

Process Controller with Setpoint Programmer

1/16 DIN - 48 x 48

Linea M5

Quick Guide • ISTR-FM5ENG02

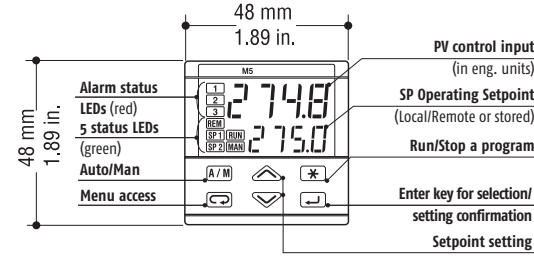


Declaration of Conformity and Manual retrieval

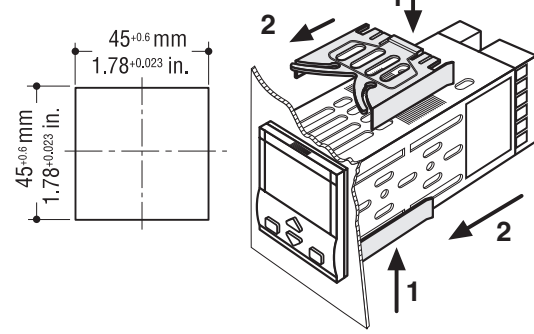
M5 is panel mounting, Class II instrument. It has been designed with compliance to the European Directives. All information about the controller use can be found in the User Manual: **MIU_M5_EN.pdf**. The Declaration of Conformity and the manual of the controller can be downloaded (free of charge) from the web-site: **www.ascontecnologic.com** Once connected to the web-site, search: **M5** then click on **M5** from the result list. In the lower part of the product page (in any language) is present the download area with links to the documents available for the controller (in the available languages).

