

JULIEN P. FRIEZ & SONS, INC.

(A Subsidiary of The Bendix Aviation Corporation)

BALTIMORE, MARYLAND, U.S.A.

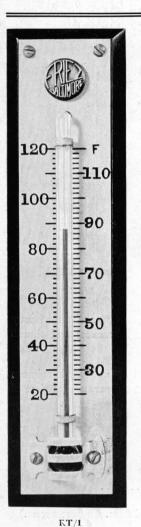
ESTABLISHED 1876

BULLETIN #L

FRIEZ THERMOMETERS

Nov., 1934

FRIEZ ROOM THERMOMETERS



NEW range of plain, neat ROOM THERMOMETERS of sufficient accuracy for most industrial uses, yet of such good appearance as to be suitable for the finest applications in homes, offices, stores, public buildings, schools, hospitals, theaters, etc. The metal scale plates are of ancdized (Alumilite) aluminum, proof against corrosion from acid, alkaline, brine, heat, cold, scratches, etc., and mounted on ebony finished hardwood bases. Scale plates are finished in "satin silver" or "bronze." Individually graduated and scaled every 2° F. over the range 20° to 120° F. Red liquid filled and with normal glass bulb. Illustration full size. Best U. S. manufacture.

TYPE

LIST PRICE
(F.O.B. Baltimore)
(D)

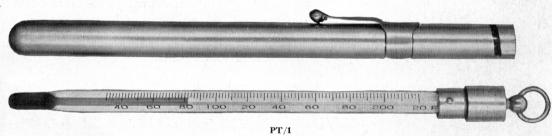
\$2.00

This range of Room Thermometers match up well with Friez Humidistats, Thermostats, Relative Humidity Indicators, etc. (See Bulletin "K"). State if "Satin Silver" (standard), or "Bronze" finish required.

See this Bulletin also for Outdoor, Industrial and Insertion Thermometers of various types. See Bulletin "K" for Automatic Controls and other Humidity and Temperature Instruments.

FRIEZ POCKET THERMOMETERS

This range of POCKET THERMOMETERS will be of great general utility to Engineers, Dealers, Salesmen, Service Engineers, etc., and to many Industrial and Plant Engineers and Executives. They are exceptionally well made and finished. Cases of aluminum with nickel plated brass fittings. Thermometer tubes can be instantly replaced. Strong pocket clip and top ring are provided. Stems are carefully etched and have normal glass bulbs. Overall length, 5½". Outside diameter, ½". Best U. S. manufacture.



LIST PRICE (F.O.B. Baltimore)

\$3.50

PT/1—Friez Standard Pocket Thermometer, complete graduation from -30° to +120° F., in 2° intervals and with lens front red reading mercury column.....

Note: Special ranges can be provided (furnished with regular lens front mercury columns without red reading feature), as follows:

Scale Range	Scale Intervals	LIST PRICE (F.O.B. Baltimore)
30°-220° F.	2°	\$4.50
30°-300° F.	2°	\$5.10
30°–400° F.	5°	\$5.65
30°-500° F.	5°	\$6.00
30°-600° F.	5°	\$6.40

Unless otherwise specified, standard type PT/1 will be sent.

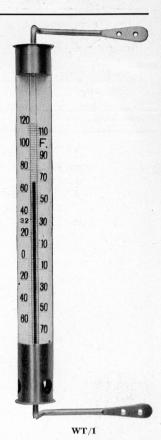
TYPE

WINDOW THERMOMETERS

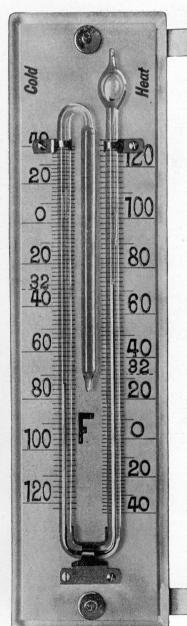
Vienna Type Window Thermometer. Constructed with the thermometer tube on white opal glass. Scale mounted in a glass cylinder. The blue spirit tube has a magnifying lens front. Furnished with white metal pliable brackets. Graduated approximately -30° to $+120^{\circ}$ F. Scale length, 8". Very handsome appearance. Not of U. S. manufacture. As illustrated to right.

