CANADA

DEPARTMENT OF TRADE AND COMMERCE

STANDARDS BRANCH

E-22

OTTAWA November 4, 1965.

NOTICE OF APPROVAL

FOR

LANDIS & GYR TYPES "NAA4", "NAA5", "NAB4", "NAC4" and "NAC5"

MAXIPRINT AVERAGE DEMAND IMPULSE PRINTERS

Apparatus

Input	Up to 80 impulses per minute
Mim. Impulse Length	0.06 second
Min. Impulse Spacing	0.6 second
Chart Speed	6 mm per printing
#Time Interval	10, 15, 20, 30 and 60 minutes
Supply	115 volts 60 cycles
Min. Timing Pulse	2 seconds
Register(s)	Cyclometer type with 6 digits
°Max. Print Marker Range	30% From 20% -50% up to 70% -100%
NAA4	single printing drum, resets to zero after each printing.
NAA5	single printing drum, cumulative, does not reset to zero.
NAB4	single printing drum, resets to zero plus graphical marker
NAC4	double printing drum, resets to zero after each printing has chart splitter.
NAC5	double printing drum, cumulative, does not reset to zero.

\# Determined by external time switch, but will be marked on the nameplate

° See description

NOTE: The maxiprint is approved for use only when associated with suitable approved auxiliary devices, e.g., "r4" transmitting contacts and type "q6" timing contacts or type "K" impulse storage attachment on the type "WA1" or "KYA1" time switches, both Landis & Gyr products.

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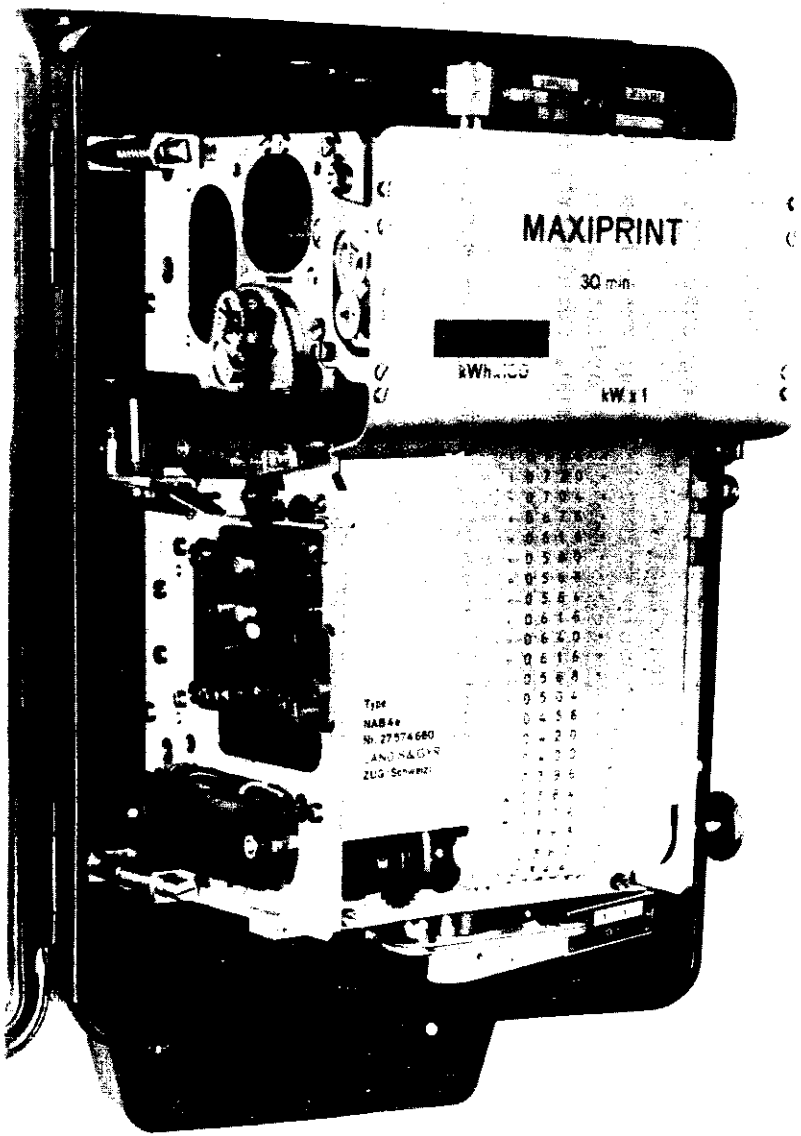
LANDIS & GYR TYPES "NAA4", "NAA5", NAB4", "NAC4" and "NAC5"
MAXIPRINT AVERAGE DEMAND IMPULSE PRINTERS



