Four push-button keys are available:

MENU
DECREASE
INCREASE
ENTER

PASSWORD OVERVIEW:

The factory set password is 33 and can be changed for security reasons.

- To access the 'Configuration Data' listed in Section I, a password is always needed.
- To access the 'Parameters Data' listed in Section II, a password may or may not be needed depending on the password used (see Password Information).
- To access the 'Operator Information' listed in Section III, a password is not required.

PASSWORD INFORMATION:

If Password is set at 0 to 4999:
The 'Parameters Data' listed in section II is available to the operator at all times. This password is only needed to access 'Configuration Data' listed in Section I.

If Password is set at 5000 to 9999:
The 'Parameters Data' listed in Section II is NOT available to the operator at all times. This password is needed for access to both 'Parameters Data' Section II and 'Configuration Data' Section I.

To Enter Known Password:
Push MENU key until 'PASS' is on lower display, then press INCREASE or DECREASE key to known password (the factory set password is 33), then push ENTER key. You are now in Configuration Data Section I.

To Change Password:
(Note: there is no need to change the factory set password of 33 except for security reasons).
After entering known password, (if ConF is not on lower display already) push MENU key until 'ConF' is on lower display, push ENTER key until 'Code' is displayed in lower display, push INCREASE or DECREASE key to new password, press ENTER key to save new password. *(IMPORTANT: record this new password in a safe place for future reference !!!)*
Press MENU key once to exit Configuration Data Section I.

ATHENA
The Temperature Control Company

QUICK START GUIDE

M400 line

Platinum SERIES

CE

QSUGM400RKH -12/03/02

c UL us LISTED

IMPORTANT READ THIS FIRST: Before functioning properly in your application, you will need to set (in order) the controller's:

- Password
- Configuration data (especially the software configuration code)
- Parameters data

This 'Quick Start Guide' will help take you through this process in a minimal amount of time. References to the larger 'M400 User Manual' are used, so have that manual available as you read through this guide.

Additional support is available via:

- *Athenacontrols.com on the web*
- *Technical support on the phone at 610-828-2490 8am to 5pm EST weekdays*
- *Your local Athena Controls authorized representative or distributor*

Section I – CONFIGURATION DATA:

Configuration Data is high level data that defines how the controller reacts to your process. This data entry requires a password. Push MENU key once to exit Configuration.

Software Configuration Code:
This five-digit code defines type of input, control mode & output, direct/reverse action and alarm types. This code may be changed to meet your application. The factory set 'Software Configuration Code' is 3002-3 for J thermocouple input, PID control on output #1, reverse acting mode, output #2 as absolute high alarm, & output #3 as absolute low alarm. To change code; push MENU key until 'ConF' is displayed, push INCREASE or DECREASE keys to code needed, then push ENTER key to save this new code. See M400 User Manual pages 18 & 19 for available code listing.

To Change Engineering Units:
Press ENTER key until 'Unit' is displayed, push INCREASE or DECREASE keys to desired selection, press ENTER key to save this new engineering unit. See M400 User Manual page 37 for engineering unit listing. Examples of engineering units are: ºF and ºC.

Additional configuration functions available:
# of display decimals (linear input only) + options of : Communication baud rate, retransmission range, DI functions, timer / startup functions, & current transformer input.
See M400 User's Manual pages 35 to 37 for a detailed explanation of these functions.

Section II – PARAMETERS DATA:

Parameters Data is detailed data that defines how the controller reacts to your process. This data entry may require a password (see password overview). Depending on the software configuration code, some displays may vary. Push MENU key 3 times to exit Parameters.

To Display and Change Alarm Setpoint:
Push MENU key until A2SP is on lower display (alarm 2 setpoint), press INCREASE or DECREASE key to change upper display value (factory default value is 32), press ENTER key to save. Repeat for A3SP (alarm 3 setpoint).

To Start Autotune Software:
Push MENU key until 'tune' displays, press INCREASE or DECREASE key to select 'start' or 'stop' (factory default value is 'stop'), press ENTER key. Green 'AT' indicator will light until software calculation is completed.

To Enter Parameter Group 1:
Push MENU key until A2SP displays. Then press ENTER key until 'Pb' displays. This group will allow access to PID tuning, output/alarm limit & heat/cool parameters.
See M400 User Manual pages 25 & 26 for details.

To Enter Parameter Group 2:
Push MENU key until 'tune' displays. Then press ENTER key, 'AdPt' displays. This parameter group will allow access to setpoint, alarm, adaptive tuning, and option parameters.
See M400 User Manual page 26-28 for details.

