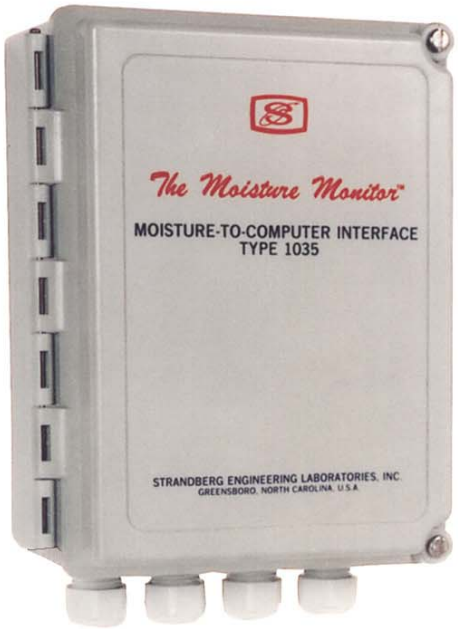
The Moisture Monitor™

MOISTURE-TO-COMPUTER INTERFACE, TYPE 1035G



MADE JUST FOR YOU... AND YOUR PROCESS CONTROLLER

- ✓ COVERS THE ENTIRE RESIDUAL MOISTURE SPECTRUM... STARTING AT ZERO PERCENT
- ✓ LINEAR ALL THE WAY
- ✓ ALL FIBERS, ANY BLEND
- ✓ 0 - 10 VOLTS AND 4 - 20 mA DC OUTPUTS
- ✓ GREAT FOR SET-POINT CONTROLS IN SIZING AND FINISHING

STRANDBERG ENGINEERING LABORATORIES, INC.
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-GENERAL INFORMATION-

On-line instruments and controls for residual moisture in textile materials require different settings for the various fibers and blends. They also require compensation for different warp and fabric densities and for the number and kind of moisture sensing rolls used. These settings are generally changed manually to permit accurate readings in percentages of moisture or in general terms of moisture condition, such as dry, normal, and wet.

The Type 1035 MOISTURE-TO-COMPUTER INTERFACE is designed specifically for use with process controls. It requires no manual adjustments and connects directly between the moisture sensing rolls and the process controller.

Electrical outputs are 0-10 volts and 4-20 mA d-c which are directly proportional to moisture in textile fibers.

The fact that the relationship is linear is important, but, of greater importance, is the fact that, in one single range, it spans the full spectrum of residual moisture in natural and man-made textile fibers and blends... from dry to wet... and from glass to wool.

Moisture sensing rolls contact the web to provide a path for minute electric currents that vary with the moisture in the web. Short rolls, one or several, contact the web as it passes over existing guide rolls and driven rolls on the machine.

Tandem rolls span the full width of the web and are used on warp sizing machines and fabric dryers to sense moisture.

Light-weight rolls are used on fine, continuous filament yarns. Heavy, knurled rolls are used on heavily-sized coarse yarns.

Each sensor configuration produces a different relationship between moisture and electric conductivity, a real problem for ordinary instruments and controls. For the 1035, it's a predictable coefficient, and computers love coefficients.

Fiber participation affects the relationship between moisture and electric conductivity in a big way. From glass and polyester to cotton, rayon, and wool, the electrical conductivity range is enormous. Add the infinite possibilties of blends, and you'll appreciate why Strandberg's Dry-Normal-Wet concept developed in the fifties won world-wide acclaim.

But, that's old hat now. Percentages to the nearest tenth can be displayed and printed directly. Computerized controls love the 1035, because it speaks their language... offset, span, coefficient, numerical readout, set points and tolerances.

It solves a mammoth problem computers can't live with... at an insignificant price.

-SPECIFICATIONS-

Power Requirements ..... 115/230 volts a-c

Weights and Dimensions ..... 5.5 lb (2.5 kg); 10.0" (254 mm) high, 7.25" (184 mm) wide, 3.8" (97 mm) deep

Enclosure ..... Stainless steel, Type 304, NEMA 4X water resistant with hinged door for use in wet processing areas

Mounting ..... Wall, 4 holes 5/16" (7.9 mm) diameter, 4" (102 mm) horizontal, 9" (229 mm) vertical, any position

Electrical Access ..... Bottom, 4 holes 0.75" (19 mm) diameter, 1.25" (32 mm) apart

Maximum Temperature ..... 140º F (60º C)

Fuse ..... 1 ampere - 250 volts

Input ..... Moisture sensing rolls, Strandberg Type Nos. R6A-L, R6A-M, R6A-H, R6A-HK, and R6A-LS, 6" (152 mm) rolls, including full-span sensing rolls for slasher warp, fabric, and carpet, special rolls available for stock dryers, and existing guide rolls using Insulation Kit

Output ..... 0-10 volts d-c, 1,000 ohms minimum load resistance, 4-20 mA d-c, 0-400 ohms

Standard Regains and Ranges .....

Fiber	Std. Regain	Range
Acetate	6.9%	0.0 - 21.8%
Acrylic	1.3	0.0 - 5.7
Aramid (Nomex)	6.5	0.0 - 20.3
Aramid (Kevlar)	9.3	0.0 - 22.6
Aramid (Kevlar 149)	1.2	0.0 - 6.8
Cotton	7.7	0.0 - 20.0
Fluorocarbon	0.1	0.0 - 2.6
Glass	0.1	0.0 - 2.6
Jute, Kenaf	12.5	0.0 - 36.9
Lyocell	11.5	0.0 - 33.0
Melamine	5.0	0.0 - 26.0
Modacrylic	2.5	0.0 - 9.1
Nylon	4.3	0.0 - 22.6
Olefin	0.1	0.0 - 2.6
Pelco	0.4	0.0 - 2.6
Polyester	0.4	0.0 - 2.6
Polyethylene	0.1	0.0 - 2.6
Rayon	12.1	0.0 - 34.5
Saran	0.1	0.0 - 2.6
Silk	10.0	0.0 - 40.5
Spandex	1.3	0.0 - 5.7
Sulfar	0.6	0.0 - 2.6
Triacetate	3.3	0.0 - 13.0
Viscose Rayon	13.0	0.0 - 37.1
Wool	13.6	0.0 - 46.0
All blends of above		

Accuracy ..... Within 2% of reading, such as ±0.1% at 5% moisture regain

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