

# CONFIGURATION AND PARAMETERS

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## DISPLAY AND CONTROLS



- 1) Status Messages
- 2) Instantaneous Motor Current
- 3) Control Scheme: Local, Control Terminal, Modbus RTU
- 4) Keypad Guidance Wizard: Displays which keys are valid for specific menu items
- 5) Motor Overload Level; 0–100%
- 6) Control Keypad
- 7) Status LED (Incorporated into center button); Green/Red

LED States		
Unit State	Control Mode	LED State
<b>Unit Power up (Initialization)</b>	N/A	Red LED single blink
<b>Standby (Awaiting Start)</b>	Local	Green LED Flashing
	Remote	No LED
<b>Fault</b>	Local / Remote	Red LED Flashing
	Remote	No LED
<b>Reset trip</b>	Local	Red LED Solid
	Remote	No LED
<b>Ramp Up</b>	Local	Green LED Solid
	Remote	No LED
<b>TOR</b>	Local	Green LED Solid
	Remote	No LED
<b>Ramp down</b>	Local	Green LED Flashing
	Remote	No LED
<b>Programming mode – Awaiting Input (I.E application Selection)</b>	N/A	Green LED Flashing (In ready state)
		Red LED Flashing (In tripped state)
<b>Updating Firmware</b>	N/A	Red LED Solid

**KEYPAD GUIDANCE EXAMPLES**



All Keys Active



Left and Right Keys Active

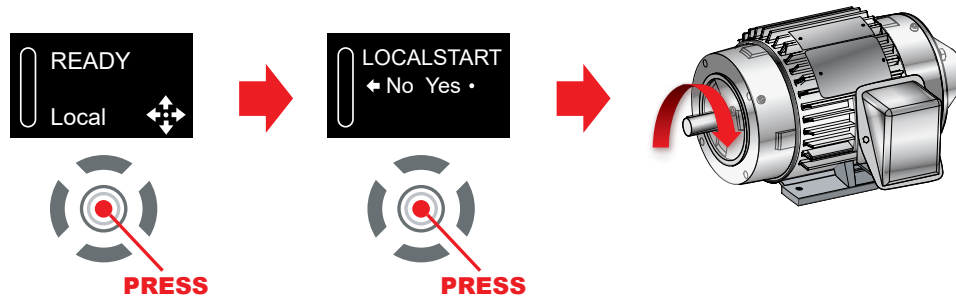


Right, Down, and Center Keys Active

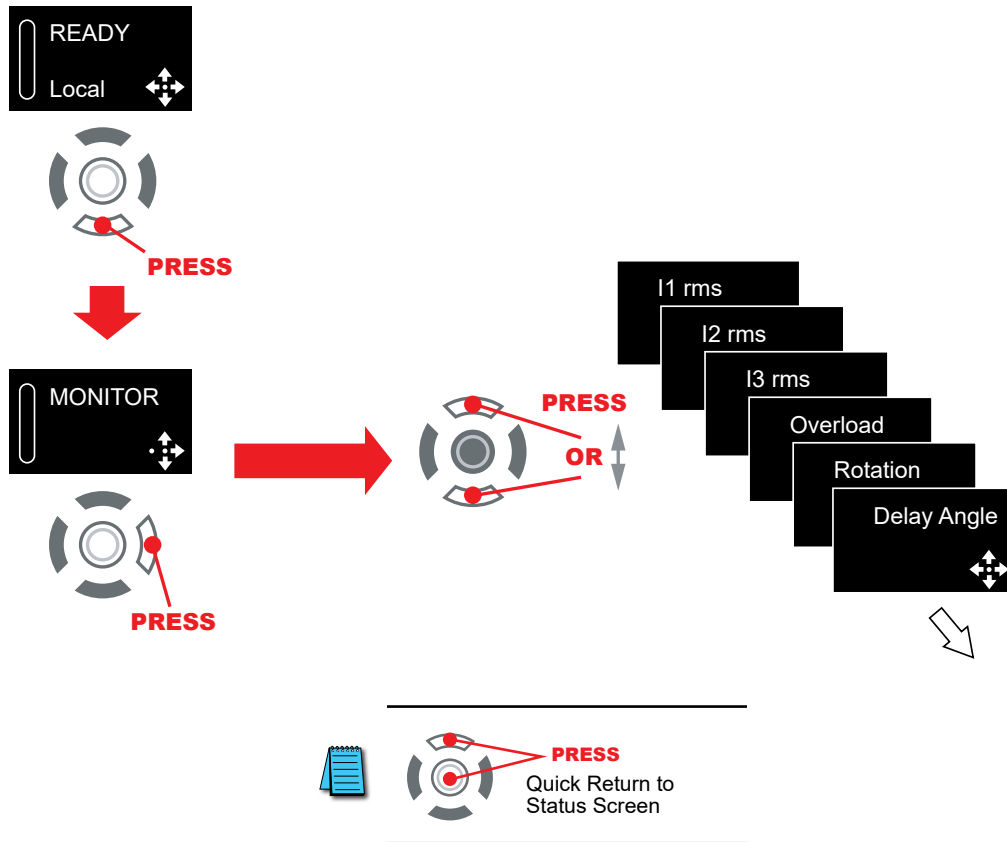


**NOTE:** A flashing center button indicates that a menu item may be selected or saved.

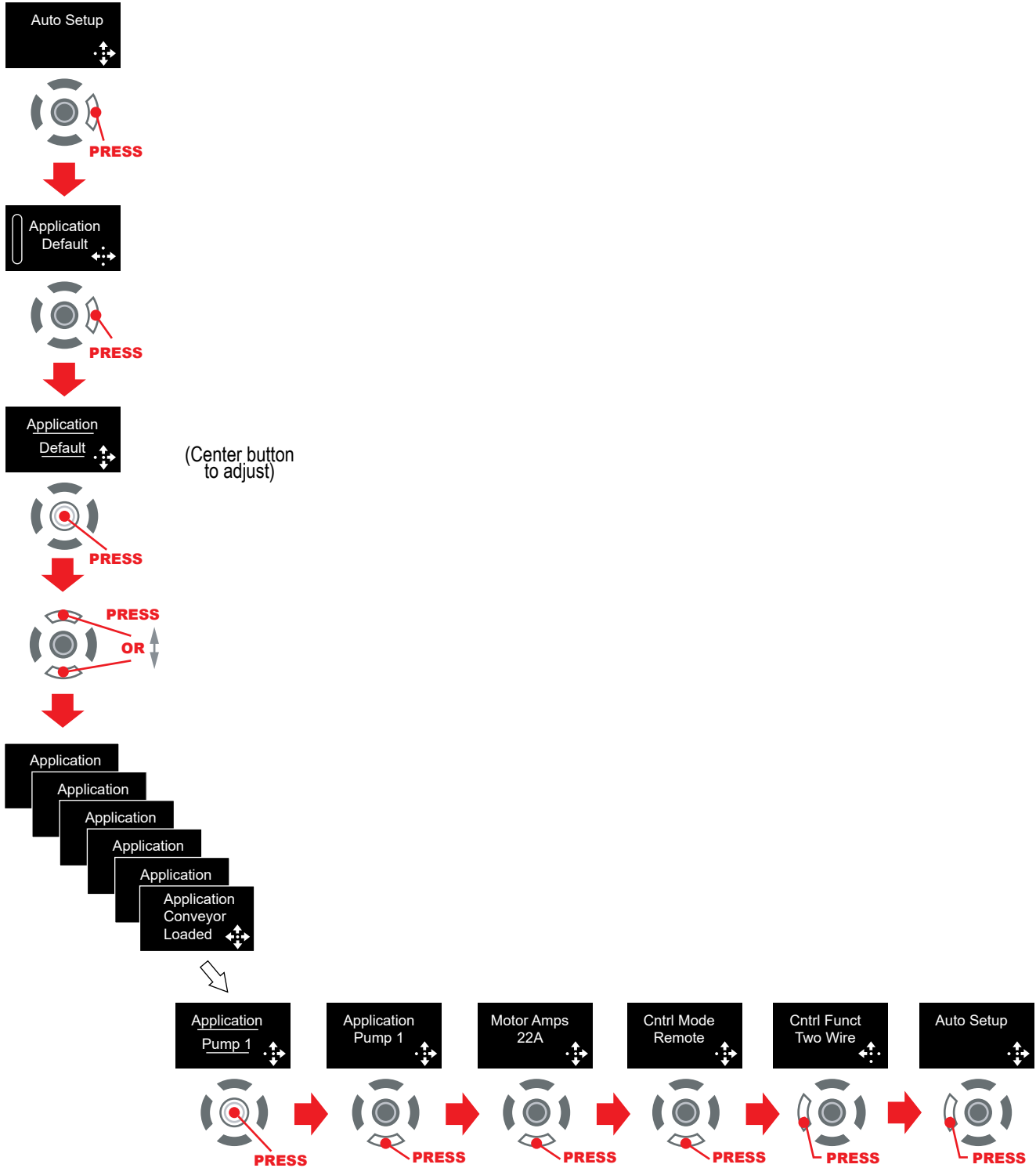
**OPERATION – LOCAL MOTOR START**



**EXAMPLE NAVIGATION METHOD**



**AUTO APPLICATION SETUP**



**AUTO SETUP PROCEDURE (AUTO APP)**

Allows the user to change all of the parameters at once to settings that are typical for general applications. One or more parameters as can be adjusted to fine tune the settings for your specific application.

**SETUP BY INDIVIDUAL PARAMETER SETTINGS (ADVANCED)**

Allows the user to change the parameter settings one at a time.

**AUTO APPLICATION SETUP PARAMETER SETTINGS**

#	Application	Initial Volts (%)	Start Time (s)	Stop Time (s)	Trip Class	Current Limit (FLC)	Current Limit Time (s)	Stop Limit Level	Stop Level Time (s)
0	<b>Default</b>	20%	10	0	10	3.5	30	5	2
1	<b>Heavy</b>	40%	10	0	20	4	40	5.5	2
2	<b>Agitator</b>	30%	10	0	10	3.5	25	4.5	2
3	<b>Compressor 1</b>	40%	15	0	20	3.5	25	5.5	2
4	<b>Compressor 2</b>	35%	7	0	10	3.5	25	4.5	2
5	<b>Conveyor Loaded</b>	10%	10	7	20	5.5	30	2	10
6	<b>Conveyor Unloaded</b>	10%	10	7	10	3.5	30	2	10
7	<b>Crusher</b>	40%	10	0	30	3.5	60	5.5	2
8	<b>Fan High Inertia</b>	40%	10	0	30	3.5	60	5.5	2
9	<b>Fan Low Inertia</b>	30%	15	0	10	3.5	30	4.5	2
10	<b>Grinder</b>	40%	10	0	20	3.5	40	5.5	2
11	<b>Mill</b>	40%	10	0	20	3.5	40	5.5	2
12	<b>Mixer</b>	10%	10	0	20	4	25	5.5	2
13	<b>Moulding M/C</b>	10%	10	0	10	4.5	25	4.5	2
14	<b>Press Flywheel</b>	40%	10	0	20	3.5	40	5.5	2
15	<b>Pump 1</b>	10%	10	60	10	3.5	25	2	25
16	<b>Pump 2</b>	10%	10	60	20	3.5	25	2	25
17	<b>PumpJack</b>	40%	10	0	20	3.5	40	5.5	2
18	<b>SawBand</b>	10%	10	0	10	3.5	25	4.5	2
19	<b>SawCircular</b>	40%	10	0	20	3.5	40	5.5	2
20	<b>Screen Vibrating</b>	40%	10	0	20	4.5	40	5.5	2
21	<b>Shredder</b>	40%	10	0	30	3.5	60	5.5	2
22	<b>Wood Chipper</b>	40%	10	0	30	3.5	60	5.5	2

Compressor 1 = Centrifugal, Reciprocating, Rotary Screw  
 Compressor 2 = Rotary Vane, Scroll  
 Pump 1 = Submersible: Centrifugal, Rotodynamic  
 Pump 2 = Positive Displacement: Reciprocating, Rotary

## MENU STRUCTURE

Menu Structure									
	SR35 Px.x	Level 1	Level 2	Units	Range	Modbus Address			Default
			Level 3			R/W	PNU	Hex	
<b>Status</b>	P0.0					Read	128	0080h	
	P0.1	Address				R/W	148	0094h	Default: 1
	P0.2	Parity			0=Odd 1=Even	R/W	149	0095h	Default: 1
	P0.3	Baud			0=9600 baud 1=19200 baud 2=38400 baud 3=57600 baud 4=115200 baud	R/W	150	0096h	Default: 1
	P0.4	CommsTime			ms	R/W	147	0093h	Default: 5000
<b>Monitor</b>	P15.0	I rms			A	Read	25	0019h	Default: 0
	P15.1	I1 rms			A	Read	41	0029h	Default: 0
	P15.2	I2 rms			A	Read	43	002Bh	Default: 0
	P15.3	I3 rms			A	Read	45	002Dh	Default: 0
	P15.4	Overload			%	Read	27	001Bh	Default: 0
	P15.5	Rotation			0=----- 1=L1L2L3 2=L1L3L2	Read	37	0025h	Default: 0
	P15.6	HS Temp			C	Read	39	0027h	Default: 0
	P15.7	HS Temp	TempUnit		0=°C 1=°F	R/W	145	0091h	Default: 0
	P15.8	HS Temp F			F	Read	40	0028h	Default: 0
		HS Temp F	TempUnit		0=°C 1=°F	R/W	145	0091h	Default: 0
	P15.10	Delay Angle			°	Read	47	002Fh	Default: 0
	P15.11	Frequency			Hz	Read	30	001Eh	Default: 0
	P15.12	RX Bytes				Read	225	00E1h	Default: 0
	P15.13	TX Bytes				Read	229	00E5h	Default: 0
	P15.14	RX Errors				Read	227	00E3h	Default: 0
	P15.15	TX Errors				Read	231	00E7h	Default: 0
	P15.16	StartsHr				Read	247	00F7h	Default: 0
	P15.17	Initial Temp			C	Read	248	00F8h	Default: 0
	P15.18	AR Pending				Read	294	0126h	Default: 0
	P15.19	AR Exceeded				Read	295	0127h	Default: 0
P15.20	AR Delay			s	Read	296	0128h	Default: 0	
P15.21	AR Attempts				Read	297	0129h	Default: 0	
P15.22	AR Trip Free			s	Read	298	012Ah	Default: 0	
P15.23	AR Trip Event				Read	299	012Bh	Default: 0	
<b>Unlock</b>	P2.0					Read	118	0076h	