Section III – OPERATOR INFORMATION:

This information is always available to the operator and does not require a password.

Normal Display – Process Variable (PV):
The normal display shows PV (input value) in the upper display, and SP on the lower display. On the left part of the display; a red 1, 2, or 3 indicates that output is active. A steady green 'MAN" indicates manual mode, and a flashing 'MAN" indicates autotune software is active. See M400 user Manual page 20 for other indicators.

To Change from Auto to Manual mode:
Push the MENU key once, 'AMan' displays in lower display, 'Auto' displays in upper display. Push INCREASE key once, 'Man' displays in upper display, press ENTER key to save entry. Use same procedure to go back to Auto mode, but use DECREASE key to select 'Auto'.

To Change Setpoint (SP) Value:
Push either the DECREASE or INCREASE key to change the SP value.

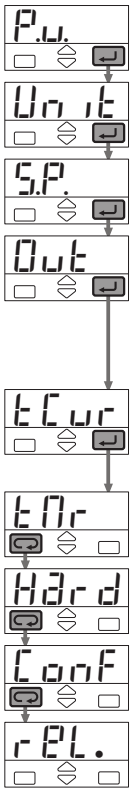
To Display PV Engineering Units:
Push ENTER key once and the type of unit will display briefly in the lower display (examples: ºC or ºF). This value can only be changed via password access.

To Display Output Value while in Auto mode:
Push the ENTER key twice, 'Out' briefly displays on lower display with output value in the upper display. This value can only be changed when in the manual mode.

Athena M400 Platinum™ Controller Software Map

= MENU key = ENTER key = DECREASE/INCREASE key

OPERATOR INFORMATION



Shown when in manual mode.

Shown when in auto mode, not shown when configured for on/off controller.

Shown with current transformer option.

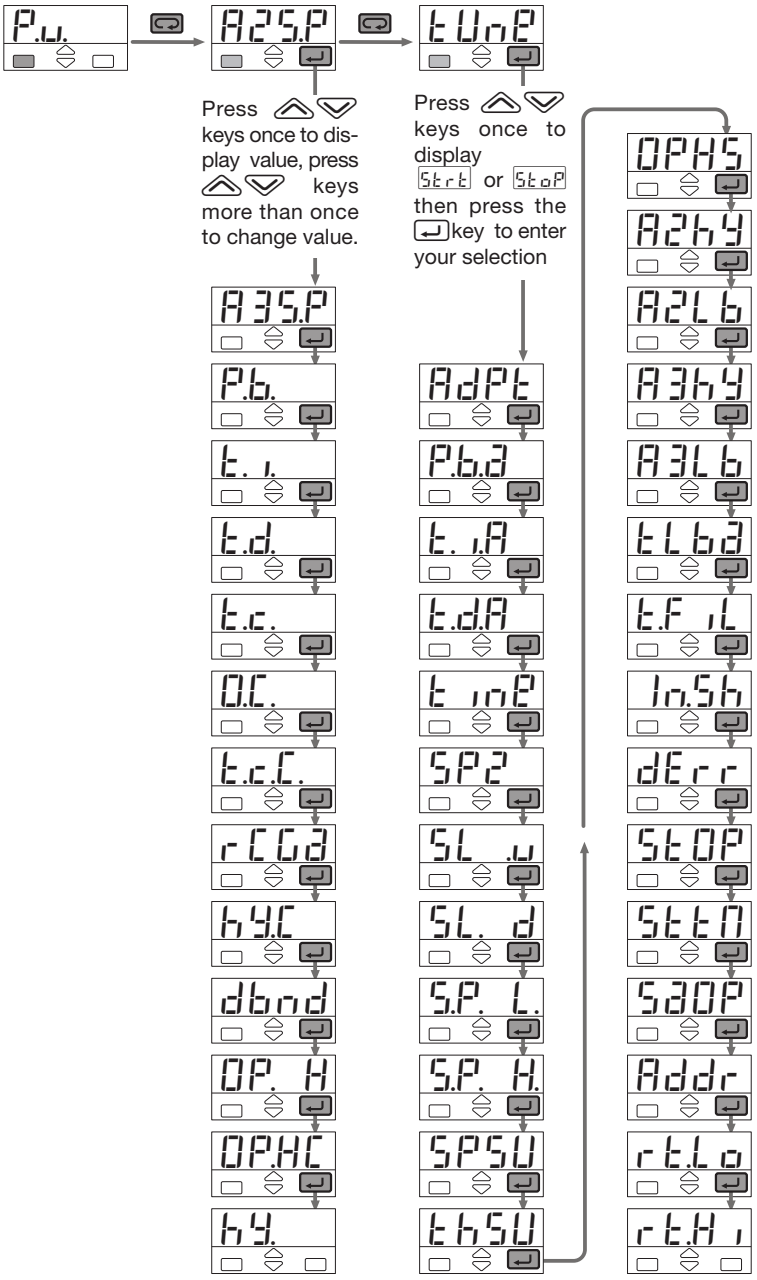
Shown with timer option.

