

Quick Reference Guide



ABB Kent-Taylor MICRO-SCAN™ 200 Controller

ABB Kent-Taylor

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DISPLAYS AND ENTRIES

The MICRO-SCAN 200 generates display prompts to make set-up and operation fast and easy. The appearance of specific prompts depends upon input selection, output form, and operating configuration. Refer to appropriate instruction manual for details.



up key : Selects YES response. Increases value or level.



down key : Selects no response. Decreases value or level.



scroll key : Depress to enter level or move through prompts.

Main Display	Secondary Disp. Entry	Description and Valid Entry
A.C.	F A I L	Diagnostic message. Starting point at start-up. See back cover for other diagnostic messages.
L E U.1	d S P L	LEVEL 1, DISPLAY. Point of entry.
X X X	X X X	Process value and set-point or output display, or totalized value display.
X.X.X X	X X X	Alarm status (see back cover)
r - S P.		Remote set-point (d-SP must be no); no — remote set-point not required, YES — remote set-point active.
d - S P.		Dual set-point (r-SP must be no); no — dual set-point not required, YES — dual set-point active.
b A L	X X X	Balance. Difference between remote/local or dual/local set-point values.
d.E b L	n o	Digital Input enable. YES = enable.
t o t L	d S P L	Totalizer status.*
r A _ P	S o A k.	Ramp/soak status.*
C o d E	X X X	Access code required for tune or configure entry to other levels.
***		***See instructions for description of ramp/soak reset (rS.rS), ramp/soak skip (rS.Sk), or totalizer reset (r.tot).
A U t o	t U n E	Auto tune procedure. See instructions.
L E U.2	t U n E	LEVEL 2, TUNE. Point of entry. All except heat/cool
d.G A P		Differential gap; 0 to span value.
P.b n d		Proportional band; 0.1 to 999.9%.

Main Display	Secondary Disp. Entry	Description and Valid Entry
I n t r		YES — integral response; reset enabled, no — no reset action.
I.r A t.		Integral ratio value; 0.1 to 120 rpt/min.
__r.E n		YES — manual reset enabled (Intr = no), no — no manual reset action.
__r S t		Manual reset value; 0 to 100.0%.
d r.I U		Derivative rate; 0 to 999.9 sec.
r A t o		Ratio function; 0 to 99.99.
b I A S		Bias function; -999 to 9999.
d.b n d		Dead band (position proportioning); 2.0 to 50.0%.
C Y C.t		Cycle time; 1.0 to 300.0 sec.
		Heat/cool control
b n d.H.		Proportional band heat; 0.1 to 999.9%.
b n d.C.		Proportional band cool; 0.1 to 999.9%.
I n.r.H.		Integral (reset) value heat; 0.1 to 120 rpt/min.
I n.r.C.		Integral (reset) value cool; 0.1 to 120 rpt/min.
C r o S		Heat/cool output crossover; 0.1 to 99.9%.
H.H Y S		Crossover transition band width; 0 to crossover value in % output.
o.H Y S		Crossover output off hysteresis; ± 25.0 value in % output.
C Y.t.H.		Cycle time heat; 1.0 to 300.0 sec.
C Y.t.C.		Cycle time cool; 1.0 to 300.0 sec.
L E U.3	A L r S.	LEVEL 3, ALARMS. Point of entry.
d I S P	A L r S.	Display alarms. Point of entry.
A L r.1	S E t	Alarm 1 set. Point of entry.
t Y P E		H.PrC - High process (L.PrC+3 to 9999) L.PrC - Low process (-999 to H.PrC-3) H.dEU - High deviation (0.1 to 9999) L.dEU - Low deviation (0.1 to 9999) H.oUt - High output (10 to oP.HI) L.oUt - Low output (oP.Lo to oP.HI) nonE - No alarm setting
H E A t		YES — output alarm trip-point value in heat band, no — value is in cool band.
t r I P		Alarm trip-point value (see type).
P r t Y		Alarm priority; 1 or 2 (1 is high priority).

