Microplan s.r.l.
Via Andrea Doria, 2
37066 Sommacampagna (VR) - Italy

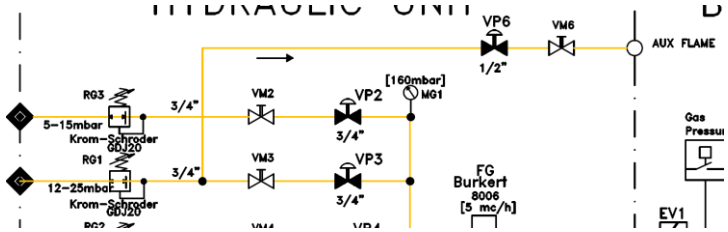
| | |
|---|---|
| Offer n. | # 32217 |
| Version | 4 |
| Date | 04/09/2023 |
| Author | R. Riolfi |
| Customer | Innovita |
| Contact | Raffaele Solimene |
| Object | Offer for *LS1-70-H*, end-of-line test bench for gas boilers |
| Reference documents | [1] *LS1-70-H* test bench data sheet 2200829 |

| *TEST BENCHES* | | |
|---|---|---|
| *Code* | *Item* | *Price [€]* |
| *LS1-70-H* | *LS1-70-H* end-of-line test bench, basic version (no options), according to reference document [1] | 37.830,00 |

| | *OPTIONS* | | |
|---|---|---|---|
| *Option* | *Code* | *Description* | *Price [€]* |
| A | GFR | Thermal mass gas flow meter (Burkert brand), f.s. 5 $m^3/h$. | 2.988,00 |
| B | GLDA | Gas circuit leakage test with air at 150mbar. | 1.525,00 |
| C | GMP | Measurement of gas burner/manifold pressure. | 1.260,00 |
| D | DHW | Domestic hot water circuit. | 4.765,00 |
| G | DWMV | Modulating valve on the DHW circuit and on the cooling circuit. | 2.090,00 |
| I | AAW | Wattmeter. | 640,00 |
| | *SOFTWARE OPTION* | | |
| - | PQ Full | *Parseq* Full license | 1.000,00 |

NOTE1: prices include one test sequence written by Microplan with Parseq under customer's specification. The tests that can be included need to be chosen within the ones listed in the tables at chapter 4 of reference documents [1] and that are compatible with the options included in the customer's order.
Further test sequences are available with separate quotation.

NOTE2: respect to the standard *LS1-70-H* bench described in the reference document [1], the bench here offered includes an additional gas pipe connected to the G20 gas inlet providing a connection point for an open flame device for gas leakages search, made by the customer. This pipe is shown in the below diagram, regarding the B310 test benches, including the VP6 and VM6 valves.




NOTE3: the test bench is available with electric cabinet on the left side or on the right side of the structure, as in the samples in following photos, at same price. The selected layout needs to be specified in the order.



NOTE4: the offered test bench includes the DI and DO signals intended for the connection of the bench to the electrical safety test station. They are the same channels that were included in the test benches of the B310 series for that purpose and they can be recognized in the I/O channels table reported in Annex A.

Besides what is already present in the datasheet, the development of additional test sequences is not part of the current offer. Additional sequences can be quoted under request.

| SUPPLY CONDITIONS |
|---|
| *PAYMENT TERMS* |
| • 30% at order;<br>• 70% at goods available for loading, before shipment. |

| |
|---|
| *Any possible administrative or money-transfer cost, both for Italian and foreign banks, are to be charged on the customer.* |
| *APPROVAL STEPS* |
| During the development of the project, Microplan will send to the customer the following documents:<br>- Project presentation<br>- Logic diagrams<br>- Electrical features inquiry<br>- Electrical diagrams<br>- Layout project with dimensions<br>- Installation requirements.<br>The documents will be sent to the reference person mentioned in the "Contact" field above, or a different person selected by the customer, in which case the relevant name and contacts data will be sent to Microplan in written form.<br>For each step, the customer can report Microplan discrepancies respect to the offer within 3 working days, without delays in the delivery date. If this would happen later, delays in the delivery date are likely and costs could be charged.<br>Once informed by Microplan that the product is finished and internally tested, the customer can send an authorization to the delivery based on the received documentation. As an alternative, the customer can ask to attend an acceptance visit at Microplan site according to the "Acceptance" field. |
| *ACCEPTANCE* |
| Microplan is available to an acceptance visit of the customer at Microplan's premises, for a maximum period of 3 days (24 working hours), without charging additional costs for relevant working hours. Visit expenses (travel, board, lodging) will be at customer's charge. During the acceptance visit the customer's technicians can test the product at our premises together with our technicians. Their signature on a pre-acceptance form will authorize the delivery.<br>The customer will inform Microplan of his intention to attend the acceptance visit once received the Project Presentation document. In this case, the name of the persons charged of the visit will be transmitted to Microplan. The charged persons shall be aware of all the documentation, including the offer and the documents mentioned at the "Approval steps" field. |
| *START-UP* |
| Not included. Quotation under request. |
| *DELIVERY* |
| Ex Works |
| *SHIPMENT DATE* |
| To be agreed at order. At the moment of this offer, 6-8 months from down payment receipt up to bench ready for acceptance visit. |
| *TRANSPORT* |
| At customer's charge. |
| *PACKAGING* |
| Certified fumigated wooden crate. |
| *WARRANTY* |
| 12 months from delivery. See "*Microplan warranty"* document for conditions. |
| *OFFER VALIDITY* |
| 30 calendar days - Due to ongoing market instability, this is a strict constraint |

Every feature not explicitly mentioned in this offer as included, has to be considered excluded.

