

**CONTENTS**

1. Jnet NETWORK IDENTIFICATION.....	2
2. TIMER DATA .....	2
3. MASTER TIME SCHEDULE DATA.....	3
4. ACTIVE EVENT DATA.....	7
5.1 SPECIAL DAY DATES (UPTO V0.00.3).....	10
5.2 SPECIAL DAY DATES (FROM V0.00.4) .....	10
6. INPUTS & OUTPUTS.....	11
7. DISPLAY FUNCTIONS .....	11
8. CLOCK CALENDAR.....	11
9. RESTORE FACTORY DEFAULTS .....	11
10. RESTORE PARAMETERS FROM NETWORK.....	12
11. DIAGNOSTIC & TEST FUNCTIONS.....	12
DISPLAY DATA.....	14
GRAPHIC DATA.....	14

JTL RELATIVE TIME CLOCK ITEM NUMBERS				NT310/NT320 NT330	
ITEM	DESCRIPTION	CODE	CODE MEANING	RANGE	ITEM 9 VALUE
<b>1. Jnet NETWORK IDENTIFICATION</b>					
0	Unit type	nt31	Unit type		
19	Software version number				
1	Unit number			0.0 - 899.8	
<b>2. TIMER DATA</b>					
22	status	OFF On	Contacts open Contacts closed		
199	Master time schedule to be used			1 - 4	1
197	On time relative to master time schedule (minutes)			-240 to +240	0
198	Off time relative to master time schedule (minutes)			-240 to +240	0
28	Daylight saving selection. For daylight saving item 18 must be set to dAY.S	Std.t dAY.t	Standard time Daylight saving time	0 - 1	Std.t
29	v0.00.0				
	Enable timer for control of all display cabinet lights. (note unit no. for this unit must be set less than 100.0 for this function to be enabled)	oFF C.Lt..C	off Cabinet light control enabled	0 - 1	oFF
	v0.00.1 on				
	Timer type selection (note unit no for this unit must be set less than 100.0 for this function to be enabled)	0 1 2 3 4 - 8	No network function Cabinet lights Condenser fan setback Energy reduction Undefined network broadcast functions	0 - 8	0
26	External override switch input status	Off Or.On			
27	Communications command enable	OFF Co.En	Off Enabled	0 - 1	Co.En
91	Enable Jnet command on (active) when the channel is on (from v0.00.9)	c.oFF c.on	Command off for channel on Command on for channel on	0 - 1	nt.c.t
65	Communications command	C.on C.oFF	Lights on Lights off		
20	Force on (advance status to on)	CLr F.On	Timed operation Forced on	0 - 1	
21	Force off (advance status to off)	CLr F.OFF	Timed operation Forced off	0 - 1	

JTL RELATIVE TIME CLOCK ITEM NUMBERS				NT310/NT320 NT330	
ITEM	DESCRIPTION	CODE	CODE MEANING	RANGE	ITEM 9 VALUE
<b>3. MASTER TIME SCHEDULE DATA</b>					
<p>The master time schedule events are in 4 blocks of 100 items. 500 - 599 for master time 1 and 600 - 699 for master time 2 etc.  t=5 for schedule 1 t=6 for schedule 2 t=7 for schedule 3 &amp; t=8 for schedule 4  There are 32 master time events each using 3 item sets for masters schedule 1 starting at item 501.  The 32 event sets end at item 598. The master time schedule can be set locally on the timer or the schedule can be delivered by the JTL network. This feature depends on item t98.</p>					
t98	<p>Disable JTL network update of master time events</p> <p>Note: when this item is set to nEt. The master time schedule can be updated automatically from the JTL network controller. This function is supported by network controller version 74 and on for master time schedulers 1&amp;2.</p> <p>Up to v0.00.2. This function is not supported for master time schedulers 3&amp;4 which can only operate in local mode.</p> <p>From v0.00.3 schedule 3 can be set to operate from the day/night times in the network controller provided this function is supported by the network controller.</p> <p>Note: When set to network:  Schedule 1 (500-599) is associated with network trading hours 1.  Schedule 2 (600-699) is associated with network trading hours 2.  Schedule 3 (700-799) is associated with network day night times.  Schedule 4 (800-899) can only be used as local trading hours set.</p> <p>For normal operation these settings should be left at the default value.</p>	0 net 1 Loc 2 dY.nt	Network (trading hours) Local only Network (day/night times)	up to v0.00.2	
				0 - 1	Schedule 1 & 2 nEt
					Schedule 3 & 4 LOC
				from v0.00.3	
0 - 2	Schedule 1 & 2 nEt				
	Schedule 3 dY.nt				
	Schedule 4 LOC				
t00	Extend master time hours	nonE E.Hr.S	No extension Extend hours	0 - 1	nonE
957	Master time clock extension time			00:00 - 02:00	01:00
t97	Master time event checksum				