Main Display	Secondary Disp. Entry	Description and Valid Entry
H Y S t.		Alarm hysteresis value; 0 to 1000 = dead band value in engineering units.
A L r.2	S E t	Alarm 2 set. Point of entry. See ALr.1.
A L r.3	S E t	Alarm 3 set. Point of entry. See ALr.1.
A L r.4	S E t	Alarm 4 set. Point of entry. See ALr.1.
r E L Y	S E t	Relay set. Point of entry.
r L Y.A	S E t	Relay A set. Point of entry.
C n t L	r E L Y	Control relay
n o t	I n S t	Relay not installed
r L Y.b	S E t	Relay b set. Point of entry.
r.A C t		Relay action; nonE, ALrS, rS, totL.
t.A C t		Relay trip action; Alarm set 1, 2, 3, 4, or any combination of 1 through 4.
r L Y.C	S E t	Relay C set. Point of entry. See rLY.b.
A C k -	A L r S .	Alarm acknowledge. Point of entry.
A C k.1		YES — relay follows alarm action, no — relay doesn't follow alarm action.
A C k.2		YES — alarm relay latches until acknowledged, no — no latching.
L E U.4	H I.L o	LEVEL 4, HIGH/LOW. Point of entry.
o P.H I		Output high limit; 10.0 to 100.0% relay output span. 10.0 to 110.0% mA output span.
H o.H I		Heat output high limit; 10.0 to 99.9% heat output span.
o P.L o		Output low limit; 0 to oP.HI -.1 = % relay output span. -.10.0 to oP.HI -.1 = % mA output span.
C o.H I		Cool output high limit; 10.0 to 99.9% cool output span.
S P - H		Local set-point high limit; -999 to 9999.
S P - L		Local set-point low limit; -999 to 9999.
d.S P.E		YES — dual set-point selectable in Level 1. no — dual set-point not enabled.
S P.2.H		Dual set-point high value; -999 to 9999.
S P.2.L		Dual set-point low value; -999 to 9999.
S P.2		Dual set-point start value; -999 to 9999.
d I G.	I n P t	Digital input. Point of entry.
L k.o t		Yes — lockout front panel changes to digital input action, no — disable lockout.

