

## OMRON Technical Note

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### Omron F3SG-SR\_7\_9 and F3SG-SR\_12\_15 IAG's

Purpose: To be used with the F3SG-SR safety light curtains I/O Link using NJ or NX PLC along with NA type HMI. Depending on the screen size will determine which files to use. If using a 7" or 9" NA HMI please use F3SG-SR\_7\_9. If using a 12" or 15" HMI please use F3SG-SR\_12\_15. These are the same just scaled for the resolution of the screens.

#### Contents:

- F3SG\_SR\_Error\_Dat
- F3SG\_SR\_Error\_Dat\_CH2
- F3SG\_SR\_Error\_Dat\_CH3
- F3SG\_SR\_Light\_Intensity
- F3SG\_SR\_Status\_Process\_Dat
- F3SG\_SR\_Status\_Service\_Dat
- F3SG\_SR\_Sys\_Dat
- F3SG\_SR\_Sys\_Dat\_CH2
- F3SG\_SR\_Sys\_Dat\_CH3

### F3SG\_SR\_Error\_Dat, F3SG\_SR\_Error\_Dat\_CH2 and F3SG\_SR\_Error\_Dat\_CH3:

Provides Error data from the Intelligent Tap, both Emitter and Receiver of the Primary Sensor, Secondary 1 and Secondary 2 sensors if mounted. Error data consists of Error Codes, Accumulated Power On Time in hours and Data for Inquiry value. By pushing the “Detailed Information” button the user can get more detailed information about the error code. If further detail is needed please consult the F3SG-SRA user manual (Z405-E1)

**F3SG-SRA Error Data**

**Intelligent Tap**

Error Code	Accumulated Power On Time (h):	Data For Inquiry:
#	#	#
#	#	#
#	#	#
#	#	#
#	#	#
#	#	#

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**Receiver:**

**Primary Sensor**

Error Code	Accumulated Power On Time (h):	Data For Inquiry:
#	#	#
#	#	#
#	#	#
#	#	#

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**Emitter:**

**Channel 2 Sensor**

Error Code	Accumulated Power On Time (h):	Data For Inquiry:
#	#	#
#	#	#
#	#	#
#	#	#

[Detailed Information](#)

**F3SG-SRA Error Data CH2**

**Channel 2 Sensor**

**Receiver:**

**Channel 2 Sensor**

Error Code	Accumulated Power On Time (h):	Data For Inquiry:
#	#	#
#	#	#
#	#	#
#	#	#

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**Emitter:**

**Channel 2 Sensor**

Error Code	Accumulated Power On Time (h):	Data For Inquiry:
#	#	#
#	#	#
#	#	#
#	#	#

[Detailed Information](#)

**F3SG-SRA Error Data CH3**

**Channel 3 Sensor**

**Receiver:**

Error Code	Accumulated Power On Time (h):	Data For Inquiry:
#	#	#
#	#	#
#	#	#
#	#	#

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**Emitter:**

Error Code	Accumulated Power On Time (h):	Data For Inquiry:
#	#	#
#	#	#
#	#	#
#	#	#

