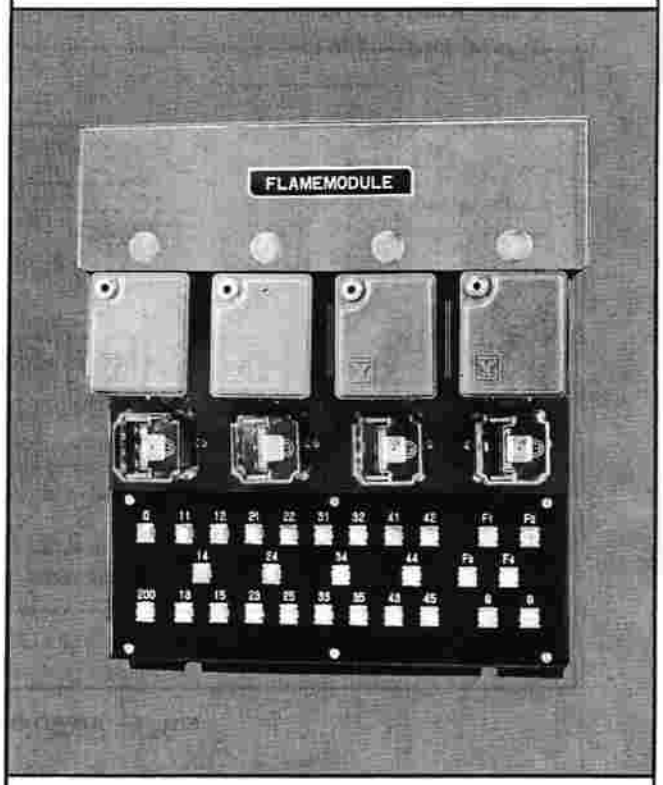
Yamatake-Honeywell

MULTI-BURNER FLAME-MODULE



WN200A WN210A

The WN200A and WN210A are the basic flame control modules of a flame safeguard system for multiple burner. The WN200A flame module has four separate burner circuits. The WN210A flame module has two separate burner circuits. These flame circuit modules contain for each burner circuit: flame failure indicating lamp, test jack for meter determination of flame current, sockets for separate plug-in relay and amplifier, and terminal strip.

☐ Separate chassis for each module provides for future add-on installation.

☐ Plug-in components for quick, easy replacement and any amplifiers can be used.

☐ Test jack for each burner circuit simplifies checking flame detector current.

☐ Standard response time 2-4 seconds for fast shut-down on proved flame failure, but eliminates nuisance shutdowns from flame flicker.

AB–7003 REV.12-73

SPECIFICATIONS

MODELS:

WN200A for 1-4 burners
WN210A for 1-2 burners

Flame amplifier and flame relay shown in the following table are to be added.

Flame amplifier

Application	Kind of Flame Detector	Flame Amp. Model
Gas	Flame Rod	R7257A
Gas, Oil	C7012A Ultra-vision	
	C7015A Lead Sulfide Cell	R7258A
	C7035A Ultra-vision	R7259B

Flame Relay: 187600

Jumper Plug: 187615

ELECTRICAL RATINGS:

Power supply: 100, 200VAC 50/60 Hz.
Contact rating: 100,200VAC 3 amp. Resistive load.
Power consumption: WN200A, 20W
WN210A, 10W

AMBIENT TEMPERATURE RATING: -20° to 60°C.

DIMENSIONS: Refer to Fig. 1.