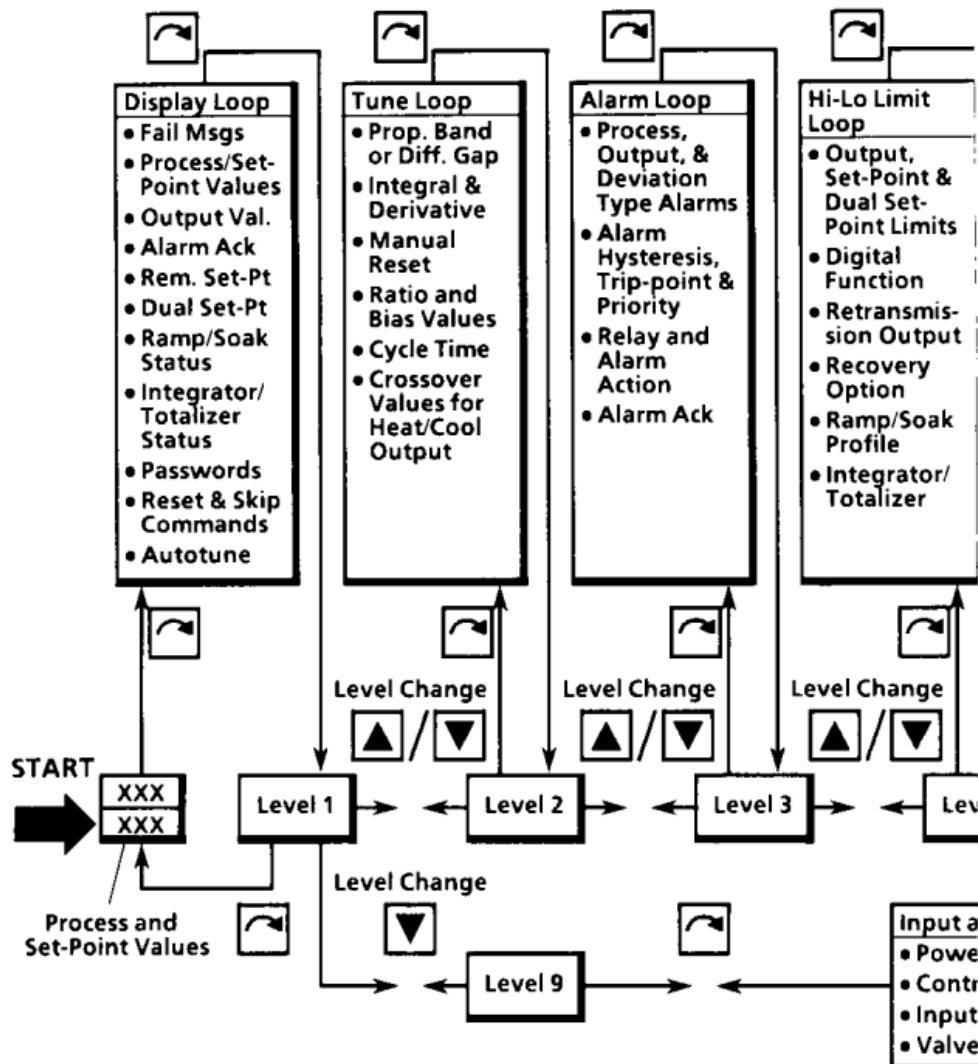
Main Display	Secondary Disp. Entry	Description and Valid Entry
d I.F C		Function; A.to. __ (auto/manual), L.to.r (local/remote), F.d.SP (fixed dual set-point), A.ACk (alarm acknowledge), rS (ramp/soak), tot (totalizer), or notH.
C.o U t		YES – Use configured output value when transferring to manual, no does not.
C F o.d		Configured output value; 0 to 100%.
r S.F		Ramp/soak fuction; rn.Hd (run/hold), or rn.St (run/stop).
t o t.F		Totalizer function; rS.St (reset/start), or St.St (start/stop).
F.S P.1		Fixed dual set-point 1; SP-H to SP-L.
F.S P.2		Fixed dual set-point 2; SP-H to SP-L.
t o G L.		YES – Set toggling action for A/M, L/R.
d.A C t		Digital action; dlr (direct), rEU (reverse).
r A __ P	S o A K	Ramp/soak profile. Point of entry.*
t o t L	C n F G	Totalizer configuration. Point of entry.*
r t.E n		Retransmission output enable. YES or no. Set at no for Hc.d__.
P.U.H I		Retransmission process high; -999 to 9999 (20 mA retransmission output).
P.U.L o		Retransmission process low; -999 to 9999 (4 mA retransmission output).
F.o U t		Fault output; 0 to 100% output.
F.P E r		Fault detection level % of volt input span (limits: -.05 to 6.45 V, -48.3 to 193 mV, .02 to 49.6 mA); 0 to 100%.
r.o P t		Recovery Option; __ An, or LAST.
L E U.5	I n P t.	LEVEL 5, INPUT. Point of entry.
I n P.H		Input high range value; 5.00 to 20.00 mA dc, 10.0 to 150.0 mV dc, or 0.1 to 5.00V dc.
I n P.L		Input low range value; 4.00 to 19.00 mA, 0.0 to 140.0 mV, or 0.00 to 4.90V.
d.P.- -		Decimal point; 0., 0.0, 0.00, 0.000 positions (units, tenths, etc.) for mA, mV, V; 0., 0.0 for tC, RTD.
S Q - L		Square law; YES – square law linearization of input, no – square root not extracted.
E n G.H		Engineering units, high; -999 to 9999.
E n G.L		Engineering units, low; -999 to 9999 (applies only when SQ-L not selected).