Menu Structure											
	SR35 Px.x	Level 1	Level 2	Units	Range	Modbus Address			Default		
			Level 3			R/W	PNU	Hex			
<b>Auto Setup</b>	P0.5	Application				See page 3–5	R/W	16	0010h	Default: 0	
	P5.0	Motor Amps		A			R/W	18	0012h	Default: 1 x P27.19 (PNU20)	
	P7.0	Cntrl Mode			0=Local 1=Remote 2=Modbus		R/W	1	0001h	Default: 0	
	P7.1	Cntrl Funct			0=Three Wire 1=Two Wire 2=D2 Reset 3=D2 Hold 4=D2 Enable 5=D2 Fire		R/W	74	004Ah	Default: 0	
<b>Advanced</b>	P3.0	Start Param	Start Time	s			R/W	4	0004h	Default: 10	
	P3.1		Initial Volts	%			R/W	2	0002h	Default: 3277	
			I Limit								
	<b>P3.2</b>		<b>I Limit Start</b>			<b>0=Trip Off 1=Trip On</b>	<b>R/W</b>	<b>59</b>	<b>003Bh</b>	<b>Default: 1</b>	
	<b>P3.3</b>		<b>Limit Amps</b>	<b>A</b>			<b>R/W</b>	<b>69</b>	<b>0045h</b>	<b>Default: 3.5 x P27.19 (PNU20)</b>	
	<b>P3.4</b>		<b>Limit Time</b>	<b>s</b>			<b>R/W</b>	<b>71</b>	<b>0047h</b>	<b>Default: 30</b>	
			Kick Start								
	<b>P3.5</b>		<b>Kick Start</b>			<b>0=Off 1=On</b>	<b>R/W</b>	<b>89</b>	<b>0059h</b>	<b>Default: 0</b>	
	<b>P3.6</b>		<b>Kick Time</b>	<b>ms</b>			<b>R/W</b>	<b>88</b>	<b>0058h</b>	<b>Default: 100</b>	
	<b>P3.7</b>		<b>Kick Level</b>	<b>%</b>			<b>R/W</b>	<b>87</b>	<b>0057h</b>	<b>Default: 9830</b>	
	P3.8	Start Delay	ms				R/W	6	0006h	Default: 160	
	P4.0	Stop Param	Stop Time	s			R/W	5	0005h	Default: 0	
			Limit								
<b>P4.1</b>	<b>I Limit Stop</b>					<b>R/W</b>	<b>242</b>	<b>00F2h</b>	<b>Default: 0</b>		
<b>P4.2</b>	<b>Limit Amps</b>		<b>A</b>			<b>R/W</b>	<b>236</b>	<b>00ECh</b>	<b>Default: 5 x P27.19 (PNU20)</b>		
<b>P4.3</b>	<b>Limit Time</b>	<b>s</b>			<b>R/W</b>	<b>238</b>	<b>00EEh</b>	<b>Default: 2</b>			

Menu Structure											
	SR35 Px.x	Level 1	Level 2	Units	Range	Modbus Address			Default		
			Level 3			R/W	PNU	Hex			
<b>Advanced</b>	P5.0	Protection	Motor Amps	A		R/W	18	0012h	Default: 1 x P27.19 (PNU20)		
			Overload								
	<b>P5.1</b>		<b>Overload</b>			<b>0= Trip Off 1= Trip On</b>	<b>R/W</b>	<b>60</b>	<b>003Ch</b>	<b>Default: 1</b>	
	<b>P5.2</b>		<b>Trip Class</b>			<b>10=Class10 20=Class20 30=Class30</b>	<b>R/W</b>	<b>17</b>	<b>0011h</b>	<b>Default: 10</b>	
	<b>P5.3</b>		<b>Ovld Amps</b>	<b>A</b>			<b>R/W</b>	<b>218</b>	<b>00DAh</b>	<b>Default: 1.15x P5.0 (PNU18)</b>	
			Shearpin								
	<b>P5.4</b>		<b>Shearpin</b>				<b>0= Trip Off 1= Trip On</b>	<b>R/W</b>	<b>61</b>	<b>003Dh</b>	<b>Default: 1</b>
	<b>P5.5</b>		<b>Shear Amps</b>	<b>A</b>			<b>R/W</b>	<b>114</b>	<b>0072h</b>	<b>Default: 3.5 x P5.0 (PNU18)</b>	
	<b>P5.6</b>		<b>Shear Time</b>	<b>s</b>			<b>R/W</b>	<b>116</b>	<b>0074h</b>	<b>Default: 1</b>	
			Low Amps								
	<b>P5.7</b>		<b>I Low</b>				<b>0= Trip Off 1= Trip On</b>	<b>R/W</b>	<b>58</b>	<b>003Ah</b>	<b>Default: 0</b>
	<b>P5.8</b>		<b>I Low Amps</b>	<b>A</b>			<b>R/W</b>	<b>239</b>	<b>00EFh</b>	<b>Default: 0.25 x P5.0 (PNU18)</b>	
	<b>P5.9</b>		<b>I Low Time</b>	<b>s</b>			<b>R/W</b>	<b>241</b>	<b>00F1h</b>	<b>Default: 30</b>	
	P7.2		Mode	Op Mode			0=3 phase 1=1 phase	R/W	75	004Bh	Default: 0



Menu Structure									
	SR35 Px.x	Level 1	Level 2	Units	Range	Modbus Address			Default
			Level 3			R/W	PNU	Hex	
<b>Advanced</b>	P8.0	Trips	Trip Sens			R/W	152	0098h	
	P8.1		Phase Loss		0=Trip Off 1=Trip On	R/W	49	0031h	Default: 1
	P8.2		Sensor Loss		0=Trip Off 1=Trip On	R/W	50	0032h	Default: 1
	P8.3		Ph / SCR		0=Trip Off 1=Trip On	R/W	51	0033h	Default: 1
	P8.4		Hz HighLow		0=Trip Off 1=Trip On	R/W	53	0035h	
	P8.5		I Low		0=Trip Off 1=Trip On	R/W	58	003Ah	Default: 0
	P8.6		I Limit Start		0=Trip Off 1=Trip On	R/W	59	003Bh	Default: 1
	P8.7		I Limit Stop		0=Trip Off 1=Trip On	R/W	242	00F2h	Default: 0
	P8.8		Overload		0=Trip Off 1=Trip On	R/W	60	003Ch	Default: 1
	P8.9		Shearpin		0=Trip Off 1=Trip On	R/W	61	003Dh	Default: 1
	P8.10		Comms		0=Trip Off 1=Trip On	R/W	64	0040h	Default: 1
	P8.11		Remote		0=Trip Off 1=Trip On	R/W	66	0042h	Default: 1
	P8.12		CT Fault		0=Trip Off 1=Trip On	R/W	67	0043h	Default: 1
	P8.13		L1L2L3		0=Trip Off 1=Trip On	R/W	223	00DFh	Default: 0
	P8.14		L1L3L2		0=Trip Off 1=Trip On	R/W	224	00E0h	Default: 0
	P8.15		Operation 1		0=Trip Off 1=Trip On	R/W	68	0044h	Default: 1
	P8.16		Operation 2		0=Trip Off 1=Trip On	R/W	109	006Dh	Default: 1
	P8.17		Operation 3			R/W	348	015Ch	
P8.18	Breaker			R/W	343	0157h			
P28.0	Auto Reset	Auto Reset		0=Off 1=On	R/W	258	0102h	Default: 0	
P28.1		Reset Delay	s		R/W	259	0103h	Default: 0	
P28.2		Reset Attempts			R/W	260	0104h	Default: 0	
P28.3		Trip Free Time	s		R/W	261	0105h	Default: 600	
		Reset Trips							
<b>P28.4</b>		<b>Phase Loss</b>			<b>0=Off 1=On</b>	<b>R/W</b>	<b>262</b>	<b>0106h</b>	<b>Default: 1</b>
<b>P28.5</b>		<b>Thermal</b>			<b>0=Off 1=On</b>	<b>R/W</b>	<b>263</b>	<b>0107h</b>	<b>Default: 1</b>
<b>P28.6</b>		<b>ScrFire</b>			<b>0=Off 1=On</b>	<b>R/W</b>	<b>264</b>	<b>0108h</b>	<b>Default: 1</b>

Menu Structure									
SR35 Px.x	Level 1	Level 2	Units	Range	Modbus Address			Default	
		Level 3			R/W	PNU	Hex		
		Reset Trips							
P28.7	Auto Reset	Ph / SCR		0=Off 1=On	R/W	265	0109h	Default: 1	
P28.8		HzHighLow		0=Off 1=On	R/W	266	010Ah	Default: 1	
P28.9		UcLow		0=Off 1=On	R/W	267	010Bh	Default: 1	
P28.10		SCRSen		0=Off 1=On	R/W	268	010Ch	Default: 1	
P28.11		Fan		0=Off 1=On	R/W	269	010Dh	Default: 1	
P28.12		I Low		0=Off 1=On	R/W	272	0110h	Default: 1	
P28.13		I Limit		0=Off 1=On	R/W	273	0111h	Default: 1	
P28.14		Overload		0=Off 1=On	R/W	274	0112h	Default: 1	
P28.15		Shearpin		0=Off 1=On	R/W	275	0113h	Default: 1	
P28.16		External		0=Off 1=On	R/W	277	0115h	Default: 0	
P28.17		Comms		0=Off 1=On	R/W	278	0116h	Default: 1	
P28.18		Bypass		0=Off 1=On	R/W	279	0117h	Default: 1	
P28.19		Control		0=Off 1=On	R/W	280	0118h	Default: 1	
P28.20		Rotation		0=Off 1=On	R/W	281	0119h	Default: 1	
P28.21		CT Fault		0=Off 1=On	R/W	284	011Ch	Default: 1	
P28.22		Operation 1		0=Off 1=On	R/W	283	011Bh	Default: 1	
P28.23		Operation2		0=Off 1=On	R/W	285	011Dh	Default: 1	
P28.24		Operation3		0=Off 1=On	R/W	286	011Eh	Default: 1	
P28.25		Operation4		0=Off 1=On	R/W	287	011Fh	Default: 1	
P28.26		Operation5		0=Off 1=On	R/W	288	0120h	Default: 1	
P28.27	Operation6		0=Off 1=On	R/W	289	0121h	Default: 1		
P28.28	Operation7		0=Off 1=On	R/W	290	0122h	Default: 1		
P28.29	Operation8		0=Off 1=On	R/W	291	0123h	Default: 1		
P28.30	Operation9		0=Off 1=On	R/W	292	0124h	Default: 1		

Advanced

Menu Structure										
	SR35 Px.x	Level 1	Level 2	Units	Range	Modbus Address			Default	
			Level 3			R/W	PNU	Hex		
<b>Advanced</b>	<b>P28.31</b>	Auto Reset	<b>Operation10</b>		<b>0=Off 1=On</b>	<b>R/W</b>	<b>293</b>	<b>0125h</b>	<b>Default: 1</b>	
	P14.0	Expansion	PTC TripEn			?	350	015Eh		
			Input							
	<b>P14.1</b>		<b>EXP 24V Inputs</b>				?	<b>351</b>	<b>015Fh</b>	
	<b>P7.1</b>		<b>Cntrl Funct</b>		<b>0=Three Wire 1=Two Wire 2=D2 Reset 3=D2 Hold 4=D2 Enable 5=D2 Fire</b>	<b>R/W</b>	<b>74</b>	<b>004Ah</b>	<b>Default: 0</b>	
			Output							
	<b>P14.3</b>		<b>Relay 33 34</b>				?	<b>352</b>	<b>0160h</b>	
<b>P14.4</b>	<b>Relay 43 44</b>					?	<b>353</b>	<b>0161h</b>		
<b>I/O</b>	P7.0	Input	Cntrl Mode			R/W	1	0001h	Default: 0	
	P7.1		Cntrl Funct		0=Three Wire 1=Two Wire 2=D2 Reset 3=D2 Hold 4=D2 Enable 5=D2 Fire	R/W	74	004Ah	Default: 0	
	P11.0	Output	Relay 13 14		0=End of start 1=Fault 2=Run 3=Pending 4=Exceeded	R/W	300	012Ch	Default: 2	
	P11.1		Relay 21 22		0=22 = TOR 1=22 = ERR	R/W	154	009Ah	Default: 1	

Menu Structure									
	SR35 Px.x	Level 1	Level 2	Units	Range	Modbus Address			Default
			Level 3			R/W	PNU	Hex	
Log	P17.0	Save Log			0=Idle 1=Active	R/W	33	0021h	Default: 0
	P17.1	Trip Log	Trip 0		See page 4–7	Read	77	004Dh	Default: 0
	P17.2		Trip 1		See page 4–7	Read	78	004Eh	Default: 0
	P17.3		Trip 2		See page 4–7	Read	79	004Fh	Default: 0
	P17.4		Trip 3		See page 4–7	Read	80	0050h	Default: 0
	P17.5		Trip 4		See page 4–7	Read	81	0051h	Default: 0
	P17.6		Trip 5		See page 4–7	Read	82	0052h	Default: 0
	P17.7		Trip 6		See page 4–7	Read	83	0053h	Default: 0
	P17.8		Trip 7		See page 4–7	Read	84	0054h	Default: 0
	P17.9		Trip 8		See page 4–7	Read	85	0055h	Default: 0
	P18.0	Start Log	I Start	A		Read	94	005Eh	Default: 0
	P18.1		T Start	s		Read	95	005Fh	Default: 0
	P19.0	Stop Log	I Stop	A		Read	96	0060h	Default: 0
	P19.1		T Stop	s		Read	97	0061h	Default: 0
	P22.0	Totals Log	Total Events			Read	98	0062h	Default: 0
	P22.1		Total Us On			Read	200	00C8h	Default: 0
	P22.2		Total Uc On			Read	106	006Ah	Default: 0
	P22.3		Total Starts			Read	221	00DDh	Default: 0
	P22.4		Total Runs			Read	204	00CCh	Default: 0
P22.5	Total Stops				Read	206	00CEh	Default: 0	
P22.6	Total Trips				Read	210	00D2h	Default: 0	
P22.7	Total Us Off				Read	202	00CAh	Default: 0	
Device	P25.0	Language			1=English 2=Deutsch 3=Francais 4=Italiano 5=Portugues 6=Espanol	Read	220	00DCh	Default: 1
	P25.1	Factory Rst			0=Idle 1=Active	R/W	31	001Fh	Default: 0
	P25.2	Date				R/W	34	0022h	Default: 0
	P25.3		DateFormat		0=dd/mm/yy 1=mm/dd/yy 2=yy/mm/dd	R/W	151	0097h	Default: 1
	P25.4	Time				R/W	35	0023h	Default: 0
	P25.5	USB	To USB		0=Idle 1=Active	R/W	90	005Ah	Default: 0
	P25.6		From USB		0=Idle 1=Active	R/W	91	005Bh	Default: 0
	P27.0	Screen	Lock Enable			?	92	005Ch	
	P27.1		Passcode			?	93	005Dh	
	P27.2		Disp Time	s			R/W	146	0092h
P27.3	Scroll				0=Off 1=On	R/W	245	00F5h	Default: 1
P27.4	Show Status					R/W	347	015Bh	