TYPE LIST PRICE (F.O.B. Baltimore)

WT/1—Vienna Type Window Thermometer, as described above \$2.30



MAXIMUM AND MINIMUM REGISTERING THERMOMETERS Sixe's Type



In the Sixe's Thermometer, not of U. S. manufacture, the actuating medium is Beechwood creosote, or other suitable material, the function of the mercury column being mechanical. The scale of the Minimum side is inverted. The indices of magnetic material are moved by the mercury column and remain at the highest and

the lowest points reached until reset by means of a magnet. The tube is mounted on a heavy beveled plate glass scale 10'' long with white background, plated metal brackets and thumb screws for attaching to window frame. Graduated -40° to $+120^{\circ}$ F.

This instrument forms an extremely useful Thermometer, registering as it does not only Maximum and Minimum Temperatures since the last resetting but also the current temperature at time of any observation. See illustration on left.

TYPE

LIST PRICE
(F.O.B. Baltimore)
(D)

(Write for separate literature on U. S. Weather Bureau Pattern Max. and Min. Thermometers.)

CHEMICAL, TEST AND RESEARCH THERMOMETERS

A full range of good quality, up-to-date Chemical and Armored Test Thermometers are available. The former running from 6'' to 18'' in length, and the latter from 12'' to 18'' and covering ranges from -30° to $+950^{\circ}$ Fahrenheit, or from -10° to $+500^{\circ}$ Centigrade.

State scale range and unit of graduation desired.

Quotations on application.

Special Test and Research Thermometers of extreme precision available.

State your requirement.

MM/1

FRIEZ PIPE, DUCT, TANK OR WALL INSERTION THERMOMETERS

These Thermometers are strongly built and of best U. S. materials and workmanship throughout. The bulb chambers are very sensitive or "fast." The case and fittings are polished and lacquered in either brass or nickel as noted. Bulb chambers are of Monel metal. Excellent protection to the tubes is afforded. Where required for air or gas, open type thermometer tubes should be specified.

