DEPARTMENT OF CONSUMER AND CORPORATE AFFAIRS

STANDARDS BRANCH

E-51

OTTAWA, Jan. 10, 1969.

NOTICE OF APPROVAL

FOR

TEXAS INSTRUMENTS SERVO/RITER II MODEL "FS01W6A" SINGLE PEN STRIP CHART RECORDING POTENTIOMETER

Apparatus

Millivolt Inputs (1)	5, 10, 50 and 100 millivolts D.C.
Record	Singe pen continuous line
Chart and Scale	9.75 inches calibrated width
Standardization	Continuous automatic, zener diode
Pen Speeds (2)	1, 5, 10, 24 seconds
Chart Speeds (3)	1, 2, 4 inches per hour 1½, 3, 6, 12, 24 inches per hour 2½, 5, 10, 20, 40 inches per hour
Zero position	LH or centre (centre zero not approved with recorders having retransmitting slidewire)
Power Supply	120 volts 60 Hz
Max. external resistance	25,000 ohms

(1) The kilowatts, megawatts or other power function which the millivolts represent will be shown on the nameplate and scale.

(2) The pen speed is the time taken for the pen to travel the full length of the scale with a step input millivolt change equal to full scale.

(3) The groups of chart speeds are obtained by a selected motor and its associated gears.

The model designation is made up of seven (7) groups of letter-number combinations and those covered by this approval are listed and described as follows: e.g.

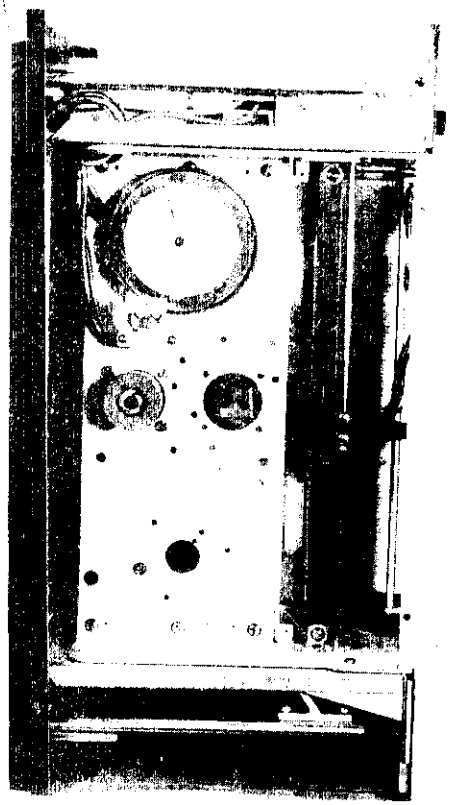
FS01W6A - 0L10P-00 - 100 - AE - DL - R16RTD -

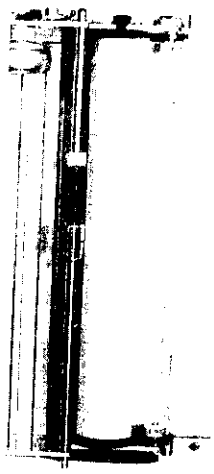
(1) (2) (3) (4) (5) (6) (7)

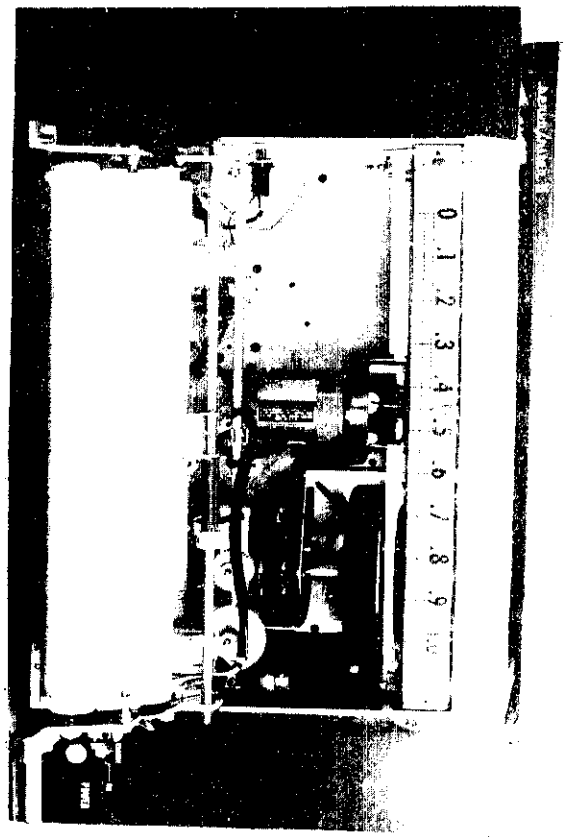
Group (1) FS01W6A Flushmounting, single channel, Servo/Riter II Recorder

