

# P19 & P20 Range

## A Family of Full Sequence Controls



technology factfile

The P19 and P20 ranges are a complete family of low cost full sequence controls designed to meet the needs of today's appliance manufacturers. All controls are fully approved to EN 298 and meet all the essential requirements of the Gas Appliance Directive.

The compact P20 range is ideal for use on atmospheric or forced draught appliances where space is a premium. The range is designed for single stage direct main burner ignition. A range of timing options are available and all controls incorporate an in-built spark generator and ionisation flame detection.

The slightly larger P19 range offers additional features to those of the P20 range. These can include integral EMC filter and two stage ignition, allowing use on intermittent pilot or expanding main burner ignition systems.



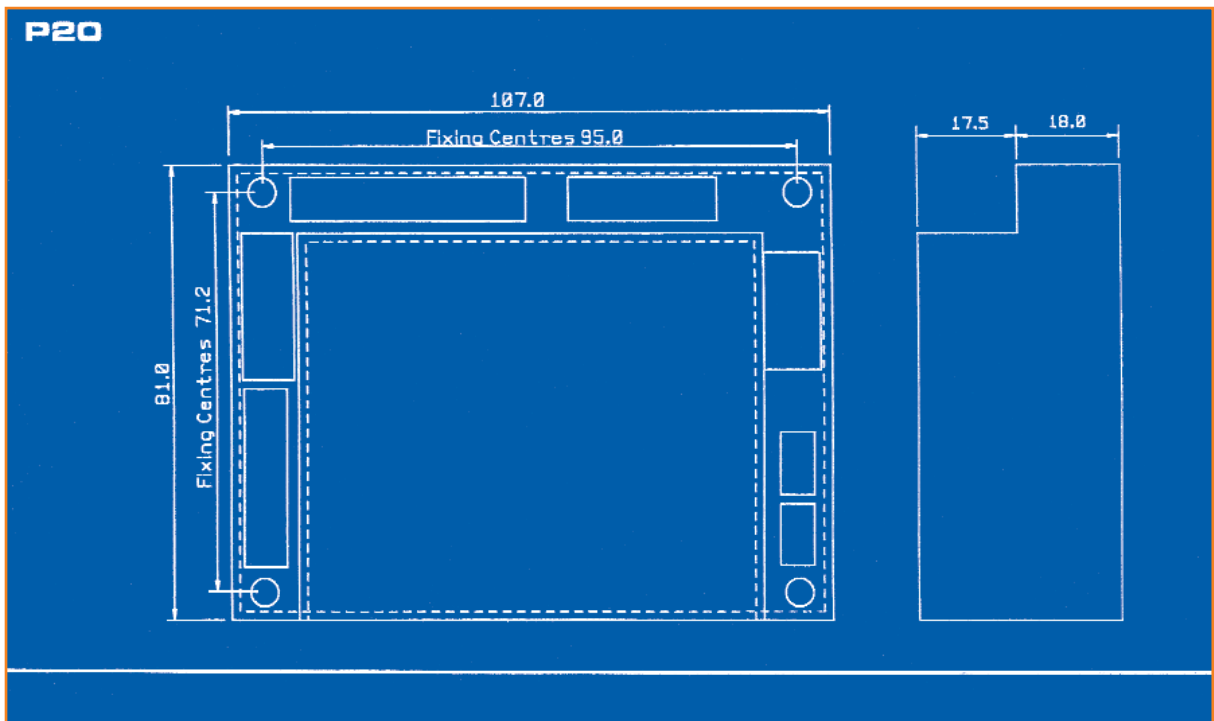
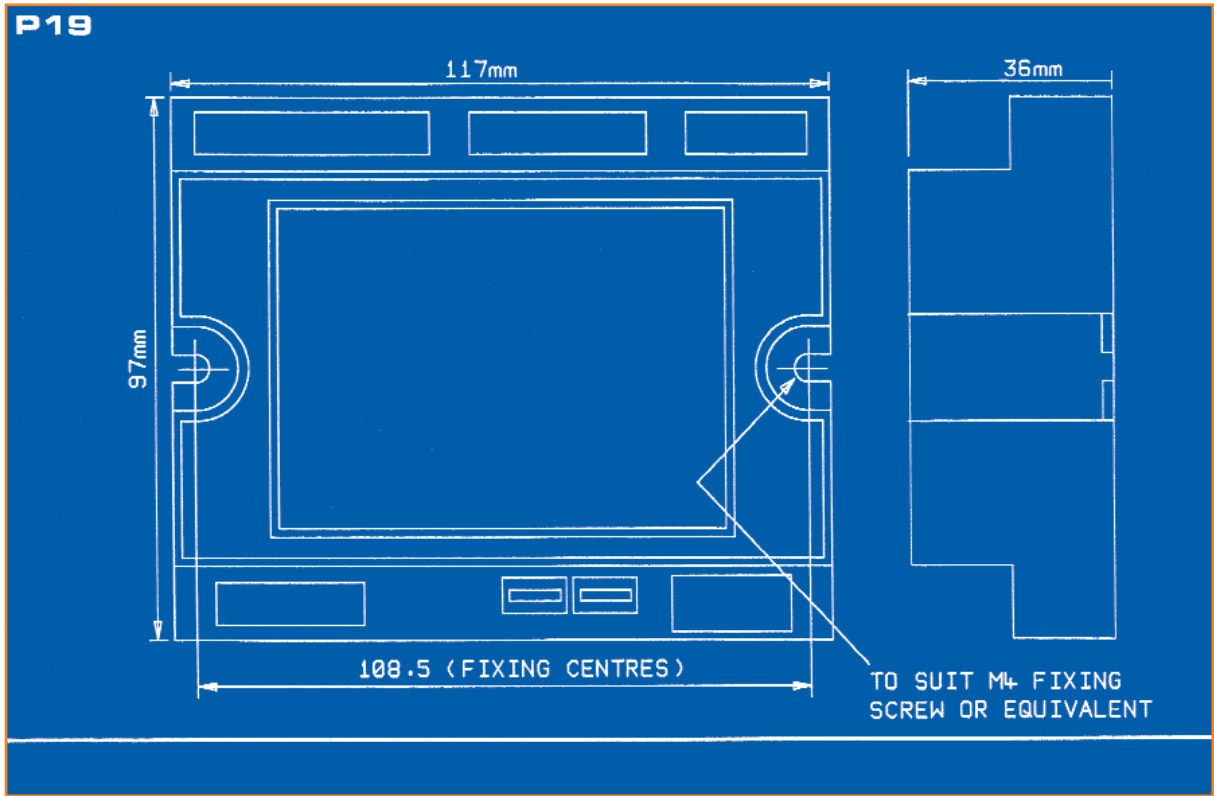
### Typical applications