Detailed Information

**Input/output variables:**

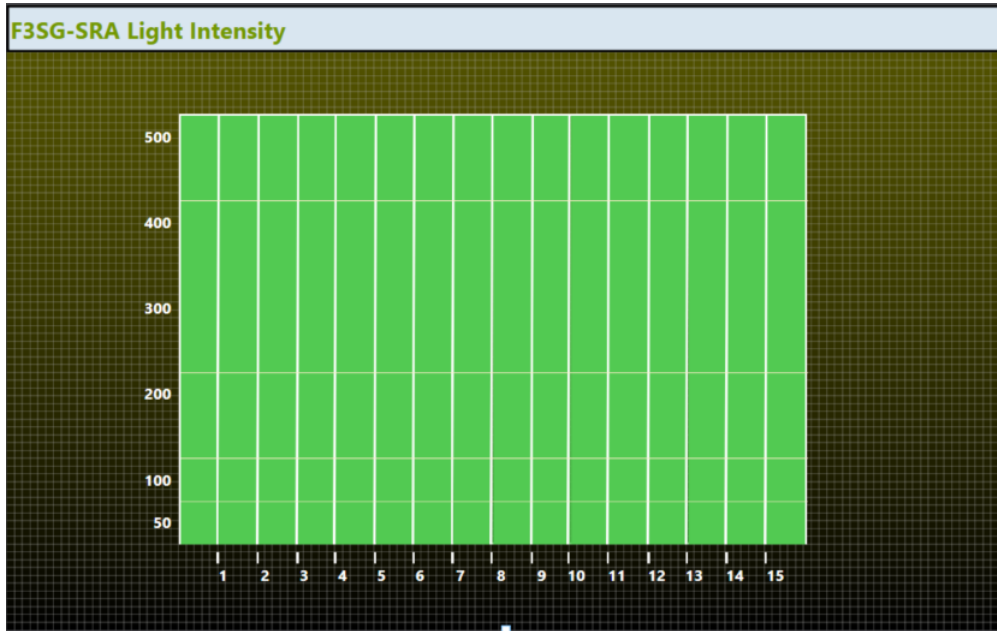
Name	Data Type	In/Out
TagSet_Input_F3SG_Error_Data	sTagSet_Input_F3SG_Error_Data	Input

**Structure:**

Name	Base Type
sTagSet_Input_F3SG_Error_Data	STRUCT
Intell_Tap_Err_Code	Byte(5)
Intell_Tap_Power_On_Time	UShort(5)
Intell_Tap_Data_For_Inquiry	UInteger(5)
Prim_Sen_Rec_Err_Code	Byte(3)
Prim_Sen_Rec_Power_On_Time	UShort(3)
Prim_Sen_Rec_Data_For_Inquiry	UInteger(3)
Prim_Sen_Emit_Err_Code	Byte(3)
Prim_Sen_Emit_Power_On_Time	UShort(3)
Prim_Sen_Emit_Data_For_Inquiry	UInteger(3)
Sec_Sen_1_Rec_Err_Code	Byte(3)
Sec_Sen_1_Rec_Power_On_Time	UShort(3)
Sec_Sen_1_Rec_Data_For_Inquiry	UInteger(3)
Sec_Sen_1_Emit_Err_Code	Byte(3)
Sec_Sen_1_Emit_Power_On_Time	UShort(3)
Sec_Sen_1_Emit_Data_For_Inquiry	UInteger(3)
Sec_Sen_2_Rec_Err_Code	Byte(3)
Sec_Sen_2_Rec_Power_On_Time	UShort(3)
Sec_Sen_2_Rec_Data_For_Inquiry	UInteger(3)
Sec_Sen_2_Emit_Err_Code	Byte(3)
Sec_Sen_2_Emit_Power_On_Time	UShort(3)
Sec_Sen_2_Emit_Data_For_Inquiry	UInteger(3)

### F3SG\_SR\_Light\_Intensity:

Provides Light Intensity values for a 320 mm hand protection light curtain (16 beams).



### Input/output variables:

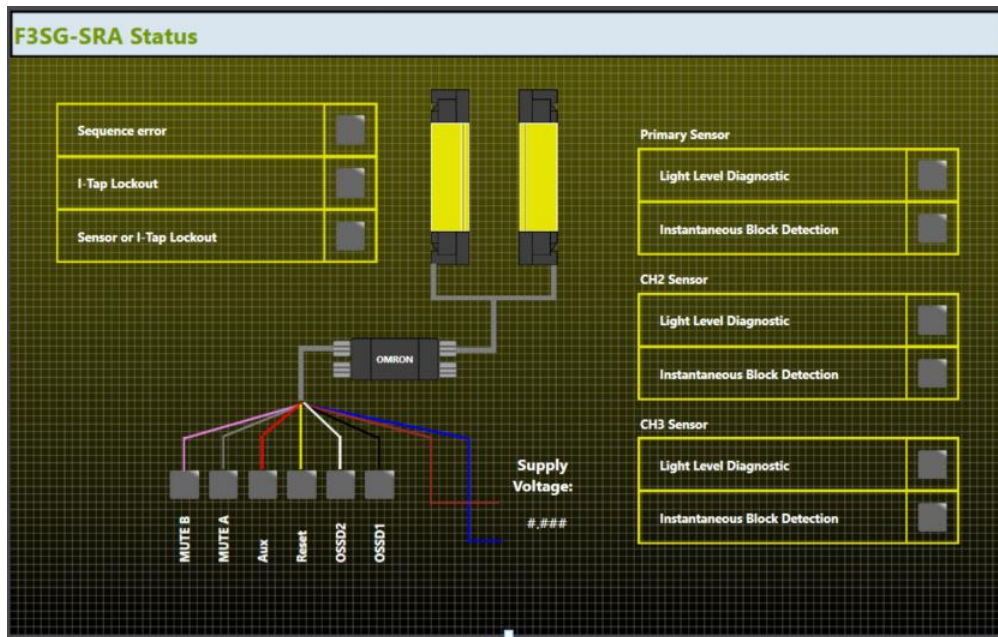
Name	Data Type	In/Out
TagSet_Input_F3SG_Status_Data_2	sTagSet_Input_F3SG_Status_Data_2	Input

