

Manufacturer:	Red Lion	Red Lion	Red Lion	Red Lion	Eurotherm	Eurotherm	Eurotherm	Eurotherm	Eurotherm	Eurotherm	FUJI	FUJI	FUJI	Honeywell	Honeywell	Jumo	Jumo
1/16 DIN PID Model:	T16	P16	T48	P48	2416	3216	2116	2116C	LDE	LME	PXR	PYH	PYX	DCP50	UDC1000	ITRON 16	DTRON16.1
Control																	
Heat and Cool	X	X	X	X	X	X	X	X	X	X			X			X	X
Heat or Cool	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ON/OFF Control	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Auto Tune	X	X	X	X	X	X	X	X	X	X	X	X	X				
Fuzzy Logic (Self Tuning)					X	X	X				X	X	X		X		
Manual control		X	X	X				X	X	X					X		
Ramp / Soak					16			1	1	1	16		8	4	4	1	1
Profiles					4	5		1	1	1	8		1	16	16		IP65
Accuracy full scale %	0.3%+/-1	0.3%+/-0.3	0.3%+/-1	0.3%+/-0.3	0.2%+/-1			0.25%			0.25%+/-1		0.5%+/-1	0.25%+/-1	0.25%+/-1	0.4%	0.1%
Internal Second Setpoint	X	X	X	X				X	X	X		X	X				X
Features																	
Display lines	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	1	2
Digits	4	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4	4
Changeable color display																	
Horizontal (or available)																	
Warranty years	2	2	2	2							3	3	3		2	1	1
Can operate below 32F					X						X		X				
Lockouts	X	X	X	X			X	X									X
NEMA or IP	4X	4X	4X	4X	IP65		IP65	4X	4X	4X	4X	4X	4X	3	3	IP65	IP65
UL	Recognized	Recognized	Recognized	Recognized				Listed			Recognized	Recognized	Recognized		Recognized	Recognized	Recognized
CSA											X				X		
FM															X	X	X
Input																	
TC RTD mV input types	12		12		21	10	12	12	12	12	10	10	27	10	8	12	14
Voltage/Current input		Both		Both	Both	Both	Both	Both			Both	Both	Both	Both	Both	Both	Both
Universal input					X	X	X	X						X	X	X	X
User inputs	1	1	1	1		1	1	1	1	1	2	2	2	1	1	1	1
Output																	
Alarm Options	2	2	2	2	2	3	1	2	2	2	3	3	2	2	2	2	2
Alarm Configurations	7	7	8	8	11	10	6	8	7	7	6	6	6	9	9		8
Relay in amps	3	3	3	3	2	2	2	2	2	2	3/1	3/2	3	2	2	3	3
Triac 120/240VAC in amps			1	1	1												
Internal SSR in amps																	
Transistor Output																	PNP
Logic VDC volts (to SSR)			7	7	18	12	9	18	14-24	14-24	17-25	10-27	24	5	5	5/12	5/12
Voltage/Current Linear DC	Both	Both	Both	Both	Both			Both			Current	Current	Both	Current	Current		Both
Second 4-20 retransmit			X	X	X						X	X	X				
Excitation voltage													24				
Powered																	
VAC	85-250	85-250	85-250	85-250	85-264	110-240	85-264	85-264	100-240	100-240	100-240	100/220	85-264	90-264	90-264	100-240	100-240
VDC	18-36	18-36	18-36	18-36	20-29		20-29		24	24	24	24		24-48	24-48	10-53	10-53
Options																	
Port only for programming	X	X			X	X	X		X	X							
PC programming software	X	X	X	X	X	X	X		X	X	X	X	X				
RS485 option			X	X	X	X	X	X			X	X	X	X	X		X
RS232 option					X	X	X	X	X	X							
Buss communication					MODBUS	MODBUS	MODBUS	Mod Dev			MODBUS			MODBUS			MODBUS
Ethernet																	
Analog Remote Setpoint			X	X				X			X	X	X				X