# JTL RELATIVE TIME CLOCK ITEM NUMBERS

# NT310/NT320 NT330

ITEM	DESCRIPTION	CODE	CODE MEANING	RANGE	ITEM 9 VALUE	
t01	Event 1 mode	0	nonE	0 - 3	on	
t04	Event 2 mode	1	t.dis		Event disabled	off
t07	Event 3 mode	2	oFF		Off event	on
t10	Event 4 mode	3	on		On event	off
t13	Event 5 mode					on
t16	Event 6 mode					off
t19	Event 7 mode					on
t22	Event 8 mode					off
t25	Event 9 mode					on
t28	Event 10 mode					off
t31	Event 11 mode					on
t34	Event 12 mode					off
t37	Event 13 mode					on
t40	Event 14 mode					off
t43	Event 15 mode					nonE
t46	Event 16 mode					nonE
t49	Event 17 mode					nonE
t52	Event 18 mode					nonE
t55	Event 19 mode					nonE
t58	Event 20 mode					nonE
t61	Event 21 mode					nonE
t64	Event 22 mode					nonE
t67	Event 23 mode					nonE
t70	Event 24 mode					nonE
t73	Event 25 mode					nonE
t76	Event 26 mode					nonE
t79	Event 27 mode					nonE
t82	Event 28 mode					nonE
t85	Event 29 mode					nonE
t88	Event 30 mode					nonE
t91	Event 31 mode					nonE
t94	Event 32 mode					nonE

JTL RELATIVE TIME CLOCK ITEM NUMBERS				NT310/NT320 NT330	
ITEM	DESCRIPTION	CODE	CODE MEANING	RANGE	ITEM 9 VALUE
t03	Event 1 time	00:00 - 23:55	Time in 5 minute intervals only allowed	00:00 - 23:55	Depends on selected master schedule
t06	Event 2 time				
t09	Event 3 time				
t12	Event 4 time				
t15	Event 5 time				
t18	Event 6 time				
t21	Event 7 time				
t24	Event 8 time				
t27	Event 9 time				
t30	Event 10 time				
t33	Event 11 time				
t36	Event 12 time				
t39	Event 13 time				
t42	Event 14 time				
t45	Event 15 time				
t48	Event 16 time				
t51	Event 17 time				
t54	Event 18 time				
t57	Event 19 time				
t60	Event 20 time				
t63	Event 21 time				
t66	Event 22 time				
t69	Event 23 time				
t72	Event 24 time				
t75	Event 25 time				
t78	Event 26 time				
t81	Event 27 time				
t84	Event 28 time				
t87	Event 29 time				
t90	Event 30 time				
t93	Event 31 time				
t96	Event 32 time				

**JTL RELATIVE TIME CLOCK ITEM NUMBERS**

**NT310/NT320  
NT330**

ITEM	DESCRIPTION	CODE	CODE MEANING	RANGE	ITEM 9 VALUE
t02	Event 1 day	Sun - Sat		0 - 6	Sun
t05	Event 2 day				Sun
t08	Event 3 day				Mon
t11	Event 4 day				Mon
t14	Event 5 day				Tues
t17	Event 6 day				Tues
t20	Event 7 day				Wed
t23	Event 8 day				Wed
t26	Event 9 day				Thurs
t29	Event 10 day				Thurs
t32	Event 11 day				Fri
t35	Event 12 day				Fri
t38	Event 13 day				Sat
t41	Event 14 day				Sat
t44	Event 15 day				-
t47	Event 16 day				-
t50	Event 17 day				-
t53	Event 18 day				-
t56	Event 19 day				-
t59	Event 20 day				-
t62	Event 21 day				-
t65	Event 22 day				-
t68	Event 23 day				-
t71	Event 24 day				-
t74	Event 25 day				-
t77	Event 26 day				-
t80	Event 27 day				-
t83	Event 28 day				-
t86	Event 29 day				-
t89	Event 30 day				-
t92	Event 31 day				-
t95	Event 32 day				-

