FUTUREDESIGN CONTROLS

Single Loop Control Feature Comparison

		Loop Control Inputs									Control Outputs								Comms		Security			Misc			
	Base List Price	Power Input: 90-250VAC or 11-26VAC/VDC	Displays: D=Dual, S=Single	Universal Input: t/c, RTD MA/VDC	Universal Input: t/c, RTD optional MA/VDC	2nd analog input: remote SP, 2nd PV or CT	18-bit analog input	200 ms input scan	Ramp to Setpoint	Event Input	Total number of control outputs	PID Auto Tune Fuzzy Assist	Output #1: on-off or PID	Output #2: PID cool or Trx PS	Output #2: PID cool, Alarm or Trx PS	Output #3: Alarm	Output #4: Alarm Timer (Hi/low all)	Alarm Logic: Dev., Dev Band, Process, latching	Analog (15-bit) Retransmission	Serial Modbus RS232 or 485 RTU	Operator Security DIP Switch	Operator Security: Software	Operator Security: Password	Agency (12): UL, CSA, CE, RoHS	3-Year Warranty	PC Configurable	NEMA 4X / IP65 S=Standard O=Optional
300 Series																											
2500 1/32 DIN	$206	✓	S	✓		✓	✓	✓	✓	(1)✓	3	(3)✓	✓	✓		✓		(6) ✓	(8)✓ (9)	(8)✓	✓			✓	✓	Y	S
9300 1/16 DIN	$221	✓	D	✓		✓	✓	✓	✓	(1)✓	3	(3)✓	✓	✓		✓		(6) ✓	(8)✓ (9)	(8)✓	✓			✓	✓	Y	S
8300 1/8 DIN	$275	✓	D	✓		✓	✓	✓	✓	(1)✓	4	(3)✓	✓	✓		✓	✓	(6) ✓	(8)✓ (9)	(8)✓	✓			✓	✓	Y	O
4300 1/4 DIN	$325	✓	D	✓		✓	✓	✓	✓	(1)✓	4	(3)✓	✓	✓		✓	✓	(6) ✓	(8)✓ (9)	(8)✓	✓			✓	✓	Y	O
100 Series																											
9100 1/16 DIN	$159	✓	D		✓		✓	✓	✓		3	✓	✓		✓	✓		✓	(8)✓ (10)	(8)✓			✓	✓	✓	Y	O
8100 1/8 DIN	$199	✓	D		✓		✓	✓	✓		3	✓	✓		✓	✓		✓	(8)✓ (10)	(8)✓			✓	✓	✓	Y	O
4100 1/4 DIN	$199	✓	D		✓		✓	✓	✓		3	✓	✓		✓	✓		✓	(8)✓ (10)	(8)✓			✓	✓	✓	Y	O
B Series Board Level	$149	✓	D		✓		✓	✓	✓		3	✓	✓		✓	✓		✓	(8)✓ (10)	(8)✓			✓	✓	✓	Y	
C Series																											
C21 1/32 DIN	$139	✓	S		✓		✓	✓	✓		2	✓	✓		✓			✓	(8)✓ (10)	(8)✓			✓	✓	✓	Y	S
C91 1/16 DIN	$139	✓	S		✓		✓	✓	✓		2	✓	✓		✓			✓	(8)✓ (10)	(8)✓			✓	✓	✓	Y	
P Series (Profile 13)																											
P91 1/16 DIN	$221	✓	D		✓		✓	✓		(1)✓	3	(3)✓	✓		(3)✓	(3)✓		(7) ✓	(8)✓ (10)	(8)✓				✓	✓	Y	O
P41 1/4 DIN	$325	✓	D		✓		✓	✓		(1)✓	4	(3)✓	✓		(3)✓	(3)✓	(3)✓	(7) ✓	(8)✓ (10)	(8)✓				✓	✓	Y	O
L Series (FM Limits)																											
L91 1/16 DIN	$180	✓	S		✓		✓	✓	(13)	(1)✓	2		(4)		(4)✓			(4)	(8)✓ (10)	(8)✓			(11)	✓	✓	Y	
L41 1/4 DIN	$299	✓	D		✓		✓	✓	(13)	(1)✓	2		(4)		(4)✓			(4)	(8)✓ (10)	(8)✓			(11)	✓	✓	Y	O
90 Series (Legacy)																											
9090 1/16 DIN	$179	✓	D		✓		✓	✓	✓		2	✓	✓		(5)✓			✓						✓	✓		

(1) Event Input:
- 300 Series configurable for 1 of 9 functions
  SP2, PID2, SP2/PID2, reset alarms, disable output 1, 2, or 1 & 2,
  switch remote to local SP, Lock all parameters
- P Series configurable for 1 of 8 functions:
  Profile - Start, Hold, Abort, Switch to Manual mode, failure transfer, all outputs off,
  segment advance, select 2nd PID parameters
- L Series Event Input is configurable as remote reset or remote Lock;
  Event input is standard L41; optional on L91 and consumes L91 output #2

2) 300 & P Series PID Sets: Both models are capable of storing two PID sets
- P and 300 Series may switch between PID sets via event input
- P Series may also have specific PID set configurable by segment within a profile.

3) P Series Output 2, 3 & 4
- Hardware may be specified as an Output or Trx Power Supply
- Outputs may be specified as an Alarm or an Event
  (events functional when running a profile, configurable by segment))
  (alarm configurable as standard alarms and as profile alarms: Hold, Run or End)
- Output #4 (P41 only) may also be specified for Retransmission of PV or SP

4) L Series
- L Series Output #1 is a latching output; No PID output
  Output #2 configurable as Process (latching or not) or alarm silence logic
- L 91 Single Display; when in Alarm show PV, when not in alarm configurable as follows:
  L 91 display configurable to show PV, SAFE or SP1 or 2.
- L41 display: upper display always shows PV
  L41 lower display: when in alarm shows SP,
  when not in alarm configurable to show SP or SAFE

5) 9090 output #2
Alarm only configurable as process, deviation, deviation band or timer

6) 300 Series Alarm Logic
- also includes Heater Break Alarm based upon PV#2 CT input, loop break alarm,
  process alarms on PV #1 and/or 2 and delta PV1 & PV2

7) P Series Alarm functionality:
- P Series does not offer latching output or Timer alarm outputs
- P Series also offers profile specific alarm logic: End of Profile, Hold mode and Static mode

8) Communications: Analog Retransmission and Serial Modbus RS232/485
- Analog Retransmission and Serial Modbus are mutually exclusive except for the model P41
- The 300 & 100 Series, C21 and L41 offer a specific Communications output option in matrix
- The C91 and L91 Series offers Communication options but are mutually exclusive with output #2
- Multiview PC based SCADA and Orion-M color touch screen systems communicate with 300 Series only

(9) Analog Retransmission - 300 Series: PV, SP or percent out for output #1 or #2

(10) Analog Retransmission - 100, C, L and P Series: C & 100 Series PV only; L & P Series PV or SP

11) Security L Series: Setpoint & configuration Lock occurs after time-out period or digital input

12) Agency Approval - UL component recognition & UL Listed
The L41 & P Series are UL Listed; all other controls are UL Recognized

13) P Series Profile Overview
- up to 9 programs
- up to 64 segments/program
- up to 2 PID outputs w/2 PID sets
- up to 3 alarms or events

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