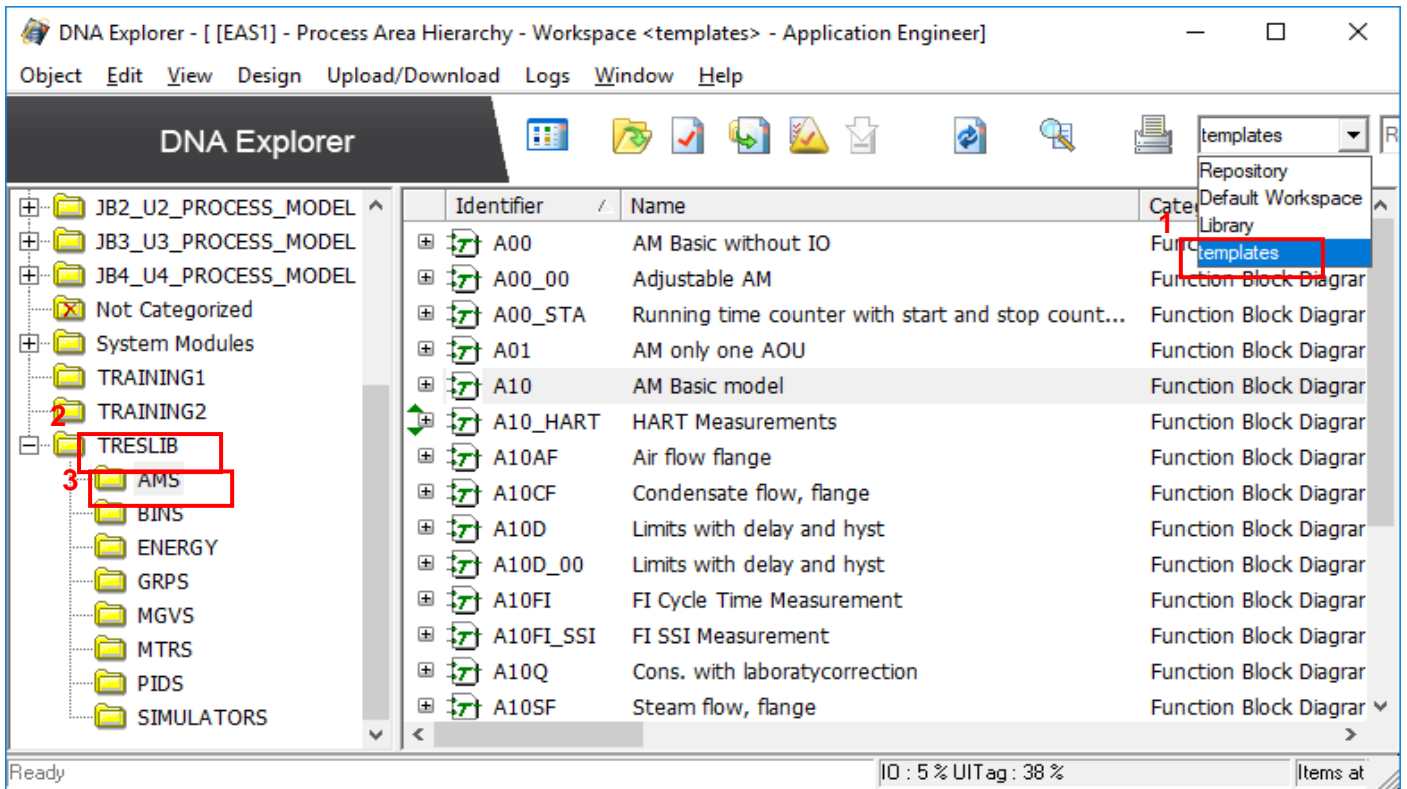


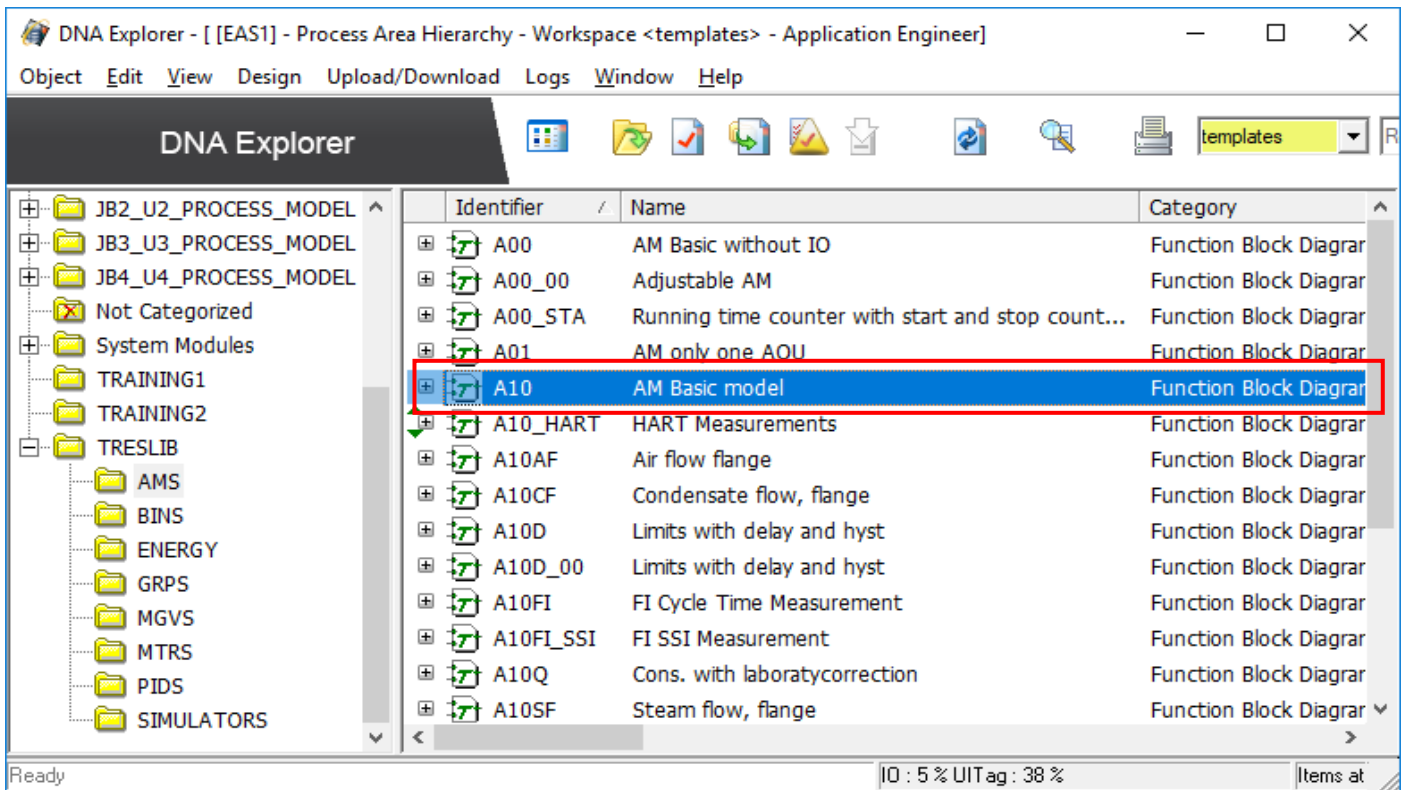
PROCESS CONTROL LAB MANUAL

**TRAINING 1: Implement Valmet Template
to generate I/Os system and logic
(Analogue Input)**

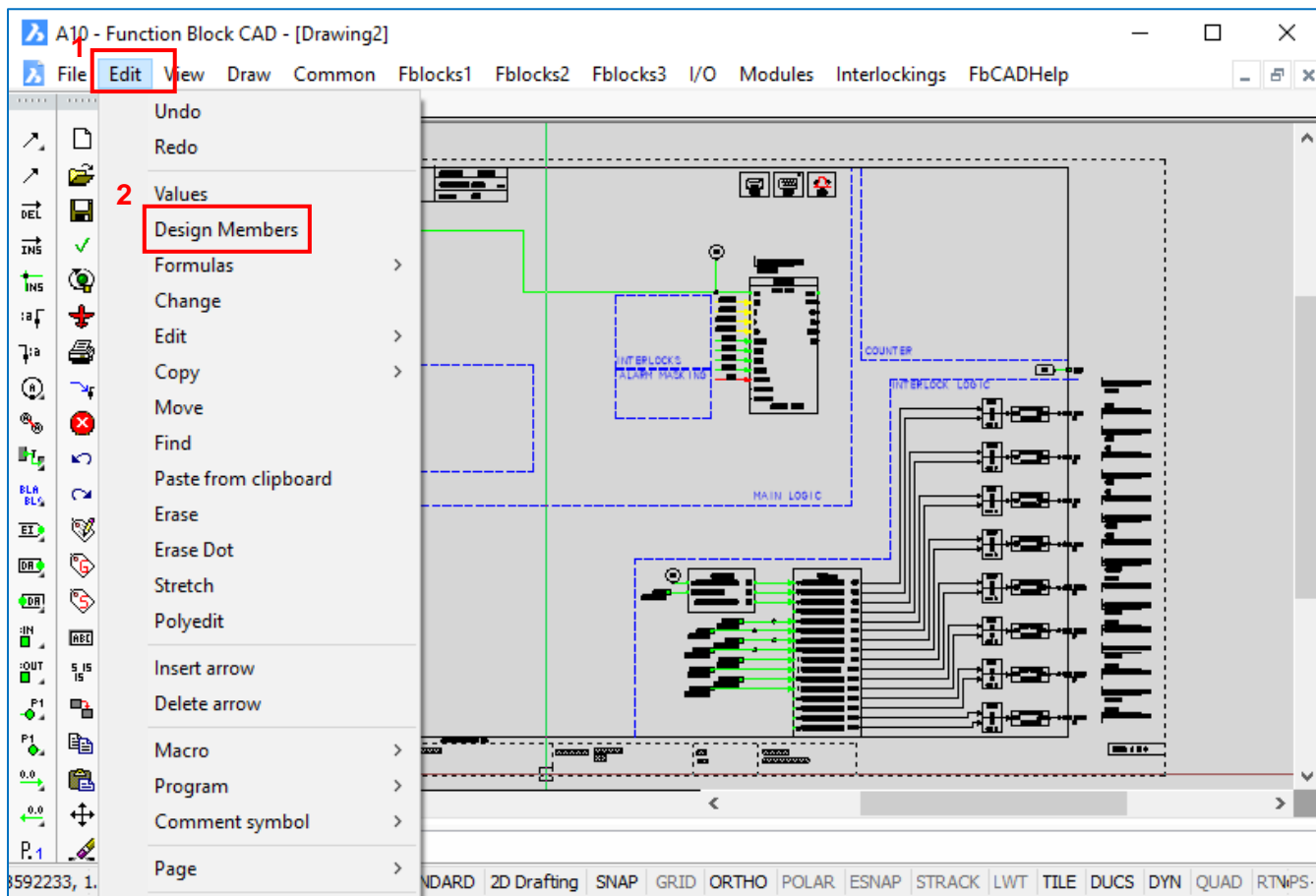
1. To open a template, change to templates workspace and browse to TRESLIB. Browse AMS for analogue input templates.



2. Select the analogue input (AI) templates with desired parameters. In this example, choose A10 template. Double click to open.