Main Display	Secondary Disp. Entry	Description and Valid Entry
t Y P E		Type thermocouple; J-tC, K-tC, E-tC, r-tC, S-tC, t-tC, b-tC, or n-tC.
d E G.C		Temperature units; YES — selects Celsius, no — selects Fahrenheit.
S P A n		Span; .001 to 9999 (controller gain calculation; process input span in engineering units is recommended except for a temperature controller gain of 100).
A __.r b.		YES — A/M ratio bias station enabled, no — A/M ratio bias station not enabled.
r.b.t Y		Type of station; rAto, bIAS, r.b.
S r C		Source (ratio or bias); LoC, rE__.
b A L		Balance (ratio or bias); StAn, AUto.
r.S r C		Ratio source (for r.b.); LoC, rE__.
b.S r C		Bias source (for r.b.); LoC, rE__.
r.b A L		Ratio balance (for r.b.); StAn, AUto.
b.b A L		Bias balance (for r.b.); StAn, AUto.
L E U.6	E n b L.	LEVEL 6, ENABLE. Point of entry.
A U t o	t U n E	Auto tune enable.*
t.P A S.		Tune password; 0 to 9999.
C.P A S.		Configure password; 0 to 9999.
P.U P._		YES — power up message displayed, no — power up message suppressed.
P.__ d E		LASt — power up mode is last mode, __An — power up mode is manual, AUto — power up mode is auto.
P.o U t		Power up output value; LASt, F.VAL.
o.U A L		Fixed output value; 0.0 to output high/low limit.
S P.t k		YES — activates set-point tracking, no — no set-point tracking.
d r C t	A C t G	YES — selects direct control action, no — selects reverse control action.
d r C t	C o o L	YES — selects cool relay closed for 100% cool output, no — selects cool relay open for 100% cool output.
r U.o P.		YES — selects reverse output (20 to 4 mA), no — selects direct output (4 to 20 mA).
r.S P.E		YES — remote set-point selectable in Level 1, no — remote set-point not enabled.