- Combination Boilers
- Condensing Boilers
- Heating Boilers
- Water Heaters
- Warm Air Heaters
- Radiant Tube Heaters

### key features

- Approved to EN 298
- Integral spark generator and flame detector
- Non-volatile lockout
- Lockout indicator and remote reset
- Non-reversible connectors
- Atmospheric and forced draught applications
- Compact size
- Integral EMC filter option (P19 range only)
- Single or dual probe operation

# housing dimensions



A division of White-Rodgers



To keep abreast of current developments, controls may be subject to change without notice. Such changes may affect the accuracy of information contained in this data-sheet, and the manufacturers advice should be sought if any problems arise.

# Technical specification

Operating voltage	230 V (195 to 253 V)
Supply frequency	50Hz (+/- 2Hz)
Internal fuse	2A rapid
Power consumption	7VA
Minimum spark voltage	15kV @ 30pF loading
Spark gap	2.5 - 4 mm
Spark frequency	17Hz @ 230V (10 - 25Hz)
Maximum lead length	1 metre
Phase sensitivity	no detection when reversed
Principle of operation	Ionisation
Electrode configuration	Single or dual probe
Minimum flame current	1.0 µA (+/-20%)
Flame response time	<1 sec.
Lockout type	Non-volatile
Reset delay from lockout	<2sec.
Housing protection classification	IP20
Ambient temp. range	-20°C to +70°C
Relative humidity	95% RH maximum (non condensing)
Connectors	Stelvio/Stocko or Molex

		Ts, Max. seconds (+0 / -30%)			
		5	10	20	30
Tp, Min. seconds (+50 / -0%)	1.5	V01	V02	V03	
	5	V04	V05	V06	V07
	10	5		V08	V09

Product Identification within the ranges		
P19 AM	Single stage, Spark until flame detected	423300/Vxxa
P19 AM(PS)	Single stage, Spark throughout Safety time	423301/Vxxa
P19 FM	Single stage, Spark until flame detected	423400/Vxxa
P19 FM(PS)	Single stage, Spark throughout Safety time	423401/Vxxa
P19 AT	Two stage, Spark until flame detected	423900/Vxxa
P19 AT(PS)	Two stage, Spark throughout Safety time	423901/Vxxa
P19 FT	Two stage, Spark until flame detected	424000/Vxxa
P19 FT(PS)	Two stage, Spark throughout Safety time	424001/Vxxa