Menu Structure										
	SR35 Px.x	Level 1	Level 2	Units	Range	Modbus Address			Default	
			Level 3			R/W	PNU	Hex		
<b>Device</b>	P25.7	Firmware	Version			Read	14	000Eh	Default: 0	
	P25.8		Update			?	117	0075h		
	P26.0	Network	Address			R/W	148	0094h	Default: 1	
	P26.1		Parity		0=Odd 1=Even	R/W	149	0095h	Default: 1	
	P26.2		Baud		0=9600 baud 1=19200 baud 2=38400 baud 3=57600 baud 4=115200 baud	R/W	150	0096h	Default: 1	
	P26.3		CommsTime	ms		R/W	147	0093h	Default: 5000	
	P27.5		Keypad	Keypad Pwr		0=Off 1=On	R/W	243	00F3h	Default: 0
	P27.6	Hardware	AGY100 Ver			Read	48	0030h	Default: 1	
	P27.7		AGY200 Ver			Read	103	0067h	Default: 1	
	P27.8		AGY300 Ver			Read	104	0068h	Default: 1	
	P27.9		AGY400 Ver			Read	153	0099h	Default: 1	
	P27.10		ODB Type			Read	159	009Fh		
	P27.11	About	Serial No			Read	7	0007h	Default: 0	
	P27.12		MenuBuild			Read	86	0056h	Default: 0	
	P27.13		Model No			Read	349	015Dh		
	P27.14		Version			Read	14	000Eh	Default: 0	
	P27.15		Boot Ver			Read	72	0048h	Default: 0	
	P27.16		Trip Class			R/W	17	0011h	Default: 10	
	P27.17		Motor Amps	A			R/W	18	0012h	Default: 1 x P27.19 (PNU20)
	P27.18		Unit Amps	A			Read	22	0016h	Default: 17000
P27.19	Rated Amps		A			Read	20	0014h	Default: 17000	
P27.20	Service	Service No			R/W	244	00F4h	Default: 0		

**PARAMETER DETAILS BY PARAMETER NUMBER**

SR35 Px.x	PNU	Name	Description	Options	Words	Type	Units	Detail
<b>P0.1</b>	148	Address	Sets the Modbus station number		1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 1 Max: 32 Default: 1
<b>P0.2</b>	149	Parity	Sets the serial communications parity bit The available parity options are None Even Odd Also sets the stop bits. No parity uses 2 stop bits. Odd or even parity uses 1 stop bit	0=Odd 1=Even.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P0.3</b>	150	Baud	Sets the serial communications baud rate The available baud rates are 9600, 19200, 38400, 57600 or 115200	0=9600 baud 1=19200 baud 2=38400 baud 3=57600 baud 4=115200 baud.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 2 Default: 1
<b>P0.4</b>	147	CommsTime	Communications trip Timeout period To prevent a 'Communications Trip' (If enabled) the bus must be kept active To keep the bus active there must be at least one Modbus read or write (any PNU) during the "Timeout ms" period		1	R/W	ms	Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 60000 Default: 5000
<b>P0.5</b>	16	Application	The Unit has numerous preset applications built in as standard Select the application best suited to the load The selected application will automatically change several parameters and functions Depending on the application loaded the "Trip Class" may also change Refer to the separate 'applications section' for more details	See page 4-7	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 23 Default: 0
<b>P0.6</b>	24	MotorState	Indicates the Unit Operating State	See page 4-7	1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P3.0</b>	4	Start Time	Time taken to soft start from the "Initial Volts" to the end of the start Normally set between 5 and 30 seconds Actual time to get to full voltage depends on the "Limit Amps" If set too long the motor can be at speed before the end of the time set		1	R/W	s	Multiplier: 1 Divisor: 1 Offset: 0 Min: 1 Max: 30 Default: 10

SR35 Px.X	PNU	Name	Description	Options	Words	Type	Units	Detail
<b>P3.1</b>	2	Initial Volts	Percentage of the supply voltage applied to motor at the beginning of the soft start Increase to provide more torque If the load fails to break away Decrease if the motor accelerates too quickly		1	R/W	%	Multiplier: 100 Divisor: 16384 Offset: 0 Min: 1638 Max: 13107 Default: 3277
<b>P3.2</b>	59	I Limit Start	Selects trip or continue if the current limit has been active for too long Trip On: The Unit will trip Trip Off: The start will continue regardless of the motor current level	0=Trip Off 1=Trip On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P3.3</b>	69	Limit Amps	The current in Amps at which the soft Start ramp is held Normally set to 350% of motor FLC Increase if motor fails to accelerate at required rate The "Limit Amps" will affect actual time to start If set too low the motor may not accelerate to full speed		2	R/W	A	Multiplier: 1 Divisor: 1000 Offset: 0 Min: 0.5 x PNU18 Max: 5 x PNU20 Default: 3.5 x PNU20
<b>P3.4</b>	71	Limit Time	The maximum time allowed for the current limit If the current limit is still active at the end of this period the Unit will either 'Trip' or 'continue'		1	R/W	s	Multiplier: 1 Divisor: 1 Offset: 0 Min: 1 Max: 60 Default: 30
<b>P3.5</b>	89	Kick Start	Applies a short duration torque pulse to dislodge 'sticky' loads On: The torque pulse is applied at start-up when complete the torque drops to the "Initial Volts" Off: The initial starting torque is defined by the "Initial Volts"	0=Off 1=On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0
<b>P3.6</b>	88	Kick Time	Time that the torque pulse is applied to load Increase to provide more torque If the load fails to break away Decrease if the motor accelerates too quickly		1	R/W	ms	Multiplier: 1 Divisor: 1 Offset: 0 Min: 100 Max: 2000 Default: 100
<b>P3.7</b>	87	Kick Level	Percentage of the supply voltage applied to the motor during the 'kick' period Increase to provide more torque If the load fails to break away Decrease if the motor accelerates too quickly		1	R/W	%	Multiplier: 100 Divisor: 16384 Offset: 0 Min: 3277 Max: 13107 Default: 9830
<b>P3.8</b>	6	Start Delay	Time allowed for external contactors to close Increase if contactors are driven by buffer relays or motor trips on phase loss when start signal applied Decrease if response to start signal needs to be improved		1	R/W	ms	Multiplier: 1 Divisor: 1 Offset: 0 Min: 100 Max: 30000 Default: 160

SR35 Px.X	PNU	Name	Description	Options	Words	Type	Units	Detail
<b>P4.0</b>	5	Stop Time	The time taken to soft stop from full voltage to the end of the stop Normally set between 15 and 30 seconds Actual time to get to the final voltage depends on the "Limit Amps" If set too long the motor may reach zero speed before the end of the time set		1	R/W	s	Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 30 Default: 0
<b>P4.1</b>	242	I Limit Stop	Selects trip or continue if the current limit has been active for too long Trip On: The Unit will trip Trip Off: The stop will continue regardless of the motor current level	0=Trip Off 1=Trip On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0
<b>P4.2</b>	236	Limit Amps	The current in Amps at which the soft stop ramp is not allowed to go above Normally set to 350% motor FLC. Increase if motor decelerates too rapidly The current limit level will affect actual time to stop the motor		2	R/W	A	Multiplier: 1 Divisor: 1000 Offset: 0 Min: 0.5 x PNU18 Max: 5 x PNU20 Default: 5 x PNU20
<b>P4.3</b>	238	Limit Time	The maximum time allowed for the current limit If the current limit is still active at the end of this period the Unit will either trip or continue		1	R/W	s	Multiplier: 1 Divisor: 1 Offset: 0 Min: 1 Max: 60 Default: 2
<b>P5.0</b>	18	Motor Amps	This should be set to the Full Load Current shown on the motor plate The overload works with multiples of the set "Motor Amps" Also referred to as Motor FLA		2	R/W	A	Multiplier: 1 Divisor: 1000 Offset: 0 Min: 0.1 x PNU22 Max: 1 x PNU20 Default: 1 x PNU20
<b>P5.1</b>	60	Overload	The Unit has an "Overload" function that is an electronic equivalent to a thermal overload Trip On: The Unit will trip when the "Overload" capacity (Modbus PNU 27) exceeds 100% Trip Off: The Unit will continue to operate regardless of motor current level	0=Trip Off 1=Trip On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1



SR35 Px.x	PNU	Name	Description	Options	Words	Type	Units	Detail
P5.2	17	Trip Class	The trip class is a numeric value that correlates the trip time with overload level Select Trip class according to application requirements The trip time depends on the selected "Trip Class" the duration of the overload and the level of the over current Refer to the Motor Overload 'cold' trip curves given in the Guide When "Class 20" or "Class30" are selected the Unit current rating (Unit Amps) will be reduced to a lower value (Rated Amps)	10=Class10 20=Class20 30=Class30.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 10 Max: 30 Default: 10
P5.3	218	Ovld Amps	Determines the level in Amps at which the overload will start Normally set to 115% of the set "Motor Amps" Reduce to speed up trip response		2	R/W	A	Multiplier: 1 Divisor: 1000 Offset: 0 Min: 1 x PNU18 Max: 1.25 x PNU18 Default: 1.15 x PNU18
P5.4	61	Shearpin	The Shearpin is an electronic equivalent of a mechanical Shearpin Trip On: The Unit will trip. This feature is not active during soft start and soft stop Trip Off: The Unit will continue to operate regardless of motor current level	0=Trip Off 1=Trip On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
P5.5	114	Shear Amps	The current in Amps that will cause a "Shear Trip" A trip will occur if the motor current is greater than the "Shear Amps" for the "Shear Time"		2	R/W	A	Multiplier: 1 Divisor: 1000 Offset: 0 Min: 1 x PNU18 Max: 5 x PNU22 Default: 3.5 x PNU18
P5.6	116	Shear Time	The trip time for the Shearpin trip A trip will occur if the motor current is greater than the "Shear Amps" for the "Shear Time"		1	R/W	s	Multiplier: 1 Divisor: 1 Offset: 0 Min: 1 Max: 10 Default: 1
P5.7	58	I Low	This can be used to detect if the motor is running lightly loaded Trip On: The Unit will trip. This feature is not active during soft start and soft stop Trip Off: The Unit will continue to operate regardless of motor current	0=Trip Off 1=Trip On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0

SR35 Px.X	PNU	Name	Description	Options	Words	Type	Units	Detail
<b>P5.8</b>	239	I Low Amps	The current in Amps that will cause a trip A trip will occur if the motor current is less than the "I Low Amps" level for the "I Low Time"		2	R/W	A	Multiplier: 1 Divisor: 1000 Offset: 0 Min: 0.25 x PNU18 Max: 1 x PNU18 Default: 0.25 x PNU18
<b>P5.9</b>	241	I Low Time	The trip time for the Low current trip A trip will occur if the motor current is less than the "I Low Amps" level for the "I Low Time"		1	R/W	s	Multiplier: 1 Divisor: 1 Offset: 0 Min: 1 Max: 60 Default: 30
<b>P7.0</b>	1	Cntrl Mode	Selects the method for starting and controlling the motor Local: Control using the button on the keypad Remote: Control using the terminals Modbus: Control via Modbus network	0=Local 1=Remote 2=Modbus.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 2 Default: 0
<b>P7.1</b>	74	Cntrl Funct	Allows the Digital inputs to be mapped to different functions Cntrl Mode must be set to "Remote" Two Wire: D1 = Start (Reset) / Stop Three Wire: D1 = Start (Reset) D2 = Stop D2 Reset, D2 Hold, D2 Enable, D2 Fire: D1= Start /Stop, D2 programmed as shown	0=Three Wire 1=Two Wire 2=D2 Reset 3=D2 Hold 4=D2 Enable 5=D2 Fire.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 5 Default: 0
<b>P7.2</b>	75	Op Mode	Allows the unit to operate with a single phase motor 3 phase: Set to control a three phase motor 1 Phase: Set to control a single phase motor	0=3 phase 1=1 phase.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0
<b>P8.1</b>	49	Phase Loss	Detects for various issues when the start signal is applied Detects for input phase loss/input phase relationship/motor side loss Trip On: Trips if there is an input phase loss/supply out of balance/ motor side loss Trip Off: The Unit will attempt to run although the operation may be erratic Operating with the Trip Off for prolonged periods may result in SCR failure	0=Trip Off 1=Trip On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P8.2</b>	50	Overheat	Detects if the internal temperature sensor has malfunctioned Trip On: The Unit will trip if the internal temperature sensor malfunctions Trip Off: The Unit will continue to operate even if the temperature sensor has malfunctioned Operating with the Trip Off for prolonged periods may result in SCR failure	0=Trip Off 1=Trip On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1