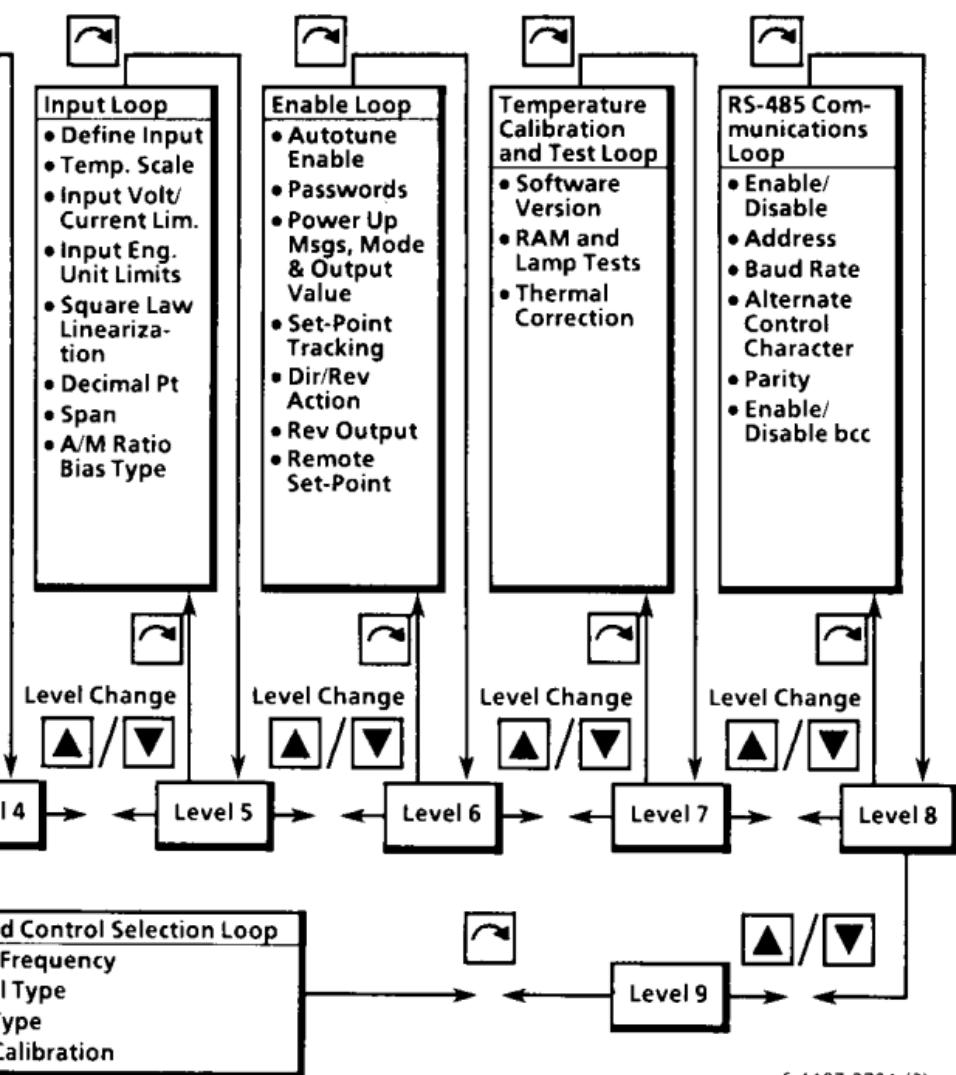
Main Display	Secondary Disp. Entry	Description and Valid Entry
r.S P H.		R. set-point high value; -999 to 9999. High engineering unit value of remote set-point at 20 mA input.
r.S P L.		R. set-point low value; 999 to 9999. Low engineering unit value of remote set-point at 4 mA input.
r.F.A.		Remote set-point fault action; notH., or LoC.
F.S P t.		Fault local set-point value; limited by local set-point.
F.P E r.		Fault detection level % of mA input span; 0 to 100%.
L E U.7 d I A G		LEVEL 7, DIAGNOSTICS. Point of entry.
S.r E U.		Software revision number
r.t S t		YES — RAM OK test performed, no — skip RAM test.
L.t S t		YES — lamp test performed, no — skip lamp test.
t.C A L		YES — temperature calibration point of entry, no — skip calibration procedure.
3 2.0		Calibration correction; 15.0 to -15.0°. Temperature correction applied to input (shown at 32°).
L E U.8 4 8 5		LEVEL 8, RS485 COMMUNICATIONS. Point of entry.*
L E U.9 C n t L.		LEVEL 9, CONTROL. Point of entry.
H r t		Line frequency in Hertz; 50 or 60.
C n t L. t Y P E		Controller type (restricted by hardware); on.oF., CP. (current proportioning), tP. (time proportioning), PP. (position proportioning) HC.d__ (Heat/cool dual milliamp), HC.dr (Heat/cool dual relay), Hc.__r (Heat/cool milliamp/relay).
I n Pt. t Y P E		Input type; Volt., tCPL. (thermocouple), r.t.d. (RTD), __V Lt (millivolt), __A__P (milliamp).
U.C A L		YES — perform valve calibration procedure, no — skip calibration.

* See instructions.