3. Create new AI application file. Template will be an application as soon as the template name changed. To change the parameter values, click Edit, then choose Design Members.



Parameters window will pop up. Default parameters are preferred except some that need to be changed according to the system requirement such as tag, I/O address and etc. For now, change the selected values to rename the template. Make sure that the changed values identify the respective I/O address.

Identifier	Prompt	Value
\$(DUMMY1)	--LOOP-----	--
\$(TAG)	TAG	A10
\$(TEMPLATE)	TEMPLATE	A10
\$(NAME20)	NAME20	AM BASIC
\$(PACKAGE)	PACKAGE	AP01
\$(EXE)	EXE	900
\$(ORDER)	EXECUTION ORDER	20
\$(CTRLROOM)	CTRLROOM	A1
\$(ALGROUP)	ALGROUP	11
\$(ALPRI)	ALARM PRIORITY	700
\$(GDID_1)	GDID_1	
\$(NAME14)	NAME14	
\$(NAME40_1)	NAME40_1	AM Basic model
\$(NAME40_2)	NAME40_2	
\$(FDESCR)	PATH TO FUNC.DESCRPTION	
\$(SIMULATION)	MEASUREMENT IS SIMULATED (0/1)	0
\$(alarmmasking)	alarm masking (0= not used, 1= LL & HH,2=LL,3=HH)	0
\$(zeroing)	Zeroing of measurement is used (0/1)	0
\$(zerotag)	Tag that zeros the measument and/or masks alarms	#
\$(zerotag2)	Tag that zeros the measument and/or masks alarms	#
\$(limit_type)	Limits used (0/1)	1
\$(limit_inv)	Limits inverted interface (0/1)	0
\$(HH)	HH ALARM IN USE	1
\$(H)	H ALARM IN USE	1
\$(L)	L ALARM IN USE	1
\$(LL)	LL ALARM IN USE	1
\$(HYST)	ALARM HYSTERESIS PERCENTAGE	1.0
\$(interl_hh_alm)	HH Alarm Limit operable (0), same as Inter.limit (1) or fixed (2)	0
\$(interl_h_alm)	H Alarm Limit operable (0), same as Inter.limit (1) or fixed (2)	0
\$(interl_l_alm)	L Alarm Limit operable (0), same as Inter.limit (1) or fixed (2)	0
\$(interl_ll_alm)	LL Alarm Limit operable (0), same as Inter.limit (1) or fixed (2)	0
\$(MASK_DH)	AL.MASK DELAY HH/H	30
\$(ALIMTHH)	ALIMTHH (only used if interl_hh_alm =0)	9999
\$(ALPRIHH)	HH ALARM PRIORITY	700
\$(DELAY_HH)	DELAY_HH	0
\$(ALIMTH)	ALIMTH (only used if interl_h_alm =0)	9999
\$(ALPRIH)	H ALARM PRIORITY	700
\$(DELAY_H)	DELAY_H	0
\$(MASK_DL)	AL.MASK DELAY L/LL	30
\$(ALIMTL)	ALIMTL (only used if interl_l_alm =0)	-9999
\$(ALPRIL)	L ALARM PRIORITY	700
\$(DELAY_L)	DELAY_L	0
\$(ALIMTLL)	ALIMTLL (only used if interl_ll_alm =0)	-9999
\$(ALPRILL)	LL ALARM PRIORITY	700
\$(DELAY_LL)	DELAY_LL	0
\$(LIMHYST)	LIMIT HYSTERESIS PERCENTAGE	1.0
\$(LIMIT_H)	LIMIT_H	999
\$(LIMIT_HH)	LIMIT_HH	999
\$(LIMIT_HH2)	LIMIT_HH2	999
\$(LIMIT_HH3)	LIMIT_HH3	999
\$(LIMIT_L)	LIMIT_L	-999
\$(LIMIT_LL)	LIMIT_LL	-999
\$(LIMIT_LL2)	LIMIT_LL2	-999
\$(LIMIT_LL3)	LIMIT_LL3	-999

Show Formulas

Function formula:

Typehelp

+ -

OK

Cancel

Identifier	Prompt	Value
\$(LIMIT_LL2)	LIMIT_LL2	-999
\$(LIMIT_LL3)	LIMIT_LL3	-999
\$(counter_used)	Counter block is used (0/1)	0
\$(H_NAME)	H_Name of the interface port	H
\$(HH_NAME)	HH_Name of the interface port	HH
\$(HH2_NAME)	HH2_Name of the interface port	HH2
\$(HH3_NAME)	HH3_Name of the interface port	HH3
\$(L_NAME)	L_Name of the interface port	L
\$(LL_NAME)	LL_Name of the interface port	LL
\$(LL2_NAME)	LL2_Name of the interface port	LL2
\$(LL3_NAME)	LL3_Name of the interface port	LL3
\$(IH_NAME)	IH_Name of the interface port	IH
\$(IHH_NAME)	IHH_Name of the interface port	IHH
\$(IHH2_NAME)	IHH2_Name of the interface port	IHH2
\$(IHH3_NAME)	IHH3_Name of the interface port	IHH3
\$(IL_NAME)	IL_Name of the interface port	IL
\$(ILL_NAME)	ILL_Name of the interface port	ILL
\$(ILL2_NAME)	ILL2_Name of the interface port	ILL2
\$(ILL3_NAME)	ILL3_Name of the interface port	ILL3
\$(name14_1)	Counter NAME14 (14char)	COUNTER
\$(name20_1)	Counter NAME20 (20char)	COUNTER
\$(qufa)	Counter quantity factor (QUFA)	1
\$(qunit)	Counter unit (UNIT) (8char)	m3
\$(timescale)	Counter timescale (TIME SCALE)	1000
\$(ODTAG_1)	ODTAG_1	
\$(ODTEXT_1)	ODTEXT_1	
\$(ODTAG_2)	ODTAG_2	
\$(ODTEXT_2)	ODTEXT_2	
\$(ODTAG_3)	ODTAG_3	
\$(ODTEXT_3)	ODTEXT_3	
\$(ODTAG_4)	ODTAG_4	
\$(ODTEXT_4)	ODTEXT_4	
\$(ODTAG_5)	ODTAG_5	
\$(ODTEXT_5)	ODTEXT_5	
\$(DUMMY2)	----- DEVICE -----	--
\$(CARDTYPE1)	Inputcards type (AI8, AI8H, AI8, AI4H, AIU8, AIH8, AIU1)	AI8
\$(DEVICETAG1)	INPUT CARD TAG	A10m
\$(DEVICETAG1:MIN)	MEASUREMENT MIN	0
\$(DEVICETAG1:MAX)	MEASUREMENT MAX	999
\$(DEVICETAG1:UNIT)	MEASUREMENT UNIT	%
\$(DECS)	DECIMALS IN MEASUREMENT	0
\$(DUMMY3)	----- MIO parameters -----	--
\$(AI1_FILTER)	Filter	6
\$(LF1_HIGH)	Line fault high limit	1
\$(LF1_LOW)	Line fault low limit	1
\$(MF1_HIGH)	Measurement high limit	1
\$(MF1_LOW)	Measurement low limit	1
\$(AI1_HARTABLE)	Recognition of the hart protocol	1
\$(AI1_HART_FBMASK)	Masking of faultbits from hart device	0
\$(DUMMY4)	----- Version information -----	--
\$(APP_VERS)	Application version	TRESLIB 2.0
\$(MOD_VERS)	Module version	1.8
\$(DUMMY5)	----- Internal variables -----	--
\$(dzer)	Internal variable (do not change)	0

Show Formulas

Function formula:

Typehelp

+ -

OK

Cancel

For example: Analogue input at JB 2 using Channel 3. Software address = 2323. Then click OK.

Editing attributes of --DESIGNMEMBERS

Identifier	Prompt	Value
\$(DUMMY1)	---LOOP-----	--
\$(TAG)	TAG	JB2_AI_2323
\$(TEMPLATE)	TEMPLATE	A10
\$(NAME20)	NAME20	JB2 AI CH3
\$(PACKAGE)	PACKAGE	AP01
\$(EXE)	EXE	900
\$(ORDER)	EXECUTION ORDER	20
\$(CTRLROOM)	CTRLROOM	A1
\$(ALGROUP)	ALGROUP	11
\$(ALPRI)	ALARM PRIORITY	700
\$(GDID_1)	GDID_1	
\$(NAME14)	NAME14	
\$(NAME40_1)	NAME40_1	JB2 AI CH3
\$(NAME40_2)	NAME40_2	
\$(FDESCR)	PATH TO FUNC.DESCRPTION	
\$(SIMULATION)	MEASUREMENT IS SIMULATED (0/1)	0
\$(alarmmasking)	alarm masking (0= not used, 1= LL & HH,2=LL,3=HH)	0
\$(zeroing)	Zeroing of measurement is used (0/1)	0
\$(zerotag)	Tag that zeros the measument and/or masks alarms	#
\$(zerotag2)	Tag that zeros the measument and/or masks alarms	#
\$(limit_type)	Limits used (0/1)	1
\$(limit_inv)	Limits inverted interface (0/1)	0
\$(HH)	HH ALARM IN USE	1
\$(H)	H ALARM IN USE	1
\$(L)	L ALARM IN USE	1
\$(LL)	LL ALARM IN USE	1
\$(HYST)	ALARM HYSTERESIS PERCENTAGE	1.0
\$(interl_hh_alm)	HH Alarm Limit operable (0), same as Interl.limit (1) or fixed (2)	0
\$(interl_h_alm)	H Alarm Limit operable (0), same as Interl.limit (1) or fixed (2)	0
\$(interl_l_alm)	L Alarm Limit operable (0), same as Interl.limit (1) or fixed (2)	0
\$(interl_ll_alm)	LL Alarm Limit operable (0), same as Interl.limit (1) or fixed (2)	0
\$(MASK_DH)	AL.MASK DELAY HH/H	30
\$(ALIMITHH)	ALIMITHH (only used if interl_hh_alm =0)	9999
\$(ALPRIHH)	HH ALARM PRIORITY	700
\$(DELAY_HH)	DELAY_HH	0
\$(ALIMITH)	ALIMITH (only used if interl_h_alm =0)	9999
\$(ALPRIH)	H ALARM PRIORITY	700
\$(DELAY_H)	DELAY_H	0
\$(MASK_DL)	AL.MASK DELAY L/LL	30
\$(ALIMITL)	ALIMITL (only used if interl_l_alm =0)	-9999
\$(ALPRIL)	L ALARM PRIORITY	700
\$(DELAY_L)	DELAY_L	0
\$(ALIMITLL)	ALIMITLL (only used if interl_ll_alm =0)	-9999
\$(ALPRILL)	LL ALARM PRIORITY	700
\$(DELAY_LL)	DELAY_LL	0
\$(LIMHYST)	LIMIT HYSTERESIS PERCENTAGE	1.0
\$(LIMIT_H)	LIMIT_H	999
\$(LIMIT_HH)	LIMIT_HH	999
\$(LIMIT_HH2)	LIMIT_HH2	999
\$(LIMIT_HH3)	LIMIT_HH3	999
\$(LIMIT_L)	LIMIT_L	-999
\$(LIMIT_LL)	LIMIT_LL	-999