SR35 Px.X	PNU	Name	Description	Options	Words	Type	Units	Detail
<b>P8.3</b>	51	Ph/SCR	Detects for various issues when "Starting" or "Stopping" Detects for input phase loss/output phase loss/SCR misfire Trip On: Trips if there is an input phase loss/motor side phase loss/ SCR misfire Trip Off: The Unit will attempt to run although the operation may be erratic Operating with the Trip Off for prolonged periods may result in SCR failure	0=Trip Off 1=Trip On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P8.10</b>	64	Comms	Detects if the communications bus has failed or become inactive To keep the bus active there must be at least one Modbus read or write (any PNU) during the "Comms Time" period (ModbusPNU 147) Trip On: Communication trip enabled Trip Off: External Trip is disabled	0=Trip Off 1=Trip On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P8.11</b>	66	Remote	For safety reasons the Unit will trip during some operations if the remote start signal is active Trip On: Trips if the remote start signal is active when the Unit is powered up or a reset is applied Trip Off: The Unit will not trip and may start unexpectedly if the start signal is accidentally left active	0=Trip Off 1=Trip On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P8.12</b>	67	CT Fault	Detects if the internal current sensors have failed or reading a very low level Trip On: The Unit will trip if the internal current sensors fail or the current measured falls to a very low level Trip Off: Will continue to operate even if the sensor has failed. Measurements and overload protection may be affected	0=Trip Off 1=Trip On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P8.13</b>	223	L1L2L3	Determines if supply phase sequence is incorrect for motor rotation On: Trips if the phase sequence is L1-L2-L3 Off: The Unit will continue to operate normally	0=Trip Off 1=Trip On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0
<b>P8.14</b>	224	L1L3L2	Determines if supply phase sequence is incorrect for motor rotation On: Trips if the phase sequence is L1-L3-L2 Off: The Unit will continue to operate normally	0=Trip Off 1=Trip On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0
<b>P8.15</b>	68	Operation 1	Detects if the Control Board has failed to operate normally Trip On: System Trip enabled Trip Off: System Trip disabled	0=Trip Off 1=Trip On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1

SR35 Px.X	PNU	Name	Description	Options	Words	Type	Units	Detail
<b>P8.16</b>	109	Operation 2	Detects if the Control Board has failed to operate normally Trip On: System Trip enabled Trip Off: System Trip disabled	0=Trip Off 1=Trip On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P11.0</b>	300	Relay 13 14	Allows the n/c relay (13 -14) to be reconfigured Available options are End Of Start, Fault, Run, Pending, Exceeded, Breaker, or Ph/SCR	0=End of start 1=Fault 2=Run 3=Pending 4=Exceeded 5=Breaker 6=Ph/SCR	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 6 Default: 2
<b>P11.1</b>	154	RelayFunct	Allows the n/c relay (21 -22) to be reconfigured Available options are End Of Start, Fault, Run, Pending, Exceeded, Breaker, or Ph/SCR	0=End of start 1=Fault 2=Run 3=Pending 4=Exceeded 5=Breaker 6=Ph/SCR	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 6 Default: 1
<b>P15.0</b>	25	I rms	The RMS motor current The average of the 3 phases This value is used for the current Limit and overload features		2	R	A	Multiplier: 1 Divisor: 1000 Offset: 0 Min: 0 Max: 24 Default: 0
<b>P15.1</b>	41	I1 rms	The RMS current on phase L1		2	R	A	Multiplier: 1 Divisor: 1000 Offset: 0 Min: 0 Max: 24 Default: 0
<b>P15.2</b>	43	I2 rms	The RMS current on phase L2		2	R	A	Multiplier: 1 Divisor: 1000 Offset: 0 Min: 0 Max: 24 Default: 0
<b>P15.3</b>	45	I3 rms	The RMS current on phase L3		2	R	A	Multiplier: 1 Divisor: 1000 Offset: 0 Min: 0 Max: 24 Default: 0

SR35 Px.X	PNU	Name	Description	Options	Words	Type	Units	Detail
<b>P15.4</b>	27	Overload	The Unit has an "Overload" function that is an electronic equivalent to a thermal overload Overload displays the overload capacity which is a measure of how close the Unit to tripping on "Overload Trip" When "Irms" is greater than the "Overload Amps" the "Overload" increases in accordance with the "Trip Class" When "Current Irms" is less than "Overload Level" the "Overload" decreases exponentially (if greater than 50%) When the "Overload" reaches 100% the Unit will trip During situations when "Motor Amps" is equal to "Unit Amps" the overload will indicate 50%		1	R	%	Multiplier: 10 Divisor: 16384 Offset: 0 Min: 0 Max: 16384 Default: 0 During situations when "Motor Amps" is equal to "Unit Amps" the overload will indicate 50%
<b>P15.5</b>	37	Rotation	Indicates the phase sequence of the incoming supply RYB = ABC = L1-L2-L3 RBY = ACB = L1-L3-L2	0=----- 1=L1L2L3 2=L1L3L2.	1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 2 Default: 0
<b>P15.6</b>	39	HS Temp C	The temperature of the internal Unit heatsink The Unit will trip when the heatsink temperature exceeds 80°C The internal cooling fans will turn on if this temperature exceeds 40°C		1	R	C	Multiplier: 1 Divisor: 16 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P15.7</b>	145	TempUnit	Selects °C or °F for displayed temperatures °C: All displayed temperatures are °C °F: All displayed temperatures are °F	0=°C 1=°F.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0
<b>P15.8</b>	40	HS Temp F	The temperature of the internal Unit heatsink The Unit will trip when the heatsink temperature exceeds 176°C The internal cooling fans will turn on if this temperature exceeds 104°F		1	R	F	Multiplier: 9 Divisor: 80 Offset: 32 Min: 0 Max: 65535 Default: 0
<b>P15.10</b>	47	Delay Angle	Internal firing delay angle in Degrees Displayed for diagnostic purposes		1	R	°	Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 180 Default: 0
<b>P15.11</b>	30	Frequency	The frequency of the 3-phase supply		1	R	Hz	Multiplier: 1 Divisor: 1000 Offset: 0 Min: 45000 Max: 65000 Default: 0

SR35 Px.X	PNU	Name	Description	Options	Words	Type	Units	Detail
<b>P15.12</b>	225	RX Bytes	Diagnostic parameter for Modbus communications Indicates transmission bytes are being received		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P15.13</b>	229	TX Bytes	Diagnostic parameter for Modbus communications Indicates transmission bytes are being sent		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P15.14</b>	227	RX Errors	Diagnostic parameter for Modbus communications Indicates whether the data has errors		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P15.15</b>	231	TX Errors	Diagnostic parameter for Modbus communications Indicates whether the data has errors		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P15.16</b>	247	StartsHr	When the fan is connected the number of fully rated starts can be increased Without the fan connected the number of fully rated starts is 5 With the fan connected the number of fully rated starts is 40		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P15.17</b>	248	Initial Deg C	Displays the temperature of the heatsink at the beginning of the start		1	R	C	Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P15.18</b>	294	AR Pending	Indicates that the Reset Delay counter is counting down Yes: The Auto Reset Delay is counting down No: The Auto Reset Delay is not counting down To map to digital output refer to PNU154/PNU300		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P15.19</b>	295	AR Exceeded	Indicates that the maximum number of reset attempts has been reached Yes: The number of reset attempts has exceeded the value set No: The number of reset attempts has not exceeded the value set To map to digital output refer to PNU154/PNU300		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P15.20</b>	296	AR Delay	The amount of time remaining in the Reset Delay counter		1	R	s	Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0

SR35 Px.X	PNU	Name	Description	Options	Words	Type	Units	Detail
<b>P15.21</b>	297	AR Attempts	The number of Reset Attempts remaining		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P15.22</b>	298	AR Trip Free	The amount of time remaining in the Trip Free Time counter		1	R	s	Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P15.23</b>	299	AR Trip Event	The trip that occurred just prior to the auto reset		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P17.0</b>	33	Save Log	Download the full log file on to the USB stick The Unit logs several parameters during normal and fault conditions Data is stored in CSV format. Please send all downloaded files to AutomationDirect on request	0=Idle 1=Active.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0
<b>P17.1</b>	77	Trip 0	Displays the last Fault trip	See page 4-7	1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P17.2</b>	78	Trip 1	Displays the last Fault trip -1	See page 4-7	1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P17.3</b>	79	Trip 2	Displays the last Fault trip -2	See page 4-7	1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P17.4</b>	80	Trip 3	Displays the last Fault trip -3	See page 4-7	1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P17.5</b>	81	Trip 4	Displays the last Fault trip -4	See page 4-7	1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0

SR35 Px.X	PNU	Name	Description	Options	Words	Type	Units	Detail
<b>P17.6</b>	82	Trip 5	Displays the last Fault trip -5	See page 4-7	1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P17.7</b>	83	Trip 6	Displays the last Fault trip -6	See page 4-7	1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P17.8</b>	84	Trip 7	Displays the last Fault trip -7	See page 4-7	1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P17.9</b>	85	Trip 8	Displays the last Fault trip -8	See page 4-7	1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P18.0</b>	94	I Start	Displays the peak current during the last start		1	R	A	Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 528 Default: 0
<b>P18.1</b>	95	T Start	Displays the time of the last start		1	R	s	Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 90 Default: 0
<b>P19.0</b>	96	I Stop	Displays the peak current during the last stop		1	R	A	Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 528 Default: 0
<b>P19.1</b>	97	T Stop	Displays the time of the last stop		1	R	s	Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 90 Default: 0
<b>P22.0</b>	98	Total Events	The total number of events that have been recorded in the log file		2	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0



SR35 Px.X	PNU	Name	Description	Options	Words	Type	Units	Detail
<b>P22.1</b>	200	Total Us On	The total number of times the unit has been powered up The unit is powered up by applying a voltage to Uc Uc will be 24V or 110V/230V depending on configuration		2	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P22.2</b>	106	Total Uc On	The total number times the start command has been applied		2	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P22.3</b>	221	Total Starts	The total number of successful starts		2	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P22.4</b>	204	Total Runs	The total number of times the unit as successfully got to the "Running" State The Running state is active when the unit is operating at full voltage When operating at full voltage the internal bypass relays are closed		2	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P22.5</b>	206	Total Stops	The total number of successful stops/ soft stops		2	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P22.6</b>	210	Total Trips	The total number of trips		2	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P22.7</b>	202	Total Us Off	The total number of times the unit has been powered down The unit is powered down by removing the voltage at Uc Uc will be 24V or 110V/230V depending on configuration		2	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P25.0</b>	220	Language	Selects the display language for the keypad Enter the required language from the displayed list	1=English 2=Deutsch 3=Francais 4=Italiano 5=Portugues 6=Espanol.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 1 Max: 10 Default: 1
<b>P25.1</b>	31	Factory Rst	Restores the Unit to the factory defaults	0=Idle 1=Active.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0

SR35 Px.X	PNU	Name	Description	Options	Words	Type	Units	Detail
<b>P25.2</b>	34	Date	Enter current date Date format can be set to either dd/mm/yyyy or mm/dd/yyyy. Refer to "Date format" parameter		1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P25.3</b>	151	DateFormat	Allows the date format to be changed dd/mm/yy or mm/dd/yy or yy/mm/dd	0=dd/mm/yy 1=mm/dd/yy 2=yy/mm/dd.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 2 Default: 1
<b>P25.4</b>	35	Time	Allows the time to be changed to 'local' time By default the time is set to GMT		2	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P25.5</b>	90	To USB	Allows the user to save parameters Downloads the parameters from the Unit to the USB drive Data is stored in CSV format	0=Idle 1=Active.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0
<b>P25.6</b>	91	From USB	Allows the user to load parameters stored on a USB flash drive Uploads the parameters from the USB drive to the Unit Data is stored in CSV format	0=Idle 1=Active.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0
<b>P25.7</b>	11	Model No	The device Model number stored at the point of manufacture		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 101 Max: 113 Default: 101
<b>P27.2</b>	146	Disp Time	Time for backlight on display After the period set the back light on the screen will turn off To reactivate touch screen anywhere. To disable set to 0		1	R/W	s	Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 7200 Default: 60
<b>P27.3</b>	245	Scroll	Used to allow the text to scroll on the keypad On: If the text is too long for the display it will scroll Off: If the text is too long for the display the message will be truncated	0=Off 1=On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P27.5</b>	243	Keypad Pwr	Connects the 24VDC supply a pin on the RJ45 connector Must be turned "On" if the remote keypad is connected	0=Off 1=On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0

SR35 Px.X	PNU	Name	Description	Options	Words	Type	Units	Detail
<b>P27.6</b>	48	AGY100 Ver	The hardware version for display PCB		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 1
<b>P27.7</b>	103	AGY200 Ver	The hardware version for Main PCB		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 1
<b>P27.8</b>	104	AGY300 Ver	The hardware version for Power PCB		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 1
<b>P27.9</b>	153	AGY400 Ver	Displays the hardware version for the temperature sense PCB		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 1
<b>P27.10</b>	159	Reserved	No user function					
<b>P27.11</b>	7	Serial No	The device serial number stored at the point of manufacture		4	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 255 Default: 0
<b>P27.12</b>	86	MenuBuild	Menu Version		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P27.14</b>	14	Version	Software Version for the Main control PCB Software version recorded in log file		2	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P27.15</b>	72	Boot Ver	Software Version for the Bootloader		2	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P27.18</b>	22	Unit Amps	Unit Class10 Current Rating		2	R	A	Multiplier: 1 Divisor: 1000 Offset: 0 Min: 17000 Max: 66000 Default: 17000

SR35 Px.X	PNU	Name	Description	Options	Words	Type	Units	Detail
<b>P27.19</b>	20	Rated Amps	Unit Class20/Class30 Current Rating		2	R	A	Multiplier: 1 Divisor: 1000 Offset: 0 Min: 17000 Max: 66000 Default: 17000
<b>P27.20</b>	244	Service No.	Diagnostic parameter For AutomationDirect use only		1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
<b>P28.0</b>	258	Auto Reset	Enables the Auto Reset Feature Refer to Auto Reset section for more details (page 3–47) On: The Auto Reset feature is enabled Off: The Auto Reset feature is disabled and all counters will be re-initialized	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0
<b>P28.1</b>	259	Reset Delay	The delay between the trip event and the automatic reset, the unit will re-start following the reset if the start signal is active If this is set to zero at any point the Auto Reset feature will terminate and the counters will be re-initialized when the delay is active the Restart Pending parameter is set and the time remaining can be viewed in the monitor menu		1	R/W	s	Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 7200 Default: 0
<b>P28.2</b>	260	Reset Attempts	The number of restart attempts allowed before the Auto Reset terminates. If the Auto Reset has been successful, the counter is reset back to its maximum value when the unit has been running fault free for the Trip Free Time If the Auto Restart has been unsuccessful the counters are re-initialized by applying a reset signal or removing the start signal. If this PNU is set to zero at any point the Auto Reset feature will terminate and the counters will be re-initialize The number of attempts remaining can be viewed in the Monitor menu		1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 10 Default: 0
<b>P28.3</b>	261	Trip Free Time	The time the unit must be run trip free before the counters are re-initialized back to zero If this PNU is set to zero at any point the Auto Reset feature will terminate and the counters will be re-initialized The Trip Free Time can be viewed in the Monitor menu		1	R/W	s	Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 7200 Default: 600
<b>P28.4</b>	262	Phase Loss	Allows the user to select whether the unit will auto reset if a Phase Loss Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1