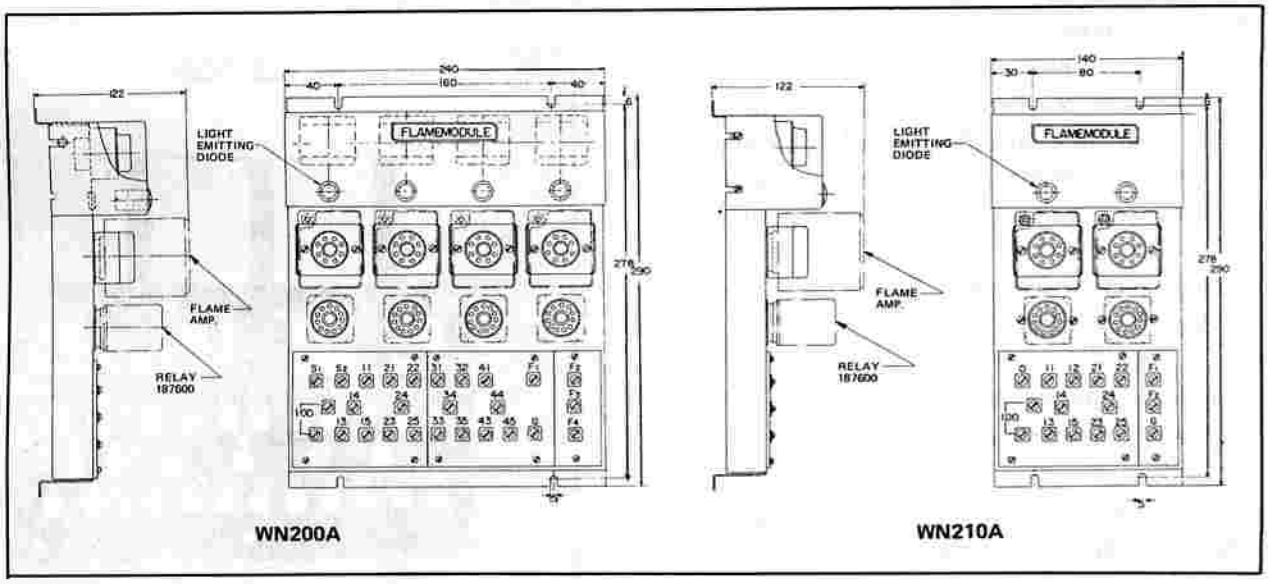


FIG. 1– APPROXIMATE DIMENSIONS IN MM.

Specifications are subject to change without notice.

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INSTALLATION

MOUNTING:

The WN200A and WN210A flame modules are designed to mount vertically in a cabinet or control panel. Be sure each module contains 1 relay (clear plastic cover), and 1 amplifier (green case), for every burner circuit to be used. For every unused circuit, add a #187615 plug in the relay position.

WIRING:

All wiring must comply with applicable codes, regulations, and ordinance.

REPLACEMENT PARTS:

Amplifier:	R7257A	for Rectification
	R7258A	for Lead Sulphide Cell.
	R7259B	for C7035A Ultravision.
Flame Relay:	187600	
Jumper Plug:	187615	Jumper plug required for un-used plug-in relay.

INTERNAL SCHEMATIC DIAGRAM:

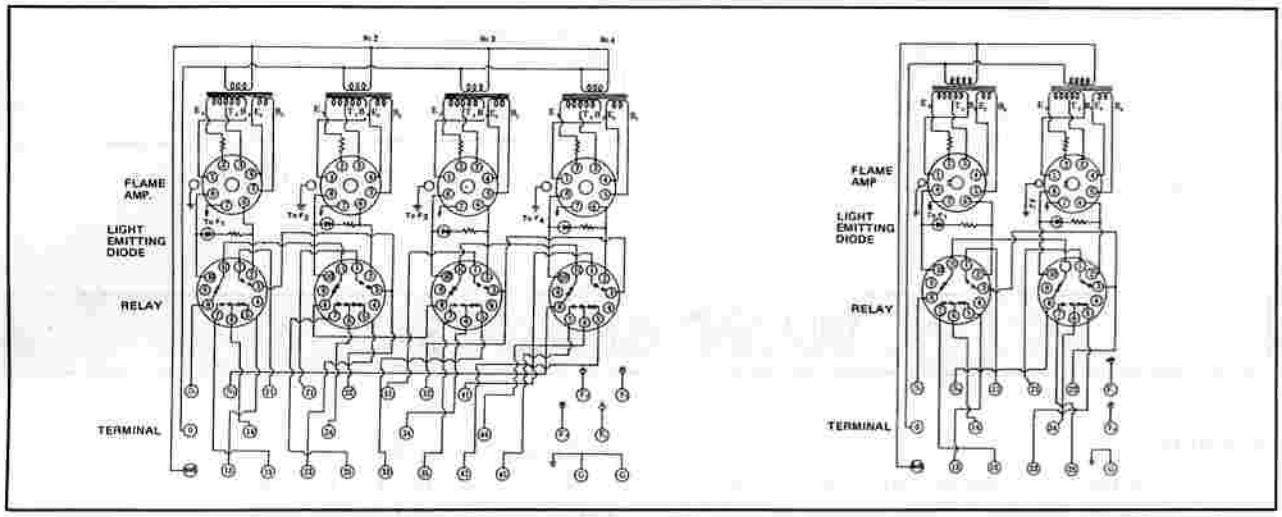

FIG. 2– INTERNAL SCHEMATIC OF WN200A AND WN210A.