Show Formulas Function formula: Typehelp

+ -

Identifier	Prompt	Value
\$(LIMIT_LL3)	LIMIT_LL3	-999
\$(counter_used)	Counter block is used (0/1)	0
\$(H_NAME)	H_Name of the interface port	H
\$(HH_NAME)	HH_Name of the interface port	HH
\$(HH2_NAME)	HH2_Name of the interface port	HH2
\$(HH3_NAME)	HH3_Name of the interface port	HH3
\$(L_NAME)	L_Name of the interface port	L
\$(LL_NAME)	LL_Name of the interface port	LL
\$(LL2_NAME)	LL2_Name of the interface port	LL2
\$(LL3_NAME)	LL3_Name of the interface port	LL3
\$(IH_NAME)	IH_Name of the interface port	IH
\$(IHH_NAME)	IHH_Name of the interface port	IHH
\$(IHH2_NAME)	IHH2_Name of the interface port	IHH2
\$(IHH3_NAME)	IHH3_Name of the interface port	IHH3
\$(IL_NAME)	IL_Name of the interface port	IL
\$(ILL_NAME)	ILL_Name of the interface port	ILL
\$(ILL2_NAME)	ILL2_Name of the interface port	ILL2
\$(ILL3_NAME)	ILL3_Name of the interface port	ILL3
\$(name14_1)	Counter NAME14 (14char)	COUNTER
\$(name20_1)	Counter NAME20 (20char)	COUNTER
\$(qufa)	Counter quantity factor (QUFA)	1
\$(qunit)	Counter unit (UNIT) (8char)	m3
\$(timescale)	Counter timescale (TIME SCALE)	1000
\$(ODTAG_1)	ODTAG_1	
\$(ODTEXT_1)	ODTEXT_1	
\$(ODTAG_2)	ODTAG_2	
\$(ODTEXT_2)	ODTEXT_2	
\$(ODTAG_3)	ODTAG_3	
\$(ODTEXT_3)	ODTEXT_3	
\$(ODTAG_4)	ODTAG_4	
\$(ODTEXT_4)	ODTEXT_4	
\$(ODTAG_5)	ODTAG_5	
\$(ODTEXT_5)	ODTEXT_5	
\$(DUMMY2)	-----DEVICE-----	--
\$(CARDTYPE1)	Inputcards type (AI8, AI8H, AI8, AI14H, AIU8, AIH8, AIU1)	AI8
\$(DEVICETAG1)	INPUT CARD TAG	JB2_AI_2323
\$(DEVICETAG1:MIN)	MEASUREMENT MIN	0
\$(DEVICETAG1:MAX)	MEASUREMENT MAX	999
\$(DEVICETAG1:UNIT)	MEASUREMENT UNIT	%
\$(DECS)	DECIMALS IN MEASUREMENT	0
\$(DUMMY3)	-----MIO parameters-----	--
\$(AI1_FILTER)	Filter	6
\$(LF1_HIGH)	Line fault high limit	1
\$(LF1_LOW)	Line fault low limit	1
\$(MF1_HIGH)	Measurement high limit	1
\$(MF1_LOW)	Measurement low limit	1
\$(AI1_HARTABLE)	Recognition of the hart protocol	1
\$(AI1_HART_FBMASK)	Masking of faultbits from hart device	0
\$(DUMMY4)	-----Version information-----	--
\$(APP_VERS)	Application version	TRESLIB 2.0
\$(MOD_VERS)	Module version	1.8
\$(DUMMY5)	-----Internal variables-----	--

Show Formulas

Function formula:

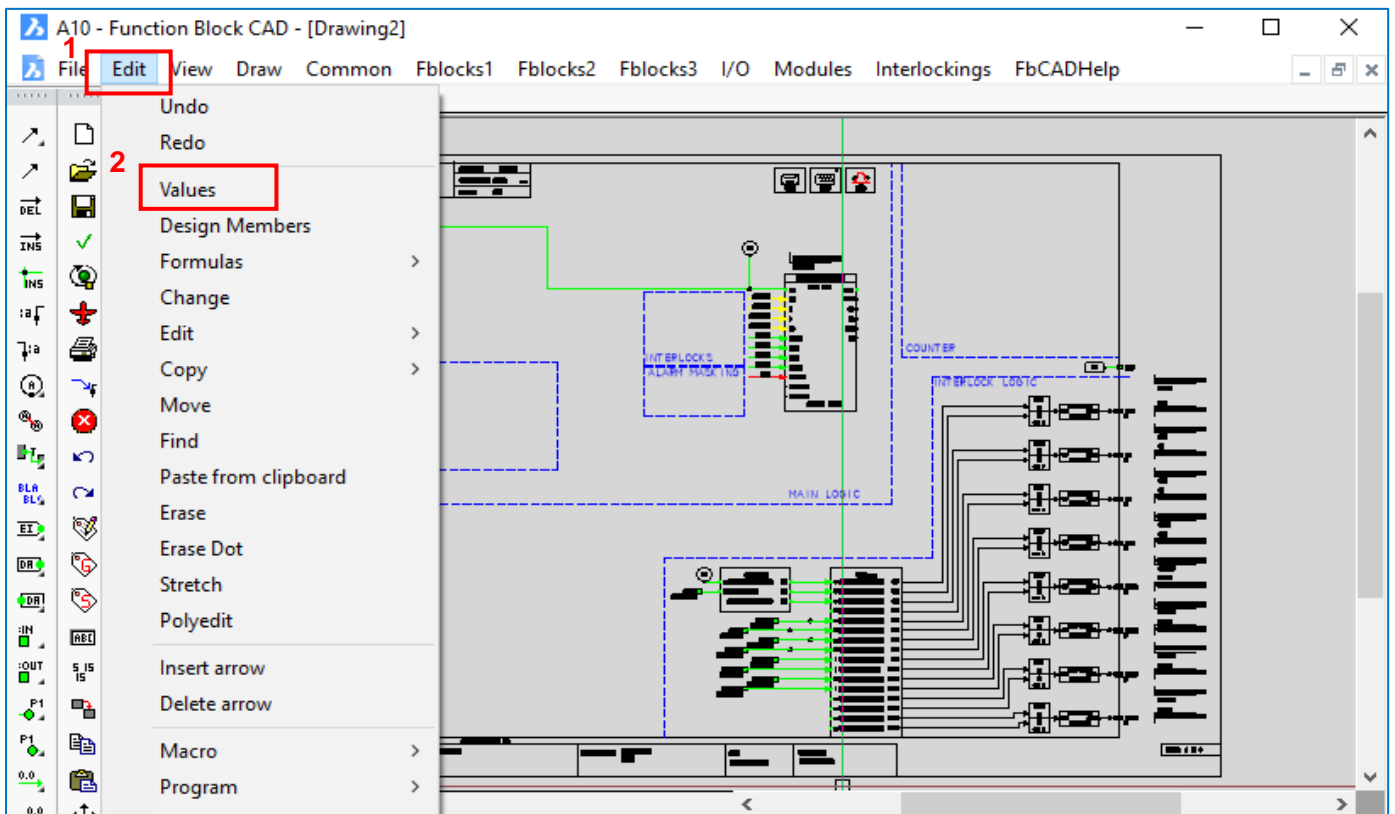
Typehelp

+ -

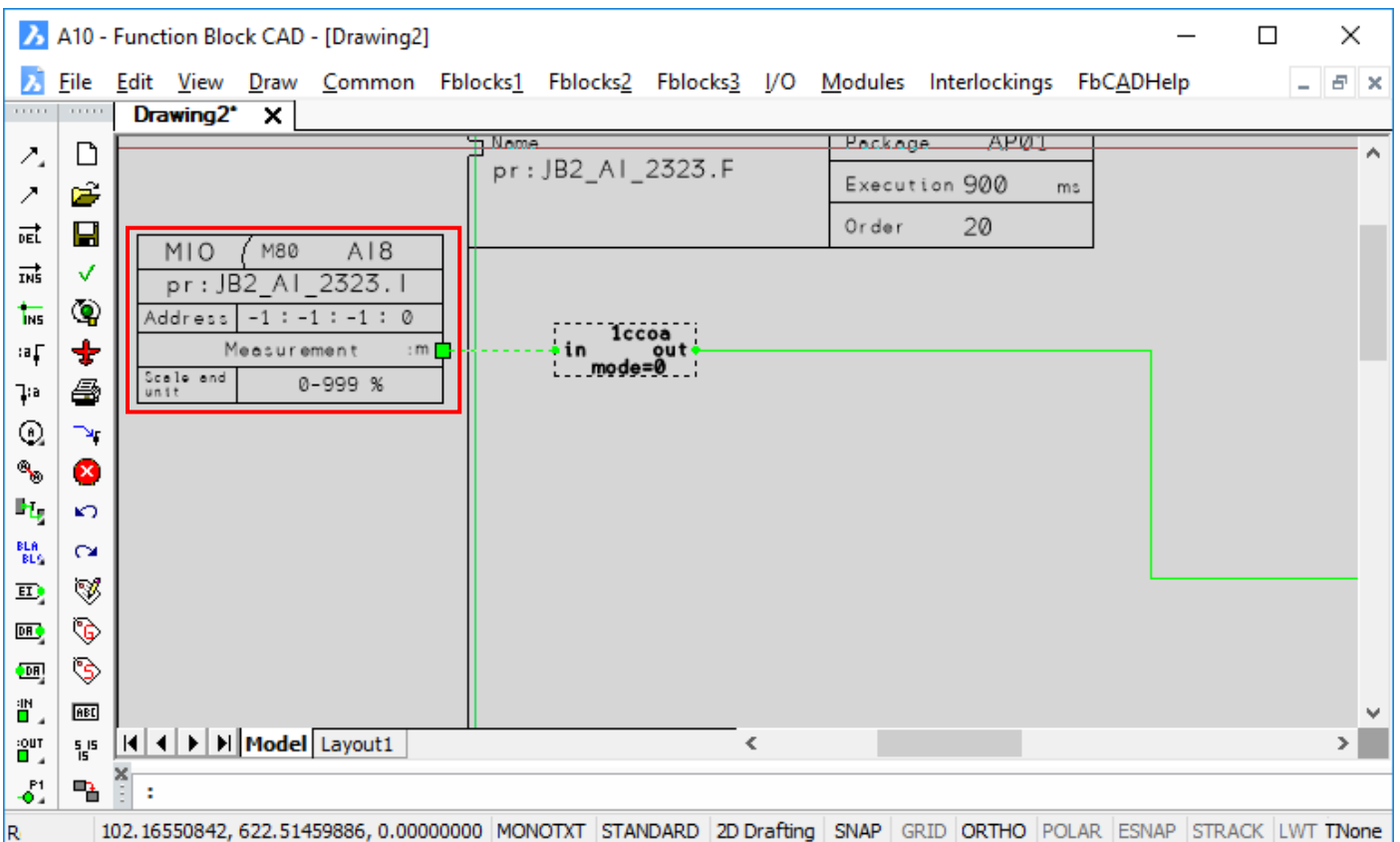
OK

Cancel

4. Change the new application file I/O address. To change the address, click Edit and choose Values.



Then, click the I/O address box.



A parameter selection window will pop up. Default values are in preferred in the window. Only change values in the red box according to the respective I/O address. Then, click OK.

