DEPARTMENT OF TRADE AND COMMERCE

STANDARDS BRANCH

E-70

OTTAWA March 20, 1968.

NOTICE OF APPROVAL

FOR

SANGAMO TYPE "WLY-" POLYPHASE THERMAL KW-KVA DEMAND METERS

Apparatus

Types WLYP# and WLYS

Service 3 phase 3 wire

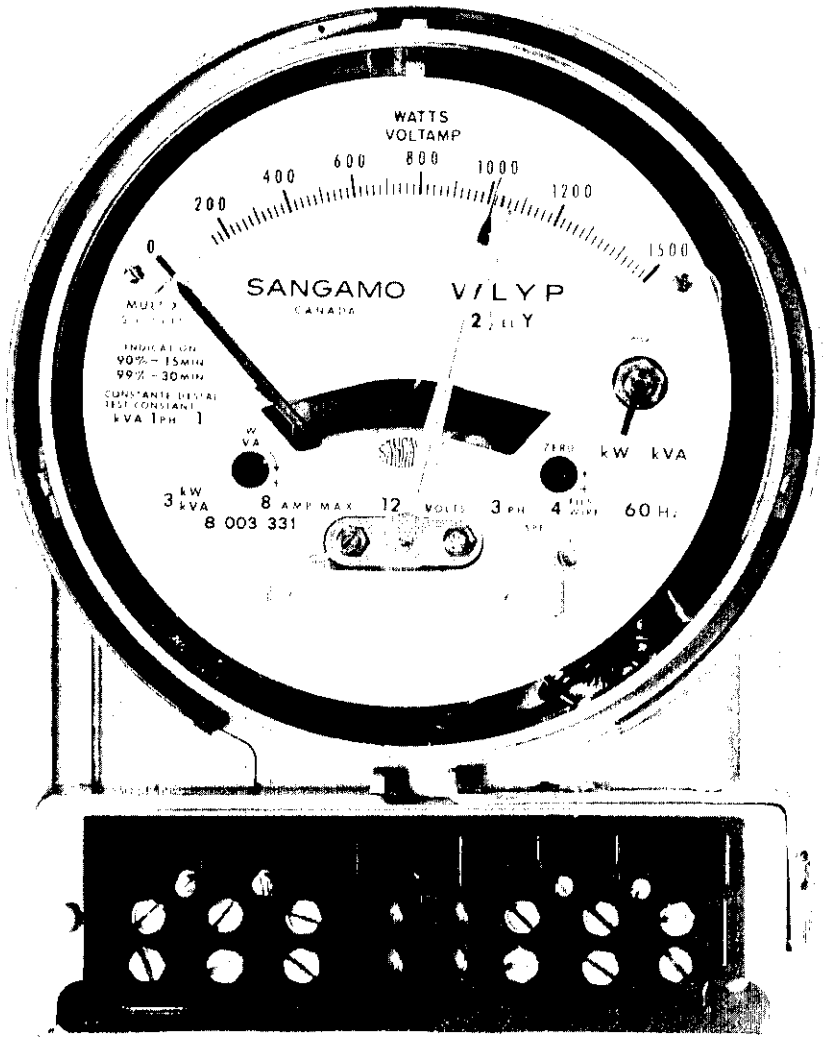
	Voltages	120, 240, 480 and 600 volts					
	Max. Current (amperes)	8	25	50	100	200	
*	Full Scale (KW-KVA)	1.5	5	10	20	40	
*	Multiplier	1	5	10	20	40	
o	Single Phase KVA Test Constant	0.866 (all types and ratings)					
	Indication 90%	15 minutes					
	99%	30 minutes					
	Frequency	50 hz and 60 hz (all types and ratings)					
	Scale	1500 watts/va and 1.5 KW/KVA on 8 ampere meters.					
		1000 watts/va and 1.0 KW/KVA on all other ratings.					

\# Maximum current rating on P base meters is 100 amperes.

* Full scale value and multiplier are given for 120 volts.
For other voltages multiply by the voltage ratio (for 277 volts use 2.5).

o Applies only when the selector switch is set in the KVA position.