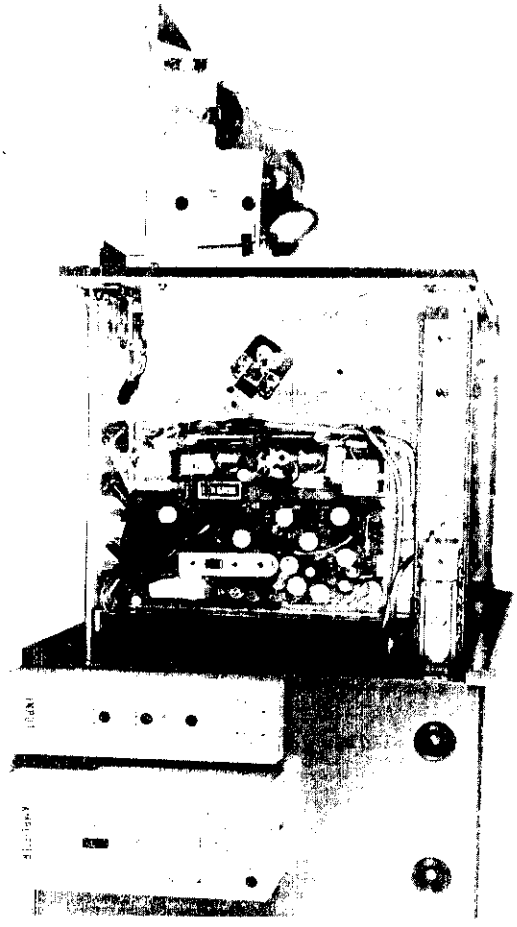
..../2

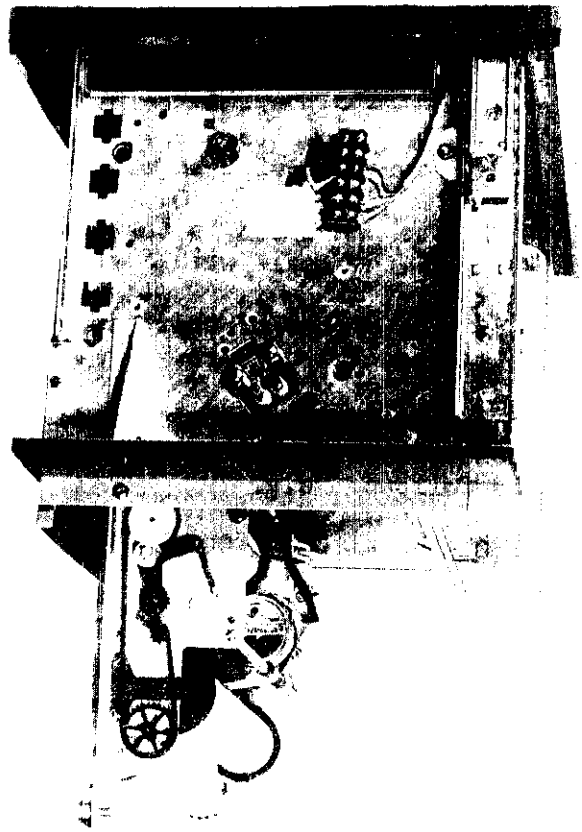
TEXAS INSTRUMENTS SERVO/RITER II MODEL "FS01W6A" SINGLE PEN
STRIP CHART RECORDING POTENTIOMETER