Heater Current monitor			X	X	X	X	X	X			X	X	X				
Motorized Valve					X			X				X					

Manufacturer:	Red Lion	Red Lion	Red Lion	Red Lion	Love	Love	Love	Love	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Omega
1/16 DIN PID Model:	T16	P16	T48	P48	16S	16A	LCU116	LVC16	CN8201	CNi16	CNi16D	CN77000	CN9000A	CN9300	CN9400	CN77500
Control																
Heat and Cool	X	X	X	X					X	X	X		X			
Heat or Cool	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ON/OFF Control	X	X	X	X					X	X	X	X	X	X	X	X
Auto Tune	X	X	X	X	X	X			X	X	X	X	X	X	X	X
Fuzzy Logic (Self Tuning)					X	X	X	X								
Manual control		X	X	X	X		X	X	X							
Ramp / Soak					16	16	3		1	1	1	1		1	1	1
Profiles									8							
Accuracy full scale %	0.3%+/-1	0.3%+/-0.3	0.3%+/-1	0.3%+/-0.3	0.25%+/-1	0.25%+/-1	0.5%+/-1	0.1%+/-1	0.2%+/-1	0.03%+/-0.5	0.03%+/-0.5	0.03%+/-0.5	0.25%+/-1	0.25%+/-1	0.25%+/-1	0.03%+/-0.5
Internal Second Setpoint	X	X	X	X	X	X	X					X	X			X
Features																
Display lines	2	2	2	2	2	2	2	2	2	1	2	2	1	1	2	2
Digits	4	4	4	4	4	4	4	4	4	4	4	4	3.5	4	4	4
Changeable color display										X	X					
Horizontal (or available)																
Warranty years	2	2	2	2	3	3	3	3	2	5	5	5	3	3	3	5
Can operate below 32F					X	X										
Lockouts	X	X	X	X	X	X						X		X	X	X
NEMA or IP	4X	4X	4X	4X	4X	4X	4X	4X	4X			4				12
UL	Recognized	Recognized	Recognized	Recognized	Listed	Listed	Listed	Listed	Listed	Listed	Listed	Listed	Recognized	Recognized	Recognized	Listed
CSA																
FM																
Input																
TC RTD mV input types	12		12		13	13	15	15	13	13	13	12	10	10	10	12
Voltage/Current input		Both		Both	Both	Both	Both		Both	Both	Both	Both		Current	Current	Both
Universal input					X	X	X		X	X	X	X		X	X	X
User inputs	1	1	1	1	1	1	1		1			1				1
Output																
Alarm Options	2	2	2	2		1		1	1	1	1	1	1			1
Alarm Configurations	7	7	8	8					8			5	2	5	5	5
Relay in amps	3	3	3	3	3	3	1	3	5	3	3	5	5/3	2	2	5
Triac 120/240VAC in amps			1	1												
Internal SSR in amps					2	2			1	0.5	0.5	1	1			1
Transistor Output																
Logic VDC volts (to SSR)			7	7	15	15	24	20	20	10	10	10	5	5	5	10
Voltage/Current Linear DC	Both	Both	Both	Both	Current	Current	Current	Current	Current	Both	Both	Both	Both			Both
Second 4-20 retransmit			X	X								X				X
Excitation voltage									5-15	24	24					
Powered																
VAC	85-250	85-250	85-250	85-250	100-240	100-240	100-240	100-240	100-250	90-340	90-340	90-250	115 / 230	110-240	110-240	90-25
VDC	18-36	18-36	18-36	18-36	12-24	12-24			24	12-36	12-36	10-34		12 or 24	12 or 24	10-34
Options																
Port only for programming	X	X														
PC programming software	X	X	X	X	X				X	X	X	X		X	X	X
RS485 option			X	X	X	X	X	X	X	X	X	X		X	X	X
RS232 option					X	X	X		X	X	X	X		X	X	X
Buss communication					MODBUS		MODBUS		MODBUS	MODBUS	MODBUS	MODBUS		MODBUS	MODBUS	MODBUS
Ethernet																
Analog Remote Setpoint			X	X	X	X			X	X	X	X				X
Heater Current monitor			X	X	X		X									