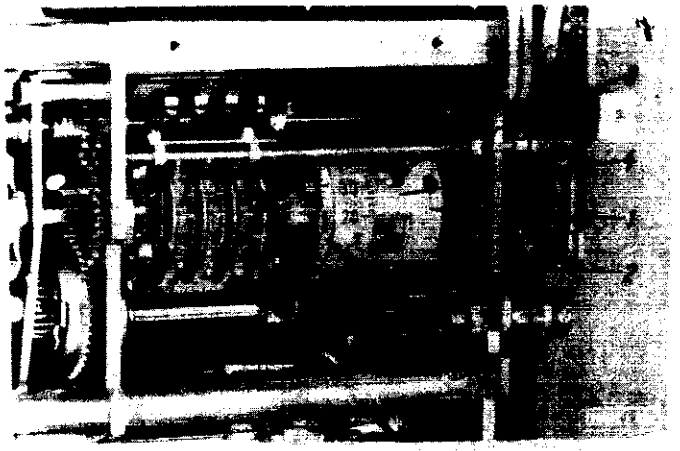


Fig. 3

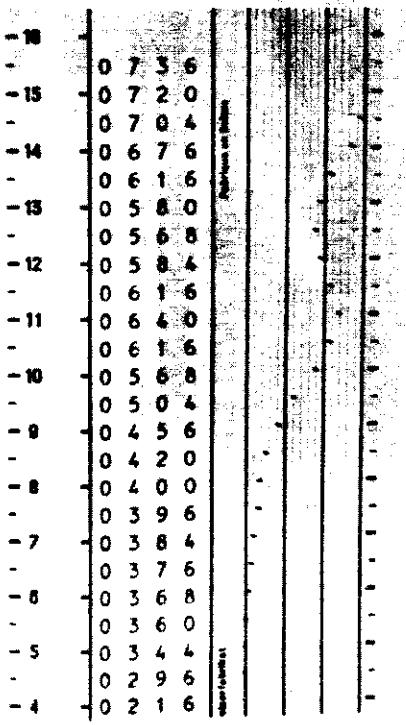


Fig. 5

Description

The Maxiprint is an impulse-operated average demand printer. It contains neither a timing mechanism nor a meter; all operations are initiated by electrical control impulses. Therefore, an installation must comprise a metering instrument as a transmitter to generate pulses, and a time switch to initiate the recording and printing process. Both must be approved devices.

Each metering impulse is equivalent to a certain fixed value of primary units, but as the Maxiprint may incorporate reduction gearing, these impulses may be printed either as impulses or directly as the number of the original units of measurement, e.g., Kw, Mw etc.

Each recording appears on the chart as a number adjacent to the corresponding time marking.

The type "NAB-" differs from the type "NAA-" in that the former has the measured values recorded additionally as dots in the form of a graph in the vertically divided column on the right-hand half of the chart.

Only the numerical record may be used for billing, but the graph on the right-hand side of the chart makes more certain the task of finding the maximum values. It is also of value as a visual indication of the manner in which the load varies.

This graphical record is confined to 30% of the total range and is adjustable to cover the range 20% to 50% up to 70% to 100%. In effect it distributes a portion of the measuring range over the whole of the available chart width and provides in effect a magnifying "window" to view a part of the whole range. Values up to the minimum have the dots printed along the lower margin, and values higher than the maximum are printed along the upper margin.

The type "NAC" is essentially a type "NAA", with a second, identical printing mechanism placed where the recording drum of the "NAB" is found. It is usually fitted with a vertical chart splitter and a horizontal, solenoid operated, chart cutter for the left-hand portion of the chart which then drops into a receptacle in the lower centre of the front window, from where it can be removed by opening a transparent flap.

The receiver relays for both metering and timing impulses are in the form of servo relays requiring low operating current, the power required to drive the integrating mechanism, printing mechanism and chart feed is supplied by a spring mechanism which is kept wound by a small AC motor.

Any pulses arriving during the printing process are stored until the process is ended so that no impulses are lost.

LANDIS & GYR TYPES "NAA4", "NAA5", "NAB4", "NAC4" and "NAC5"
MAXIPRINT AVERAGE DEMAND IMPULSE PRINTERS

Description (Con'd.)

The types "NAA4", "NAB4" and "NAC4" print at the end of each timing period, the total number of pulses that were received during that period, or with appropriate gearing, the total number of Kwh etc., after which, the printing mechanism is reset to zero.

The type "NAC5" is similar to the type NAC4 in that it has two duplicate printing mechanisms, one for each side of the chart, but differs in that the printed record is cumulative, because the printing drums are not returned to zero after each printing operation.

A small red segment covering approximately 30% of the full range may be found mounted above the demand indicator of the type NAB4. It is held in place by friction and may be moved manually around the circumference of the demand dial. Its function is to give a visual indication of the area covered by the graph on the right-hand side of the chart. It has no other purpose.

Incorporated with the type designation may be found one or more of the following suffixes:

e	single rate integrating register
30	denoting that the graphical portion covers 30% of the total range
m	small maximum demand indicator
f1	flush mounting case
f2	surface mounting case for back connection
	Instruments without an f1 or f2 are called domestic pattern having bottom terminals.

NOTE: Readings of "m" above must not be used in computing a billing

The types NAA4 and NAB4 supersede the types NAA2 and NAC2; see circulars S-EA.419 and S-EA.504.

Approval granted to Landis & Gyr Inc.,
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