SR35 Px.X	PNU	Name	Description	Options	Words	Type	Units	Detail
<b>P28.5</b>	263	Thermal	Allows the user to select whether the unit will auto reset if a Thermal Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.6</b>	264	ScrFire	Allows the user to select whether the unit will auto reset if a ScrFire Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.7</b>	265	Ph / SCR	Allows the user to select whether the unit will auto reset if a Ph/SCR Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.8</b>	266	HzHighLow	Allows the user to select whether the unit will auto reset if a HzHighLow Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.9</b>	267	UcLow	Allows the user to select whether the unit will auto reset if a UcLow Trip occur On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.10</b>	268	SCRSen	Allows the user to select whether the unit will auto reset if a SCRSen Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.11</b>	269	Fan	Allows the user to select whether the unit will auto reset if a Fan Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.12</b>	272	I Low	Allows the user to select whether the unit will auto reset if a I LOW Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.13</b>	273	I Limit	Allows the user to select whether the unit will auto reset if a I Limit Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1

SR35 Px.X	PNU	Name	Description	Options	Words	Type	Units	Detail
<b>P28.14</b>	274	Overload	Allows the user to select whether the unit will auto reset if a Overload Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.15</b>	275	Shearpin	Allows the user to select whether the unit will auto reset if a Shearpin Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.16</b>	277	External	Allows the user to select whether the unit will auto reset if a External Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0
<b>P28.17</b>	278	Comms	Allows the user to select whether the unit will auto reset if a Comms Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.18</b>	279	Bypass	Allows the user to select whether the unit will auto reset if a Bypass Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.19</b>	280	Control	Allows the user to select whether the unit will auto reset if a Control Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.20</b>	281	Remote	Allows the user to select whether the unit will auto reset if a Remote Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.21</b>	284	CT Fault	Allows the user to select whether the unit will auto reset if a CT Fault Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.22</b>	283	Operation 1	Allows the user to select whether the unit will auto reset if a Operation1 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1

SR35 Px.x	PNU	Name	Description	Options	Words	Type	Units	Detail
<b>P28.23</b>	285	Operation2	Allows the user to select whether the unit will auto reset if a Operation2 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.24</b>	286	Operation3	Allows the user to select whether the unit will auto reset if a Operation3 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.25</b>	287	Operation4	Allows the user to select whether the unit will auto reset if a Operation4 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.26</b>	288	Operation5	Allows the user to select whether the unit will auto reset if a Operation5 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.27</b>	289	Operation6	Allows the user to select whether the unit will auto reset if a Operation6 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.28</b>	290	Operation7	Allows the user to select whether the unit will auto reset if a Operation7 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.29</b>	291	Operation8	Allows the user to select whether the unit will auto reset if a Operation8 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.30</b>	292	Operation9	Allows the user to select whether the unit will auto reset if a Operation9 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
<b>P28.31</b>	293	Operation10	Allows the user to select whether the unit will auto reset if a Operation10 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1

SR35 Px.x	PNU	Name	Description	Options	Words	Type	Units	Detail
	32	Store Param	Saves all Read/Write parameters to non-volatile memory Yes: Parameters are permanently written No: Parameters remain changed until next power cycle	0=Idle 1=Active.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0
	110	Reserved	No user function					
	119	Modbus Enable	Enable using Modbus On: The unit is enabled Off: The unit is disabled	0=Off 1=On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0
	120	Modbus Start	Start/Stop using Modbus On: Starts the Unit Off: Stops or Soft stops the Unit	0=Off 1=On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0
	121	Modbus Reset	Reset using Modbus On: The initial state required for a reset Off: The final state required for a reset To reset pulse high and then low	0=Off 1=On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0
	143	Fire Mode	A special feature that allows the Unit to operate with ALL of the trips OFF Set "Cntrl Funct" to "D2 Fire Mode", Enabled when D2 is high Although the unit will keep running in this mode it may become damaged In some instances the damage may inhibit a subsequent starts This is only to be used in an emergency	0=Off 1=On.	1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0
	155	Reserved	No user function					
	157	Window View	Used to arrange the Modbus Parameters into Group Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	158	Window Code	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	160	Patch Addr 1	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0



SR35 Px.x	PNU	Name	Description	Options	Words	Type	Units	Detail
	161	Patch Addr 2	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	162	Patch Addr 3	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	163	Patch Addr 4	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	164	Patch Addr 5	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	165	Patch Addr 6	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	166	Patch Addr 7	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	167	Patch Addr 8	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	168	Patch Addr 9	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	169	Patch Addr 10	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0

SR35 Px.x	PNU	Name	Description	Options	Words	Type	Units	Detail
	170	Patch Addr 11	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	171	Patch Addr 12	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	172	Patch Addr 13	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	173	Patch Addr 14	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	174	Patch Addr 15	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	175	Patch Addr 16	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	176	Window 1	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	177	Window 2	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	178	Window 3	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0

SR35 Px.x	PNU	Name	Description	Options	Words	Type	Units	Detail
	179	Window 4	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	180	Window 5	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	181	Window 6	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	182	Window 7	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	183	Window 8	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	184	Window 9	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	185	Window 10	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	186	Window 11	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	187	Window 12	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0

SR35 Px.x	PNU	Name	Description	Options	Words	Type	Units	Detail
	188	Window 13	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	189	Window 14	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	190	Window 15	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	191	Window 16	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	192	Window 17	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	193	Window 18	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	194	Window 19	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	195	Window 20	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	196	Window 21	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0

SR35 Px.x	PNU	Name	Description	Options	Words	Type	Units	Detail
	197	Window 22	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	198	Window 23	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	199	Window 24	Used to arrange the Modbus Parameters into Groups Refer to 'Special Modbus Registers' document for more details	See page 4-8	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	211	Reserved						Multiplier: Divisor: Offset: Min: Max: Default:
	212	Diagnostic 1	Used for diagnostic purposes only		1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 65535
	213	Diagnostic 2	Used for diagnostic purposes only		1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 65535
	214	Diagnostic 3	Used for diagnostic purposes only		1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 65535
	215	Diagnostic 4	Used for diagnostic purposes only		1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 65535
	216	Diagnostic 5	Used for diagnostic purposes only		1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 65535

SR35 Px.X	PNU	Name	Description	Options	Words	Type	Units	Detail
	217	Diagnostic 6	Used for diagnostic purposes only		1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 65535
	226	RX Frames	Diagnostic parameter for Modbus communications Indicates transmission frames are being received		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	228	RX TMO Er	Diagnostic parameter for Modbus communications Indicates a timing error		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	230	TX Frames	Diagnostic parameter for Modbus communications Indicates transmission frames are being sent		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 0
	232	StopCode File	Diagnostic parameter For AutomationDirect use only		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 65535
	233	StopCode File_1	Diagnostic parameter For AutomationDirect use only		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 65535
	234	StopCode Pos	Diagnostic parameter For AutomationDirect use only		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 65535
	235	StopCode Pos_1	Diagnostic parameter For AutomationDirect use only		1	R		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 65535 Default: 65535
	246	Reset Ovld	Factory parameter AutomationDirect use only	0=Off 1=On.	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 0

SR35 Px.x	PNU	Name	Description	Options	Words	Type	Units	Detail
	270	Spare900	Allows the user to select whether the unit will auto reset if a Spare900 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
	271	Spare1000	Allows the user to select whether the unit will auto reset if a Spare1000 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
	276	Spare1500	Allows the user to select whether the unit will auto reset if a Spare1500 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1
	282	Rotation	Allows the user to select whether the unit will auto reset if a Rotation Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset	0=Off 1=On	1	R/W		Multiplier: 1 Divisor: 1 Offset: 0 Min: 0 Max: 1 Default: 1

## FUNCTION DESCRIPTIONS

<b>Address</b>	Sets the Modbus address number
<b>Application</b>	The unit has numerous preset applications built in as standard Select the application best suited to the load The selected application will automatically change several parameters and functions Depending on the application loaded the "Trip Class" may also change
<b>Baud</b>	Sets the serial communications baud rate The available baud rates are 9600 19200 38400 57600 or 115200
<b>Boot Ver</b>	Software Version for the Bootloader
<b>Cntrl Funct</b>	Allows the Digital inputs to be mapped to different functions Cntrl Mode must be set to "Remote" Two Wire: D1 = Start (Reset) / Stop Three Wire: D1 = Start (Reset) D2 = Stop DI-Prog Reset, DI-Prog Hold, DI-Prog Enable, DI-Prog Fire: D1= Start/Stop, D2 programmed as shown
<b>Cntrl Mode</b>	Selects the method for starting and controlling the motor Local: Control using the button on the keypad Remote: Control using the terminals Modbus: Control via Modbus network Expansion: Control via the Expansion Module. See SR35-AUX-IO, Expansion Module Manual for details.
<b>Comms</b>	Detects if the communications bus has failed or become inactive To keep the bus active there must be at least one Modbus read or write (any parameter) during the "Comms Time" period (Modbus parameter 147) Trip On: Communication trip enabled Trip Off: External Trip is disabled
<b>CommsTime</b>	Communications trip Timeout period To prevent a 'Communications Trip' (if enabled) the bus must be kept active To keep the bus active there must be at least one Modbus read or write (any parameter) during the "Timeout ms" period
<b>CT Fault</b>	Detects if the internal current sensors have failed or reading a very low level Trip On: The unit will trip if the internal current sensors fail or the current measured falls to a very low level Trip Off: Will continue to operate even if the sensor has failed. Measurements and overload protection may be effected
<b>Date</b>	Enter current date Date format can be set to either dd/mm/yyyy or mm/dd/yyyy. Refer to "Date format" parameter
<b>DateFormat</b>	Allows the date format to be changed dd/mm/yy or mm/dd/yy or yy/mm/dd
<b>Delay Angle</b>	Internal firing delay angle in Degrees Displayed for diagnostic purposes
<b>Disp Time</b>	Time for backlight on display After the period set the back light on the screen will turn off To reactivate touch screen anywhere. To disable set to 0
<b>Factory Rst</b>	Restores the unit to the factory defaults
<b>Fan Fault</b>	Detects if the cooling fans have failed Trip On: The unit trips if the cooling fans fitted to the unit fail Trip Off: Will continue to operate and is likely to trip on a thermal trip as the heatsink will not be sufficiently cooled
<b>Fire Mode</b>	A special feature that allows the unit to operate with ALL of the trips OFF Set " Cntrl Funct" to "D2 FireMode" , Enabled when D2 is high Although the unit will keep running in this mode it may become damaged In some instances, the damage may inhibit a subsequent starts This is only to be used in an emergency
<b>Frequency</b>	The frequency of the 3-phase supply
<b>From USB</b>	Allows the user to load parameters stored on a USB flash drive Uploads the parameters from the USB drive to the unit Data is stored in CSV format



<b>HS Temp C</b>	The temperature of the internal unit heatsink The unit will trip when the heatsink temperature exceeds 80°C
<b>HS Temp F</b>	The temperature of the internal unit heatsink The unit will trip when the heatsink temperature exceeds 176°F The optional cooling fans will turn on if this temperature exceeds 104°F
<b>I Limit</b>	Selects trip or continue if the current limit has been active for too long Trip On: The unit will trip Trip Off: The start will continue regardless of the motor current level
<b>I Low</b>	This can be used to detect if the motor is running lightly loaded Trip On: The unit will trip. This feature is not active during soft start and soft stop Trip Off: The unit will continue to operate regardless of motor current
<b>I rms</b>	The RMS motor current Indicates average current of the 3 phases
<b>I Start</b>	Displays the peak current during the last start
<b>I Stop</b>	Displays the peak current during the last stop
<b>I1 rms</b>	The RMS current on phase L1
<b>I2 rms</b>	The RMS current on phase L2
<b>I3 rms</b>	The RMS current on phase L3
<b>Initial Volts</b>	Percentage of the supply voltage applied to motor at the beginning of the soft start Increase to provide more torque If the load fails to break away Decrease if the motor accelerates too quickly
<b>Kick Level</b>	Percentage of the supply voltage applied to the motor during the 'kick' period Increase to provide more torque If the load fails to break away Decrease if the motor accelerates too quickly
<b>Kick Start</b>	Applies a short duration torque pulse to dislodge 'sticky' loads On: The torque pulse is applied at start-up when complete the torque drops to the "Initial Volts" Off: The initial starting torque is defined by the "Initial Volts"
<b>Kick Time</b>	Time that the torque pulse is applied to load Increase to provide more torque If the load fails to break away Decrease if the motor accelerates too quickly
<b>Last Trip</b>	-
<b>Limit Amps</b>	The current in Amps at which the soft Start ramp is held Normally set to 350% of motor FLC Increase if motor fails to accelerate at required rate The "Limit Amps" will affect actual time to start If set too low the motor may not accelerate to full speed
<b>Limit Time</b>	The maximum time allowed for the current limit If the current limit is still active at the end of this period, the unit will either 'Trip' or 'continue'
<b>MenuBuild</b>	Menu Version
<b>Modbus Enable</b>	Enable using Modbus On: The unit is enabled Off: The unit is disabled
<b>Modbus Reset</b>	Reset using Modbus On: The initial state required for a reset Off: The final state required for a reset To reset pulse high and then low
<b>Modbus Start</b>	Start / Stop using Modbus On: Starts the unit Off: Stops or Soft stops the unit
<b>Model No</b>	The device Model number stored at the point of manufacture
<b>Motor Amps</b>	This should be set to the Full Load Current shown on the motor plate The overload works with multiples of the set "Motor Amps" Also referred to as Motor FLA

