	
	00333	00354
	00343	
		00367
	00433	
	00336	00379
RENCE		DIAGRAM REFERENCE
	7 days	24 hours
	00321	00394
	00362	03334
	00425	00511
	00370	00444
	00370	00444
	00384	03335
	00384 00321	
	00384 00321 DIAGRAM REFERENCE	03335 00394
	00384 00321	03335
	00384 00321 DIAGRAM REFERENCE	03335 00394
	00384 00321 DIAGRAM REFERENCE 24 hours 00445	03335 00394 4 x 7 days 00499
	00384 00321 DIAGRAM REFERENCE 24 hours 00445 00381	03335 00394 4 x 7 days 00499 00296
	00384 00321 DIAGRAM REFERENCE 24 hours 00445 00381 00354	03335 00394 4 x 7 days 00499 00296 00293
	00384 00321 DIAGRAM REFERENCE 24 hours 00445 00381	03335 00394 4 x 7 days 00499 00296
	00384 00321 DIAGRAM REFERENCE 24 hours 00445 00381 00354	03335 00394 4 x 7 days 00499 00296 00293
	00384 00321 DIAGRAM REFERENCE 24 hours 00445 00381 00354 00379	03335 00394 4 x 7 days 00499 00296 00293 00298
	00384 00321 DIAGRAM REFERENCE 24 hours 00445 00381 00354 00379 00381	03335 00394 4 x 7 days 00499 00296 00293 00298 00296
	00384 00321 DIAGRAM REFERENCE 24 hours 00445 00381 00354 00379 00381	03335 00394 4 x 7 days 00499 00296 00293 00298 00296 00293
	00384 00321 DIAGRAM REFERENCE 24 hours 00445 00381 00354 00381 00381 00354 00354 00354 00354 00379	03335 00394 4 x 7 days 00499 00296 00293 00298 00296 00293 00293 00293
	00384 00321 DIAGRAM REFERENCE 24 hours 00445 00381 00354 00381 00381 00354 00354 00354 00379 00379 DIAGRAM REFERENCE	03335 00394 4 x 7 days 00499 00296 00293 00298 00296 00293 00293 00293
	00384 00321 DIAGRAM REFERENCE 24 hours 00445 00381 00354 00381 00354 00354 00354 00354 00379 00367 00379 DIAGRAM REFERENCE 24 hours	03335 00394 4 x 7 days 00499 00296 00293 00298 00296 00293 00293 00293 00293 00293 00293 00293
	00384 00321 DIAGRAM REFERENCE 24 hours 00445 00381 00354 00381 00354 00354 00354 00379 00367 00379 DIAGRAM REFERENCE 24 hours 00445	03335 00394 4 x 7 days 00499 00296 00293 00298 00296 00293 00293 00293 00293 00293 00293 00293 00301 00298
	00384 00321 DIAGRAM REFERENCE 24 hours 00445 00381 00354 00381 00354 00354 00354 00354 00379 00367 00379 DIAGRAM REFERENCE 24 hours	03335 00394 4 x 7 days 00499 00296 00293 00298 00296 00293 00293 00293 00293 00293 00293 00293

are guaranteed if the pens and diagrams used are from Jules Richard Instruments.

REMOTE PANORAMIQUE Capillary length * 5 meters ** 10 meters *** 15 meters TRANSALIM Capillary length * 10 meters ** 2 meters *** 2 x 2 meters

ACCESSORIES	DESCRIPTION	REF.	
FOR THERMALIM	Diagram milled nut	00334	
FOR THERMALIM II S	Embedding kit	00469	
	Capillary with 10 m con- nectors	00265	
	Capillary with 20 m con- nectors	00271	
	Capillary with 30 m con- nectors	00278	
FOR	Capillary with 40 m con- nectors	00284	
PRESSURE- LEVEL PANORAMIQUE (12/17	Capillary with 50 m con- nectors	00279	
CONNECTOR)	Capillary with 60 m con- nectors	00266	
	0 to 6 m level indicator	00707	
	0 to 10 m level indicator	00730	
	Cover	00260	
	Additional removable cassette 7 days	00441	
FOR TRANSALIM	Additional removable cassette 24 hours	00533	
	Additional removable cassette 28 days	00492	
	Violet fibre-tip pen	00005	
FOR ALL MECHANICAL DEVICES	Black fibre-tip pen	00292	
	Red fibre-tip pen	00299	

	THERM	THERMALIM II MINIDISQUE			P	PANORAMIQUE		
FEATURES	R Model	S Model	REMOTE	AMBIENT	REMOTE	AMBIENT	PRESSURE- LEVEL	
Measurement accuracy at 23°C	T: ± 2°C (class 2 of the EN 12830 standard)		T: ± 2% of the MR with a minimum of ± 1°C RH: ± 5% RH		T: ± 3% of the MR with a minimum of ± 2°C	T: ± 1% of the MR with a minimum of ± 0,5°C RH: ± 5% RH	Pressure (from 0.6 B to 60 B): ± 1.5% of the MR Curved bronze tube Low pressure: ± 1.5% of the MR Beryllium copper capsule ± 1.5% of the MR Beryllium copper capsule	T: ± 2°C (class 2 of the EN 12830 standard)
Measurement range (MR)	from -35°C to +15°C	+15°(see preceding table					from -25°C to +25°C	
Storage conditions	from -15°C to +60°C from -35°C to +65°C			from -35°C to +65°C			from -40°C to +85°C	
Operating conditions	from +5°C	to +40°C	from -5°C to + 40°C	according to the MR		according to the MR		from -30°C to +65°C
Temperature sensor	Probe in stainless steel for foodstuffs of Ø 10 mm and L 100 mm connected to casing by a copper capillary of Ø 2.5 mm (L 3 m)		00 mm sing llary	Bimetallic element	Probe in stainless steel for foodstuffs of Ø 10 mm and L 100 mm connected to casing by a copper capillary of Ø 2.5 mm (L 3 m)	Bimetallic element		Bulb in stainless steel for foodstuffs connected to casing by a copper capillary of Ø 1.4 mm
Humidity sensor				Hair bundle	Hair bundle			
Recording medium	Circular diagram Ø 125 mm on pre-printed paper Pre-printed strip or roll					Circular diagram Ø 160 mm on pre-printed paper		
Recording time	7 days 7 days or 24 hours			24 hours or 7 days or 4 x 7 days			24 hours or 7 days or 28 days	
Diagram movement	Quartz clockwork 2-speed quartz clockwork			2-speed quartz or mechanical clockwork			Quartz clockwork	
Diagram speed					At 0°C: 2 mm/H for 1 round 7 days 14 mm/H for 1 round/24 H			
Power supply	1 AA-type alkaline battery (1.5V)							
Autonomy	Battery: 1 year - Pen: 90 m line length				Battery: 6 months Pen: 90 m line length			
Protection	IP 20				IP 65			

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