Editing attributes of -IO_AI8

Prompt	Value
Input module name	pr:JB2_AI_2323.I
Card type	AI8
IO cabinet	
FBC slot (2-15)	-1
IBC number (0-15)	-1
Card place (0-15)	-1
Channel number (0-7)	0
Minimum	&mi
Maximum	&ma
Range (0-3)	0
Filter	6
Line fault high limit	1
Line fault low limit	1
Measurement high limit	1
Measurement low limit	1
Additional parameter	--
Input fault control	0
Line fault control	0
Measurement update method	4
Scale and unit	0-999 %

Show Formulas Function formula: \$(CARDTYPE1)==AI8 Typehelp ai8

+ - OK Cancel

Editing attributes of -IO_AI8

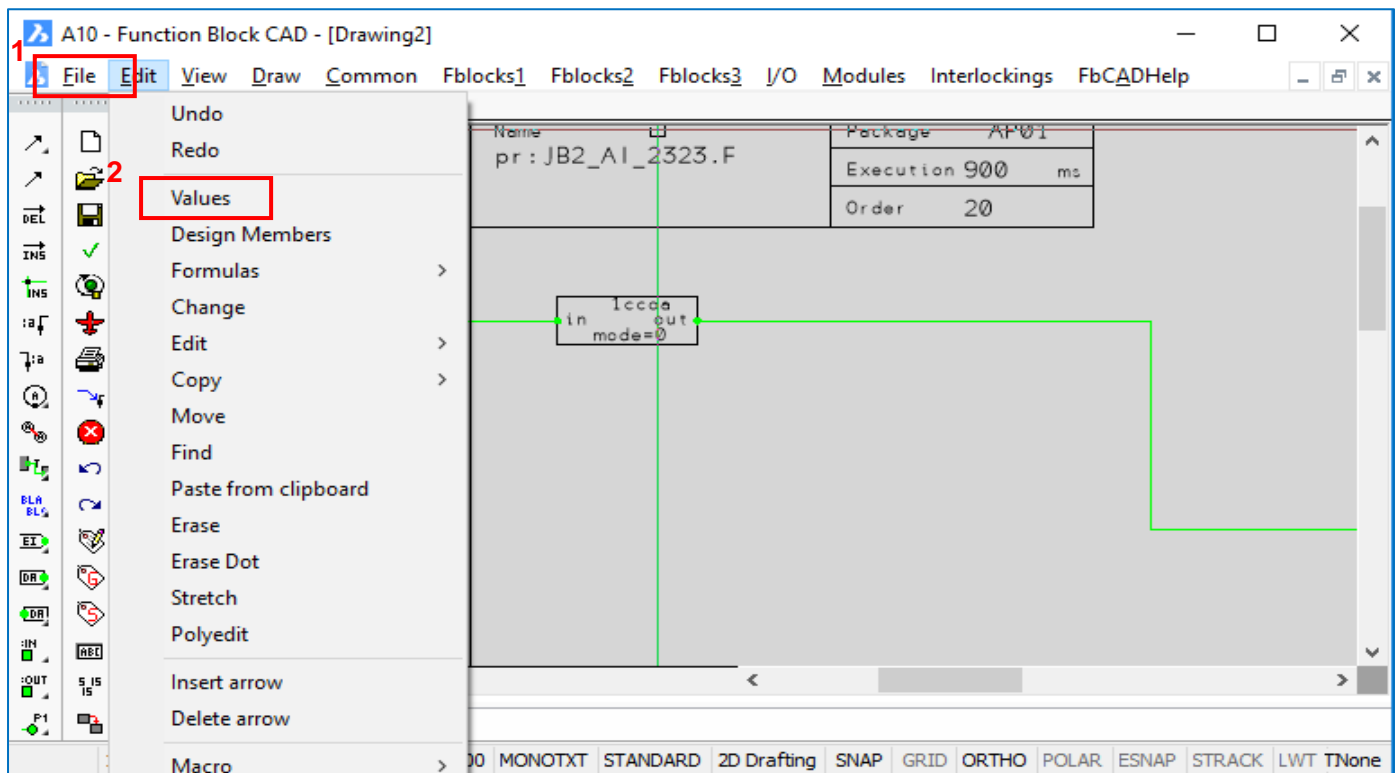
Prompt	Value
Input module name	pr:JB2_AI_2323.I
Card type	AI8
IO cabinet	
FBC slot (2-15)	2
IBC number (0-15)	3
Card place (0-15)	2
Channel number (0-7)	3
Minimum	&mi
Maximum	&ma
Range (0-3)	0
Filter	6
Line fault high limit	1
Line fault low limit	1
Measurement high limit	1
Measurement low limit	1
Additional parameter	--
Input fault control	0
Line fault control	0
Measurement update method	4
Scale and unit	0-999 %

Show Formulas Function formula: \$(CARDTYPE1)==AI8 Typehelp ai8

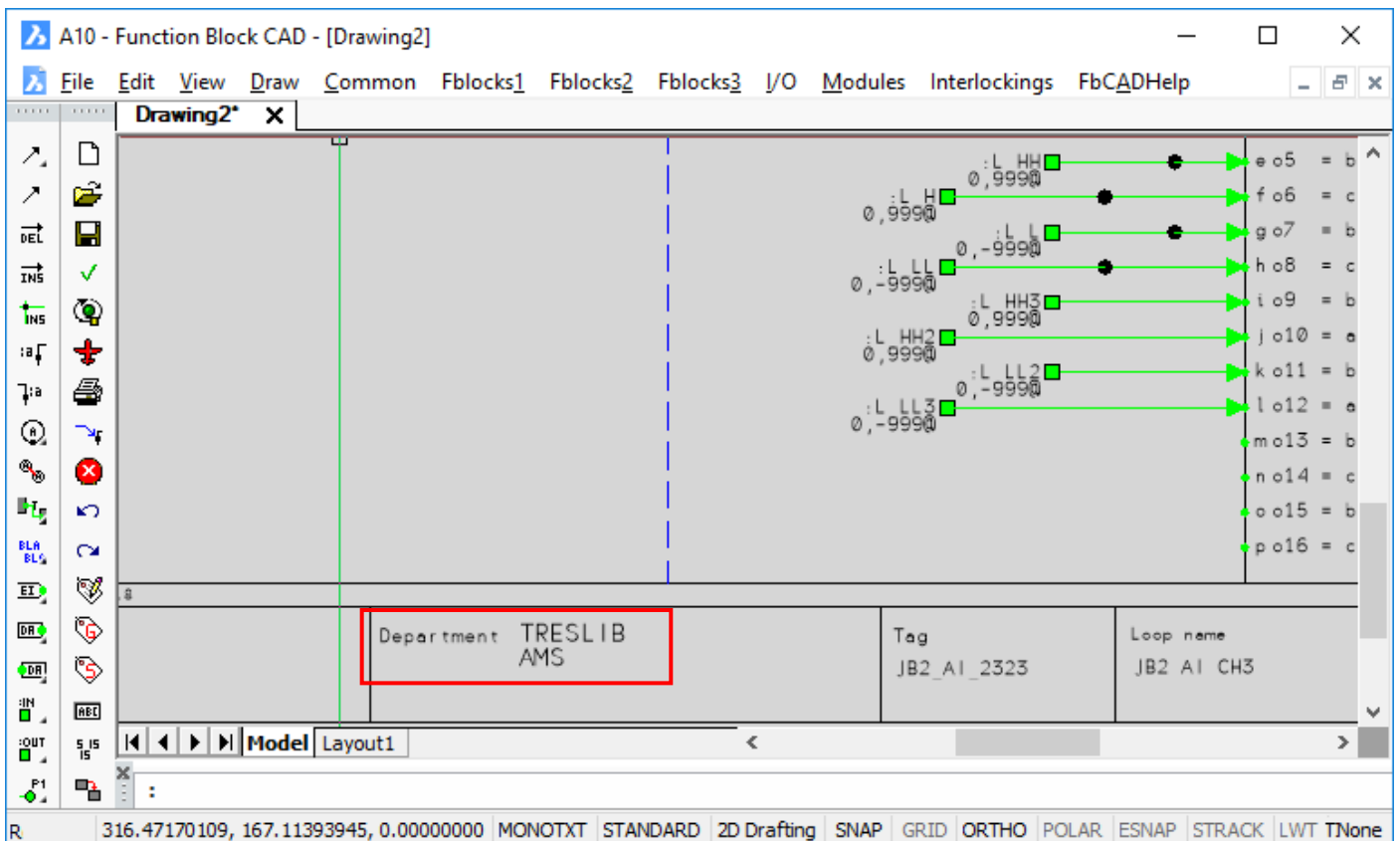
+ - OK Cancel

FBC
IBC 2 (Rack 2)
Card AI
Channel 3

- Change the new application file process area. To change the process area, click Edit and choose Values.



Then, click the department box.



Parameters window will pop up. Change the process area from TRESLIB-BINS to TRAINING1. Then click OK.

The screenshot shows a window titled "Editing attributes of -ADMINM". It contains a table with two columns: "Prompt" and "Value". The table lists various attributes and their current values. A red box highlights the "PROCESS AREA 1" row, which currently has the value "TRESLIB". A red arrow points from this box down to the second screenshot.

Prompt	Value
LOOP TAG	JB2_AI_2323
LOOP NAME (FIELD 1)	JB2 AI CH3
LOOP NAME (FIELD 2)	
LOOP STATUS	complete
NAME OF PLANNER	A10
DATE OF PLANNING	11-05-01 12:00
NAME OF MODIFIER	treslib
DATE OF MODIFICATION	12-04-19 08:52
PROCESS AREA 1	TRESLIB
PROCESS AREA 2	AMS
PROCESS AREA 3	
PROCESS AREA 4	

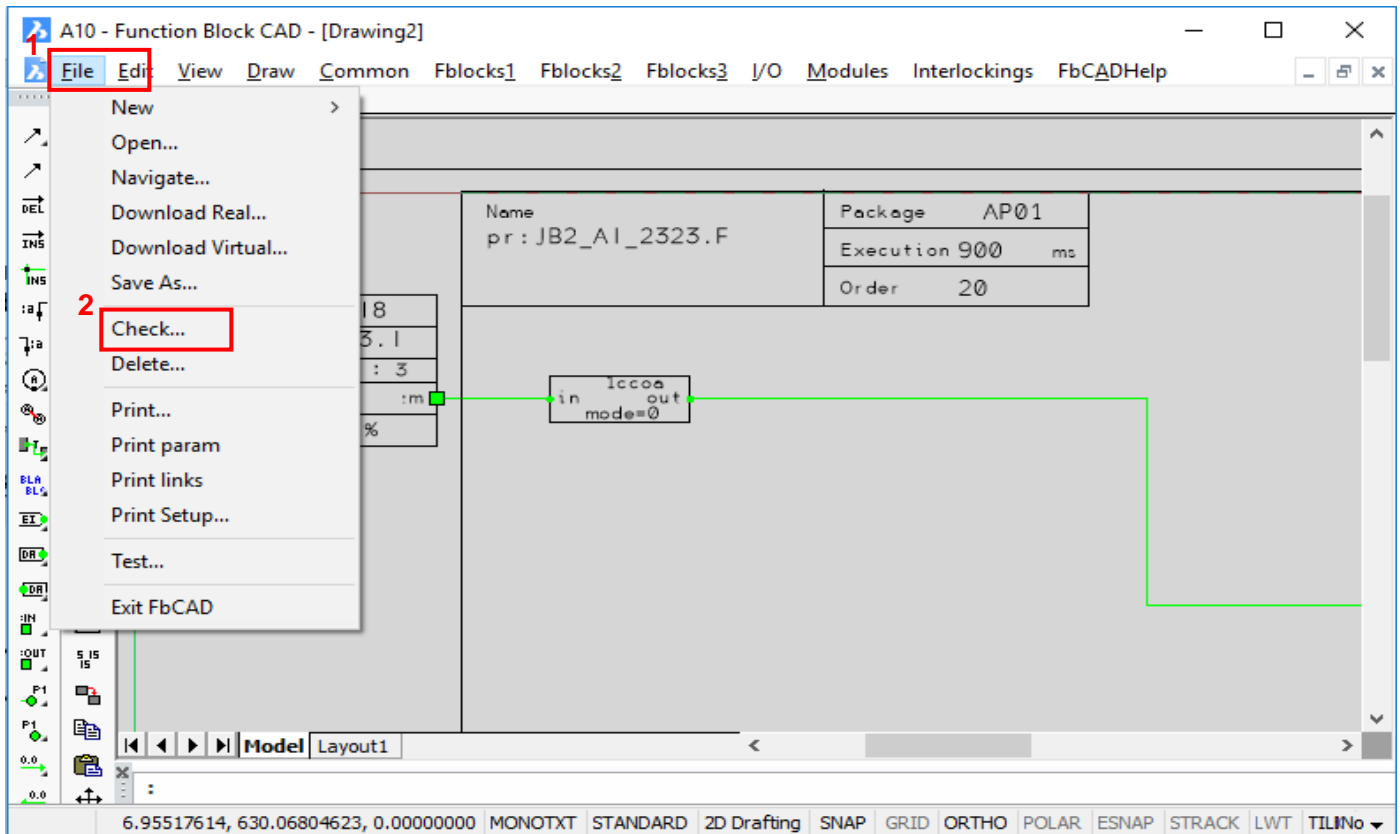
At the bottom of the window, there are buttons for "Show Formulas", "Function formula:", "Typehelp", "+", "-", "OK", and "Cancel".

