BurnerPRO BP110UVFR-SxM or BP230UVFR-SxM with Interrupted Pilot

SEQUENCE LEGEND							TIM	INGS / STAT	E SEQUENCE	E						
Is on or must be on	PRESET	FFRT			t11	t1	t12	t3'	TSA'	t7	t9	t5				t6
Is off or must be off	S1	1s			ne ne)	35.5s	time time)	4s	2s	8s	2s	10s				12s
No effect or not applicable	S2	1s			ator travel time - feedback time)	31s	travel time edback time	6s	3s	8.5s	3s	11.5s				18s
→ Must be on by end of state	S3	1s			rave	37s	tor travel feedback	2.5s	5s	10s	5s	12.5s				15s
CAST/POC Voltage must be present on terminal 13 within time	S4	1s			or t	60s	or t feec	2.5s	5s	10s	5s	12.5s				15s
specified for CAST (default 60s) and voltage must be	S 5	4s			Actuator · (max = fee	37s	ll Ø	2.5s	5s	10s	5s	12.5s				15s
present on terminal 12 within time specified for POC	S6	4s			Ac (ma	30s	Actu (max	1s	10s	5s	10s	15s				15s
(default 60s) timing for POC begins after CAST is proven.				l ×			\succ									
CAB Voltage must be present on terminal 14 within time				ILOC	Æ		INTERLOCK									
specified for CAB (default 60s)				TER.	RO		TER			9 N		9 N				
FS A flame signal in standby/afterburn for longer than the				PURGE INTERLOCK	AIR PROVE		E IN			PROVING		FLAME PROVING D				
time allowed for flame standby (default 60s) will result in			HEAT	URC	N V		PURGE			111		E Pf		_		щ
a lockout	<u> </u>	≿	R H	FIRE P	ІЅТІС	ige.	ZE P	Z		LAMI		LΑΝ		N O W N		URG
FB Voltage must be present on terminal 8 within time	LOCKOUT	STANDBY	L FOR	H FI	ИBU T	PREPURGE	V FIRE)VE	IGNITION	_	PILOT FL PERIOD	l	MAIN FL PERIOD	7			STPI
specified for feedback (default 60s)	707	STA	CALL	HIGH	COMBUSTION / TEST	PRE	LOW FI PROVE	N 91	PTFI	PIL(MTFI	MA	RUN	SHUT		PO
STATE	38	4	6	17	7	18	19	22	23	26	27	28,29	30,31	33	34	35 36
TYPE TERMINAL DESCRIPTION					◀ t11 ▶	◀ t1 ▶	◀ t12 ▶	⋖ t3' ►	◀ TSA' ►	∢ t7 ▶	⋖ t9 ►	 t5 ▶			◀	t6 ►
OUTPUT 3 Alarm						ı							<u> </u>		•	
OUTPUT 4 Power to limits																
INPUT 5 Recycle limits																
INPUT 12 Proof of closure																
INPUT 13 Combustion air switch test		CAST/POC														
INPUT 14 Combustion air proven					САВ											
OUTPUT 6,7 Blower																
OUTPUT 16 Ignition																
OUTPUT 17 Pilot gas valve																
OUTPUT 19 Main gas valve																
INPUT 8 Actuator feedback					FB		FB									
OUTPUT 9 Actuator open (high fire purge)																
OUTPUT 10 Actuator minimum (low fire ignition)																
OUTPUT 11 Actuator economy (closed)																
OUTPUT 20 Release to modulate																
INPUT 22,23 Flame signal UV									\rightarrow			\rightarrow				
INPUT 24, G Flame signal flame rod									\rightarrow			\rightarrow				
Flame signal results in lockout		FS														
Flame fail results in postpurge									····							

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BurnerPRO BP110UVFR-SxM or BP230UVFR-SxM with Intermittent Pilot