SANGAMO TYPE "WLY-" POLYPHASE THERMAL KW-KVA DEMAND METERS



Service 3 phase 4 wire Wye

	Voltages	120, 240, 277 and 345 volts
	Max. Current (amperes)	8 25 50 100 200
*	Full Scale (KW-KVA)	3 9 18 36 72
	Multiplier	2 7.5 15 30 60
o	Single Phase KVA Test Constant	1 (all types and ratings)
	Indication 90%	15 minutes
	99%	30 minutes
	Frequency	50 hz and 60 hz (all types and ratings)
	Scale	1500 watts/va and 1.0 KW/KVA on 8 ampere meters.
		1200 watts/va and 1.2 KW/KVA on all other ratings.

* Full scale value and multiplier are given for 120 volts.

For other voltages multiply by the voltage ratio (for 277 volts use 2.5).

o Applies only when the selector switch is set in the KVA position.

NOTE: Meters of 8 amperes and all voltages listed above for both 3 phase 3 wire and 3 phase 4 wire wye services are available in "F" base mounting as type "WLYF".

Description

The thermal element used in the type "WLY-" polyphase thermal KW/KVA demand meter is identical to that used in the type "LY-" polyphase thermal KVA Demand Meter receiving approval under circular E-64, and all descriptive material on this circular applies also to the type WLY-.

The type WLY- incorporates the same rectifier circuits as described in circular E-64 covering the type LY-.

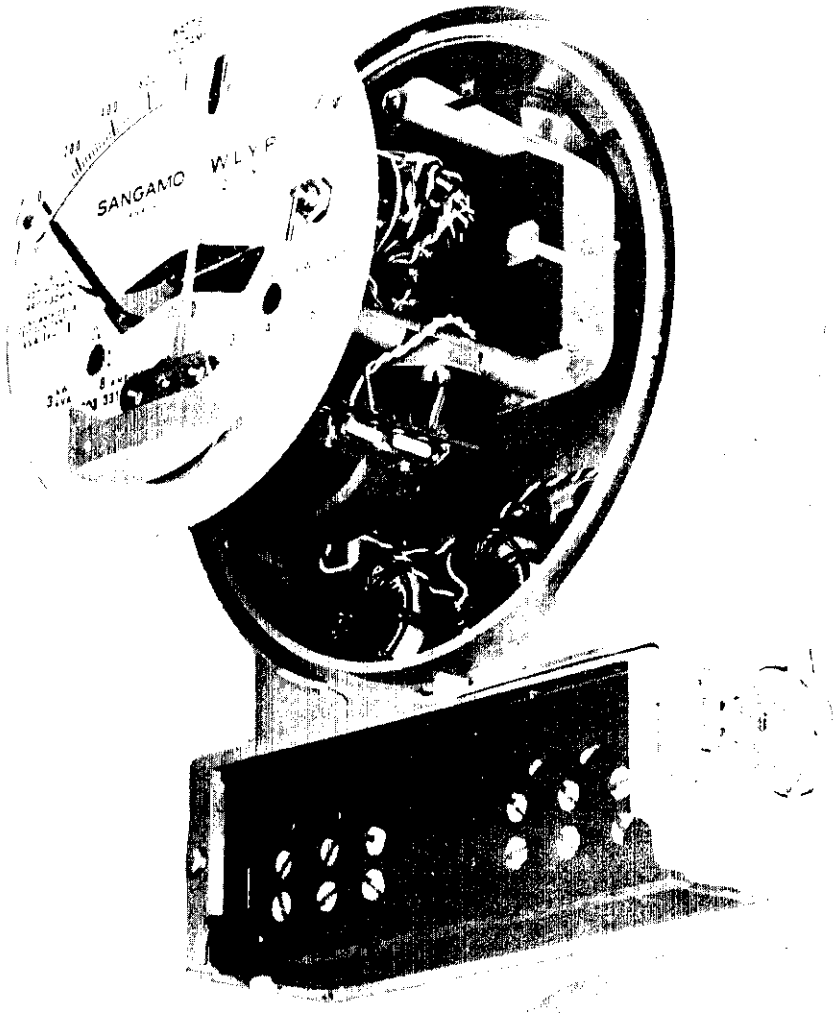
To separate the KW demand function from the KVA demand function, a multi-pole 2-position switch has been installed on the right front of the meter and the two positions of the switch are marked "KW" and "KVA".