This offer is valid for the specifications defined in it or in the documents to which it refers, for the warranty, payment, responsibility of the supplier and of the customer, transport, and any other conditions described in it or in the documents to which it refers. Any modification to the specifications or any variations of the conditions, which may occur afterward, makes invalid the present offer. Microplan reserves the right to refuse any order based on this offer, should it be accompanied by modifications to the conditions here described, or to confirm the order at the here stated conditions.

Microplan s.r.l.
Via Andrea Doria, 2
37066 Sommacampagna (VR) - Italy

# APPENDIX A: I/O CHANNELS DIAGRAM OF THE B310 BENCHES

| Module | type | Ref | Description | F.S. |
|---|---|---|---|---|
| 750-530 8 digital output 24V B3 | DO0 | K2 | 230Vac boiler supply | |
| | DO1 | K3 | 230/250 Select | |
| | DO2 | K4 | Electric safety test command (start) | |
| | DO3 | VP2 | G111 inlet | |
| | DO4 | VP3 | G20 inlet | |
| | DO5 | VP4 | G31 inlet | |
| | DO6 | VP5 | Gas soundness test | |
| | DO7 | VP6 | Flame aux | |
| 750-530 8 digital output 24V B4 | DO8 | VP11 | CH filling water | |
| | DO9 | VP12 | Compressed air on CH flow | |
| | DO10 | VP13 | CH return enable | |
| | DO11 | VP14 | CH flow enable | |
| | DO12 | VP15 | CH drain on flow (N.O.) | |
| | DO13 | VP16 | Ch return drain | |
| | DO14 | VP17 | Cooling enable | |
| | DO15 | VP21 | DHW water inlet | |
| 750-530 8 digital output 24V B5 | DO16 | VP22 | Compressed air on DHW circuit | |
| | DO17 | VP23 | DHW drain (N.O.) | |
| | DO18 | | | |
| | DO19 | ELETTR | Electric safety test command | |
| | DO20 | RESET | Electric safety test command | |
| | DO21 | EV1 | Gas electrovalve | |
| | DO22 | TA | Ambient thermo switch | |
| | DO23 | POS | DHW prog. clock | |
| 750-530 8 digital output 24V B6 | DO24 | | | |
| | DO25 | | | |
| | DO26 | | | |
| | DO27 | | | |
| | DO28 | | | |
| | DO29 | | | |
| | DO30 | | | |
| | DO31 | | | |
| 750-430 8 digital input 24V B7 | DI0 | STOP | STOP pushbutton | |
| | DI1 | PROCEED | PROCEED pushbutton | |
| | DI2 | DOWN | DOWN pushbutton | |
| | DI3 | REPEAT | REPEAT pushbutton | |
| | DI4 | RESTART | RESTART pushbutton | |
| | DI5 | NOR_GUA | NOR/GUA selector | |
| | DI6 | TEST | TESTpushbutton | |
| | DI7 | CALIN | Boiler in position | |
| 750-430 8 digital input 24V B8 | DI8 | STARTOK | Signal for electric safety test unit | |
| | DI9 | CICLOON | Signal for electric safety test unit | |
| | DI10 | KORIGID | Signal for electric safety test unit | |
| | DI11 | KOISOL | Signal for electric safety test unit | |
| | DI12 | KOTERRA | Signal for electric safety test unit | |
| | DI13 | KOFUGA | Signal for electric safety test unit | |
| | DI14 | | | |
| | DI15 | | | |

| | | | | |
|---|---|---|---|---|
| **750-430 8 digital input 24V B9** | DI16 | | | |
| | DI17 | | | |
| | DI18 | | | |
| | DI19 | | | |
| | DI20 | | | |
| | DI21 | | | |
| | DI22 | | | |
| | DI23 | | | |
| **750-553 4 analog output 0-20mA B10** | AO0 | **VRP1** | Modulating valve on DHW circuit | |
| | AO1 | | | |
| | AO2 | | | |
| | AO3 | | | |
| **750-453 4 analog input 4-20mA B11** | AI0 | | | |
| | AI1 | **FS** | DHW water flowrate | 15l/min |
| | AI2 | **FR** | CH water flowrate | 25l/min |
| | AI3 | **PGB** | Gas burner pressure | 50mbar |
| **750-453 4 analog input 4-20mA B12** | AI4 | **PGA** | Gas supply pressure | 100mbar |
| | AI5 | **PR** | CH pressure | 6bar |
| | AI6 | **PS** | DHW pressure | 6bar |
| | AI7 | **TVM1** | Voltage measurement 1 | 15V |
| **750-453 4 analog input 4-20mA B13** | AI8 | **TVM2** | Voltage measurement 2 | 15V |
| | AI9 | **FG** | Gas flowrate | 5nm3/h |
| | AI10 | **OHM** | Resistance measurement | 8kOhm |
| | AI11 | **PEA** | Absorbed power | 550W |
| **750-461 2 PT100 input 4 wires B14** | PT0 | **TMR** | CH flow temperature | 150°C |
| | PT1 | **TRR** | CH return temperature | 150°C |
| **750-461 2 PT100 input 4 wires B15** | PT2 | **TUS** | DHW outlet temperature | 150°C |
| | PT3 | **TES** | DHW inlet temperature | 150°C |