SEQUENCE LEGEND							TIM	INGS / STAT	E SEQUENCI	E					
Is on or must be on	PRESET	FFRT			t11	t1	t12	t3'	TSA'	t7	t9	t5			t6
Is off or must be off	S1	1s			er ne)	35.5s	time : time)	4s	2s	8s	2s	10s	=		12s
No effect or not applicable	S2	1s			Actuator travel time max = feedback time)	31s	tin k tin	6s	3s	8.5s	3s	11.5s	1		18s
→ Must be on by end of state	S3	1s			rave	37s	r travel i edback	2.5s	5s	10s	5s	12.5s			15s
CAST/POC Voltage must be present on terminal 13 within time	S4	1s			tor t	60s	tor t feec	2.5s	5s	10s	5s	12.5s			15s
specified for CAST (default 60s) and voltage must be	S5	4s			tual	37s	Actuator (max = fee	2.5s	5s	10s	5s	12.5s			15s
present on terminal 12 within time specified for POC	S6	4s			Actu (max	30s	AG (m.	1 s	10s	5s	10s	15s			15s
(default 60s) timing for POC begins after CAST is proven.		[[l ×			×	[
CAB Voltage must be present on terminal 14 within time				SLO(/E		001								
specified for CAB (default 60s)				Ä	, NO NO N		INTERLOCK			DNI BNI		5NI			
FS A flame signal in standby/afterburn for longer than the				PURGE INTERLOCK	COMBUSTION AIR PROVE TEST		<u>≤</u> ;;			PROVING		PROVING			
time allowed for flame standby (default 60s) will result in			HEAT	UR	NC V		PURGE			le Pl		1E PI		7	35
a lockout	5	}	FOR H	FIRE F	STIC	ЗGЕ	FIRE P	z		. FLAME		FLAME		SHUTDOWN	POSTPURGE
FB Voltage must be present on terminal 8 within time	LOCKOUT	STANDBY	. F	H FI	MBL	PREPURGE	LOW FI PROVE	IGNITION	_	PILOT FL PERIOD		MAIN FL PERIOD	_	JTD	STP
specified for feedback (default 60s)	07	STA	CALL	HIGH	CO	PRE	LO PR(101	PTFI	PIL	MTFI		RUN		PO
STATE	38	4	6	17	7	18	19	22	23	26	27 ▼ t9	28,29	30,31	33	34 35 36
TYPE TERMINAL DESCRIPTION					◀ t11 ▶	◀ t1 ▶	◀ t12 ▶	⋖ t3' ▶	◀ TSA' ▶	◀ t7 ▶		l :5 ▶			⋖ t6 ►
OUTPUT 3 Alarm															
OUTPUT 4 Power to limits															
INPUT 5 Recycle limits															
INPUT 12 Proof of closure															
INPUT 13 Combustion air switch test		CAST/POC													
INPUT 14 Combustion air proven					САВ										
OUTPUT 6,7 Blower															
OUTPUT 16 Ignition															
OUTPUT 17,18 Pilot gas valve															
OUTPUT 19 Main gas valve			8												
INPUT 8 Actuator feedback					FB		FB								
OUTPUT 9 Actuator open (high fire purge)															
OUTPUT 10 Actuator minimum (low fire ignition)															
OUTPUT 11 Actuator economy (closed)														1	
OUTPUT 20 Release to modulate												•			
INPUT 22,23 Flame signal flame red									→			→			
INPUT 24, G Flame signal flame rod		FC							\rightarrow			\rightarrow			
Flame signal results in lockout		FS							<u> </u>						
Flame fail results in postpurge															