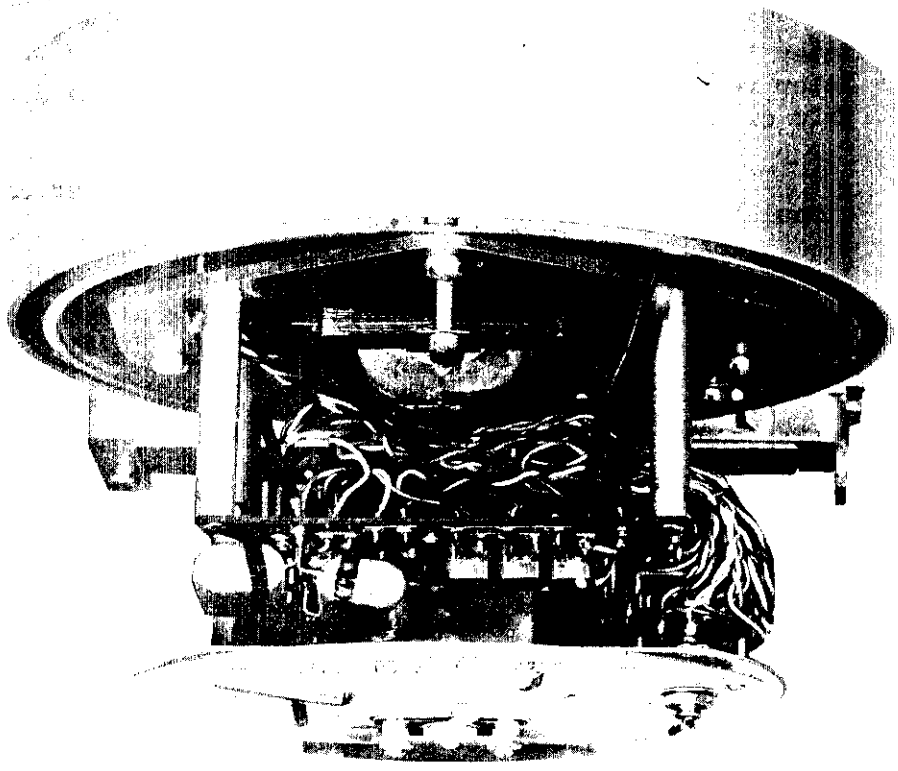
When the switch is in the position marked "KW", the demand indication is in watts, and when the switch is in the position marked "KVA" the demand indication is in voltamperes.

The demand scale multiplier is the same for both switch positions.

However, when verifying on single phase with the switch in the KVA position, it will be necessary to apply the "Single Phase KVA Test Constant" marked on the nameplate in order to obtain the desired scale reading.

SANGAMO TYPE "WLY-"
POLYPHASE THERMAL KW-KVA
DEMAND METERS





Moving the switch from KW to KVA or vice versa is accomplished by turning a knob mounted on the glass cover. The position of this knob may be changed by the utility after the meter has been verifed and sealed, and can be fixed in position by a locating pin and a utility seal.

The type "WLY-" KW/KVA thermal demand meters are designed to meter correctly only when connected in the specified services.

The current coils of the 8 ampere rating for 3 phase 3 wire service may be fed from the secondaries of two current transformers. It will not measure correctly if fed from the secondaries of three delta-connected current transformers on a 3 phase 4 wire wye circuit.

The type WLY- has the usual zero and calibration adjustments and one additional adjustment to bring the KVA calibration into coincidence with the KW calibration.

This is not intended to be a routine adjustment and is preset at the factory. This adjustment is of the "trim-pot" type, it is screwdriver operated and may be found at the lower right front behind the nameplate.

Verification of this meter begins with the switch in the "KW" position with all the test points prescribed for thermal watt demand meters. The meter is then to be verified with the switch in the KVA position and because it now becomes a rectifier type of instrument, the test board should be one known to produce a waveform having low harmonic content.

Verification KVA test points will be set out in a circular letter from Headquarters.

Approval granted to:

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