Press keys once to display current SP value,

press keys more than once to change SP value.

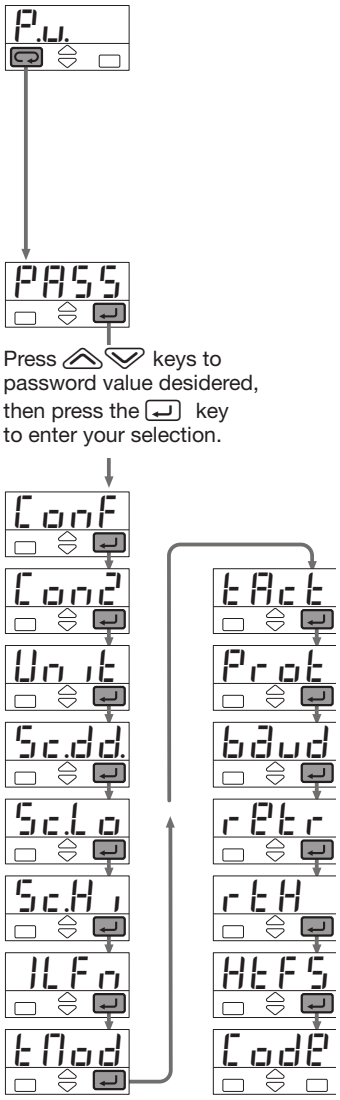
PARAMETERS DATA

(may require password entry, see configuration data for password entry press key three times to exit)



CONFIGURATION DATA

(requires password entry press key once to exit)



Note: some prompts may not appear depending on options selected and how other prompts are configured.

Detail can be found on pages 20 to 24 of the M400 User's Manual

Conf = configuration code
Hard = hardware code
Out = control output value in %
(PV) = process variable value
reL. = software release code
(SP) = setpoint value
tCur = current transformer load current in amperes
tMr = timer remaining time
Unit = engineering unit

Details can be found on pages 25 to 34 of the M400 User's Manual

A2hY = alarm 2 (AL2) hysteresis
A2Lb = AL2 latch/block functions
A2SP = alarm 2 setpoint
A3SP = alarm 3 (AL3) setpoint
A3hY = AL3 hysteresis
A3Lb = AL3 latch/block functions
AdPt = adaptive tuning
Addr = communications address
dbnd = deadband (heat/cool)
dErr = error dead band
hY = control output hysteresis
hYc = cool output hysteresis
InSh = input shift
O.C. = overshoot control
OPH = control output high limit
OPHC = cool output high limit
OPHS = output high limit at startup
Pb = proportional band
Pba = calculated proportional band
rCga = cool relative gain
rtHi = retransmission high range
rtLo = retransmission low range
SaOp = output safety value
SL.d = setpoint ramp down
Sl.u = setpoint ramp up
SP2 = stand-by setpoint value
SPH = setpoint high limit
SPL = setpoint low limit
SPSU = start-up setpoint
StOP = soft-start output value
Sttm = soft-start activation time
t.c. = cycle time
tcC = cool cycle time
t.d. = derivative time
tdA = calculated derivative time
tFiL = filter time constant
thSU = start-up hold time
t.i. = integral time
tiA = calculated integral time
tLbA = loop break alarm delay
tiMe = timer setting
Tune = self-tuning prompt

Details can be found on pages 35 to 45 of the M400 User's Manual

baud = baud rate
Code = password
Con2 = alarm 3 configuration code
ConF = main configuration code
HtFS = current transformer primary high range
ILFn = digital input function
Pass = password entry
Prot = communications protocol
(PV) = process variable value
retr = analog output range
rtH = analog output selection
Scdd = number of decimals
ScHi = analog high range
ScLO = analog low range
tAct = timer action
tMod = timer/startup mode
Unit = engineering units

Note: parameter listings are in alphabetical order