Consumer and Corporate Affairs
Standards

Consommation et corporations
Normes

SPE-311

Ottawa, Ontario.
K1A 0C9

October 5, 1976.

Your file *Votre référence*

Our file *Notre référence*

G-6565-1

SPECIAL APPROVAL

Granted to: Nortech Control Equipment Inc.
701 Evans Avenue,
Toronto, Ontario.
M9C 1A3

Attention: Mr. E. Rogers

Subject: (a) One only Pacific Technology Inc. Model "418" Two-channel, Pulse Record Printer Ser.No. 0110

(b) One only Pacific Technology Inc. Demand Interval Reset Timer. 115V 60 Hz 1/30 R.P.M. This Timer is to be used in conjunction with the above Printer.

Special Approval has been granted by the Standards Directorate for use of the subject equipment for billing purposes at Churchill Falls, Labrador, Newfoundland, Canada.

The printer and demand timer may be used unsealed.

Operational Limits

Type of Input	Any approved 2-wire (S.P.S.T.) isolated contact device
Max. Input Pulse Rate *	3 pulses per second
Max. Input Circuit Impedance	500 ohms
Accuracy	± 1 pulse

Max. Pulse Count	4-digit registers Max. 9999
Max. Pulse Print-out	4-digits printed on a paper tape Max. 9999
Channel Identifier	1-digit character
Synchronous motor clock	7-digit continuous timing Max. display 999 days 23 hours and 59 minutes (resolution 1 minute)
Demand Time Interval	15, 30 and 60 minutes (synchronous motor reset timer)
Max. Reset Circuit Impedance	500 ohms
Min. Reset Timing Pulse	10 ms.
Contacts Rating	230V, 1A max.
Ambient Temperature	$0^{o}C$ to $50^{o}C$
Power supply	115V A.C. 60 Hz

* Data input channel 1 prints actual pulses received, 4-digit print, where 1 pulse equals an even number of kWh.

Data input channel 2 receives similar pulses but has built-in ratio 1/1.2 and 1 pulse equals 1.2 MW.
For example, the 4-digit register and printout will read 120 for each 100 pulses received.

In this Churchill Falls, Labrador, Newfoundland installation pulses from the existing totalizing kWh meters will be fed to the 2-channel printer.

The input data from two separate sources in the form of 2-wire pulses (dry contact closures) enter serially into each corresponding input channel counter.

The printer will accumulate the incoming pulses in a memory and then at the end of each demand interval (reset command provided by the timer 'b' above) the print mechanism will be servo driven to read the memory of each channel and then the total pulse count of each channel will be printed on a paper tape with the corresponding date hour and minute. No pulses are lost during encoding and printing operations, because of the memory buffer.

This printer is supplied with the +24V d.c. metering option, but the required d.c. voltage is generated within the printer.

The additional information - theory, installation procedure, operation and maintenance is provided in the Pacific Technology Inc. "Equipment Manual for Model 418 Multi-Channel Printer" of August 20, 1974.

D. L. Smith,
Chief,
Electricity and Gas Division.

c.c. Mr. P. Lebeau,
Montreal, P.Q.