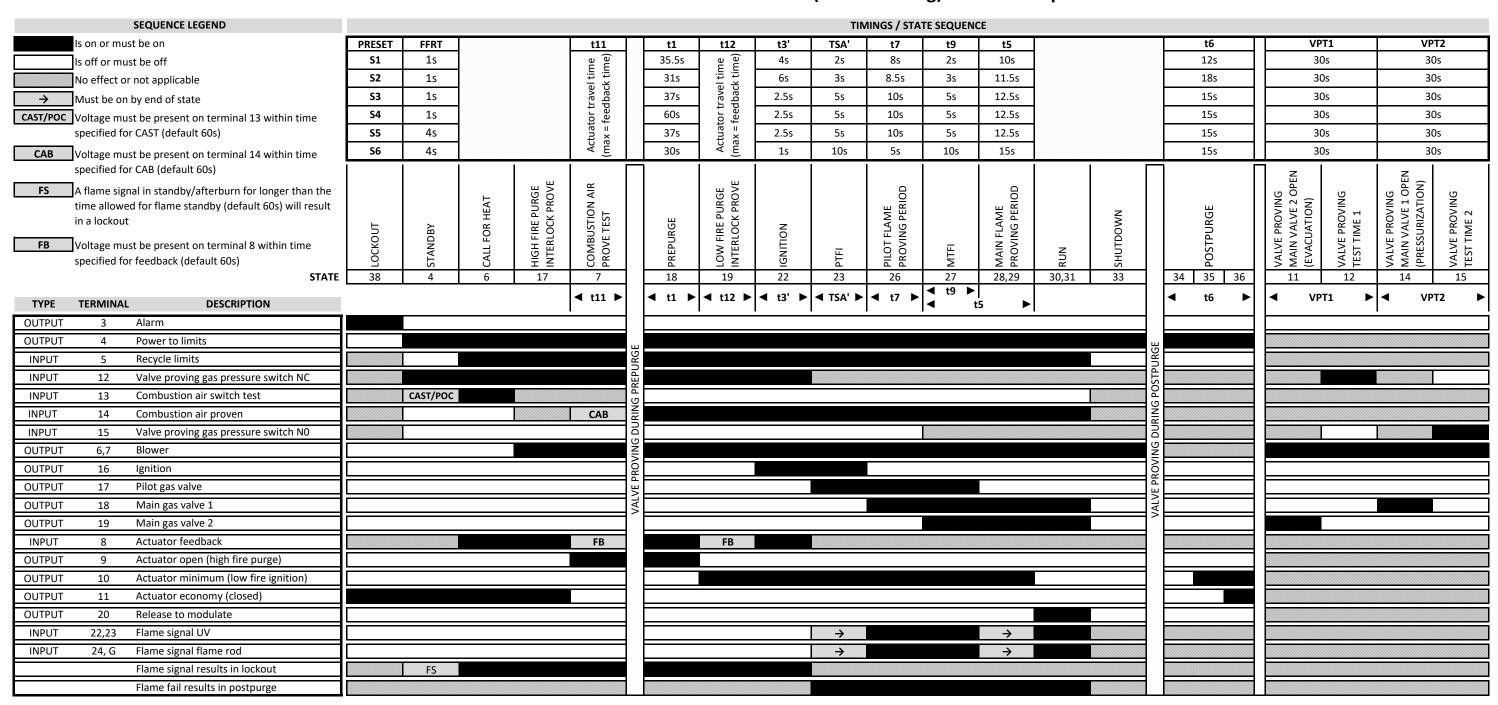
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BurnerPRO BP110UVFR-SxM or BP230UVFR-SxM with Direct Main

SEQUENCE LEGEND							TIM	INGS / STAT	E SEQUENCE								
Is on or must be on	PRESET	FFRT			t11	t1	t12	t3'	TSA'	t4'		t5				t6	
Is off or must be off	S1	1s			ne ne)	35.5s	ne ne)	4s	2s	10s		10s				12s	
No effect or not applicable	S2	1s			l tin k tin	31s	l tin k tin	6s	3s	11.5s		11.5s				18s	
→ Must be on by end of state	S3	1s			Actuator travel time (max = feedback time)	37s	ator travel time efeedback time	2.5s	5s	15s		12.5s				15s	
CAST/POC Voltage must be present on terminal 13 within time	S4	1 s			tor t feec	60s	tor t feec	2.5s	5s	15s		12.5s				15s	
specified for CAST (default 60s) and voltage must be	S5	4s			tual	37s	Actuator 1 (max = fee	2.5s	5s	15s		12.5s				15s	
present on terminal 12 within time specified for POC	S6	4s			Ac (m	30s	AG (m.	1s	10s	15s		15s				15s	
(default 60s) timing for POC begins after CAST is proven.				l ×			×										
CAB Voltage must be present on terminal 14 within time				PURGE INTERLOCK	Æ		PURGE INTERLOCK										
specified for CAB (default 60s)				I HE	PROVE		ITER					9 N					
FS A flame signal in standby/afterburn for longer than the				3E II	AIR P		<u>\</u>					PROVING					
time allowed for flame standby (default 60s) will result in			HEAT	URC	N O		URG					E P		_		出	
a lockout	5	≿	FOR H	RE F	STIC	GE	FIRE P	z				ΡΑΣ		OWN		PURGE	
FB Voltage must be present on terminal 8 within time	госкоит	STANDBY	L FC	HIGH FIRE PROVE	MBU	PREPURGE	LOW FII	IGNITION	l	_		IN F	_	SHUTD(STP	
specified for feedback (default 60s)	707	STA	CALL	HIG	COMBUSTION / TEST	PRE	LOW PROV	NSI	M			MAIN FLAME F PERIOD	RUN	SHL		PO	
STATE	38	4	6	17	7	18	19	22	23	26		27,28,29	30,31	33	34	35	36
TYPE TERMINAL DESCRIPTION					◀ t11 ▶	◀ t1 ▶	◀ t12 ▶	⋖ t3' ►		ı' >	◀	t5)	•		◄	t6	•
OUTPUT 3 Alarm																	
OUTPUT 4 Power to limits																	
INPUT 5 Recycle limits																	
INPUT 12 Proof of closure																	
INPUT 13 Combustion air switch test		CAST/POC															
INPUT 14 Combustion air proven					CAB												
OUTPUT 6,7 Blower																	
OUTPUT 16 Ignition																	
OUTPUT 17,18 Main gas valve																	
INPUT 8 Actuator feedback					FB		FB										
OUTPUT 9 Actuator open (high fire purge)																	
OUTPUT 10 Actuator minimum (low fire ignition)																	
OUTPUT 11 Actuator economy (closed)																	
OUTPUT 20 Release to modulate																	
INPUT 22,23 Flame signal UV									\rightarrow								
INPUT 24, G Flame signal flame rod									\rightarrow								
Flame signal results in lockout		FS															
Flame fail results in postpurge																	