The screenshot shows the same "Editing attributes of -ADMINM" window. The "PROCESS AREA 1" value has been changed from "TRESLIB" to "TRAINING1", which is highlighted with a red box and labeled with a red "1". A red arrow from the first screenshot points to this box. The "OK" button at the bottom is also highlighted with a red box and labeled with a red "2".

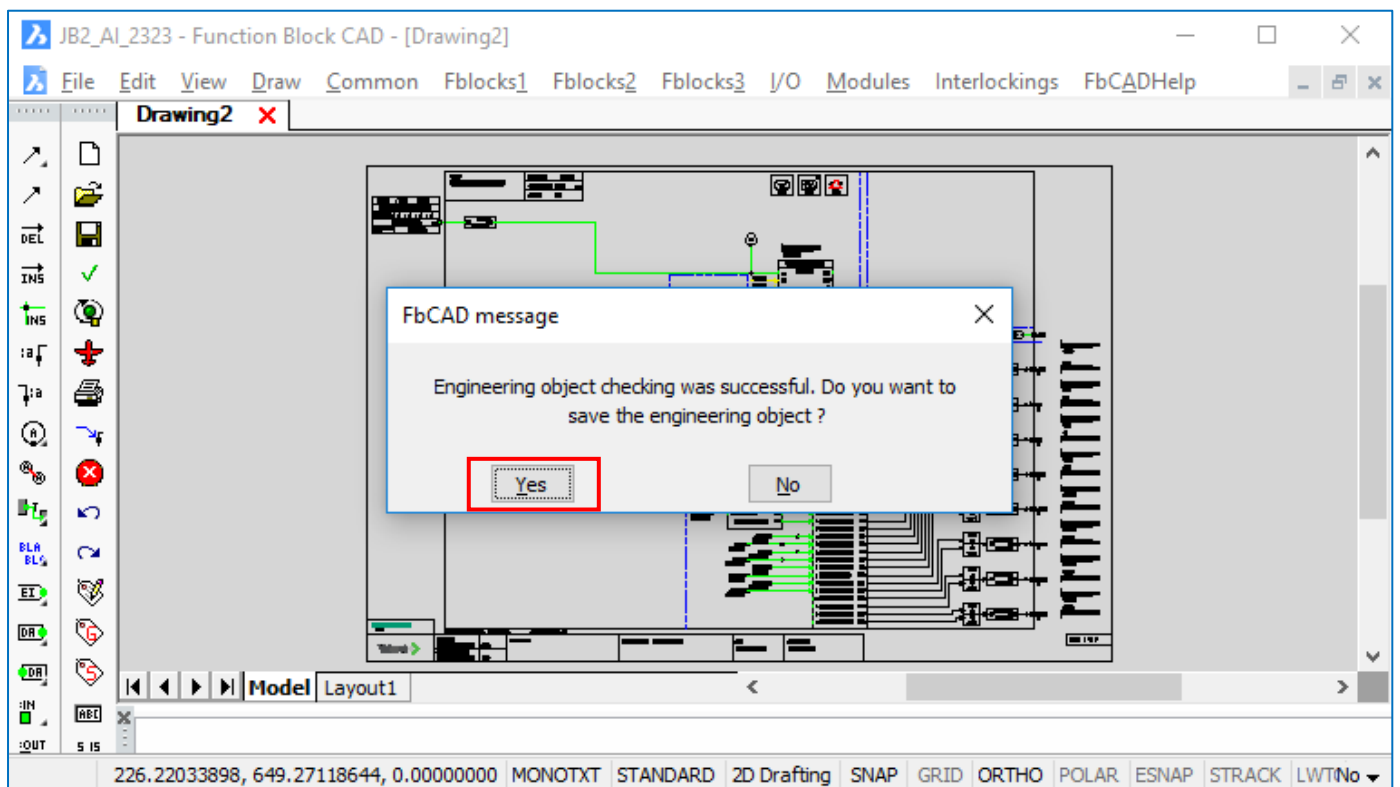
Prompt	Value
LOOP TAG	JB2_AI_2323
LOOP NAME (FIELD 1)	JB2 AI CH3
LOOP NAME (FIELD 2)	
LOOP STATUS	complete
NAME OF PLANNER	A10
DATE OF PLANNING	11-05-01 12:00
NAME OF MODIFIER	treslib
DATE OF MODIFICATION	12-04-19 08:52
PROCESS AREA 1	TRAINING1
PROCESS AREA 2	
PROCESS AREA 3	
PROCESS AREA 4	

At the bottom of the window, the "OK" button is highlighted with a red box and labeled with a red "2".

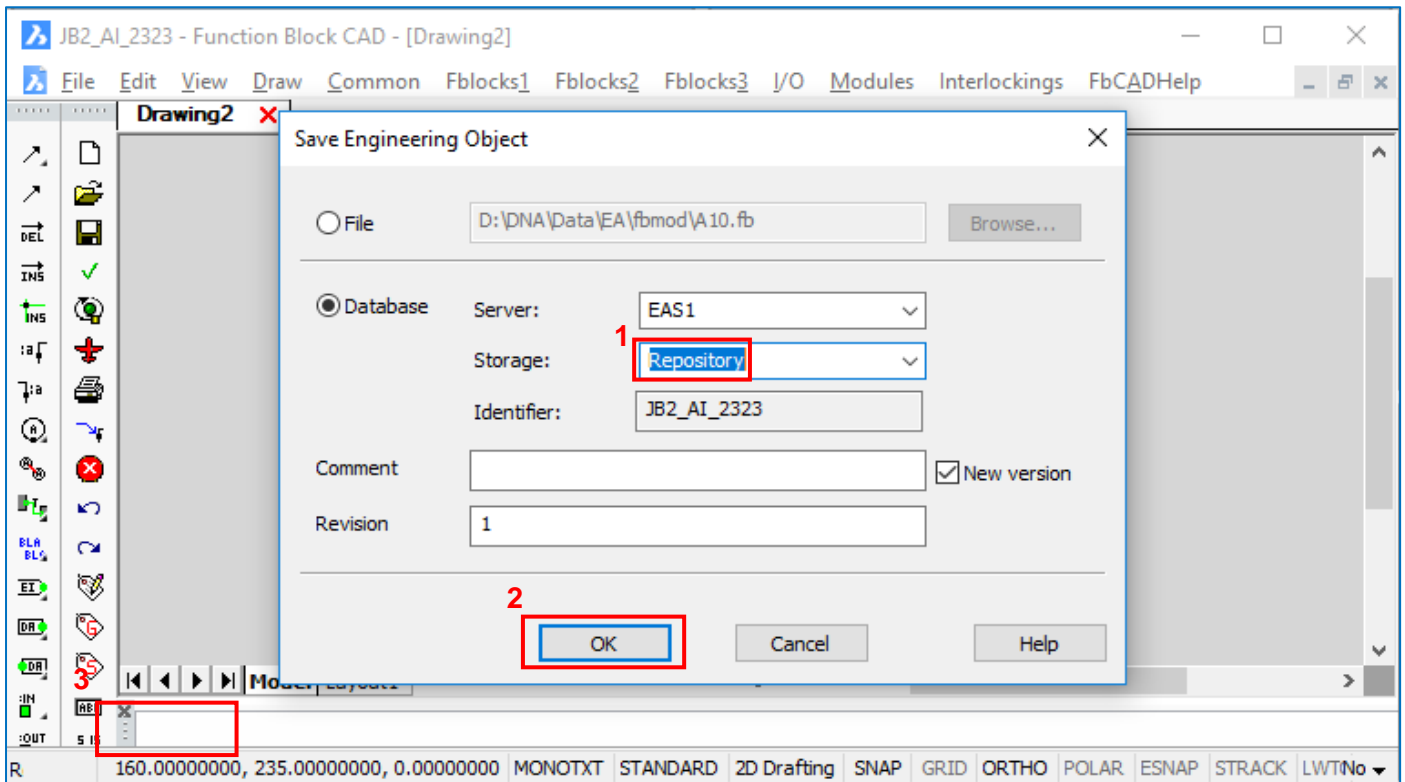
6. To save the new application, click File and choose Check. Created application must be check in repository before downloaded to avoid any error.