Description and dimensions

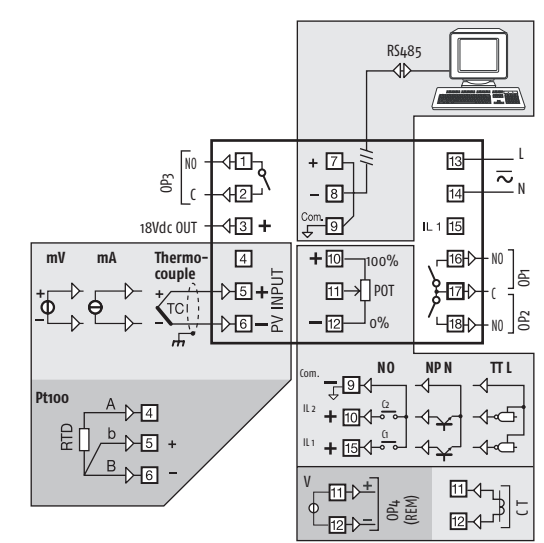
Depth: 110 mm



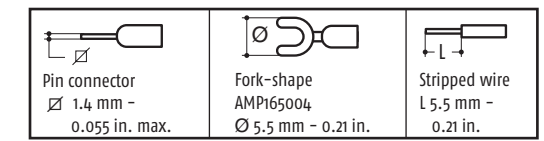
Panel cut out and mounting



Electrical connections



Terminals



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Model Code

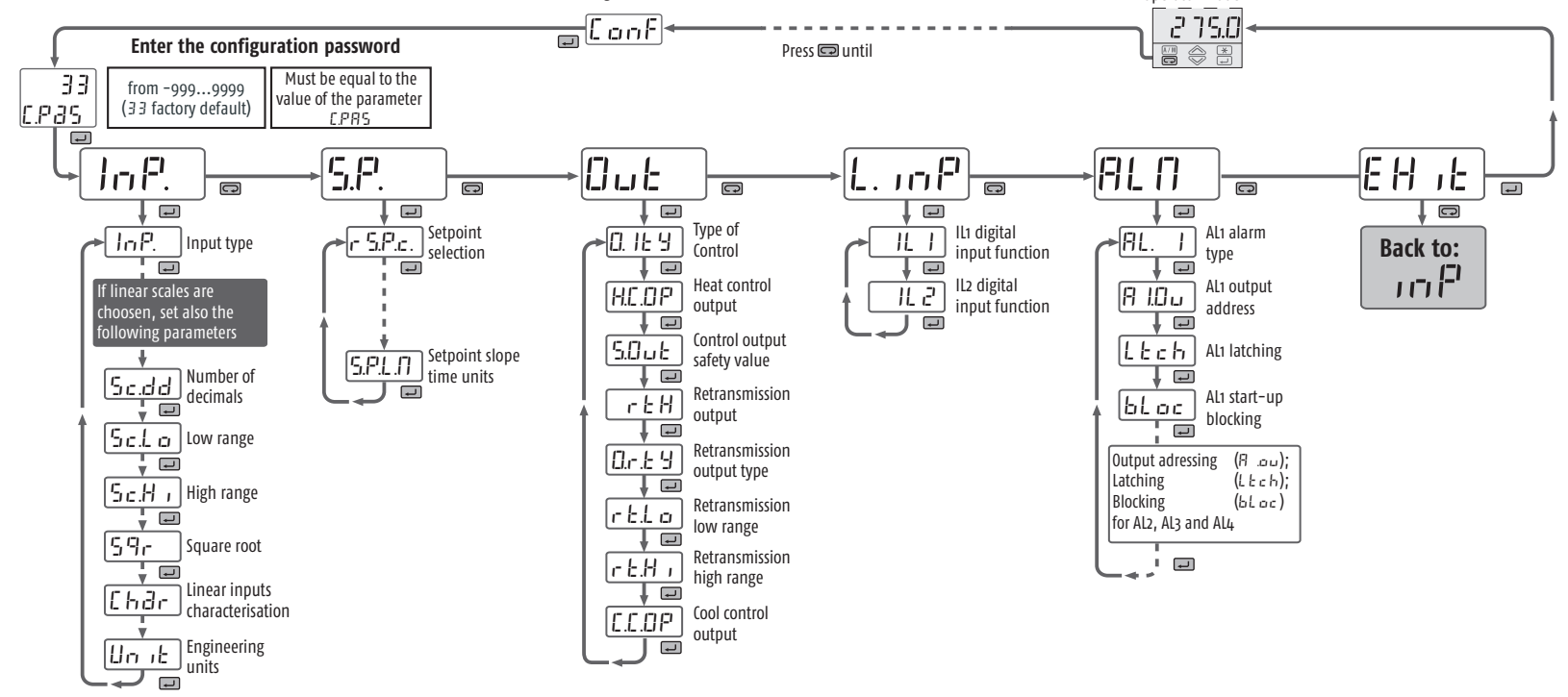
The product code indicates the specific hardware configuration of the instrument, that can be modified by specialized engineers only.

| Line | Basic | Accessories |
|--------|-------|-------------|
| Model: | M5 | A1CD-E900 |