<b>MotorState</b>	MotorState P0.6, PNU 24, Read Only 65=UP 20=STARTING 22=FIRE MODE 25=LIMIT START 30=DOWN 35=LIMIT STOP 40=STOPPING 50=DWELLING 60=RUNNING 128=READY 140=TRIPPED 195=TH TEST 200=DISABLED 250=INITIALIZE
<b>Op Mode</b>	Allows the unit to operate with a single phase motor 3 Phase : Set to control a three phase motor 1 Phase: Set to control a single phase motor
<b>Overheat</b>	Detects if the internal temperature sensor has malfunctioned Trip On: The unit will trip if the internal temperature sensor malfunctions Trip Off: The unit will continue to operate even if the temperature sensor has malfunctioned Operating with the Trip Off for prolonged periods may result in SCR failure
<b>Overload</b>	The unit has an "Overload" function that is an electronic equivalent to a thermal overload Overload displays the overload capacity which is a measure of how close the unit to tripping on "Overload Trip" When "Irms" is greater than the "Overload Amps" the "Overload" increases in accordance with the "Trip Class" When "Current Irms" is less than "Overload Level" the "Overload" decreases exponentially (if greater than 50%) When the "Overload" reaches 100% the unit will trip During situations when "Motor Amps" is equal to "unit Amps" the overload will indicate 50%
<b>Overload Trip</b>	The unit has an "Overload" function that is an electronic equivalent to a thermal overload Trip On: The unit will trip when the "Overload" capacity (Modbus PNU 27) exceeds 100% Trip Off: The unit will continue to operate regardless of motor current level
<b>Ovld Amps</b>	Determines the level in Amps at which the overload will start Normally set to 115% of the set "Motor Amps" Reduce to speed up trip response
<b>Parity</b>	Sets the serial communications parity bit The available parity options are None Even Odd Also, sets the stop bits. No parity uses 2 stop bits. Odd or even parity uses 1 stop bit
<b>Patch Addr 1 through 16</b>	Used to arrange the Modbus Parameters into Groups Refer to page 4–9 for more details
<b>Ph/SCR</b>	Detects for various issues when "Starting" or " Stopping" Detects for input phase loss/output phase loss/SCR misfire Trip On: Trips if there is an input phase loss/motor side phase loss/SCR misfire Trip Off: The unit will attempt to run although the operation may be erratic Operating in this mode for prolonged periods may result in SCR failure
<b>Phase Loss</b>	Detects for various issues when the start signal is applied Detects for input phase loss/input phase relationship Trip On: Trips if there is an input phase loss/supply out of balance Trip Off: The unit will attempt to run although the operation may be erratic Operating in this mode for prolonged periods may result in SCR failure
<b>Rated Amps</b>	Unit Class20/Class30 Current Rating
<b>RelayFunct</b>	Allows the n/c relay (21 -22) to be reconfigured Available options are 22 = TOR or 22 = ERR
<b>Remote</b>	For safety reasons the unit will trip during some operations if the remote start signal is active Trip On: Trips if the remote start signal is active when the unit is powered up or a reset is applied Trip Off: The unit will not trip and may start unexpectedly if the start signal is accidentally left active

<b>Rotation</b>	Indicates the phase sequence of the incoming supply RYB = ABC = L1-L2-L3 RBY = ACB = L1-L3-L2
<b>Save Log</b>	Download the full log file on to the USB stick The unit logs several parameters during normal and fault conditions Data is stored in CSV format. Please send all downloaded files to AutomationDirect on request Files can be loaded and viewed in StellarLink
<b>Serial No.</b>	The device serial number stored at the point of manufacture
<b>Shear Amps</b>	The current in Amps that will cause a "Shear Trip" A trip will occur if the motor current is greater than the "Shear Amps" for the "Shear Time"
<b>Shear Time</b>	The trip time for the Shearpin trip A trip will occur if the motor current is greater than the "Shear Amps" for the "Shear Time"
<b>Shearpin</b>	The Shearpin is an electronic equivalent of a mechanical Shearpin Trip On: The unit will trip. This feature is not active during soft start and soft stop Trip Off: The unit will continue to operate regardless of motor current level
<b>Start Delay</b>	Time allowed for external contactors to close Increase if contactors are driven by buffer relays or motor trips on phase loss when start signal applied Decrease if response to start signal needs to be improved
<b>Start Time</b>	Time taken to soft start from the "Initial Volts" to the end of the start Normally set between 5 and 30 seconds Actual time to get to full voltage depends on the "Limit Amps" If set too long the motor can be at speed before the end of the time set
<b>Stop Time</b>	The time taken to soft stop from full voltage to the end of the stop Normally set between 15 and 30 seconds Actual time to get to the final voltage depends on the "Limit Amps" If set too long the motor may reach zero speed before the end of the time set
<b>Store Param</b>	Saves all Read/Write parameters to non-volatile memory Yes: Parameters are permanently written No: Parameters remain changed until next power cycle
<b>System</b>	Detects if the Control Board has failed to operate normally Trip On: System Trip enabled Trip Off: System Trip disabled
<b>T Start</b>	Displays the time of the last start
<b>T Stop</b>	Displays the time of the last stop
<b>Tempunit</b>	Selects °C or °F for displayed temperatures °C: All displayed temperatures are °C °F: All displayed temperatures are °F
<b>Time</b>	Allows the time to be changed to 'local' time By default, the time is set to GMT
<b>To USB</b>	Allows the user to save parameters Downloads the parameters from the unit to the USB drive Data is stored in CSV format
<b>Total Events</b>	The total number of events that have been recorded in the log file
<b>Total Run</b>	The total number of times the unit as successfully got to the "Running" State The Running state is active when the unit is operating at full voltage When operating at full voltage the internal bypass relays are closed
<b>Total Starts</b>	The total number of successful starts
<b>Total Uc On</b>	The total number of times the unit has been powered up The unit is powered up by applying a voltage to Uc Uc will be 24V or 110V/230V depending on model
<b>Total Uc Off</b>	The total number of times the unit has been powered down The unit is powered down by removing the voltage at Uc Uc will be 24V or 110V / 230V depending on model
<b>Trip 0</b>	Displays the last Fault trip

<b>Trip 1</b>	Displays the last Fault trip -1
<b>Trip 2</b>	Displays the last Fault trip -2
<b>Trip 3</b>	Displays the last Fault trip -3
<b>Trip 4</b>	Displays the last Fault trip -4
<b>Trip 5</b>	Displays the last Fault trip -5
<b>Trip 6</b>	Displays the last Fault trip -6
<b>Trip 7</b>	Displays the last Fault trip -7
<b>Trip 8</b>	Displays the last Fault trip -8
<b>Unit Amps</b>	Unit Class10 Current Rating
<b>Version</b>	Software Version for the Main control PCB Software version recorded in log file
<b>Window 1 through 24</b>	Used to arrange the Modbus Parameters into Groups Refer to page 4–8 for more details
<b>Window Code</b>	Used to arrange the Modbus Parameters into Groups
<b>Window View</b>	Used to arrange the Modbus Parameters into Groups

## TRIP AND FAULT CODES

Trip Code	Trip Name	Description
<b>101-199</b>	Ph Loss	Input phase voltage missing or motor discontinuity at the instant of startup Check all incoming and outgoing connections If a main contactor is being controlled by a digital output check contactor delay is sufficient
<b>201-299</b>	Thermal	Internal heatsink temperature has exceeded 90°C It is possible the Unit is operating outside specified limits Check enclosure ventilation and airflow around the Unit. If the unit trips immediately the internal temperature sensor could be faulty
<b>301-399</b>	Ph/SCR	Input phase voltage missing or motor discontinuity or SCR failure Check all incoming and outgoing connections ISOLATE SUPPLY Check by measuring the resistance between L1-T1 L3-T3 (Anything < 10R is assumed short circuit)
<b>601-699</b>	Uc Low	The internal control supply of the Unit level has fallen to a low level Can be caused by a weak 24VDC control supply Ensure 24VDC supply meets the requirements specified in the Quick Start Guide
<b>1101-1199</b>	Low Amp	The motor current has been lower than the low trip level for the low trip time This trip is not active during soft start and soft stop and is "off" by default If the low current trip is not required turn "off" in "Trip Settings"
<b>1201-1299</b>	Limit	The motor has been held in current limit longer than the "Current limit Time" It is likely that the current limit level has been set too low for the application Increase the current limit level or timeout period
<b>1301-1399</b>	Overload	The "Overload" has exceeded 100% The Unit is attempting to start an application that is outside its capacity or it is starting too often Refer to the overload trip curves to determine whether the Unit has been sized correctly
<b>1401-1499</b>	Shear	The motor current has been higher than the "Shearpin Trip Level" for the trip time This trip is not active during soft start and soft stop and is "off" by default If Shearpin trip is not required turn "off" in "Trip Settings"
<b>1701-1799</b>	Comms	Communications failure The command or status PNU has not been polled in the time set in the "Timeout" period If the communication trip is disabled the Unit cannot be stopped in the communications fail
<b>1801-1899</b>	Bypass	One or more of the internal bypass relays has failed to close or open The internal bypass relay has failed or the control supply is too weak Ensure 24VDC supply meets the requirements specified in the Quick Start Guide
<b>2001-2099</b>	Remote	The remote start signal is active The remote start signal was active during power up or Reset or Parameter Load Turn off remote or if Remote On trip is not required turn "off" in "Trip Settings"
<b>2101-2199</b>	Rotation	Checks the input phase rotation The phase rotation is opposite to that required Change phase rotation or if the trip is not required turn "off" in trip settings
<b>2201-2299</b>	Op1	Fail Safe operation A process associated with the Control Board has been affected and is unable to recover automatically
<b>2301-2399</b>	CT Fault	Current sensor failure One or more of the internal sensors used to measure current has failed or is reading a low value Check the connections to the supply and motor as disconnection will result in a zero current reading. Check the plate FLA of the motor being controlled is at least 25% of the "i-motor" rating

<b>11001-11099</b>	Op2 Pnu	Fail Safe operation A process associated with the Control Board has been affected and is unable to recover automatically
<b>12001-12099</b>	Op2 Mod	Fail Safe operation A process associated with the Control Board has been affected and is unable to recover automatically
<b>13001-13099</b>	Op2 Mon	Fail Safe operation A process associated with the Control Board has been affected and is unable to recover automatically
<b>14001-14099</b>	Op2 Men	Fail Safe operation A process associated with the Control Board has been affected and is unable to recover automatically
<b>15001-15099</b>	Op2 Keys	Fail Safe operation A process associated with the Control Board has been affected and is unable to recover automatically
<b>16001-16099</b>	Op2 Motr	Fail Safe operation A process associated with the Control Board has been affected and is unable to recover automatically
<b>17001-17099</b>	Op2 Log	Fail Safe operation A process associated with the Control Board has been affected and is unable to recover automatically
<b>18001-18099</b>	Op2 Disk	Fail Safe operation A process associated with the Control Board has been affected and is unable to recover automatically

## AUTO RESET FUNCTION

The Auto Reset feature automatically resets a selected number of faults and then attempts a start without user intervention. The time between resets and the number of reset attempts are both programmable. If the Auto Reset has been successful, the starter must operate without faults for a set time before the counters are re-initialized. If the number of attempts exceeds the programmed value, the Auto Reset terminates, and the counters will be re-initialized when a Reset or Stop signal is given by the user.

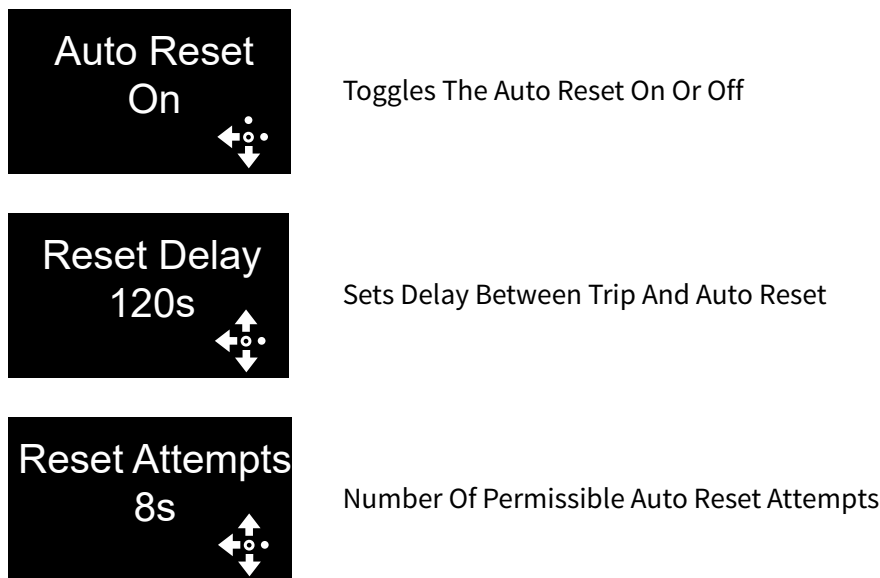


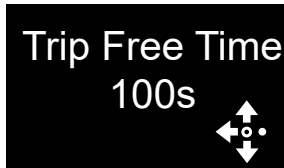
**WARNING: WHEN AUTO RESET IS ENABLED, A FAULTED STARTER AND MOTOR MAY RESTART AUTOMATICALLY AFTER THE RESET DELAY TIME. THIS MAY RESULT IN EQUIPMENT DAMAGE OR PERSONAL INJURY IF THE FUNCTION IS USED IN AN UNSUITABLE APPLICATION. DO NOT USE THIS FUNCTION WITHOUT CONSIDERING APPLICABLE LOCAL, NATIONAL, AND INTERNATIONAL STANDARDS, REGULATIONS, OR INDUSTRY GUIDELINES.**

The Auto-Reset function is accessible from the Advanced Menu (see Auto-Reset section of parameter summaries):

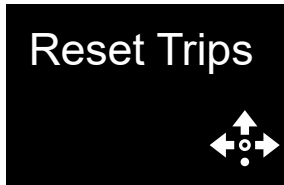


From the Auto Reset menu various functions are accessed:

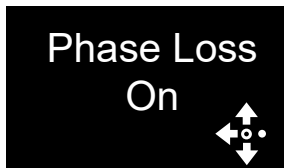




The Time The Unit Must Be Trip Free Before The Counter Is Set To Zero



Press Right Key To Assign Trips To Auto Reset Function



Example Of Trip Assigned To Auto Reset Function (Up/Down Keys To View And Select Trips)



**AUTO RESET ASSIGNABLE TRIPS**

Phase Loss	Comms
Thermal	Bypass
ScrFire	Control
Ph/SCR	Remote
HzHighLow	Rotation
UcLow	Operation 1
SCRSen	CT Fault
Fan	Operation2
Spare900	Operation3
Spare1000	Operation4
I Low	Operation5
I Limit	Operation6
Overload	Operation7
Shearpin	Operation8
Spare1500	Operation9
External	Operation10