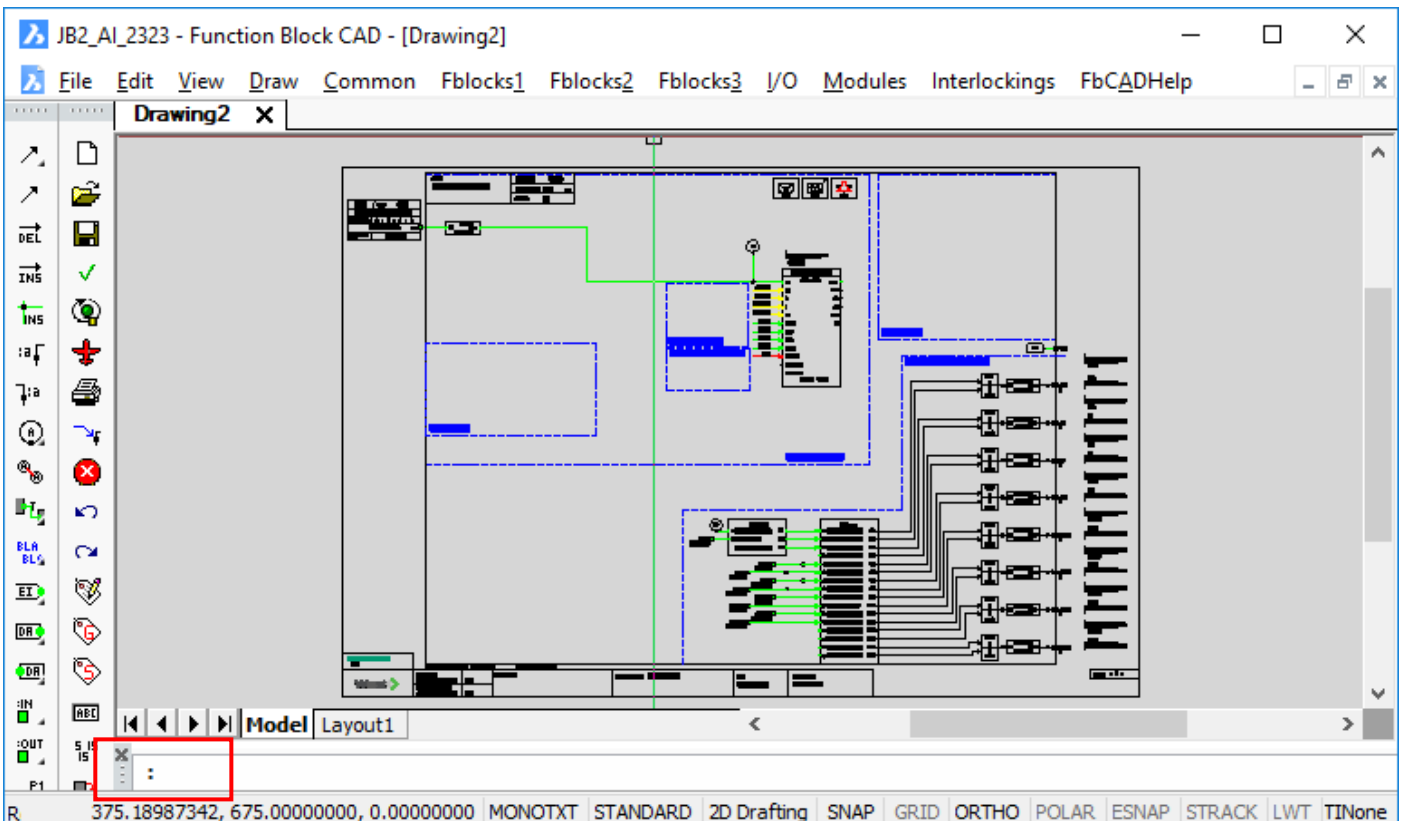
7. If there is no error occur, message to save the engineering object will pop up. Click Yes.



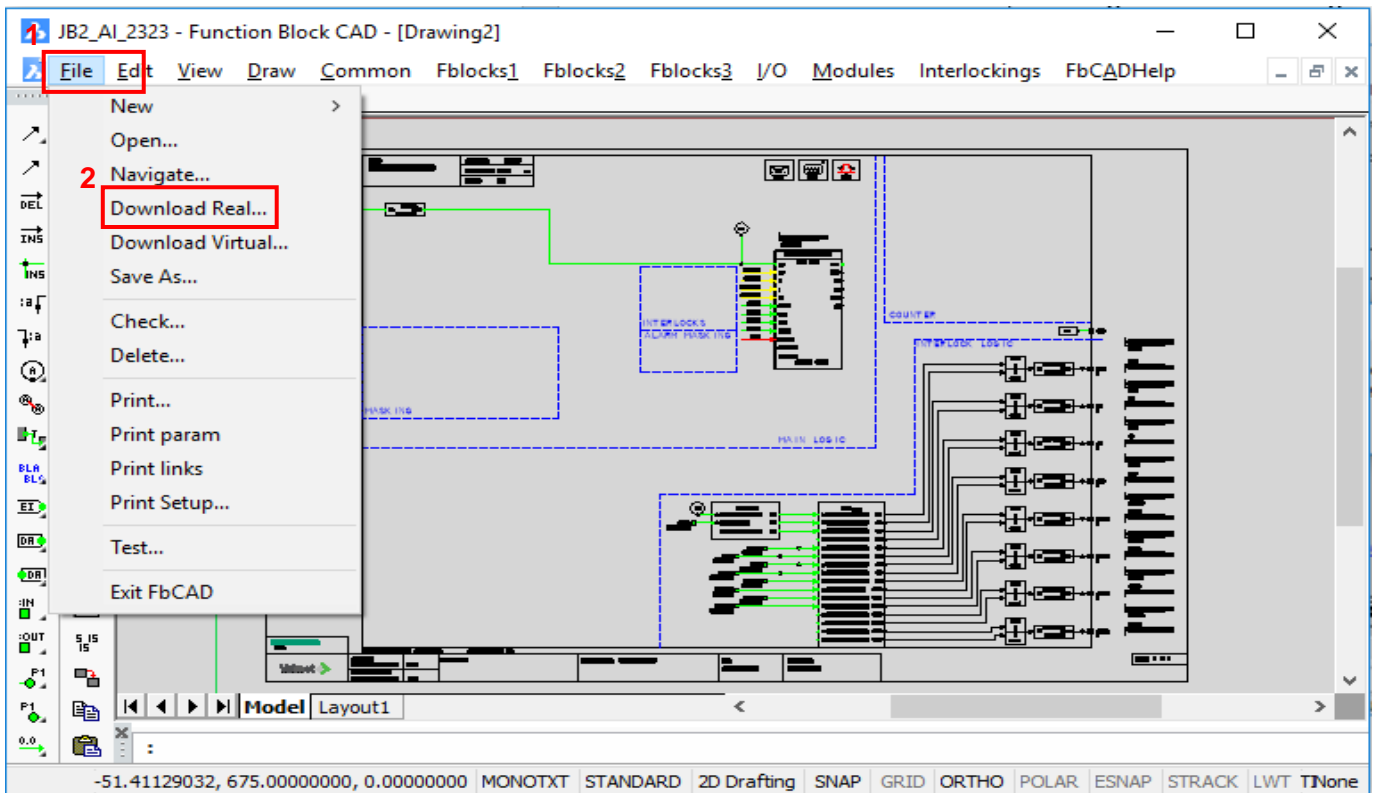
Another window will pop up. Change the storage location from templates to repository. Then, click OK. Wait until the colon symbol to reappear.



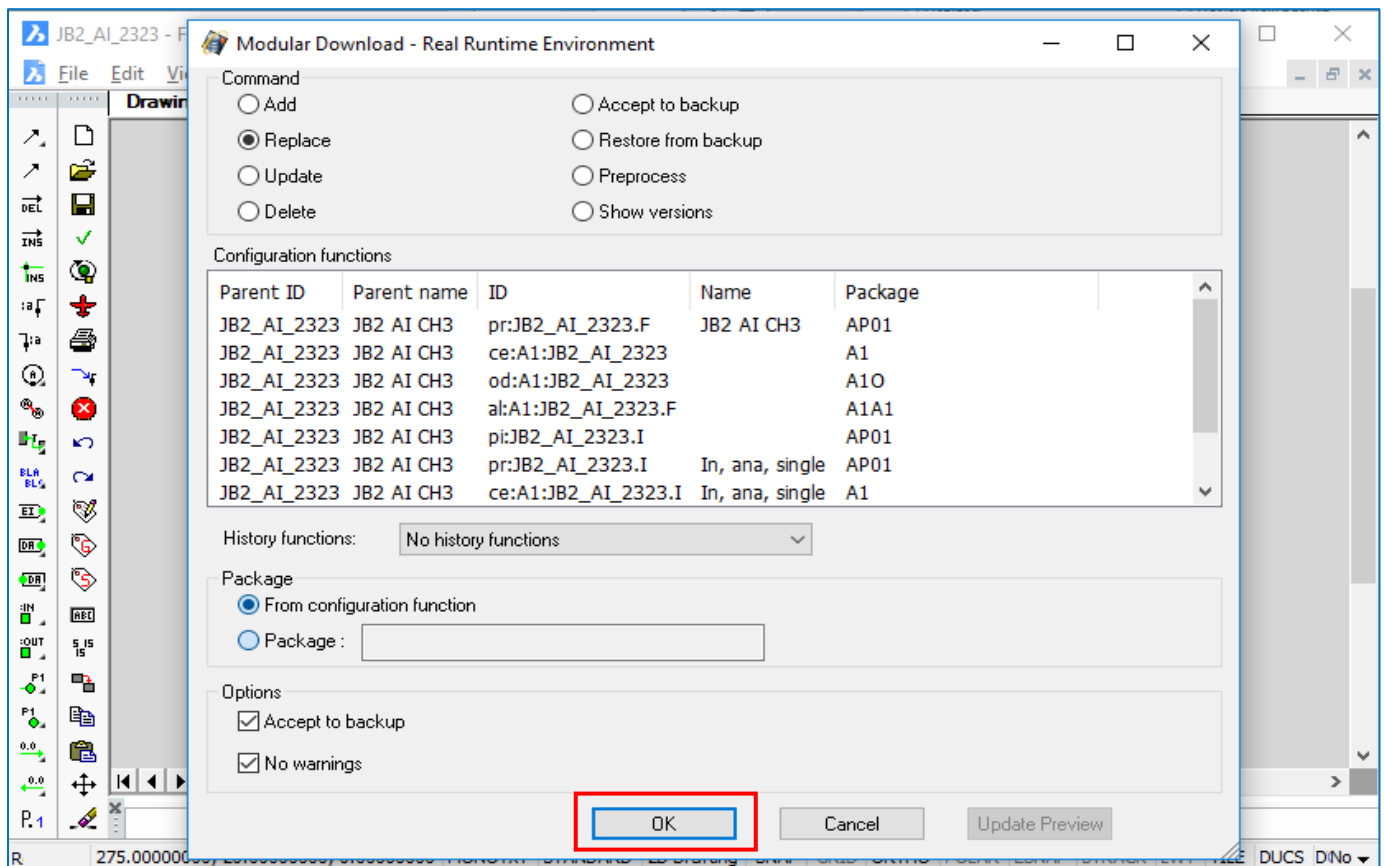
The colon symbol reappears to indicate the saving process is completed.



