

Technical Information	Date: 21.04.2015 Official: Vandenberghe Department.: ST-FIR/MKP1.1
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Tech. Information No.	1920 / 2015
Subject:	Recommendation for FLM-420-I8R1 to comply with new EMC standard

Short Description:	Installation with shielded cable is required for the FLM-420-I8R1 in order to comply with the EMC standard EN50130-4:2011
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Hardware <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Device	<input type="checkbox"/> Module	<input type="checkbox"/> PCBA
Software <input type="checkbox"/>	<input type="checkbox"/> Application	<input type="checkbox"/> Driver / Extension	<input type="checkbox"/> Firmware

Affected Products (details)	CTN	SAP no.	Aff. version	New version
LSNi device (8 inputs, 1 relay)	FLM-420-I8R1-S	F.01U.033.251	n.a.	n.a.

Number of delivered devices	n.a.
Period of delivery	from: n.a. to: n.a.
Affected serial numbers	from: n.a. to: n.a.

Priority Level	Criterion
I <input type="checkbox"/>	The change has to be made immediately (see dates below)
II <input type="checkbox"/>	The change has to be made during the next inspection.
III <input type="checkbox"/>	Change has to be made, if the error pattern recurs and with new installations.
None <input checked="" type="checkbox"/>	General Information (like new tool, new feature, new SW release)

Action Plan	
<input checked="" type="checkbox"/>	Inform customers
<input type="checkbox"/>	Arrange re-work of stock (NSO)
<input type="checkbox"/>	Arrange re-work of stock (customer)
<input type="checkbox"/>	Arrange re-work of installed products
<input type="checkbox"/>	See detailed actions on following pages

Start Date		Completion Date	
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Error(s) and Effect(s)

Due to the publication of the new standard EN50130-4:2011, the EMC requirements for products have been increased. The modified chapters of the standard are:

1. EMC-Emission

- Radiated Emission

Description: Measure the electromagnetic values which are produced by the product.

Old criteria: All radiated frequencies between 30MHz and 1GHz

New criteria: All radiated frequencies between 30MHz and 6GHz
(depends on clock-frequencies of the product)

2. EMC-immunity

- Radiated Immunity

Description: Verify the resistance of the product against exposure of high loads of electromagnetic disturbances in the air and onto wires.

Old criteria: All frequencies between 80MHz and 2GHz during a time period of 3s for each frequency.
Test performed 3 times in 3 different directions (X-Y-Z).

New criteria: All frequencies between 80MHz and 2.7GHz during a time period of 12s for each frequency.
Test performed 6 times in 6 different directions (X-Y-Z and opposites)

- Conducted Immunity

Description: Verify the resistance of the product against high exposure of loads of electromagnetic disturbances in the cabling.

Old criteria: All connected cables on the product were terminated. The disturbance signal could be redirected trough several paths.

New criteria: The connected cables on the product are terminated one by one. The disturbance signal can only be redirected trough the cable which is terminated.

- Burst

Description: Verify the resistance of the product against high exposure of loads of electromagnetic disturbances in the cabling which is influenced by other cabling which are mounted parallel to our product.

Old criteria: Repetition rate of burst-pulse 5 kHz.

New criteria: Repetition rate of burst-pulse 100 kHz.

- Surge

Didn't change.

- Electro Static Discharge (ESD)

Didn't change.

Cause

The FLM-420-I8R1-S can only pass all the tests specified by EN50130-4:2011 with shielded cable for the LSN bus and all inputs.

Action(s)

Because EN50130-4:2011 is part of the "EC Declaration of Conformity", all installations where CE- marking is required (mainly Europe) shielded cable is obligated. The shielded cable needs to be applied for:

- all loops and stubs which are equipped with one or more FLM-420-I8R1-S modules.
- all inputs which are connected on the FLM-420-I8R1-S

The cable shield wire for the LSN cable has to be connected properly according LSN specifications:

- Connect LSN cable shield on panel side to designated functional earth connector
Note: the shield of both sides (start & end) of the loop must be connected to the panel
- Loop through cable shield at all LSN peripheral devices using provided terminals
- No additional connection of LSN cable shield is permitted, neither to other earth connectors at any location nor to other electrical potential

In the FLM-420-I8R1-S multiple blank shield wires needs to be fitted in one terminal. In order to ensure a solid juncture, the wires need to be twisted and soldered together or be equipped with a quick terminal connector.

Note: This is a temporary measure until the re-designed interface module is available. A separate release note will be distributed.

Required Components	Part no.

Attachment(s)

BU Manager	Knauel	Clerk in Charge:	Vandenberghe
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Distribution

Distribution BU FIR	<input checked="" type="checkbox"/> Celebi Guenay (ST-FIR/QMM), Knauel Thomas (ST-FIR/MKP ST-FIR/MKT), Heckl Michael (ST-FIR/MKP3), Kriegbaum Kurt (ST-FIR/QMM) <input checked="" type="checkbox"/> Angstenberger Josef (ST-FIR/MKR-EU) <input type="checkbox"/> Lim Yong Gang (ST/SRM-AP), Leonard Hew (ST-FIR/MKR-AP), Quek Daniel (ST-CO/MKR2-AP) <input type="checkbox"/> Squarize Alex (ST/SRM-LA), Pinto Erik (ST/STS-LA ST-ASA/SRA-LA), Gundlach Daniel (ST/SRM-NA ST/SBV1-NA) <input type="checkbox"/>
Distribution BU IN	<input type="checkbox"/> Hossmann Daniela (ST-IN/MKR-EU), Kugler Gerhard (ST-IN/MKR2-EU), Endres Dirk (ST-IN/QMM) <input type="checkbox"/> Berberian Alexandra (ST-IN/MKR-SEF), Ferrao Eduardo (ST-IN/MKR-SEI), Karlsson Mathias (ST-IN/MKR-SEN), Tantry Ananth (ST-IN/MKR-SEM) <input type="checkbox"/> Mechler Tom (ST-IN/MKR-NA) <input type="checkbox"/>
Distribution BU ESS	<input type="checkbox"/> Loh Leon (ST-ESS/MKP1.4), Maier Holger (ST-ESS/MKP1.2), Wings Maarten (ST-ESS/MKP1.3), Redeker Bernd (ST-ESS/QMM), Jan von Rosenstiel (ST-ESS/MKP1.1), Reinhard Bloss (ST-ESS/MKP1) <input type="checkbox"/> Funke Thomas (ST-ESS/ENG) <input type="checkbox"/> Nikolas Mangold-Takao (ST-ESS/MKP1), Jaco Liebetrau (ST-ESS/MKT) <input type="checkbox"/> Markus Brack (ST-ESS/MKP2.3), Huse Istvan (ST/PRM2-EU), Law Jeffrey (ST/PRM1-AP) <input type="checkbox"/> Gary Deng (ST-PRM-CN), James Judson (ST-IN/MKR-NA) <input type="checkbox"/>
Other parties affected	<input type="checkbox"/> Steidle Kurt (ST-ASA/PRM1) <input type="checkbox"/> Proyer Konrad (ST-ASA/SRA-EU), Schrimpf Felix (ST-ASA/PRM), Wilson Jim (ST-ASA/SRA-AM), Tan Woo Khiang (ST/ASA-AP) <input type="checkbox"/> Pedolzky Georg (ST-BT/PRM1) <input type="checkbox"/> <input type="checkbox"/>