RELATIONSHIP OF I/O



LEVELS AND LOOPS



S-1107-270A (2)

CONVERSION TABLE: ALPHABET TO 7-SEGMENT LED DISPLAY

A	R	I	/	Q	C.
B	b	J	U	R	r
C	c	K	H	S	s
D	d	L	L	T	t
E	E	M	-	U	U
F	F	N	n	V	v
G	G	O	o	Y	y
H	H	P	P		

S-1107-60 (1)

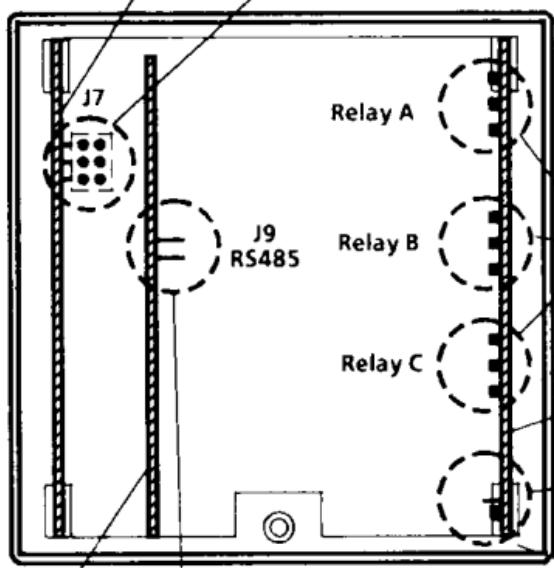
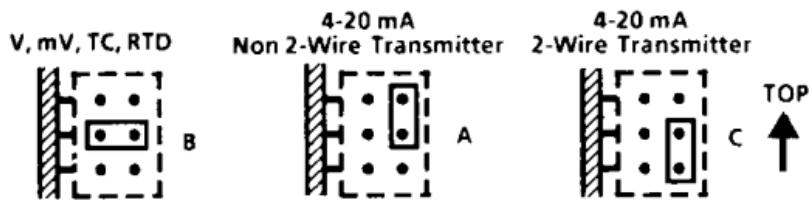
DIAGNOSTIC MESSAGES

Main Display	Secondary Display	Description
A.C.	F A I L	Power failure power-up message
C n F G	C H n G	Program change, defaults loaded
FAIL	F.b d C	A/D converter failure
FAIL	F.b C.O	Option board A/D converter failure
FAIL	r A _	RAM failure
FAIL	F.t C.L	Failed thermocouple, low
FAIL	F.t C.H	Failed thermocouple, high
FAIL	F.r t d	Failed RTD
FAIL	F.r t.L	Failed RTD, low
FAIL	F.r t.H	Failed RTD, high
FAIL	F.C J C	Failed cold junction compensating resistor
FAIL	F._ A.L	Failed 4-20 mA input, low
FAIL	F._ A.H	Failed 4-20 mA input, high
FAIL	F.L o	Under voltage
FAIL	F.H i	Over voltage
FAIL	F.r S.L	Failed remote set-point, low
FAIL	F.r S.H	Failed remote set-point, high

ALARM MESSAGES

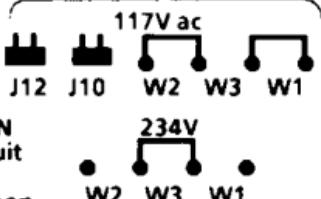
Main Display	Secondary Display	Description
X.X.X X	X X X	Process value and alarm message flash while set-point or output are displayed. See alarm message breakdown below.
X.X.X X	n.A C k.	Alarm not acknowledged
X.X.X X	A C k d	Alarm acknowledged
1.x.x X		Alarm 1 set alarm
2.x.x X		Alarm 2 set alarm
3.x.x X		Alarm 3 set alarm
4.x.x X		Alarm 4 set alarm
x.H.x X		High alarm
x.L.x X		Low alarm
x.x.P r		Process alarm
x.x.d U		Deviation alarm
x.x.o P		Output alarm

JUMPER LOCATIONS



Jumper IN: Resistor In (Last Instrument)
Jumper OUT: Resistor Out

J12 Jumper IN: Connects circuit common to isolated common



S-1107-328(1)



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all specifications are subject to change without notice.