## JTL RELATIVE TIME CLOCK ITEM NUMBERS

## NT310/NT320 NT330

ITEM	DESCRIPTION	CODE	CODE MEANING	RANGE	ITEM 9 VALUE
<b>4. ACTIVE EVENT DATA</b>					
There are 32 events each using 3 items starting at item 101. The 32 <sup>nd</sup> event ends at item 196. The times are calculated using the selected master time schedule.					
100	Enable timer	oFF ti.En	Off Enabled	0 - 1	ti.En
101	Event 1 mode	nonE	Not used		
104	Event 2 mode	t.dis	Event disabled		
107	Event 3 mode	oFF	Off event		
110	Event 4 mode	on	On event		
113	Event 5 mode				
116	Event 6 mode				
119	Event 7 mode				
122	Event 8 mode				
125	Event 9 mode				
128	Event 10 mode				
131	Event 11 mode				
134	Event 12 mode				
137	Event 13 mode				
140	Event 14 mode				
143	Event 15 mode				
146	Event 16 mode				
149	Event 17 mode				
152	Event 18 mode				
155	Event 19 mode				
158	Event 20 mode				
161	Event 21 mode				
164	Event 22 mode				
167	Event 23 mode				
170	Event 24 mode				
173	Event 25 mode				
176	Event 26 mode				
179	Event 27 mode				
182	Event 28 mode				
185	Event 29 mode				
188	Event 30 mode				
191	Event 31 mode				
194	Event 32 mode				

**JTL RELATIVE TIME CLOCK ITEM NUMBERS****NT310/NT320  
NT330**

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>CODE</b>	<b>CODE MEANING</b>	<b>RANGE</b>	<b>ITEM 9 VALUE</b>
103	Event 1 time	00:00 - 23:59			
106	Event 2 time				
109	Event 3 time				
112	Event 4 time				
115	Event 5 time				
118	Event 6 time				
121	Event 7 time				
124	Event 8 time				
127	Event 9 time				
130	Event 10 time				
133	Event 11 time				
136	Event 12 time				
139	Event 13 time				
142	Event 14 time				
145	Event 15 time				
148	Event 16 time				
151	Event 17 time				
154	Event 18 time				
157	Event 19 time				
160	Event 20 time				
163	Event 21 time				
166	Event 22 time				
169	Event 23 time				
172	Event 24 time				
175	Event 25 time				
178	Event 26 time				
181	Event 27 time				
184	Event 28 time				
187	Event 29 time				
190	Event 30 time				
193	Event 31 time				
196	Event 32 time				



JTL RELATIVE TIME CLOCK ITEM NUMBERS				NT310/NT320 NT330	
ITEM	DESCRIPTION	CODE	CODE MEANING	RANGE	ITEM 9 VALUE
102	Event 1 day	Sun - Sat			
105	Event 2 day				
108	Event 3 day				
111	Event 4 day				
114	Event 5 day				
117	Event 6 day				
120	Event 7 day				
123	Event 8 day				
126	Event 9 day				
129	Event 10 day				
132	Event 11 day				
135	Event 12 day				
138	Event 13 day				
141	Event 14 day				
144	Event 15 day				
147	Event 16 day				
150	Event 17 day				
153	Event 18 day				
156	Event 19 day				
159	Event 20 day				
162	Event 21 day				
165	Event 22 day				
168	Event 23 day				
171	Event 24 day				
174	Event 25 day				
177	Event 26 day				
180	Event 27 day				
183	Event 28 day				
186	Event 29 day				
189	Event 30 day				
192	Event 31 day				
195	Event 32 day				

<b>JTL RELATIVE TIME CLOCK ITEM NUMBERS</b>	<b>NT310/NT320 NT330</b>
---	------------------------------

ITEM	DESCRIPTION	CODE	CODE MEANING	RANGE	ITEM 9 VALUE
------	-------------	------	--------------	-------	--------------------

<b>5.1 SPECIAL DAY DATES (upto v0.00.3)</b> The special days are disabled by selecting the number of special days allowed on item 940. Timer is "off" on selected special days regardless of schedule.
--