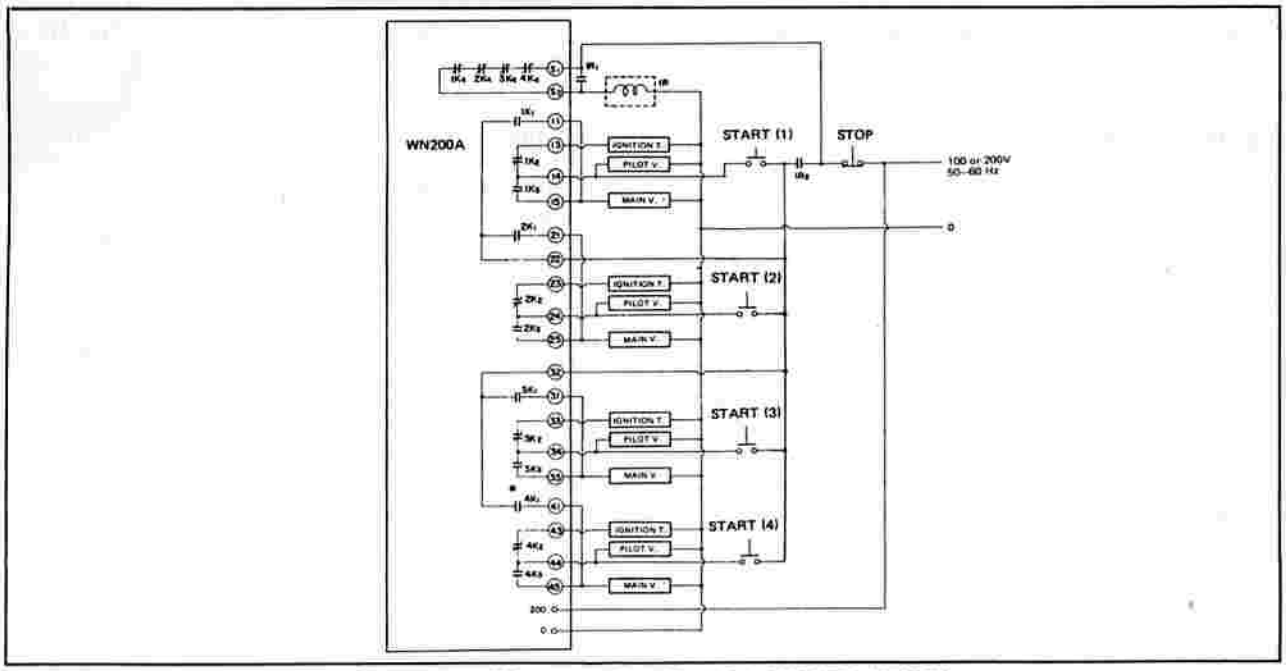

FIG. 3– WN200A FLAME MODULE 4-BURNER UNISON LIGHT SYSTEM (4 MAIN VALVES)

TESTING FOR NORMAL OPERATION:

FRAME CURRENT TEST

A test jack is provided for each burner flame amplifier for use with a Honeywell W136A Test Meter. Attach #117053 Test Cable to meter leads (red to red, black to black). If using, W136A1029, set selector range switch at 25μa position. Insert cable plug into test jack of flame amplifier.

With all pilots lighted, read DC MICROAMPERES meter scale for flame current.

For flame rod–current must be no less than 2 microamperes.

For C7012A, C7035, C7015– current must be steady, approximately 4 microamperes.

Adjust detector location until meter reading indicates a steay current of the proper size for pilot-and-detector.

Repeat procedure for every burner circuit.

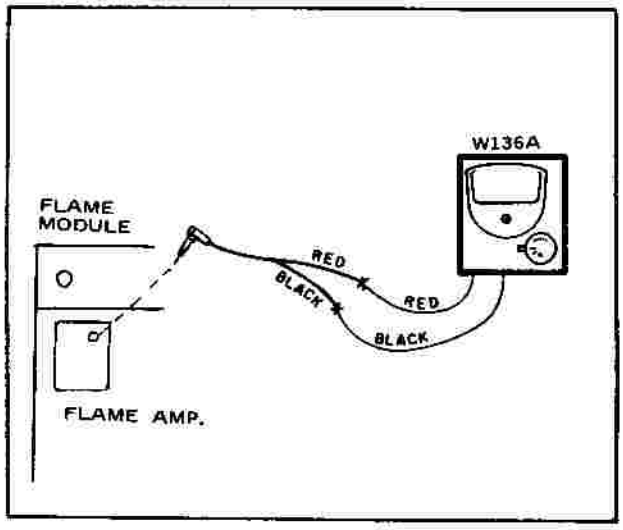

FIG. 4– FLAME CURRENT TEST

BURNER:

Adjust burner for proper operation as recommended by burner manufacturer.

FLAME ROD:

When cleaning the burner, check and clean flame rod apparatus, and replace wiring if it appears scorched or charred.

ULTRA-VISION:

C7012A:

Replace both vaccum tubes in the C7012A annually. Order numbers 113236 and 115330. Replace the ultraviolet sensing tube of the C7012A if it is not functioning properly. Use part 113228.

C7035:

Replace the ultraviolet sensing tube of the C7035, if it is not functioning properly. Use part 129464M. When cleaning the burner, remove the detector and clean the transparent window.

LEAD SULPHIDE PHOTO CELL:

Replace the sensing tube of the C7015, if it is not functioning properly. Use part 104662.

TROUBLE SHOOTING:

Materials needed for troubleshooting the WN200A and WN210A systems:

A-C voltmeter D-C voltmeter	Recommend W136A1029
D-C microammeter	Test Meter

Supply of Spare plug-in units, relays, amplifiers, and lamps.

By first making a series of voltage checks with an a-c voltmeter, it is possible to determine which burner component is faulty – external to the flame safeguard or somewhere within the detector-controller combination. If trouble is traced to the latter, a microammeter can be used to further isolate the malfunction.

STEP 1. Recheck all external wiring connections to modules.
STEP 2. Check power supply to all components.
STEP 3. Remove plug-in relays from flame module. Rock gently and pull firmly.
STEP 4. Check flame current and remove plug-in amplifier from flame module. Rock gently and pull firmly.