Group (2)

subgroup 1	0-------	No input attachment or attenuator
subgroup 2	-L--P---	Left hand zero
	-C--P---	Centre zero
subgroup 3	--05----	5 millivolt span
	--10----	10 millivolt span
	--50----	50 millivolt span
	--00----	100 millivolt span
subgroup 4	------00	No control attachments
	-----100	1 blindset SPDT switch
	-----200	2 blindset SPDT switches
	-----300	2 frontset SPDT switches
Group (3)	010	1 second pen speed
	050	5 seconds pen speed
	100	10 seconds pen speed
	240	24 seconds pen speed
Group (4)	AE	1, 2 or 4 inches per hour
	BE	$1\frac{1}{2}$, 3, 6, 12 or 24 inches per hour
	CE	$2\frac{1}{2}$, 5, 10, 20 or 40 inches per hour
Group (5)	DL	Door with lock
Group (6)	L16	LH marker pen 120 volt 60 Hz actuated
	R16	RH marker pen 120 volt 60 Hz actuated
	LR16	Both marker pens 120 volt 60 Hz actuated
	F16	Internal lighting
	P	Tilt-out chart writing platen
	TU	Upscale burnout
	TD	Downscale burnout
	X	Output millivolts
	Y	Retransmitting slidewire
Group (7)		None approved

A dash will separate each of the groups so that the model designation of the recorder given as an example as

FS01W6A - 0L10P-00 - 100 - AE - DL - R16PTD

would be interpreted to mean - a single channel servo/riter II strip chart potentiometer recorder with no input attenuator, left hand zero, 10 millivolt span, no control attachments, 10 second pen speed, 1, 2 or 4 inches per hour chart speed, door with lock, RH marker pen, tilt-out chart writing platen and downscale burnout.

..../3

DEPARTMENT OF PUBLIC SAFETY

All recorders covered by this approval must have "DL"in the type designation denoting a door lock; and if equipped with a re-transmitting slidewire must have (XY) denoting the retransmitting function, "TD" denoting downscale burnout protection and have the retransmitted full scale value in millivolts either on the nameplate or on a separate plate.

Description

The Servo/riter II is a continuous balance null type potentiometer recorder providing a continuous ink record on a strip chart.

The case is panel mounted with terminals inside at the back and the mechanism can be withdrawn on slides from the front.

The only control on the front is a single 3-position switch marked "on-standby-off" for turning the instrument on and off and for keeping it energized but without chart drive running.

The chart and chart drive motor are mounted on a framework pivotted at the bottom which can be swung out for chart replacement.

The capillary type pen which carries the indicator over the scale is connected to a plastic ink container which slides along a rod above and at the rear of the chart when in the recording position.

At the right hand side of the recorder will be found the input and amplifier modules, both having metal covers.

The input module is provided with screw-driver-operated zero, calibration and damping adjustments and the amplifier is provided with a screw-driver-operated gain control.

Both modules are transistorized and utilize printed circuits. The input module has provision for a printed circuit plug-in card for the various millivolt ranges.

"Chopper" action as the first step in converting the millivolt error signal to an A.C. signal that is amplified to operate the servo motor, is by means of a pair of photoconductive cells which are illuminated by a pair of neon bulbs shining along two clear plastic rods.

Also incorporated in the input module is a filter through which the incoming millivolt signal passes to reduce the effect of interference in the transmission line.

..../4

The slidewire is mounted with its shaft vertical at the top of the recorder, and if a retransmitting slidewire is installed it will be mounted beneath the measuring slidewire on an extension of the shaft.

The power supply for the retransmitting slidewire is mounted at the left hand side behind the chart. It will be provided with its own regulated power supply and adjustments so that there will be no electrical corrections between input and transmitted millivolts.

Note: The illustrations do not show the required door lock.

Approval granted to: Instronics Techno-Products Limited,
Stittsville,
Ontario.

W.J.S. Fraser,
Chief, Electricity & Gas Division,
Standards Branch.

J.S.T. Swanson,
Chief, Standards Laboratory,
Standards Branch.

Ref: SL-100-20D