TYPE IT/I—Friez Insertion Thermometer, as illustrated. Case of polished nickel finish. Scale 5" long and of oxidized brass with white figures. Stem chamber of Monel metal 1" long below ½" standard pipe thread, with lens front tube with circle mercury or red spirit. (Specify which required.) Graduated 30" to 220" E., or -40" to +100" F. (Specify which required.) Graduated 30" to 220" E., or -40" to +100" F. (Specify which required.) Graduated 30" to 220" E., or -40" and of oxidized brass with white figures. Stem chamber of Monel metal 2" long below ½" a 3" standard pipe thread. Available in the following rangers -30" to +100"; or 120"; 30" to 240"; 30" to 300"; 30" to 500"; 30" to 500"	sitive or "fast." The case and fittings are polished and lacquered in either brass or nickel as noted. Bulb chambers are Excellent protection to the tubes is afforded. Where required for air or gas, open type thermometer tubes should be	of Monel metal.
IT/1—Price Insertion Thermometer, as illustrated. Case of polished nickel finish. Scale S' long and of oxidized brass with white figures. Stem chamber of Monel metal 1' long below \(\frac{1}{2}\) (with the first front tube with either mercury or red spirit. (Specify which required.) Graduated 30° to 220° F, or -40° to +100° F. (Specify which required.) Graduated 30° to 220° F, or -40° to +100° F. (Specify which required.) Graduated 30° to 220° F, or -40° to +100° F. (Specify which required.) Graduated 30° to 220° F, or -40° to 10° Tir/2—Price Insertion Thermometer, just as above but angle pattern, as illustrated. See of polished and lacquered brass. Scale 8' long and of oxidized brass with white figures. Stem chamber of Monel metal 2' long below \(\frac{1}{2}\) or 320° 30° to 400°, 30° to 300°, 30° to 400°, 30° to 30°, 30° to 40°, 30° to 30°, 30° to 400°, 30° to 600°. Bulls below lock mut 4'', with lens front mercury tube in either of the following ranges: -30° to +100°; 30° to 240°, 30° to 30°, 30° to 400°, 30° to 600°. Bulls hard for a standard instrument allows for thickness of wall of 240°, 30° to 30°, 30° to 400°, 30° to 600°. Bulls have for maximum sensitivity and is protected with policy and the propertied metal guard. IT/6—Friez Insertion Thermometer, Wall Pattern, just as above but with mercury bath enclosed bulls chamber, as illustrated. 1T/10—Triez Insertion Thermometer, wall Pattern, just as above but with mercury bath enclosed bulls chamber, as illustrated.		LIST PRICE
TI /2—Friez Insertion Thermometer, just as above but angle pattern, as illustrated. See all of oxidized brass with white figures. Stem chamber of Month ented 12" long below 3½" or 3½" standard pipe thread. Available in the following ranges: -30" to +100°; 0° to 120°; 30" to 240°; 30° to 300°; 30° to 400°; 30° to 500°; 30° to 500	oxidized brass with white figures. Stem chamber of Monel metal 1" long below \(\frac{1}{9}\)" standard pipe thread, with	(D)
IT /3—Friez Insertion Thermometer, as illustrated. Case of polished and lacquered brass. Scale 8" long and of oxidized brass with white figures. Storn chamber of Mona metal 2" long below 3/6" of 3/6" stondard pipe thread. Available in the following ranges: —50" to ±100% for 100% 200" to 240% 30" to 300%, 30" to 400%, 30" to 500%, 30" to 600% 200" to 750". With either open or closed bulb chamber. (Specify which required.) Straight pattern. IT /4—Friez Insertion Thermometer, just as above but angle pattern. If the Thermometers are to be used specially for measuring temperature of brine lines, the case is built with a 4" extression between rangen are to be used specially for measuring temperature of brine lines, the case is built with a 4" extression between rangen are to be used specially for measuring temperature of brine lines, the case is built with a 4" extression between rangen are to be used specially for measuring temperature of brine lines, the case is built with a 4" extression between rangen are to be used specially for the purpose of keeping the frost line below the scale. There is a slight increase in cost for this feature. IT /5—Friez Insertion Thermometer, Wall Pattern, as illustrated. Case of polished and lacquered brass. Scale for the purpose of keeping the frost line below the scale. There is a slight intended to obtain the purpose of keeping the frost line below the scale. There is a slight intended to obtain the purpose of keeping the frost line below the scale. There is a slight intended to the purpose of keeping the frost line below the scale. There is a slight intended to the purpose of keeping the frost line below the scale. There is a slight intended to the purpose of keeping the frost line below the scale. There is a slight intended to the purpose of keeping the frost line below the scale. There is a slight intended to the scale of	to +100° F. (Specify which required.) Straight pattern	\$7.05
of oxidized brass with white figures. Stem chamber of Monel metal 2" long below ½" or 3" 3" or 40"; 30" to 500"; 200" to 750". With either open or closed balls chamber. (Specify which required.) Straight pattern		
17/4—Friez Insertion Thermometer, just as above but angle pattern. 18/10/10/10/10/10/10/10/10/10/10/10/10/10/	of oxidized brass with white figures. Stem chamber of Monel metal 2" long below \(\frac{1}{2}\)" or \(\frac{3}{4}\)" standard pipe thread.	
If the Thermometers are to be used specially for measuring temperature of brine lines, the case is built with a 4" extension between hexagon and lower opening of scale for the purpose of keeping the first line below the scale. There is a slight increase in cost for this feature. IT /5—Friez Insertion Thermometer, Wall Pattern, as illustrated. Case of polished and lacquered brass. Scale 8" long and of oxidized brass with white figures. Angle type stem equipped with flange, lock nut and washer for attaching through walls, refrigerators, vast, insulated docts, etc. Standard in the following ranges: —30° to +100°; 30° to 240°; 30° to 300°; 30° to 400°; 30° to 500°; 30° to 400°; 30° to 500°; 30° to 500°; 30° to 400°; 30° to 500°; 30° to 500°; 30° to 400°; 30° to 500°; 30° to 600°. Bulb is bare for maximum sensitivity and is protected with perforated metal guard. IT /6—Friez Insertion Thermometer, Wall Pattern, just as above but with mercury bath enclosed but have a sillustrated. \$23.00 \$240°; 50° to 300°; 30° to 400°; 30° to 500°;	to 600°; 200° to 750°. With either open or closed bulb chamber. (Specify which required.) Straight pattern	\$12.95
extension between hexagon and lower opening of scale for the purpose of keeping the frost line below the scale. There is a slight increase in cost for this feature. IT/5—Friez Insertion Thermometer, Wall Pattern, as illustrated. Case of polished and lacquered bras. Scale 87 long and of solidized brass with white figures. Angle type stem equipped with flange, lock nut and washer for attaching through walls, refrigerators, vats, insulated ducts, etc. Standard instrument allows for thickness of wall of 24%. Stem length below lock nut 47, with lens front mercury tube in either of the following ranges: 30° to 100°; 30° to 500°; 30° to 500		
8" Tong and of oxidized brass with white figures. Angle type stem equipped with flange, lock nut and washer for attaching through walls, refrigerators, vats, insulated ducts, etc. Standard instrument allows for thickness of wall of 22". Stem length below lock nut 4", with lens front mercury tube in either of the following ranges: -30" to +100"; 30" to 500"; 30" to 600"; 30" to 60	extension between hexagon and lower opening of scale for the purpose of keeping the frost line below the scale. There	
IT/6—Friez Insertion Thermometer, Wall Pattern, just as above but with mercury bath enclosed bulb chamber, as illustrated. \$24.50	IT/5—Friez Insertion Thermometer, Wall Pattern, as illustrated. Case of polished and lacquered brass. Scale 8" long and of oxidized brass with white figures. Angle type stem equipped with flange, lock nut and washer for attaching through walls, refrigerators, vats, insulated ducts, etc. Standard instrument allows for thickness of wall of 2½". Stem length below lock nut 4", with lens front mercury tube in either of the following ranges: -30° to +100°; 30° to 240°; 30° to 300°; 30° to 400°; 30° to 500°; 30° to 600°. Bulb is bare for maximum sensitivity and is protected with	
TAS	IT/6—Friez Insertion Thermometer, Wall Pattern, just as above but with mercury bath	
TIT/2 IT/2 IT/2 IT/2 IT/2 IT/2	enclosed but o chamber, as muserated.	
	Tabol under propried	5/2
	IT/2 IT/2 IT/5 & IT/6 IT/5 % IT/6	