940	No of special days			0 - 16	2
941	Date of special day 1			01.01 - 31.12	25.12
942	Date of special day 2			01.01 - 31.12	01.01
943	Date of special day 3			01.01 - 31.12	01.01
944	Date of special day 4			01.01 - 31.12	01.01
945	Date of special day 5			01.01 - 31.12	01.01
946	Date of special day 6			01.01 - 31.12	01.01
947	Date of special day 7			01.01 - 31.12	01.01
948	Date of special day 8			01.01 - 31.12	01.01
949	Date of special day 9			01.01 - 31.12	01.01
950	Date of special day 10			01.01 - 31.12	01.01
951	Date of special day 11			01.01 - 31.12	01.01
952	Date of special day 12			01.01 - 31.12	01.01
953	Date of special day 13			01.01 - 31.12	01.01
954	Date of special day 14			01.01 - 31.12	01.01
955	Date of special day 15			01.01 - 31.12	01.01
956	Date of special day 16			01.01 - 31.12	01.01

<b>5.2 SPECIAL DAY DATES (from v0.00.4)</b> The special days are disabled by selecting the number of special days allowed on item 910. Timer is "off" on selected special days regardless of schedule.
--










910	No of special days			0 - 16	2
911	Date of special day 1			01.01 - 31.12	25.12
912	Date of special day 2			01.01 - 31.12	01.01
913	Date of special day 3			01.01 - 31.12	01.01
914	Date of special day 4			01.01 - 31.12	01.01
915	Date of special day 5			01.01 - 31.12	01.01
916	Date of special day 6			01.01 - 31.12	01.01
917	Date of special day 7			01.01 - 31.12	01.01
918	Date of special day 8			01.01 - 31.12	01.01
919	Date of special day 9			01.01 - 31.12	01.01
920	Date of special day 10			01.01 - 31.12	01.01
921	Date of special day 11			01.01 - 31.12	01.01
922	Date of special day 12			01.01 - 31.12	01.01

JTL RELATIVE TIME CLOCK ITEM NUMBERS				NT310/NT320 NT330	
ITEM	DESCRIPTION	CODE	CODE MEANING	RANGE	ITEM 9 VALUE
923	Date of special day 13			01.01 - 31.12	01.01
924	Date of special day 14			01.01 - 31.12	01.01
925	Date of special day 15			01.01 - 31.12	01.01
926	Date of special day 16			01.01 - 31.12	01.01
<b>6. INPUTS &amp; OUTPUTS</b>					
77	External override switch enable	oFF or.En	Disabled Enabled	0 - 1	oFF
78	Output relay state selection	En.On DE.On	Energised for on Deenergised for on	0 - 1	DE.On
79	Disable remote forcing functions for JTL SiteSuite computer	En F.diS	Enable forcing Disable forcing	0 - 1	F.diS
<b>7. DISPLAY FUNCTIONS (v0.00.6 on)</b>					
189	Backlight control	0 B.oFF 1 BL.on 2 BL.F.F 3 BL.n.F	Backlight off Backlight on Backlight off, flashes for alarm Backlight on, flashes for alarm	0 - 3	
<b>8. CLOCK CALENDAR</b>					
Note, the time and date can be displayed as standard or daylight saving (summer) time. This choice is made on item 18. When daylight saving is chosen and the controller is connected to a JTL Network Controller supporting daylight saving operation, the change is made automatically to the current EU directive.					
2	Time of day			00:00 - 23:59	
3	Day of week	Sun - Sat			
4	Date			01.01 - 31.12	
5	Year			2015 - 2042	
18	Daylight saving enable	Stnd dAY.S	Standard time Daylight saving time	0 - 1	Stnd
<b>9. RESTORE FACTORY DEFAULTS</b>					
To set the factory defaults into the memory of the controller, first set the virtual bitswitch as shown, then set item 9 to the set default value of "1234". This should be done on initial commissioning of the unit or when the unit is being installed as a replacement part.					
966	Virtual bitswitch setting (from v0.00.4)	0	Standard		
9	Set default values To set the factory defaults into the memory of the controller, set item 9 to the set default value of "1234". This should be done on initial commissioning of the unit or when the unit is being installed as a replacement part.	1234 1066	Load default settings Write to NVRAM immediately		

