System Memory (Software V1.2)

The following table lists the system maintained data and information in the system memory of the HMI that may be useful for your application. Note that in any case do not modify the system memory for any purpose or the system may malfunction or crash.

Address	**Length**	**Content**
$S0~$S25	26	Keypad input buffer for keypads $S0: Command code for keypad display $S1~$S24: Null terminated ASCII character string up to 48 characters
$S42	1	The second and minute of the current time in BCD format Bit 0~7: Second (0x00~0x59) Bit 8~15: Minute (0x00~0x59)
$S43	1	The hour of the current time in BCD format and the RTC adjustment parameter Bit 0~7: Hour (0x00~0x23) Bit 8~15: RTC adjustment value
$S44	1	The day and month of the current date in BCD format Bit 0~7: Day (0x01~0x31) Bit 8~15: Month (0x01~0x12)
$S45	1	The year and the day-of-week of the current date in BCD format Bit 0~7: Year (0x00~0x99) Bit 8~15: Day of week (0x00~0x06); 0 represents Sunday
$S46	1	The second of the current time in binary format (0~59)
$S47	1	The minute of the current time in binary format (0~59)
$S48	1	The hour of the current time in binary format (0~23)
$S49	1	The one tenth of the second of the current time in binary format (0~9) 9 represents 0.9 second
$S50	1	The day of the current date in binary format (0~30) 0 represents the first day of a month
$S51	1	The month of the current date in binary format (0~11) 0 represents January
$S52	1	The year of the current date in binary format (0~99)
$S53	1	The day of week of the current date in binary format (0~6) 0 represents Sunday
$S219	1	Current user level (0~9); 9 indicates that the user logged in with the developer password
$S230~$S241	12	The ASCII character string up to 24 characters to show the allowable input range for numeric keypads
$S297	1	The lowest user level that can be accepted by the current password keypad. When the value is 0, any user level is acceptable. When the value is 9, only the developer password is acceptable.

<table>
<tr><td>$S300~$S301</td><td>2</td><td>500ms timer</td></tr>
<tr><td>$S302~$S303</td><td>2</td><td>1 second timer</td></tr>
<tr><td>$S304</td><td>1</td><td>20 Hz sine wave (-1000 ~ 1000)</td></tr>
<tr><td>$S305</td><td>1</td><td>20 Hz cosine wave (-1000 ~ 1000)</td></tr>
<tr><td>$S306</td><td>1</td><td>20 Hz triangle wave (0~1000)</td></tr>
<tr><td>$S307</td><td>1</td><td>System signals
$S307.0: always 0 when ready
$S307.1: always 1 when ready</td></tr>
<tr><td>$S315</td><td>1</td><td>System status
$S315.0: 1 indicates that the data in battery backed RAM is good</td></tr>
<tr><td>$S317</td><td>1</td><td>Current language number (0~9); 0 represents language #1</td></tr>
<tr><td>$S319</td><td>1</td><td>Status bits of USB memory sticks
$S319.0: Drive C (1:OK; 0:None)
$S319.1: Drive D (1:OK; 0:None)
$S319.2: Drive E (1:OK; 0:None)</td></tr>
<tr><td>$S654</td><td>1</td><td>Link enabled bits for Link 1~16
$S654.0 is for Link 1; 0: Disabled; 1: Enabled
$S654.1 1 is for Link 2;
…
$S654.f is for Link 16</td></tr>
<tr><td>$S662~$S677</td><td>32</td><td>Communication status words for Link 1~16
$S662 is for Link 1
$S663 is for Link 2
…
$S677 is for Link 16

Communication Status
<table>
<tr><td>Value</td><td>Meaning</td></tr>
<tr><td>0</td><td>OK</td></tr>
<tr><td>1</td><td>Overrun error</td></tr>
<tr><td>2</td><td>Break error</td></tr>
<tr><td>3</td><td>Parity error</td></tr>
<tr><td>4</td><td>Framing error</td></tr>
<tr><td>5</td><td>No response</td></tr>
<tr><td>6</td><td>Unrecognized response</td></tr>
<tr><td>7</td><td>Timeout</td></tr>
<tr><td>8</td><td>Inactive CTS</td></tr>
<tr><td>9</td><td>Checksum error</td></tr>
<tr><td>10</td><td>Command rejected</td></tr>
<tr><td>11</td><td>Invalid address</td></tr>
<tr><td>12</td><td>Invalid range</td></tr>
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<tr><td></td><td></td><td><table>
<tr><td>13</td><td>Invalid request</td></tr>
<tr><td>14</td><td>Device busy</td></tr>
<tr><td>15</td><td>Unknown error</td></tr>
<tr><td>16</td><td>Link disabled</td></tr>
<tr><td>17</td><td>Initialization failure</td></tr>
<tr><td>18</td><td>Failed to send data</td></tr>
<tr><td>19</td><td>Failed to receive data</td></tr>
<tr><td>20</td><td>Failed to open connection</td></tr>
<tr><td>21</td><td>Connection not ready</td></tr>
<tr><td>22</td><td>Invalid sub-link</td></tr>
<tr><td>23</td><td>Invalid COM port</td></tr>
<tr><td>24</td><td>Error</td></tr>
<tr><td>255</td><td>Uncertain</td></tr>
</table></td></tr>
<tr><td>$S838</td><td>1</td><td>The ID of the current recipe block (0~15)</td></tr>
<tr><td>$S839~$S854</td><td>16</td><td>The current recipe numbers of recipe block 0~15
$S839 is for recipe block 0
$S840 is for recipe block 1
…
$S854 is for recipe block 15</td></tr>
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