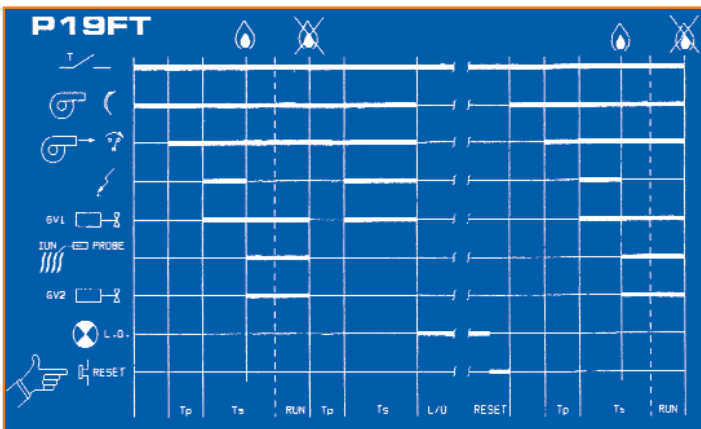
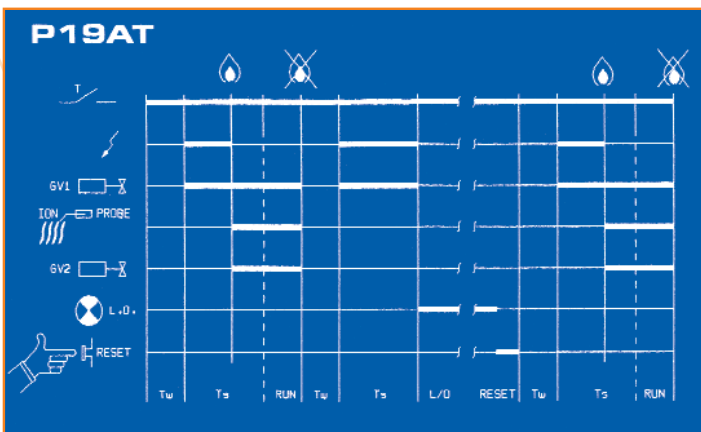
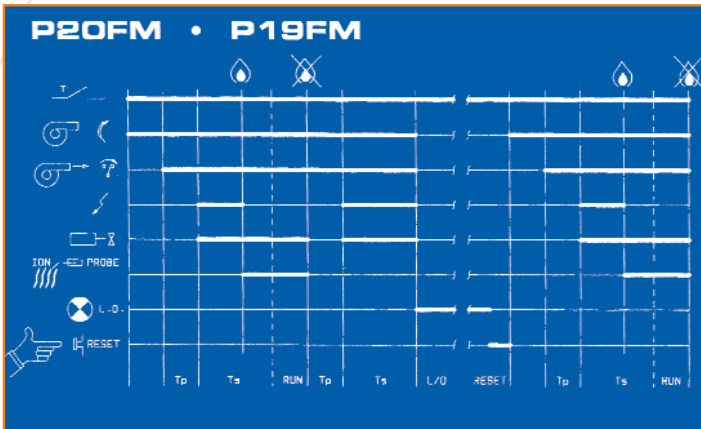
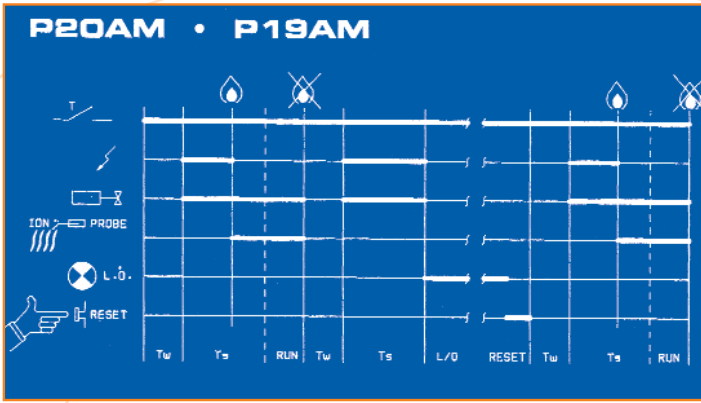
where a

is S for Stocko/Selvio connectors or M for Molex connectors

ie 423400/V05S is a single stage P19 Control with 5 second purge. 10 second Safety time, the spark will stop as soon as the flame is detected and the connectors are Stocko/Selvio

# system operation

# key



**Function**

**Fan**

**Air Pressure Switch**

**Spark**

**GV1** 1st Stage Gas Valve (GV1)

**GV2** 2nd Stage Gas Valve (GV2)

**ION** PROBE  
Flame Detected

**L.O.**  
Lockout

**RESET**

**Flame Present**

**Flame loss**