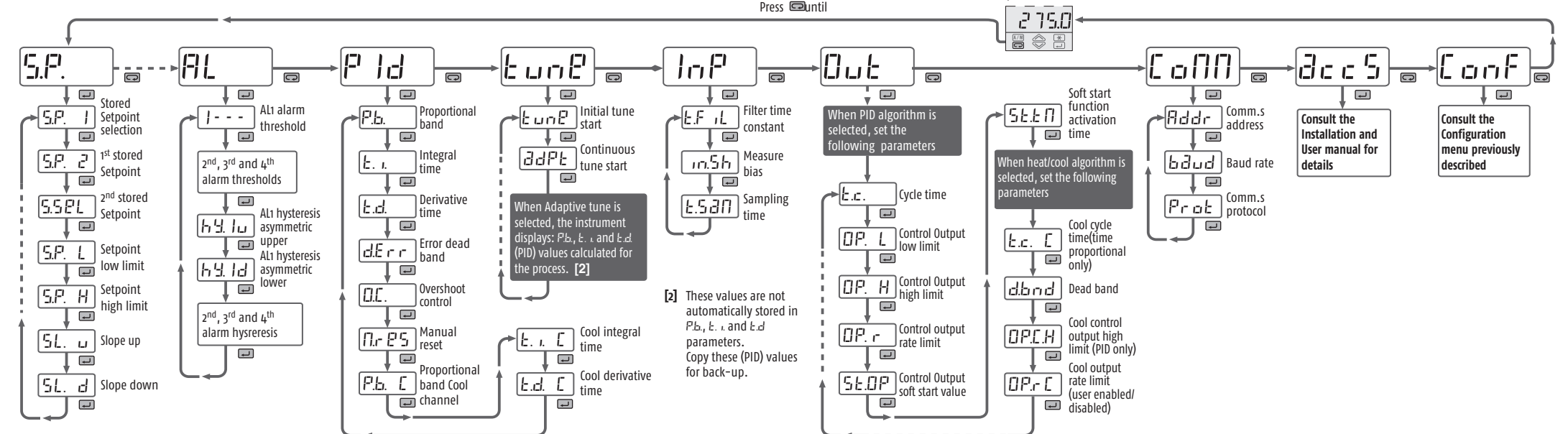
| Line | M | 5 |
|---|----------|----------|
| Power supply | | A |
| 100...240Vac (-15...+10%) | | 3 |
| 24Vac (-25...+12%) or 24Vdc (-15...+25%) | | 5 |
| Serial Comms. Options | C | D |
| None [2] | 0 | 0 |
| Aux. input Feedback potentiometer [2] | 0 | 1 |
| Aux. input Remote Setpoint [1] | 0 | 2 |
| Aux. input Current Transformer | 0 | 3 |
| Aux. output SSR drive/analogue | 0 | 4 |
| Aux. output SSR drive/analogue + Rem. SP [1][2] | 0 | 5 |
| RS485 Modbus/Jbus protocol | 5 | 0 |
| Aux. input Feedback potentiometer [2] | 5 | 1 |
| Aux. input Remote Setpoint [1] | 5 | 2 |
| Aux. input Current Transformer | 5 | 3 |
| SSR drive/analogue auxiliary output | 5 | 4 |
| Setpoint Programmer | | E |
| Not fitted | | 0 |
| Present | | 4 |

[1] Not available with Setpoint programmer installed (E = 1);
[2] Second digital input (IL2) not available.

Configuration menu



Parameterisation menu



Parameter list

The parameters pointed out with grey background are those necessary to configure the options and are NOT shown in the menus. All the parameters are fully described and explained in the user manual of the controller.

| Code | Parameter Name | Value | |
|----------|--------------------------------|---------|------|
| | | Default | User |
| InP. | Input type selection | 0 - 10 | |
| Sc.d | Number of decimals (0... 3) | 0 | |
| Sc.L | Low range | 0 | |
| Sc.H | High range | 9999 | |
| Sqr | Square root (0 = OFF, 1 = ON) | NO | |
| Chdr | Linear input characterization | NO | |
| Unit | Engineering units | NONE | |
| r.S.P.C. | Setpoint selection | LOC | |
| r.S.In | Remote Setpoint input | 4 - 20 | |
| S.P.E.U | Time units and Setpoint slope | P.SEC | |
| Out | Control type | PID | |
| H.C.O.P. | Control output (Heat) | OFF | |
| S.O.U.T. | Control output safety value | OFF | |
| r.e.H | Retransmitted output selection | none | |
| r.e.L | Retransmission low range | 0 | |
| r.e.H | Retransmission high range | 9999 | |
| C.C.O.P. | Cool control output | OFF | |
| IL. | ILn digital input function | OFF | |

| Code | Parameter Name | Value | |
|---------|------------------------------|---------|------|
| | | Default | User |
| AL. | ALn alarm type | OFF | |
| AL. | ALn addressing | OP1 | |
| AL. | ALn alarm threshold | 0 | |
| AL. | ALn alarm hysteresis Up | 1 | |
| AL. | ALn alarm hysteresis Down | 1 | |
| P.b. | Proportional band | 5.0 | |
| E.i. | Integral time | 60 | |
| E.d. | Derivative time | 12.0 | |
| d.E.r.r | Error Dead Band | OFF | |
| O.C. | Overshoot Control | 1.00 | |
| Pr.P.S | Manual Reset | 50.0 | |
| P.b.C | Cool proportional band | 5.0 | |
| E.i.C | Cool integral time | 60 | |
| E.d.C | Cool derivative time | 12.0 | |
| E.u.n.P | Start/Stop One shot tuning | NO | |
| Ad.P.t | Start/Stop Adaptive tuning | NO | |
| P.b. | Calculated Proportional band | | |
| E.i. | Calculated Integral time | | |
| E.d. | Calculated derivative time | | |