Motorized Valve												X				X

Manufacturer:	Red Lion	Red Lion	Red Lion	Red Lion	Omron	Omron	Omron	Precision D	Precision D	Precision D	Watlow	Watlow	Watlow	Watlow
1/16 DIN PID Model:	T16	P16	T48	P48	E5CN	E5CS	E5CK	PD54x	PD550	PD570	93	96	SD6xD	SD6
Control														
Heat and Cool	X	X	X	X	X			X	X		X	X	X	X
Heat or Cool	X	X	X	X	X		X	X	X	X	X	X	X	X
PID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ON/OFF Control	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Auto Tune	X	X	X	X	X	X	X		X	X	X	X	X	X
Fuzzy Logic (Self Tuning)							X							
Manual control		X	X	X					X		X	X	X	X
Ramp / Soak									15		1		8	10
Profiles									2				2	4
Accuracy full scale %	0.3%+/-1	0.3%+/-0.3	0.3%+/-1	0.3%+/-0.3	0.1%+/-1	0.5%	0.3%+/-1	0.1%+/-1	0.1%+/-1	0.1%+/-1	0.10%	0.10%	0.10%	0.1%
Internal Second Setpoint	X	X	X	X							X	X		
Features														
Display lines	2	2	2	2	2	1	2	2	2	2	2	2	2	2
Digits	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Changeable color display														
Horizontal (or available)														
Warranty years	2	2	2	2	3	3	3	3	3	3	3	3	3	3
Can operate below 32F													X	X
Lockouts	X	X	X	X							X	X	X	X
NEMA or IP	4X	4X	4X	4X		4	4X	IP65	IP65	4X	4X	4X	4X	4X
UL	Recognized	Recognized	Recognized	Recognized	Listed	Recognized	Recognized	Recognized	Recognized	Recognized		Listed	Listed	Listed
CSA						X	X						X	
FM														
Input														
TC RTD mV input types	12		12		13	4	17	18	18	18	7	13	11	12
Voltage/Current input		Both		Both	Voltage		Both	Both	Both	Both	Both	Both	Both	Both
Universal input							X	X	X	X	X	X	X	X
User inputs	1	1	1	1					2		1	1		
Output														
Alarm Options	2	2	2	2	3	2		2	2	1	5	3	1	2
Alarm Configurations	7	7	8	8	12	8		9	9	20	5	5		
Relay in amps	3	3	3	3	3	3	5	3/1	3/1	3/1	2	2	2	5/2
Triac 120/240VAC in amps			1	1							.5	.5	0.5	0.5
Internal SSR in amps												1	1	1
Transistor Output														
Logic VDC volts (to SSR)			7	7	12		24				7-10	42	12	12
Voltage/Current Linear DC	Both	Both	Both	Both	Both	Both	Both	Both	Both		Both	Both	Both	Both
Second 4-20 retransmit			X	X	X		X	X	X	X	X	X	X	X
Excitation voltage														
Powered														
VAC	85-250	85-250	85-250	85-250	100-240	100-240	100-240	100-240	100-240	100-240	100-240	85-264	85-264	85-264
VDC	18-36	18-36	18-36	18-36	24		24				21-24	21-30	24	24
Options														
Port only for programming	X	X										X	X	X
PC programming software	X	X	X	X	X			X	X	X				PDA
RS485 option			X	X	X		X	X	X	X		X		
RS232 option							X	X	X			X		
Buss communication					MODBUS			MODBUS	MODBUS	MODBUS		MODBUS	Devicenet	MODBUS
Ethernet														
Analog Remote Setpoint			X	X	X									
Heater Current monitor			X	X										
Motorized Valve							X							

Manufacturer:			Red Lion	Red Lion	Red Lion	Red Lion	Autonics	Carlo G	Carlo G	Eurotherm	Eurotherm	Eurotherm	FUJI	FUJI	FUJI	Honeywell	Jumo	Jumo
1/8 DIN	PID	Model:	TCU	PCU	TSC	PSC	T2	PDI 92	PDI 95	2408	2208e	TKS	PXR	PYH	PYX	UDC1500	ITRON 08	DTRON08.1