### Structure:

Name	Base Type
sTagSet_Input_F3SG_Status_Data_2	STRUCT
Prim_Sen_Rec_Lht_Level	Byte(231)
Sec_1_Sen_Rec_Lht_Level	Byte(231)
Sec_2_Sen_Rec_Lht_Level	Byte(231)

### F3SG\_SR\_Status\_Process\_Dat:

Provides Status information that is provided in the process data. If “Nub\_Of\_Cascade” is set for 1 or 2 the display will add the status for these sensors as well.



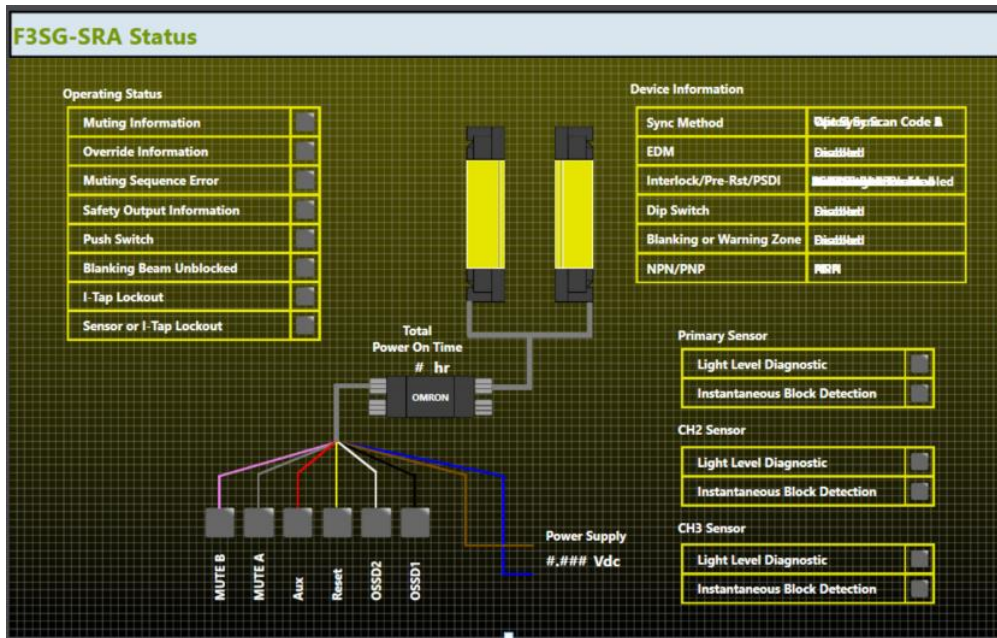
### Input/output variables:

Name	Data Type	In/Out
Num_Of_Cascade	Short	Input
Suply_Voltage	Short	Input
Status	Short	Input



## F3SG\_SR\_Status\_Service\_Dat:

Provides Status information that is provided in the Service data. If “Nub\_Of\_Cascade” is set for 1 or 2 the display will add the status for these sensors as well.