| Code | Parameter Name | Value | |
|--|---------------------------|---------|------|
| | | Default | User |
| L.r | Setpoint selection | NONE | |
| S.P. | nth stored Setpoint | 0 | |
| S.S.E.L | Stored setpoint selection | | |
| S.P.L | Setpoint low limit | PV.LO | |
| S.P.H | Setpoint high limit | PV.HI | |
| S.L.u | Setpoint ramp up | OFF | |
| S.L.d | Setpoint ramp down | OFF | |
| r.e.r | Ratio remote Setpoint | 1.00 | |
| r.r.S | Remote Setpoint Bias | 0 | |
| Program parameters | | | |
| (consult the Installation and user manual for details) | | | |
| i. | ALn alarm threshold | 0 | |

| Code | Parameter Name | Value | |
|---------|--|---------|------|
| | | Default | User |
| 2. | AL2 alarm threshold | 0 | |
| 3. | AL3 alarm threshold | 0 | |
| 4. | AL4 alarm threshold | 0 | |
| OP.H | Control output high limit | 100.0 | |
| OP.L | Control output low limit | 0.0 | |
| OP.R | Control output maximum speed | OFF | |
| S.t.O.P | Soft start output high value | OFF | |
| S.t.T | Soft start time | 10 | |
| E.c. | Cool cycle time | 10.0 | |
| d.b.n.d | Heat/Cool Dead band | 0.5 | |
| OP.C.H | Cool control output high limit (PID only) | 100.0 | |
| OP.C.L | Cool control output low limit (PID only) | 0.0 | |
| OP.R.C | Cool output rate limit (user enabled/disabled) | OFF | |
| OP.R.L | Control output rate limit | OFF | |
| OP.H.L | Control output high limit | 100.0 | |
| OP.L.L | Control output low limit | 0.0 | |
| OP.S | Control output soft start value | OFF | |
| OP.C | Cool cycle time (time proportional only) | 10.0 | |
| OP.C.C | Cool cycle time (time proportional only) | 10.0 | |
| OP.C.D | Cool control output high limit (PID only) | 100.0 | |
| OP.C.L | Cool control output low limit (PID only) | 0.0 | |
| OP.C.R | Cool output rate limit (user enabled/disabled) | OFF | |
| OP.C.L | Cool output rate limit (user enabled/disabled) | OFF | |
| OP.C.H | Cool control output high limit (PID only) | 100.0 | |
| OP.C.L | Cool control output low limit (PID only) | 0.0 | |
| OP.C.R | Cool output rate limit (user enabled/disabled) | OFF | |
| OP.C.L | Cool output rate limit (user enabled/disabled) | OFF | |

| Code | Parameter Name | Value | |
|---------|--|---------|------|
| | | Default | User |
| E.F.i.L | Input filter | OFF | |
| In.S.h | Input shift | OFF | |
| E.S.a.P | Sampling time | 0.1 | |
| OP.H.Y | Output Hysteresis | 1 | |
| E.c. | Cycle time | 10.0 | |
| OP.L | Control output low limit | 0.0 | |
| OP.H | Control output high limit | 100.0 | |
| OP.R | Control output maximum speed | OFF | |
| S.t.O.P | Soft start output high value | OFF | |
| S.t.T | Soft start time | 10 | |
| E.c. | Cool cycle time | 10.0 | |
| d.b.n.d | Heat/Cool Dead band | 0.5 | |
| OP.C.H | Cool control output high limit (PID only) | 100.0 | |
| OP.C.L | Cool control output low limit (PID only) | 0.0 | |
| OP.R.C | Cool output rate limit (user enabled/disabled) | OFF | |
| OP.C.L | Cool output rate limit (user enabled/disabled) | OFF | |
| Pr.u.t | Servomotor travel time | 60 | |
| Pr.u.Y | Output minimum step Servomotor | 0.5 | |
| Ad.d.r | Communication address | 1 | |
| b.a.u.d | Baud rate | 9600 | |
| Pr.o.t | Communication protocol | JBUS | |