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BurnerPRO BP110UVFR-SxMP or BP230UVFR-SxMP (Valve Proving) with Interrupted Pilot



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BurnerPRO BP110UVFR-SxM or BP230UVFR-SxM with Interrupted Pilot (Industrial Application)

SEQUENCE LEGEND					TIMING	S / STATE SE	QUENCE				
Is on or must be on	PRESET	FFRT			t3'	TSA'	t7	t9	t5		
Is off or must be off	S1	1 s			4s	2s	8s	2s	10s		
No effect or not applicable	S2	1s			6s	3s	8.5s	3s	11.5s		
→ Must be on by end of state	S3	1 s			2.5s	5s	10 s	5s	12.5s		
CAB Voltage must be present on terminal 14 within time	S4	1 s			2.5s	5s	10 s	5s	12.5s		
specified for CAB (default 60s)	S5	4s			2.5s	5s	10 s	5s	12.5s		
FS A flame signal in standby/afterburn for longer than the	S6	4s			1 s	10s	5s	10 s	15 s		
time allowed for flame standby (default 60s) will result in a lockout	% LOCKOUT	A STANDBY	o CALL FOR HEAT	NON-RECYCLE LIMITS PROVE TEST	NOILINDI 22	23 23	PILOT FLAME PROVING PERIOD	⊞ ∑ 27	S MAIN FLAME S PROVING PERIOD	Z 20,31	33 SHUTDOWN
				·	1	◀ TSA' ►		⋖ t9 ▶		/ -	
TYPE TERMINAL DESCRIPTION OUTPUT 3 Alarm								⋖ t	5		1
OUTPUT 3 Alarm OUTPUT 4 Power to limits											
INPUT 5 Recycle limits											
INPUT 14 Non-recycle limits				САВ							
OUTPUT 6,7 Blower				CAB							
OUTPUT 16 Ignition											
OUTPUT 17 Pilot gas valve											
OUTPUT 19 Main gas valve											
INPUT 22,23 Flame signal UV						→			→		
INPUT 24, G Flame signal flame rod						<i>→</i>			<i>→</i>		
Flame signal results in lockout		FS									
Flame fail results in postpurge											

WIRING NOTES: Jumper terminal 11 to 12 to disable CAST (combustion air switch test), terminal 5 to 12 to disable POC (proof of closure), terminal 5 to 8 to disable actuator control and terminal 4 to 15 to disable purge. Optional: Jumper terminal 13 to 15 to disable prepurge only or terminal 14 to 15 to disable postpurge only.