**AUTO RESET FUNCTION DESCRIPTIONS**

<b>AR Attempts</b>	The number of Reset Attempts remaining
<b>AR Delay</b>	The amount of time remaining in the Reset Delay counter
<b>AR Exceeded</b>	Indicates that the maximum number of reset attempts has been reached Yes: The number of reset attempts has exceeded the value set No: The number of reset attempts has not exceeded the value set To map to digital output refer to PNU154/PNU300
<b>AR Pending</b>	Indicates that the Reset Delay counter is counting down Yes: The Auto Reset Delay is counting down No: The Auto Reset Delay is not counting down To map to digital output refer to PNU154/PNU300
<b>AR Trip Event</b>	The trip that occurred just prior to the auto reset
<b>AR Trip Free</b>	The amount of time remaining in the Trip Free Time counter
<b>Auto Reset</b>	Enables the Auto Reset Feature Refer to Auto Reset section for more details (page 3–47) On: The Auto Reset feature is enabled Off: The Auto Reset feature is disabled and all counters will be re-initialized
<b>Bypass</b>	Allows the user to select whether the unit will auto reset if a Bypass Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>Comms</b>	Allows the user to select whether the unit will auto reset if a Comms Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>Control</b>	Allows the user to select whether the unit will auto reset if a Control Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>CT Fault</b>	Allows the user to select whether the unit will auto reset if a CT Fault Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>External</b>	Allows the user to select whether the unit will auto reset if a External Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset

<b>Fan</b>	Allows the user to select whether the unit will auto reset if a Fan Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>HzHighLow</b>	Allows the user to select whether the unit will auto reset if a HzHighLow Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>I Limit</b>	Allows the user to select whether the unit will auto reset if a I Limit Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>Operation 1</b>	Allows the user to select whether the unit will auto reset if a Operation1 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>Operation2</b>	Allows the user to select whether the unit will auto reset if a Operation2 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>Operation3</b>	Allows the user to select whether the unit will auto reset if a Operation3 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>Operation4</b>	Allows the user to select whether the unit will auto reset if a Operation4 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>Operation5</b>	Allows the user to select whether the unit will auto reset if a Operation5 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>Operation6</b>	Allows the user to select whether the unit will auto reset if a Operation6 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>Operation7</b>	Allows the user to select whether the unit will auto reset if a Operation7 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>Operation8</b>	Allows the user to select whether the unit will auto reset if a Operation8 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>Operation9</b>	Allows the user to select whether the unit will auto reset if a Operation9 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>Operation10</b>	Allows the user to select whether the unit will auto reset if a Operation10 Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>Overload</b>	Allows the user to select whether the unit will auto reset if a Overload Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>Ph/SCR</b>	Allows the user to select whether the unit will auto reset if a Ph/SCR Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>Phase Loss</b>	Allows the user to select whether the unit will auto reset if a Phase Loss Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset
<b>Relay 13 14</b>	Allows the n/c relay (13 -14) to be reconfigured Available options are End Of Start or Fault or Run or Pending or Exceeded
<b>Remote</b>	Allows the user to select whether the unit will auto reset if a Remote Trip occurs On: The trip will auto reset when the Reset Delay reaches zero Off: The trip will not auto reset

<b>Reset Attempts</b>	<p>The number of restart attempts allowed before the Auto Reset terminates. If the Auto Reset has been successful, the counter is reset back to its maximum value when the unit has been running fault free for the Trip Free Time</p> <p>If the Auto Restart has been unsuccessful the counters are re-initialized by applying a reset signal or removing the start signal. If this PNU is set to zero at any point the Auto Reset feature will terminate and the counters will be re-initialized</p> <p>The number of attempts remaining can be viewed in the Monitor menu</p>
<b>Reset Delay</b>	<p>The delay between the trip event and the automatic reset, the unit will re-start following the reset if the start signal is active</p> <p>If this is set to zero at any point the Auto Reset feature will terminate and the counters will be re-initialized</p> <p>When the delay is active the Restart Pending parameter is set and the time remaining can be viewed in the monitor menu</p>
<b>Rotation</b>	<p>Allows the user to select whether the unit will auto reset if a Rotation Trip occurs</p> <p>On: The trip will auto reset when the Reset Delay reaches zero</p> <p>Off: The trip will not auto reset</p>
<b>ScrFire</b>	<p>Allows the user to select whether the unit will auto reset if a ScrFire Trip occurs</p> <p>On: The trip will auto reset when the Reset Delay reaches zero</p> <p>Off: The trip will not auto reset</p>
<b>SCRSen</b>	<p>Allows the user to select whether the unit will auto reset if a SCRSen Trip occurs</p> <p>On: The trip will auto reset when the Reset Delay reaches zero</p> <p>Off: The trip will not auto reset</p>
<b>Shearpin</b>	<p>Allows the user to select whether the unit will auto reset if a Shearpin Trip occurs</p> <p>On: The trip will auto reset when the Reset Delay reaches zero</p> <p>Off: The trip will not auto reset</p>
<b>Thermal</b>	<p>Allows the user to select whether the unit will auto reset if a Thermal Trip occurs</p> <p>On: The trip will auto reset when the Reset Delay reaches zero</p> <p>Off: The trip will not auto reset</p>
<b>Trip Free Time</b>	<p>The time the unit must be run trip free before the counters are re-initialized back to zero</p> <p>If this PNU is set to zero at any point the Auto Reset feature will terminate and the counters will be re-initialized</p> <p>The Trip Free Time can be viewed in the Monitor menu</p>
<b>UcLow</b>	<p>Allows the user to select whether the unit will auto reset if a UcLow Trip occurs</p> <p>On: The trip will auto reset when the Reset Delay reaches zero</p> <p>Off: The trip will not auto reset</p>

***TWO-WIRE, THREE-WIRE AND COMMUNICATIONS CONTROL (CONTROL SUPPLY MAINTAINED)***

The Auto reset operates with two-wire, three-Wire and communications start/stop.

In Two-Wire the motor will not start if the start signal is low, however in 3-wire and communications control the motor may start without a direct start signal (although it is implied as no stop had been given during the reset delay period).

### ***CONTROL SUPPLY LOSS***

When the control supply is removed the micro-controller is unable to make calculations in real time. To overcome this the calculations are made retrospectively when the starter powers up.

### ***TWO WIRE***

Following a control supply loss the Start signal must be retained (Fig 2).

### ***THREE WIRE***

The state of the start signal is saved when the control supply is removed and if it was set to 'start' the Auto Reset will continue at power up. When operating in this mode the motor may start at power up without a start signal being present (Fig 3).

### ***MODBUS/COMMUNICATIONS***

The state of the start signal is saved when the control supply is removed and if it was set to 'start' the Auto Reset will continue at power up. When operating in this mode the motor may start at power up without a start signal being present (Fig 3).

### ***AUTO RESTART TERMINATION***

If the time to re-establish the power exceeds the Reset Delay x Reset Attempts the Auto Reset Terminates.

### ***OVERLOAD TRIP***

Following an overload trip (1301) the overload % will be at 100% and then cool exponentially to 0% after several minutes. If a re-start is attempted too soon the starter will trip again as the overload % would not have cooled to a sufficient level (Fig 5).

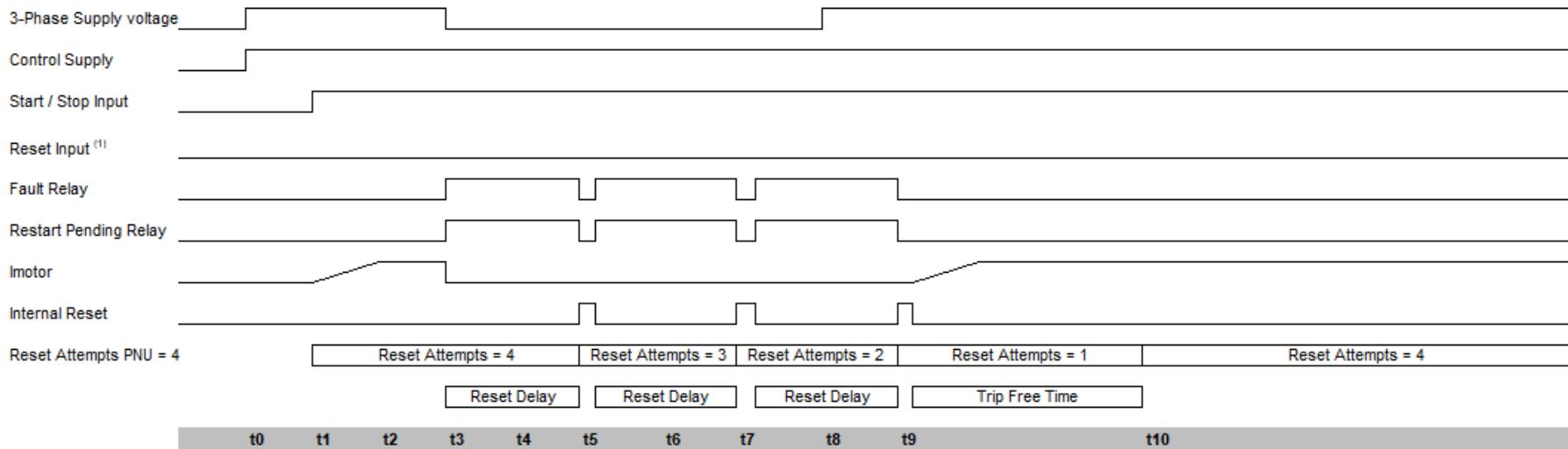
It must be ensured the Reset Delay is long enough to allow the overload to cool. This is also the case for the heatsink over temperature trip.

### ***REMOTE START ON TRIP***

If Auto Reset is turned on some of the Remote Start On trips are disabled and will be ignored.

**Fig 1 : Auto Reset - Two Wire -Three Phase Supply Loss**

The timing diagrams show the auto reset with a maintained two wire control system  
 The fault shown is a 3-phase supply loss only, the Control Supply maintained  
 The 3-Phase power is re-established (after the 2nd attempt ) before the Reset Attempts counter is depleted  
 This assumes the start signal is maintained, if it is removed the Auto Reset terminates  
 Once power has been re-established there are no further outages and the counters are reset after the trip free time.



Sequence of events	
t0	3 phase supply applied
t1	Start signal applied, motor starts
t2	Motor reaches full voltage
t3	3 phase supply removed
t4	Start signal must still be applied If it has been removed Auto Reset feature re-initialises
t5	Reset delay = 0 Restart Attempt = 3
t6	Rest Signal must be low If the trip is reset the Auto Reset feature re-initialises
t7	Reset delay = 0 Restart Attempt = 2
t8	3-Phase re-established
t9	Reset delay = 0 Restart Attempt = 1
t10	Trip Free Delay = 0 Restart Attempt = 4

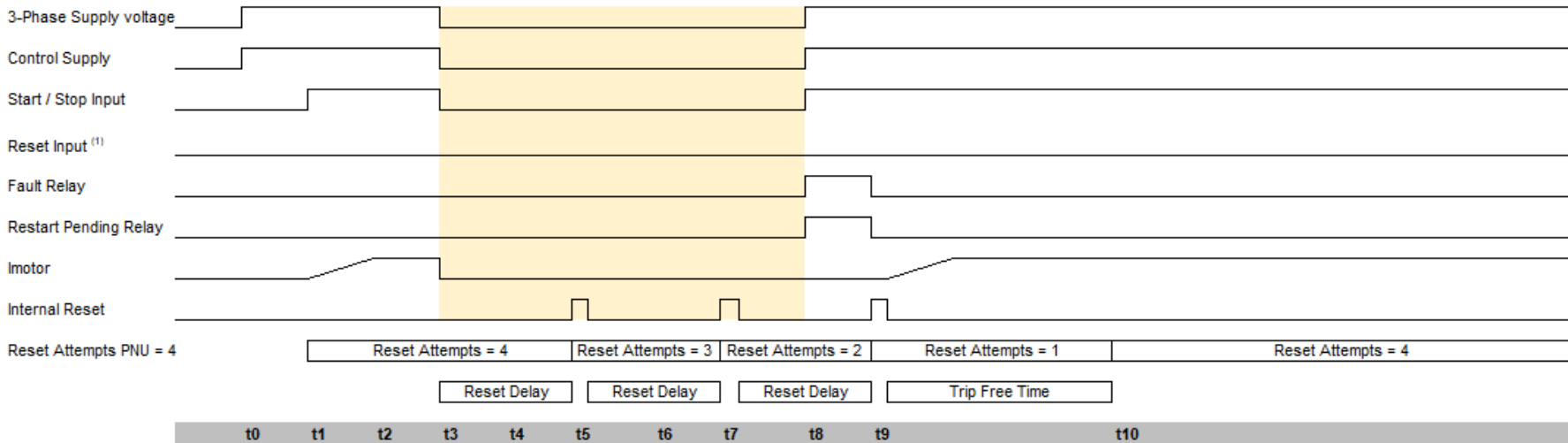
User Parameters (R/W)		
PNU	Range	Default
Auto Reset	Off / On	Off
Reset Delay	0-7200s	0s
Reset Attempts	0-10	0
Reset Trips	All resettable trips	-
Trip Free Time	0-7200s	600s

Monitor Parameters (R/O)	
PNU	Range
Auto Reset Pending	0-1
Auto Reset Exceeded	0-1
Auto Reset Delay Remaining	0-7200s
Auto Reset Attempts Remaining	0-10
Auto Reset Trip Free Time Remaining	0-7200s

**Notes**  
 For Two Wire control reset occurs automatically when the start signal changes state from low to high, reset shown is programmable reset input<sup>(1)</sup>

**Fig 2 : Auto Reset - Two Wire - Control Supply Loss**

The timing diagrams show the auto reset with a maintained two wire control system  
 The fault shown is a 3-phase supply loss and Control supply loss  
 The 3-Phase power and control supply are re-established (after the 2nd attempt) before the Reset Attempts counter is depleted  
 This assumes the start signal is maintained, if it is removed the Auto Reset terminates  
 Once power has been re-established there are no further outages and the counters are reset after the trip free time.