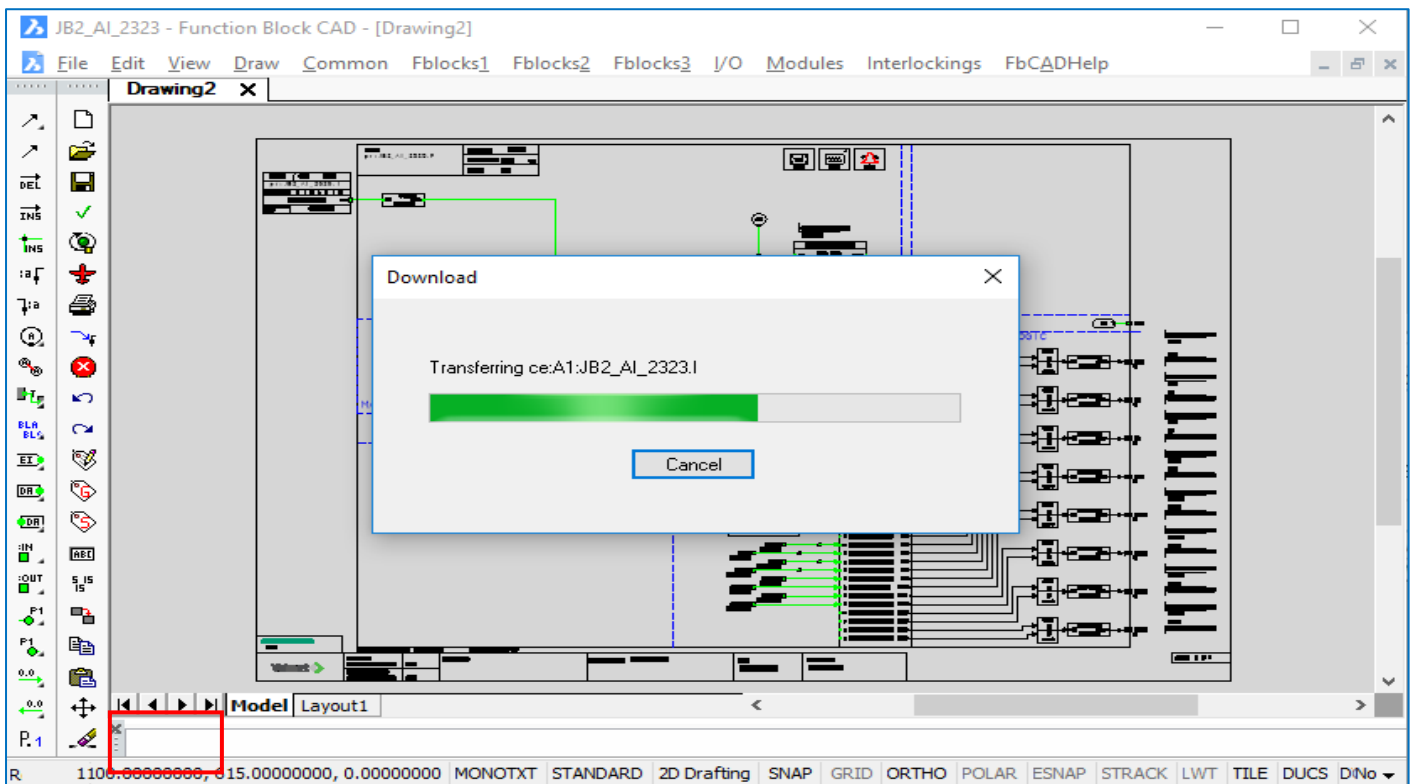
8. Then download the file.



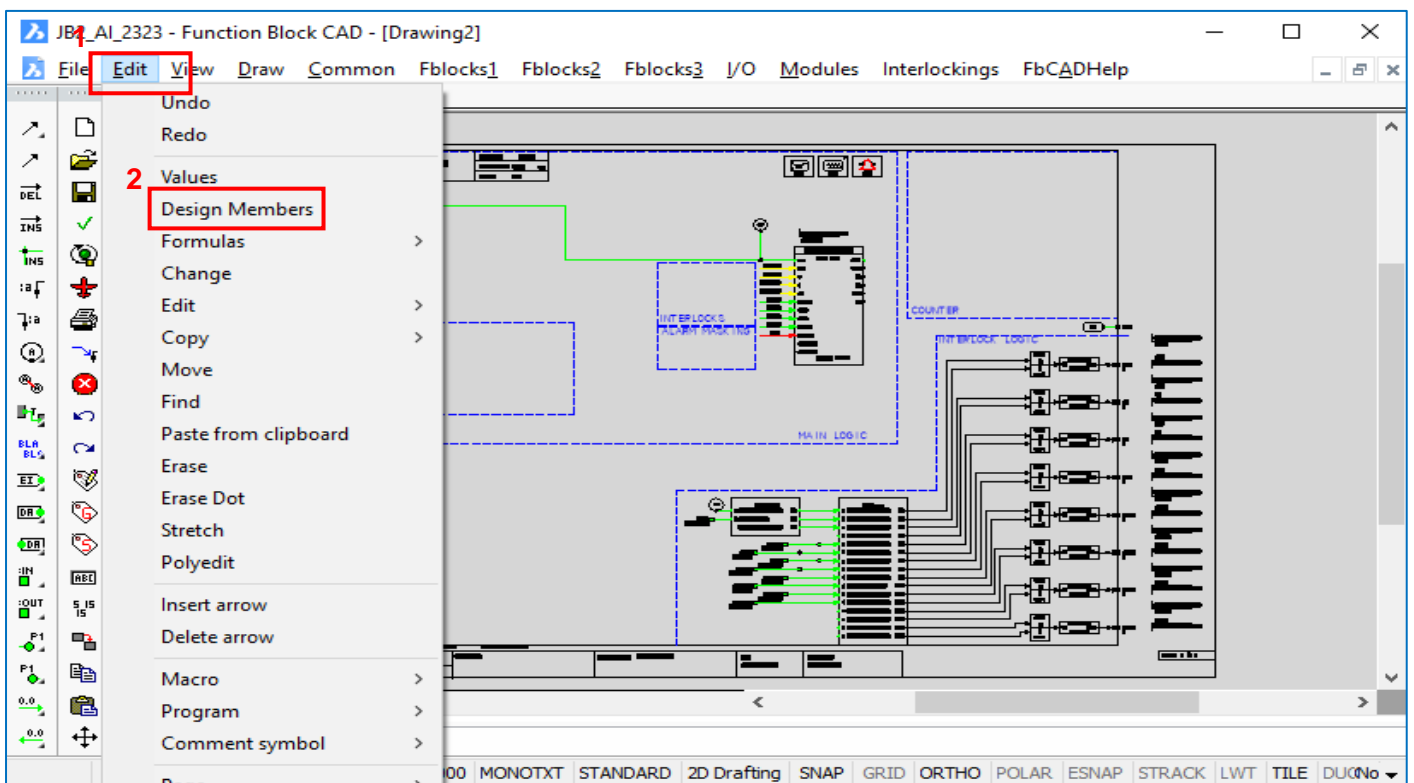
A download window will pop up. Click OK.



Download is processing. The colon symbol at the bottom will reappears when the download process is completed.



9. Test the control application. Since this is an analogue application file, set the desired alarm limit value for the control system. To edit the range and limit values, click Edit and select Design Member.



Parameters window will pop up. Default parameters are preferred. For now, edit the selected values to change the application file according to desired control value.

Identifier	Prompt	Value
\$ (interl_hh_alarm)	HH Alarm Limit operable (0), same as Interl.limit (1) or fixed (2)	0
\$ (interl_h_alarm)	H Alarm Limit operable (0), same as Interl.limit (1) or fixed (2)	0
\$ (interl_l_alarm)	L Alarm Limit operable (0), same as Interl.limit (1) or fixed (2)	0
\$ (interl_ll_alarm)	LL Alarm Limit operable (0), same as Interl.limit (1) or fixed (2)	0
\$ (MASK_DH)	AL.MASK DELAY HH/H	30
\$ (ALIMITHH)	ALIMITHH (only used if interl_hh_alarm =0)	9999
\$ (ALPRIHH)	HH ALARM PRIORITY	700
\$ (DELAY_HH)	DELAY_HH	0
\$ (ALIMITH)	ALIMITH (only used if interl_h_alarm =0)	9999
\$ (ALPRIH)	H ALARM PRIORITY	700
\$ (DELAY_H)	DELAY_H	0
\$ (MASK_DL)	AL.MASK DELAY L/LL	30
\$ (ALIMITL)	ALIMITL (only used if interl_l_alarm =0)	-9999
\$ (ALPRIL)	L ALARM PRIORITY	700
\$ (DELAY_L)	DELAY_L	0
\$ (ALIMITLL)	ALIMITLL (only used if interl_ll_alarm =0)	-9999
\$ (ALPRILL)	LL ALARM PRIORITY	700
\$ (DELAY_LL)	DELAY_LL	0
\$ (LIMHYST)	LIMIT HYSTERESIS PERCENTAGE	1.0
\$ (LIMIT_H)	LIMIT_H	999
\$ (LIMIT_HH)	LIMIT_HH	999
\$ (LIMIT_HH2)	LIMIT_HH2	999
\$ (LIMIT_HH3)	LIMIT_HH3	999
\$ (LIMIT_L)	LIMIT_L	-999
\$ (LIMIT_LL)	LIMIT_LL	-999
\$ (LIMIT_LL2)	LIMIT_LL2	-999
\$ (LIMIT_LL3)	LIMIT_LL3	-999
\$ (counter_used)	Counter block is used (0/1)	0
\$ (H_NAME)	H_Name of the interface port	H
\$ (HH_NAME)	HH_Name of the interface port	HH
\$ (HH2_NAME)	HH2_Name of the interface port	HH2
\$ (HH3_NAME)	HH3_Name of the interface port	HH3
\$ (L_NAME)	L_Name of the interface port	L
\$ (LL_NAME)	LL_Name of the interface port	LL
\$ (LL2_NAME)	LL2_Name of the interface port	LL2
\$ (LL3_NAME)	LL3_Name of the interface port	LL3
\$ (IH_NAME)	IH_Name of the interface port	IH
\$ (IHH_NAME)	IHH_Name of the interface port	IHH
\$ (IHH2_NAME)	IHH2_Name of the interface port	IHH2
\$ (IHH3_NAME)	IHH3_Name of the interface port	IHH3
\$ (IL_NAME)	IL_Name of the interface port	IL
\$ (ILL_NAME)	ILL_Name of the interface port	ILL
\$ (ILL2_NAME)	ILL2_Name of the interface port	ILL2
\$ (ILL3_NAME)	ILL3_Name of the interface port	ILL3
\$ (name14_1)	Counter NAME14 (14char)	COUNTER
\$ (name20_1)	Counter NAME20 (20char)	COUNTER
\$ (qufa)	Counter quantity factor (QUFA)	1
\$ (qunit)	Counter unit (UNIT) (8char)	m3
\$ (timescale)	Counter timescale (TIME SCALE)	1000
\$ (ODTAG_1)	ODTAG_1	
\$ (ODTEXT_1)	ODTEXT_1	
\$ (ODTAG_2)	ODTAG_2	
\$ (ODTEXT_2)	ODTEXT_2	
\$ (ODTAG_3)	ODTAG_3	
\$ (ODTEXT_3)	ODTEXT_3	
\$ (ODTAG_4)	ODTAG_4	
\$ (ODTEXT_4)	ODTEXT_4	
\$ (ODTAG_5)	ODTAG_5	
\$ (ODTEXT_5)	ODTEXT_5	
\$ (DUMMY2)	-----DEVICE-----	--
\$ (CARDTYPE1)	Inputcards type (AI8, AI8H, AI8, AI14H, AIU8, AI8, AIU1)	AI8
\$ (DEVICETAG1)	INPUT_CARD_TAG	JB2 AI 2323
\$ (DEVICETAG1:MIN)	MEASUREMENT MIN	0
\$ (DEVICETAG1:MAX)	MEASUREMENT MAX	999