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BurnerPRO BP110UVFR-SxM or BP230UVFR-SxM with Intermittent Pilot (Industrial Application)

SEQUENCE LEGEND					TIMING	S / STATE SE	QUENCE				
Is on or must be on	PRESET	FFRT	-		t3'	TSA'	t7	t9	t5		
Is off or must be off	S1	1s			4 s	2s	8s	2s	10 s		
No effect or not applicable	S2	1 s			6s	3s	8.5s	3s	11.5s		
→ Must be on by end of state	S3	1 s			2.5s	5s	10s	5s	12.5s		
CAB Voltage must be present on terminal 14 within time	S4	1 s			2.5s	5s	10s	5s	12.5s		
specified for CAB (default 60s)	S5	4s			2.5s	5s	10s	5s	12.5s		
FS A flame signal in standby/afterburn for longer than the	S6	4s			1 s	10s	5s	10s	15s		
time allowed for flame standby (default 60s) will result in a lockout STATE	ж госкоит	A STANDBY	ο CALL FOR HEAT	NON-RECYCLE LIMITS PROVE TEST	NOILINDI 22	급 급 23	PILOT FLAME PROVING PERIOD	⊞ ≥ 27	ಜ୍ಞ MAIN FLAME ଓ PROVING PERIOD	N N 30,31	SHUTDOWN
TYPE TERMINAL DESCRIPTION					◀ t3' ▶	◀ TSA' ►	∢ t7 ▶	d t9d t	5 ▶		
OUTPUT 3 Alarm											
OUTPUT 4 Power to limits											
INPUT 5 Recycle limits											
INPUT 14 Non-recycle limits				CAB							
OUTPUT 6,7 Blower											
OUTPUT 16 Ignition											
OUTPUT 17,18 Pilot gas valve											
OUTPUT 19 Main gas valve											
INPUT 22,23 Flame signal UV						\rightarrow			\rightarrow		
INPUT 24, G Flame signal flame rod						\rightarrow			\rightarrow		
Flame signal results in lockout		FS									
Flame fail results in postpurge											

WIRING NOTES: Jumper terminal 11 to 12 to disable CAST (combustion air switch test), terminal 5 to 12 to disable POC (proof of closure), terminal 5 to 8 to disable actuator control and terminal 4 to 15 to disable purge. Optional: Jumper terminal 13 to 15 to disable prepurge only or terminal 14 to 15 to disable postpurge only.

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BurnerPRO BP110UVFR-SxM or BP230UVFR-SxM with Direct Main (Industrial Application)

SEQUENCE LEGEND					TIMING	S / STATE SE	QUENCE			
Is on or must be on	PRESET	FFRT	Ī		t3'	TSA'	t4'	t5	Ī	
Is off or must be off	S1	1 s			4s	2s	10s	10s		
No effect or not applicable	S2	1 s			6s	3s	11.5s	11.5s		
→ Must be on by end of state	S3	1 s			2.5s	5s	15s	12.5s		
CAB Voltage must be present on terminal 14 within time	S4	1 s			2.5s	5s	15s	12.5s		
specified for CAB (default 60s)	S 5	4s			2.5s	5s	15s	12.5s		
FS A flame signal in standby/afterburn for longer than the	S6	4s			1s	10s	15s	15s		
time allowed for flame standby (default 60s) will result in a lockout STATE TYPE TERMINAL DESCRIPTION	% LOCKOUT	4 STANDBY	о CALL FOR HEAT	NON-RECYCLE LIMITS PROVE TEST	NOILINDI 22 ◀ t3' ▶	23 ◀ TSA' ► ◀ t	<u>26</u>	MAIN FLAME 527,28,29 ■ t5 ►	Z ⊋ 30,31	33 NWOTDOWN
OUTPUT 3 Alarm										
OUTPUT 4 Power to limits										
INPUT 5 Recycle limits										
INPUT 14 Non-recycle limits				САВ						
OUTPUT 6,7 Blower										
OUTPUT 16 Ignition										
OUTPUT 17,18 Main gas valve										
INPUT 22,23 Flame signal UV						\rightarrow		\rightarrow		
INPUT 24, G Flame signal flame rod						\rightarrow		\rightarrow		
Flame signal results in lockout		FS								
Flame fail results in postpurge										

WIRING NOTES: Jumper terminal 11 to 12 to disable CAST (combustion air switch test), terminal 5 to 12 to disable POC (proof of closure), terminal 5 to 8 to disable actuator control and terminal 4 to 15 to disable purge. Optional: Jumper terminal 13 to 15 to disable prepurge only or terminal 14 to 15 to disable postpurge only.

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