Sequence of events	
t0	3 phase supply applied
t1	Start signal applied, motor starts
t2	Motor reaches full voltage
t3	3 phase supply removed
t5	Reset delay = 0 Restart Attempt = 3
t7	Reset delay = 0 Restart Attempt = 2
t8	3-Phase re-established Start signal must still be applied If it has been removed Auto Reset feature re-initialises If the trip is reset the Auto Reset feature re-initialises
t9	Reset delay = 0 Restart Attempt = 1
t10	Trip Free Delay = 0 Restart Attempt = 4

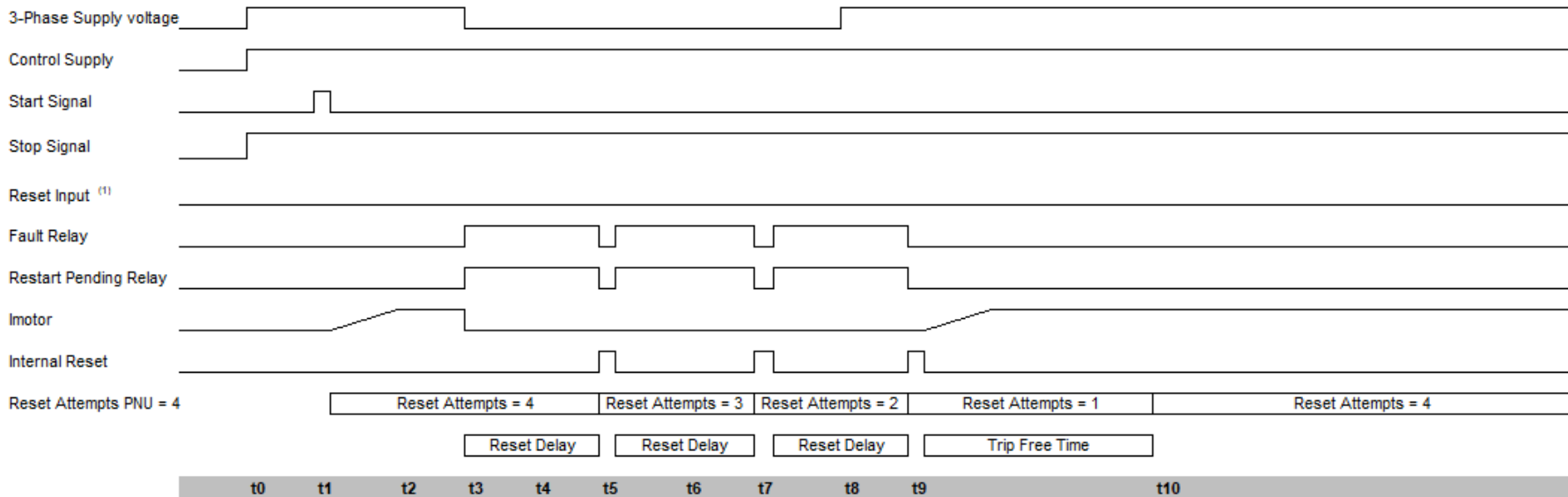
User Parameters (R/W)		
PNU	Range	Default
Auto Reset	Off / On	Off
Reset Delay	0-7200s	0s
Reset Attempts	0-10	0
Reset Trips	All resettable trips	-
Trip Free Time	0-7200s	600s

Monitor Parameters (R/O)	
PNU	Range
Auto Reset Pending	0-1
Auto Reset Exceeded	0-1
Auto Reset Delay Remaining	0-7200s
Auto Reset Attempts Remaining	0-10
Auto Reset Trip Free Time Remaining	0-7200s

**Notes**  
 The Starter is powered down between t3 and t8 ( yellow shaded region)  
 During this time controller is unable to make the calculations in real time  
 To overcome this the calculations are made retrospectively at time t8  
 The Start Signal must be maintained, if it is not the Auto Restart will be terminated  
 For Two Wire control reset occurs automatically when the start signal changes state from low to high, reset shown is programmable reset input<sup>(1)</sup>  
 If the time to re-establish the power exceeds (Reset Delay x Reset Attempts) to Auto Reset terminates

**Fig 3 : Auto Reset - Three Wire - Three Phase Supply Loss**

The timing diagrams show the auto reset with Three wire / Modbus control  
 The fault shown is a 3-phase supply loss only, the Control Supply maintained  
 The 3-Phase power is re-established (after the 2nd attempt ) before the Reset Attempts counter is depleted  
 This assumes the momentary stop signal is not activated, if it is the Auto Reset terminates  
 Once power has been re-established there are no further outages and the counters are reset after the trip free time.



Sequence of events	
t0	3 phase supply applied
t1	Start signal applied, motor starts
t2	Motor reaches full voltage
t3	3 phase supply removed
t4	Start signal must still be applied If it has been removed Auto Reset feature re-initialises
t5	Reset delay = 0 Restart Attempt =3
t6	Rest Signal must be low If the trip is reset the Auto Reset feature re-initialises
t7	Reset delay = 0 Restart Attempt =2
t8	3-Phase re-established
t9	Reset delay = 0 Restart Attempts =1
t10	Trip Free Delay = 0 Restart Attempts =4

User Parameters (R/W)		
PNU	Range	Default
Auto Reset	Off / On	Off
Reset Delay	0-7200s	0s
Reset Attempts	0-10	0
Reset Trips	All resettable trips-	-
Trip Free Time	0-7200s	600s

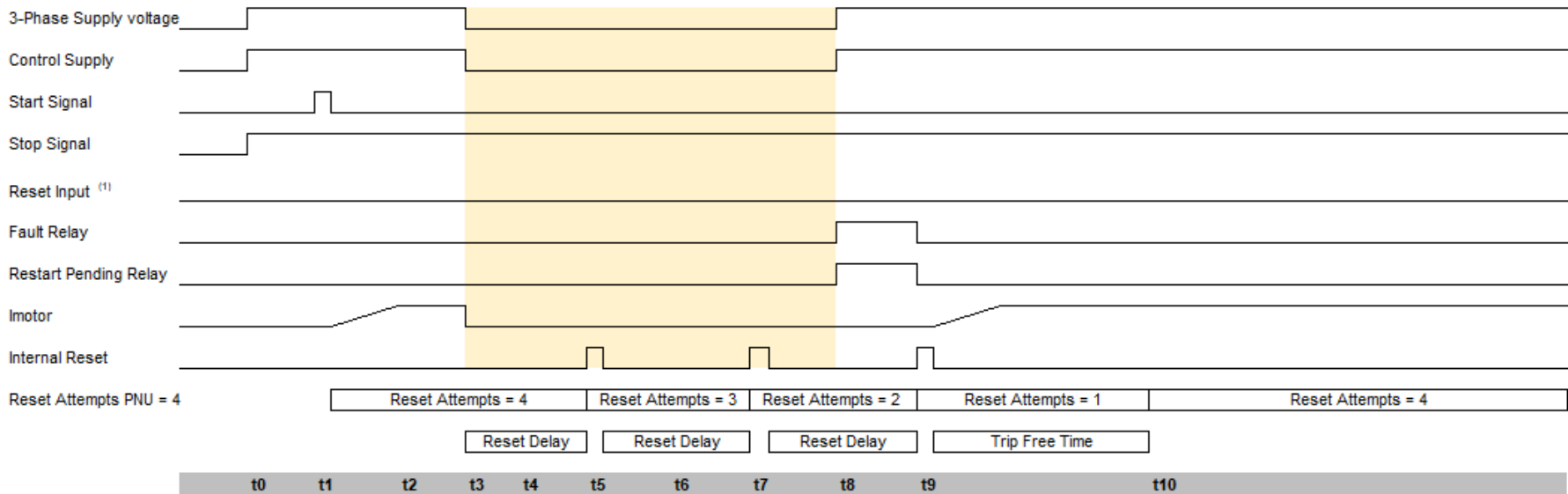
Monitor Parameters (R/O)	
PNU	Range
Auto Reset Pending	0-1
Auto Reset Exceeded	0-1
Auto Reset Delay Remaining	0-7200s
Auto Reset Attempts Remaining	0-10
Auto Reset Trip Free Time Remaining	0-7200s

**Notes**  
 (1) Separate reset signal not available on all products



**Fig 4 : Auto Reset - Three Wire - Control Supply Loss**

The timing diagrams show the auto reset with Three wire / Modbus control  
 The fault shown is a 3-phase supply loss and Control supply loss  
 The 3-Phase power and control supply are re-established (after the 2nd attempt) before the Reset Attempts counter is depleted  
 This assumes the momentary stop signal is not activated, if it is the Auto Reset terminates  
 Once power has been re-established there are no further outages and the counters are reset after the trip free time.



Sequence of events	
t0	3 phase supply applied
t1	Start signal applied, motor starts
t2	Motor reaches full voltage
t3	3 phase supply removed
t5	Reset delay = 0 Restart Attempts = 3
t7	Reset delay = 0 Restart Attempts = 2
t8	3-Phase re-established
	Start signal must still be applied
	If it has been removed Auto Reset feature re-initialises
	Rest Signal must be low
	If the trip is reset the Auto Reset feature re-initialises
t9	Reset delay = 0 Restart Attempts = 1
t10	Trip Free Delay = 0 Restart Attempts = 4

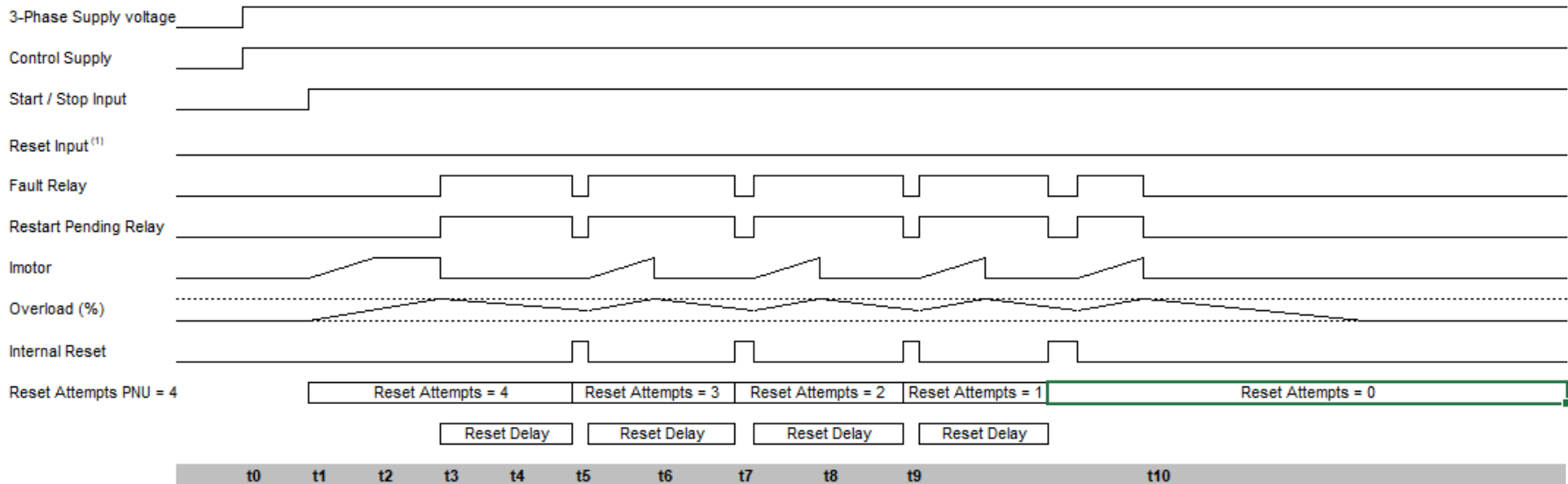
User Parameters (R/W)		
PNU	Range	Default
Auto Reset	Off / On	Off
Reset Delay	0-7200s	0s
Reset Attempts	0-10	0
Reset Trips	All resettable trips	-
Trip Free Time	0-7200s	600s

Monitor Parameters (R/O)	
PNU	Range
Auto Reset Pending	0-1
Auto Reset Exceeded	0-1
Auto Reset Delay Remaining	0-7200s
Auto Reset Attempts Remaining	0-10
Auto Reset Trip Free Time Remaining	0-7200s

**Notes**  
 The controller is powered down between t3 and t8 ( yellow shaded region)  
 During this time controller is unable to make the calculations in real time  
 To overcome this the calculations are made retrospectively at time t8  
 Start signal state saved at power down and loaded at power up. **This means it will start without a start signal being present**  
 If the time to re-establish the power exceeds (Reset Delay x Reset Attempts) to Auto Reset terminates  
 (1) Seperate reset signal not avialbe on all products

**Fig 5 : Auto Reset - Two Wire - Overload**

The timing diagrams show the auto reset with a maintained two wire control system  
 The fault shown is an overload trip, the Control Supply maintained  
 In this instance the Auto Reset clears the trip but the overload (%) will take a certain amount of time to decay  
 If insufficient time is left before re-starts the overload will trip again repeatedly until the Reset Attempts count exceeds its set value.  
 This must be considered and enough time left to allow the overload to decay to a low level



Sequence of events	
t0	3 phase supply applied
t1	Start signal applied, motor starts
t2	Motor reaches full voltage
t3	3 phase supply removed
t4	Start signal must still be applied If it has been removed Auto Reset feature re-initialises
t5	Reset delay = 0 Restart Attempts =3
t6	Rest Signal must be low If the trip is reset the Auto Reset feature re-initialises
t7	Reset delay = 0 Restart Attempts = 2
t8	3-Phase re-established
t9	Reset delay = 0 Restart Attempts = 1
t10	Trip Free Delay = 0 Restart Attempts = 0

User Parameters (R/W)		
PNU	Range	Default
Auto Reset	Off / On	Off
Reset Delay	0-7200s	0s
Reset Attempts	0-10	0
Reset Trips	All resettable trips	-
Trip Free Time	0-7200s	600s

Monitor Parameters (R/O)	
PNU	Range
Auto Reset Pending	0-1
Auto Reset Exceeded	0-1
Auto Reset Delay Remaining	0-7200s
Auto Reset Attempts Remaining	0-10
Auto Reset Trip Free Time Remaining	0-7200s

**Notes**  
 In this instance the starter has failed to Auto Restart in the set number of attempts  
 The starter will remain in the tripped state until reset  
 To overcome this the Reset Delay time should be extended to allow the overload to cool  
 For Two Wire control reset occurs automatically when the start signal changes state from low to high, reset shown is programmable reset input<sup>(1)</sup>