## Input/output variables:

Name	Data Type	In/Out
TagSet_Input_F3SG_Status_Data_1	sTagSet_Input_F3SG_Status_Data_1	Input

## Structure:

Name	Base Type
sTagSet_Input_F3SG_Status_Data_1	STRUCT
Process_Data_Input	UInteger
Sync_Method_Setting	Byte
Ext_Device_Monitor_Setting	Byte
InterLoc_Pre_RST_PSDI_Setting	Byte
Blank_Setting	Byte
PNP_NPN_Setting	Byte
Dip_SW_Setting	Byte
Muting_Status	Byte
Override_Status	Byte
Mut_Seq_Error_Status	Byte
Safety_Output_Status	Byte
Blank_Beam_Unblock_Info	Byte
Push_SW_Status	Byte
Oper_Time_Period	UInteger

### F3SG\_SR\_Sys\_Dat, F3SG\_SR\_Sys\_Dat\_CH2 and F3SG\_SR\_Sys\_Dat\_CH3:

Provides System data from the Intelligent Tap, both Emitter and Receiver of the Primary Sensor, Secondary 1 and Secondary 2 sensors if mounted.

F3SG-SRA System Data			
<b>Intelligent Tap</b>			
Vendor Name: #	Product Name: #		
Vendor Text: #	Serial Number: #	Product Text: #	
Hardware Version: #	Firmware Version: #		
<b>Primary Sensor</b>			
<b>Receiver:</b>			
Vendor Name: #	Product Name: #		
Hardware Version: #	Serial Number: #	Firmware Version: #	
<b>Emitter:</b>			
Vendor Name: #	Product Name: #		
Hardware Version: #	Serial Number: #	Firmware Version: #	

F3SG-SRA System Data CH2			
<b>Channel 2 Sensor</b>			
<b>Receiver:</b>			
Vendor Name: #	Product Name: #		
Hardware Version: #	Serial Number: #	Firmware Version: #	
<b>Emitter:</b>			
Vendor Name: #	Product Name: #		
Hardware Version: #	Serial Number: #	Firmware Version: #	

**F3SG-SRA System Data CH3**

Channel 3 Sensor

Receiver:

Vendor Name: #      Product Name: #  
Hardware Version: #      Firmware Version: #  
Serial Number: #

Emitter:

Vendor Name: #      Product Name: #  
Hardware Version: #      Firmware Version: #  
Serial Number: #

**Input/output variables:**

Name	Data Type	In/Out
TagSet_Input_F3SG_Sys_Dat	sTagSet_Input_F3SG_Sys_Dat	Input

**Structure:**

Name	Base Type
sTagSet_Input_F3SG_Sys_Dat	STRUCT
Vendor_Name	String
Vendor_Text	String
Product_Name	String
Product_Text	String
Serial_Number	String
Hardware_Version	String
Firmware_Version	String
Application_Specific_Tag	String
Prim_Sen_Rec_Supplier	String
Prim_Sen_Rec_Prod_Name	String
Prim_Sen_Rec_Serial_Num	String
Prim_Sen_Rec_HardW_Ver	String
Prim_Sen_Rec_FirmW_Ver	String
Prim_Sen_Emit_Supplier	String
Prim_Sen_Emit_Prod_Name	String
Prim_Sen_Emit_Serial_Num	String
Prim_Sen_Emit_HardW_Ver	String
Prim_Sen_Emit_FirmW_Ver	String
Sec_Sen_1_Rec_Supplier	String
Sec_Sen_1_Rec_Prod_Name	String
Sec_Sen_1_Rec_Serial_Num	String
Sec_Sen_1_Rec_HardW_Ver	String



Sec_Sen_1_Rec_FirmW_Ver	String
Sec_Sen_1_Emit_Supplier	String
Sec_Sen_1_Emit_Prod_Name	String
Sec_Sen_1_Emit_Serial_Num	String
Sec_Sen_1_Emit_HardW_Ver	String
Sec_Sen_1_Emit_FirmW_Ver	String
Sec_Sen_2_Rec_Supplier	String
Sec_Sen_2_Rec_Prod_Name	String
Sec_Sen_2_Rec_Serial_Num	String
Sec_Sen_2_Rec_HardW_Ver	String
Sec_Sen_2_Rec_FirmW_Ver	String
Sec_Sen_2_Emit_Supplier	String
Sec_Sen_2_Emit_Prod_Name	String
Sec_Sen_2_Emit_Serial_Num	String
Sec_Sen_2_Emit_HardW_Ver	String
Sec_Sen_2_Emit_FirmW_Ver	String