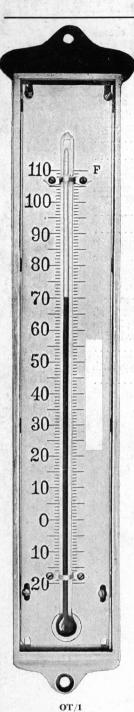
IT/5 & IT/6

IT/3

IT/3

IT/5 & IT/6

FRIEZ WALL BRACKET THERMOMETERS



These Thermometers are carefully calibrated and substantially built. They are adapted to general outdoor use and for greenhouses, cold-storage rooms, egg rooms, store rooms, cellars, drying rooms and general factory use. The lens front mercury or red spirit tube is mounted into a cadmium plated gray iron rectangular frame with lugs for screws at top and bottom. **Two scale ranges available.** -20° to $+100^{\circ}$ or 30° to 220° . **Specify which required.** Of best U. S. manufacture. As illustrated on left.

TYPE	LIST PRICE (F.O.B. Baltimore
OT/1—Friez Wall Bracket Thermometer. Case of cadmium plate. Scale 7" long. See above for ranges available	\$3.45
OT/2—Friez Wall Bracket Thermometer. Case of cadmium plate. Scale 10" long. See above for ranges available	\$4.20
OT/3—Friez Wall Bracket Thermometer. Case of cadmium plate. Scale 12" long. See above for ranges available	\$4.60
OT/4—Friez Wall Bracket Thermometer. Case of polished brass. Scale 7" long. See above for ranges available	\$6.10
OT/5—Friez Wall Bracket Thermometer. Case of polished brass. Scale 10" long. See above for ranges available	\$7.25
OT/6—Friez Wall Bracket Thermometer. Case of polished brass. Scale 12" long. See above for ranges available	\$7.65
C 1 C D TL	

See page 1 for Room Thermometer.

FRIEZ COLD STORAGE ROOM THERMOMETERS

These Thermometers are designed and calibrated specially for Cold Storage Rooms. The scale is of silvered brass mounted on a "V" shaped hardwood back to insulate from wall. The scale is 12" long with black figures and graduations. As illustrated on right.

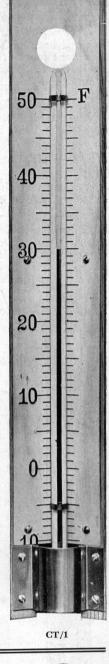
TYPE $\begin{array}{c} \text{LIST PRICE} \\ \text{(F.O.B. Baltimore)} \\ \text{CT/1} \text{--} \text{Friez Cold Storage Room Thermometer, as above.} \end{array}$

Extra heavy lens front mercury tube. Graduated -20° to +60° F. with 1° graduations \$3.60

See Page 1 for Room Thermometers.

OTHER FRIEZ PRODUCTS

Humidistats; Thermostats; Relays and Complete Control Assemblies; Humidity and Temperature Indicators; Recording Instruments; U. S. Weather Bureau Type Hygro-thermographs, Hygrographs, Thermographs; Anemometers; Sling and Aspirating Psychrometers; Wind Direction, Wind Velocity, and Weather Instruments of all kinds; Sensitive Thermo Regulators; Solenoid Valves, Motor-Operated Valves, Damper-Motors; Scientific and Special Apparatus.





Designed and Manufactured by

JULIEN P. FRIEZ & SONS, Inc.

BALTIMORE, MARYLAND, U.S.A.



REG. U. S. PAT. OFFICE