Control																		
Heat and Cool	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Heat or Cool	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ON/OFF Control	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Auto Tune	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Fuzzy Logic (Self Tuning)										X		X	X	X	X	X		X
Manual control	X	X	X	X	X	X	X		X		X					X		
Ramp / Soak			8	8	8	8	1			16	1	1	16		8	4	1	1
Profiles			4	4	4	4				8	1	1	8		1	16		
Accuracy full scale %	0.2%+/-1.5	0.15%+/-1	0.2%+/-1.5	0.15%+/-1	0.2%+/-1.5	0.15%+/-1	0.1%+/-1	0.25%+/-1	0.25%+/-1	0.2%+/-1	0.25%	0.2%	0.25%+/-1		0.5%+/-1	0.25%+/-1	0.4%	0.1%
Internal Second Setpoint			X	X	X	X					X	X		X	X			X
Features																		
Display lines	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2
Digits	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Changeable color display																		
Horizontal (or available)							X										X	X
Warranty years	2	2	2	2	2	2	3					3	3	3	2		1	1
Can operate below 32F							X					X		X				
Lockouts	X	X	X	X	X	X	X		X	X	X							X
NEMA or IP	4X	4X	4X	4X	4X	4X	4X		IP65	4X	4X	4X	4X	4X	4X	3	IP65	IP65
UL	Listed	Listed	Listed	Listed	Listed	Listed	Listed				Listed		Recognized	Recognized	Recognized	Recognized	Recognized	Recognized
CSA													X			X		
FM																X	X	
Input																		
TC RTD mV input types	12		12		12		13	6	11	11	12	10	10	10	27	8	12	9
Voltage/Current input		Both		Both		Both	Both	Both	Both	Both	Both	Both	Both	Both	Both	Both	Both	Both
Universal input						X			X	X	X				X	X	X	X
User inputs	1	1	1	1	1	1			3	1	3	2	2	2	1	1	1	1
Output																		
Alarm Options	2	2	2	2	2	2	2	3	4	4	2	2	3	3	2	2	2	3
Alarm Configurations	7	7	8	8	8	8	9	10	10	14	8	6	6	6	6	9		8
Relay in amps	5	5	5	5	5	5	3/1	6/2.5	6/2.5	2	2	2	3/1	3/2	3	2	3	3
Triac 120/240VAC in amps	1	1	1	1	1	1				1	1							
Internal SSR in amps																		
Transistor Output																		
Logic VDC volts (to SSR)	12	12	12	12	12	12	12	24	24	18	18	14	17-25	10-27	24	5	5/12	5/12
Voltage/Current Linear DC	Both	Both	Both	Both	Both	Both	Both			Both	Both	Both	Current	Current	Both	Current		Both
Second 4-20 retransmit							X			X			X	X	X			
Excitation voltage											24				24			
Powered																		
VAC	115/230	115/230	115/230	115/230	115/230	115/230	100-240	90-240	90-240	85-264	85-264	100-240	100-240	100/220	85-264	90-264	100-240	100-240
VDC								24	24	24	24	24	24	24	24	24-48	10-53	10-53
Options																		
Port only for programming																		
PC programming software												X	X	X				
RS485 option	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		X
RS232 option										X	X							
Buss communication										Mod Pro Dev	Mod Dev	MODBUS	MODBUS					MODBUS
Ethernet																		
Analog Remote Setpoint	X	X							X	X		X	X	X				X
Heater Current monitor	X							X	X		X	X	X	X				X
Motorized Valve	X	X								X	X	X	X					

