

NX-series Safety Control Unit User's Manual

Correction Notice

August 24, 2015

Affected Products:

All NX-S Series of safety Control Units: NX-SL3300_, NX-SL3500_, NX-SIH400_, NX-SID800, NX-SOH200, NX-SOD400

Affected Manual(s):

All NX-Series Safety Control Unit User's Manuals prior to NX-series Safety Control Unit User's Manual Z930-E1-07.

Affected Page / Section:

Page 4-2 / 4-1-2 Calculating Safety Reaction Times - Safety sensor/switch response time

Page 4-2 / 4-1-2 Calculating Safety Reaction Times - Safety I/O refresh time

See Appendix for details.

Action Required:

The following values and calculations have been modified; please verify all safety information relevant to:

- The safety sensor/switch response time when an Omron Special Safety Input Devices is connected to a Safety Input Unit.
- The calculation of the Safety I/O refresh time.

Updated Manual:

[NX-series Safety Control Unit User's Manual](#)

Z930-E1-07.pdf

Appendix

Manual Corrections:

Correction of the Safety sensor/switch response time

Before	Time element	Description
	Safety Sensor/switch Response time	<p>This is the response time that is required for a safety sensor or switch, such as a light curtain, to turn OFF. The value is defined for each sensor or switch.</p> <p>The following values apply when an OMRON Special Safety Input Device is connected to a Safety Input Unit.</p> <p>E3ZS/E3FS Single-beam Safety Sensors: <u>10 ms</u></p> <p>D40A Non-contact Door Switches: 6 ms + 0.4 ms x No. of linked Switches</p> <p>D40Z Non-contact Door Switches: <u>18 ms</u></p> <p>UM Safety Mats: <u>10 ms</u></p> <p>SGE Safety Edges: <u>10 ms</u></p>
After	Time element	Description
	Safety Sensor/switch Response time	<p>This is the response time that is required for a safety sensor or switch, such as a light curtain, to turn OFF. The value is defined for each sensor or switch.</p> <p>The following values apply when an OMRON Special Safety Input Device is connected to a Safety Input Unit.</p> <p>E3ZS/E3FS Single-beam Safety Sensors: <u>14ms</u></p> <p>D40A Non-contact Door Switches: 6 ms + 0.4 ms x No. of linked Switches</p> <p>D40Z Non-contact Door Switches: <u>29ms</u></p> <p>UM Safety Mats: <u>24ms</u></p> <p>SGE Safety Edges: <u>24ms</u></p>

Correction of the Safety I/O Refresh Time

<p>Before</p>	<table border="1"> <tr> <td data-bbox="342 306 518 766"> <p>Safety I/O refresh time</p> </td><td data-bbox="518 306 1458 766"> <p>Calculate the sum of the following configuration elements. This is the time from when the safety input terminal changes until the change goes through the Safety CPU Unit and the safety output terminal turns OFF.</p> <p>Calculation: Find the sum of the following configuration elements.</p> <p>Safety I/O refresh time = Input delay time + Safety input refresh time + Safety output refresh time</p> <ul style="list-style-type: none"> • The input delay time is the input OFF delay time that is set for the safety input terminal on the Safety Input Unit. • The safety input refresh time is the value of the FSoE watchdog timer between the Safety CPU Unit and Safety Input Unit. • The safety output refresh time is the value of the FSoE watchdog timer between the Safety CPU Unit and Safety Output Unit </td></tr> </table>	<p>Safety I/O refresh time</p>	<p>Calculate the sum of the following configuration elements. This is the time from when the safety input terminal changes until the change goes through the Safety CPU Unit and the safety output terminal turns OFF.</p> <p>Calculation: Find the sum of the following configuration elements.</p> <p>Safety I/O refresh time = Input delay time + Safety input refresh time + Safety output refresh time</p> <ul style="list-style-type: none"> • The input delay time is the input OFF delay time that is set for the safety input terminal on the Safety Input Unit. • The safety input refresh time is the value of the FSoE watchdog timer between the Safety CPU Unit and Safety Input Unit. • The safety output refresh time is the value of the FSoE watchdog timer between the Safety CPU Unit and Safety Output Unit
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