JTL RELATIVE TIME CLOCK ITEM NUMBERS				NT310/NT320 NT330	
ITEM	DESCRIPTION	CODE	CODE MEANING	RANGE	ITEM 9 VALUE
<b>10. RESTORE PARAMETERS FROM NETWORK (from v0.00.4)</b>					
<p>To restore the data from the network first set the virtual bitswitch on item 966 and the appropriate unit number on item 1. Then check item 965 to see if this facility is available on the network. The information on item 965 is received from a network broadcast every few minutes. If the restore parameter facility is available and operational then item 965 will be set to a non zero number e.g. 2. To request restore parameters set item 964 to 1234. Item 963 displays parameters restore progress. When all parameters are downloaded item 964 is cleared to 0.</p>					
965	Master database port	0 1 - 4	Not in use NC port no		
964	Set restore parameters from network	1234	Request restore		
963	Parameter restore progress	rdy dnl.r din.p dnl.c FAIL	Restore function possible Restore requested Restore in progress Restore complete Restore fault		
959	Requested template	0 1-9999	As commissioned Template number	0 - 9999	
<b>11. DIAGNOSTIC &amp; TEST FUNCTIONS</b>					
6	Communications speed	4.8	kilo baud rate		
7	Communications choice (Half/Full duplex)	HALF	2 wire		
967	Latest unit no polled on zone (from v0.00.3)				
973	Latest polling interval This time shows the polling interval between the last two successful network awake messages to this unit.	min:sec			
974	Time since last awake message	min:sec			
975	Network receive timer Each time a message is read correctly the timer is set to 10 it counts down. If the timer reaches 0 then the communications module is reset.	seconds	(counts down to 0)		
976	Network receive bad character counter. The counter counts down from a preset number. When the counter reaches 0 the communications module is reset.		(counts down to 0)		
977	Transmit control line status for the operation of the Jnet network communications.	Hi Lo	Transmit Receive		
8	Bitswitch Setting		Not used		
99	Test display	clr Set	Off Test active	0 - 1	
71	Switch input status	iP- - iP1-	Input 1 off Input 1 on		
72	Pushbutton inputs (Note more than 1 pushbutton can be shown simultaneously)	P1 - - P- 2 - P- - 3	Pbutton 1 pressed Pbutton 2 pressed Pbutton 3 pressed		

<b>JTL RELATIVE TIME CLOCK ITEM NUMBERS</b>				<b>NT310/NT320 NT330</b>	
<b>ITEM</b>	<b>DESCRIPTION</b>	<b>CODE</b>	<b>CODE MEANING</b>	<b>RANGE</b>	<b>ITEM 9 VALUE</b>
73	Test outputs	clr SEt	Off Test active	0 - 1	
475	Phoenix CPU supply voltage (mV)				
476	Phoenix battery voltage (mV)				
477	Phoenix CPU temperature				
478	PIC identification number				
479	PIC firmware variation				
10	Processor alarms (11-17) (see graphical data)	0 1-255	No alarms Check 11-17		
11	Static RAM fault	CLr rA.Ft	No fault Fault		
12	Program/counter fault	CLr PC.Ft	No fault Fault		
13	Stack pointer fault	CLr SP.Ft	No fault Fault		
14	Background loop fault	CLr bL.Ft	No fault Fault		
15	PROM checksum fault	CLr Pr.Ft	No fault Fault		
16	NVRAM fault	CLr n.Ft	No fault Fault		
17	Instruction TRAP fault	CLr tP.Ft	No fault Fault		

DISPLAY DATA		NT310/NT320
<b>NORMAL DISPLAY</b>		
JTL	Start-up text	
OP	Timer status follows this text	
<b>OTHER TEXT</b>		
Or-1	Timer override status follows this text	
tod	Time of day follows this text	

GRAPHICAL DISPLAY OF BIT DATA (FROM V0.00.6)				
Graphical display of bit data used on items where the data was shown previously as a decimal value	bit	Graphic	Value	<u>Note:</u> Where the data is shown as a decimal value the meaning is the sum of the associated value e.g. bits 2 and 5 set would be displayed as 18 (16+2)
	None		0	
	1		1	
	2		2	
	3		4	
	4		8	
	5		16	
	6		32	
	7		34	
	8		128	