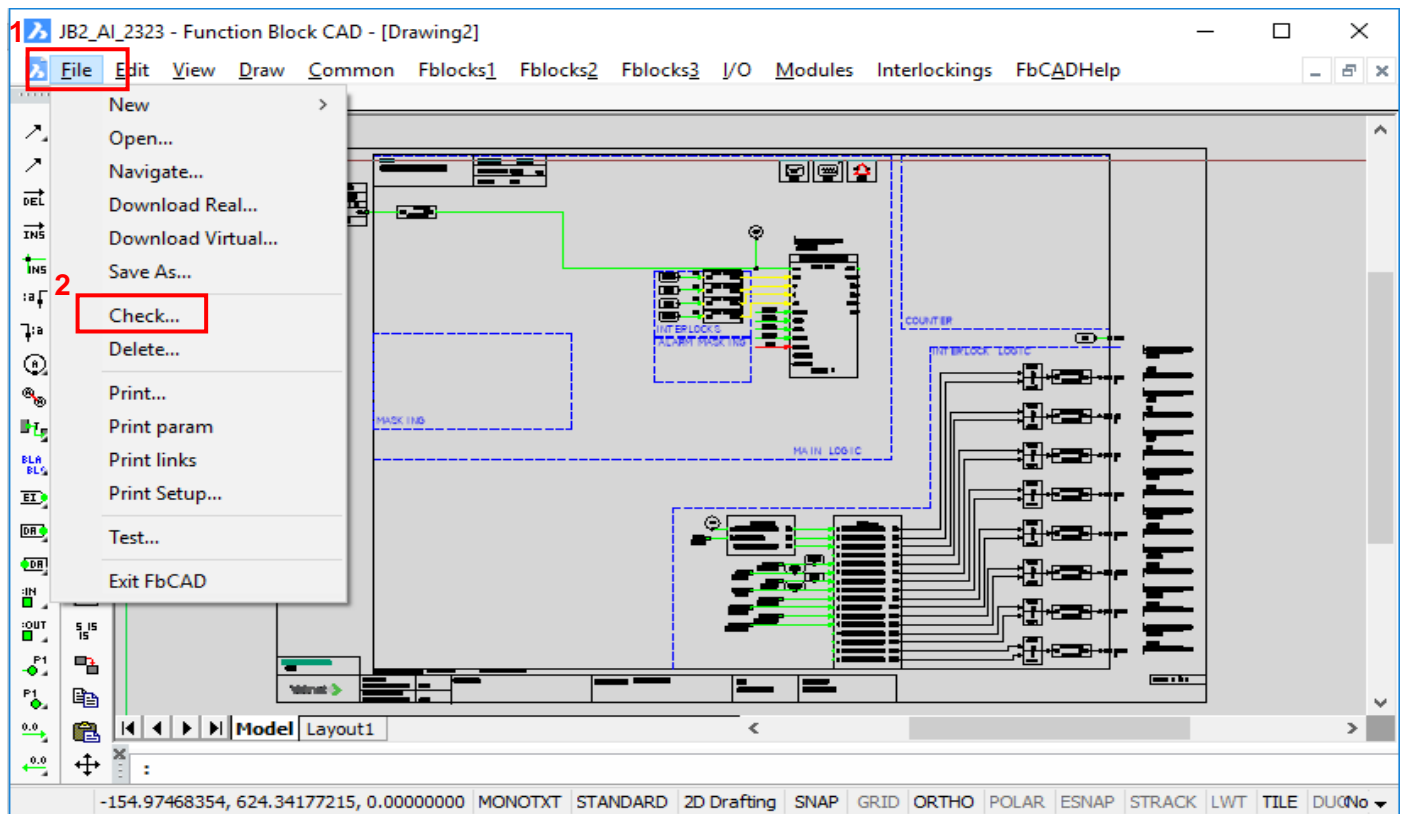
Show Formulas Function formula: Typehelp

+ -

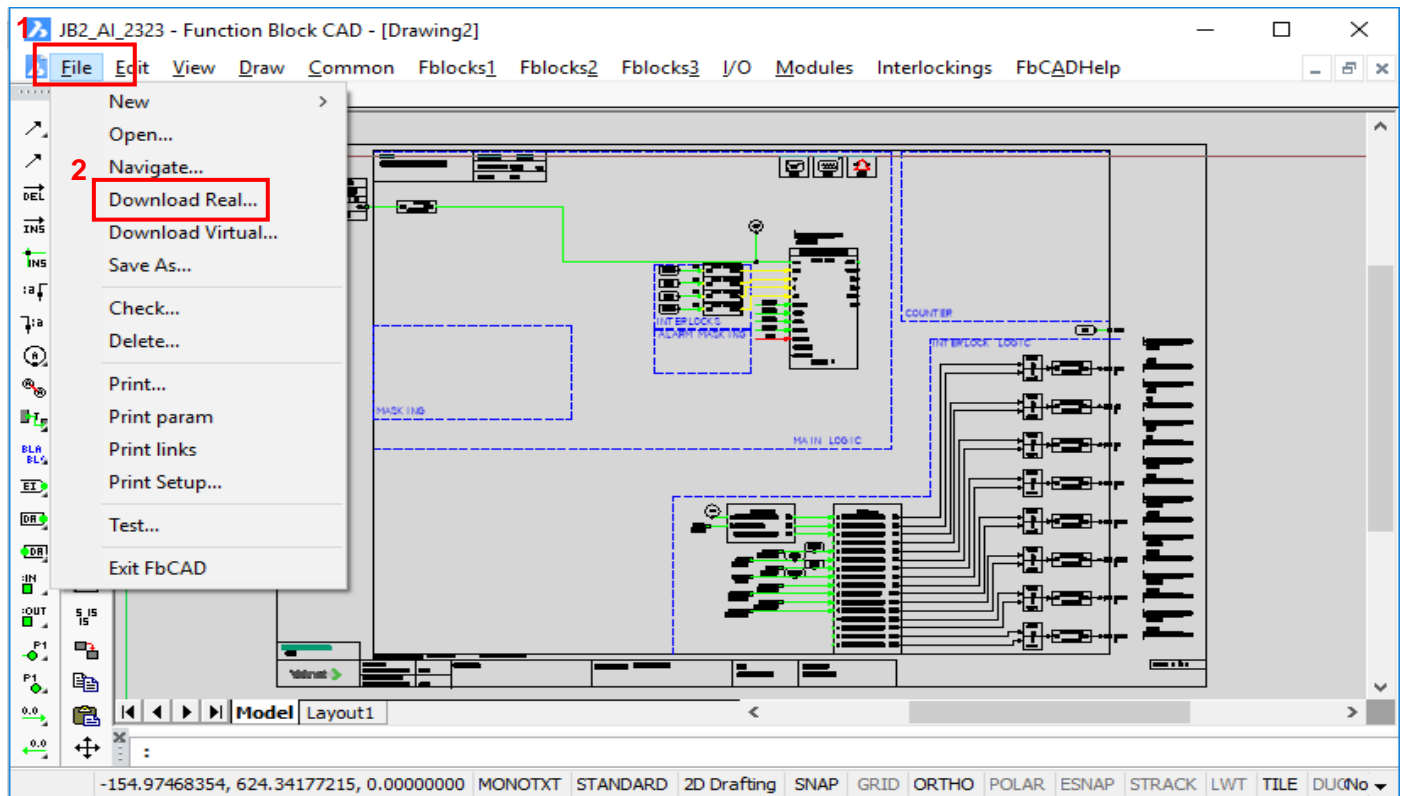
Identifier	Prompt	Value
\$ (interl_hh_alarm)	HH Alarm Limit operable (0), same as Interl.limit (1) or fixed (2)	1
\$ (interl_h_alarm)	H Alarm Limit operable (0), same as Interl.limit (1) or fixed (2)	1
\$ (interl_l_alarm)	L Alarm Limit operable (0), same as Interl.limit (1) or fixed (2)	1
\$ (interl_ll_alarm)	LL Alarm Limit operable (0), same as Interl.limit (1) or fixed (2)	1
\$(MASK_DH)	AL MASK DELAY HH/H	30
\$(ALIMITHH)	ALIMITHH (only used if interl_hh_alarm =0)	9999
\$(ALPRIHH)	HH ALARM PRIORITY	700
\$(DELAY_HH)	DELAY_HH	0
\$(ALIMITH)	ALIMITH (only used if interl_h_alarm =0)	9999
\$(ALPRIH)	H ALARM PRIORITY	700
\$(DELAY_H)	DELAY_H	0
\$(MASK_DL)	AL MASK DELAY L/LL	30
\$(ALIMITL)	ALIMITL (only used if interl_l_alarm =0)	-9999
\$(ALPRIL)	L ALARM PRIORITY	700
\$(DELAY_L)	DELAY_L	0
\$(ALIMITLL)	ALIMITLL (only used if interl_ll_alarm =0)	-9999
\$(ALPRILL)	LL ALARM PRIORITY	700
\$(DELAY_LL)	DELAY_LL	0
\$(LIMHYST)	LIMIT HYSTERESIS PERCENTAGE	1.0
\$(LIMIT_H)	LIMIT_H	70
\$(LIMIT_HH)	LIMIT_HH	100
\$(LIMIT_HH2)	LIMIT_HH2	999
\$(LIMIT_HH3)	LIMIT_HH3	999
\$(LIMIT_L)	LIMIT_L	10
\$(LIMIT_LL)	LIMIT_LL	5
\$(LIMIT_LL2)	LIMIT_LL2	-999
\$(LIMIT_LL3)	LIMIT_LL3	-999
\$(counter_used)	Counter block is used (0/1)	0
\$(H_NAME)	H_Name of the interface port	H
\$(HH_NAME)	HH_Name of the interface port	HH
\$(HH2_NAME)	HH2_Name of the interface port	HH2
\$(HH3_NAME)	HH3_Name of the interface port	HH3
\$(L_NAME)	L_Name of the interface port	L
\$(LL_NAME)	LL_Name of the interface port	LL
\$(LL2_NAME)	LL2_Name of the interface port	LL2
\$(LL3_NAME)	LL3_Name of the interface port	LL3
\$(IH_NAME)	IH_Name of the interface port	IH
\$(IHH_NAME)	IHH_Name of the interface port	IHH
\$(IHH2_NAME)	IHH2_Name of the interface port	IHH2
\$(IHH3_NAME)	IHH3_Name of the interface port	IHH3
\$(IL_NAME)	IL_Name of the interface port	IL
\$(ILL_NAME)	ILL_Name of the interface port	ILL
\$(ILL2_NAME)	ILL2_Name of the interface port	ILL2
\$(ILL3_NAME)	ILL3_Name of the interface port	ILL3
\$(name14_1)	Counter NAME14 (14char)	COUNTER
\$(name20_1)	Counter NAME20 (20char)	COUNTER
\$(qufa)	Counter quantity factor (QUFA)	1
\$(qunit)	Counter unit (UNIT) (8char)	m3
\$(timescale)	Counter timescale (TIME SCALE)	1000
\$(ODTAG_1)	ODTAG_1	
\$(ODTEXT_1)	ODTEXT_1	
\$(ODTAG_2)	ODTAG_2	
\$(ODTEXT_2)	ODTEXT_2	
\$(ODTAG_3)	ODTAG_3	
\$(ODTEXT_3)	ODTEXT_3	
\$(ODTAG_4)	ODTAG_4	
\$(ODTEXT_4)	ODTEXT_4	
\$(ODTAG_5)	ODTAG_5	
\$(ODTEXT_5)	ODTEXT_5	
\$(DUMMY2)	----- DEVICE -----	-
\$(CARDTYPE1)	Inputcards type (AI8, AI8H, AI8, AI4H, AIU8, AIH8, AIU1)	AI8
\$(DEVICETAG1)	INPUT CARD TAG	JB2 AI 2323
\$(DEVICETAG1:MIN)	MEASUREMENT MIN	0
\$(DEVICETAG1:MAX)	MEASUREMENT MAX	100

Show Formulas Function formula: Typehelp

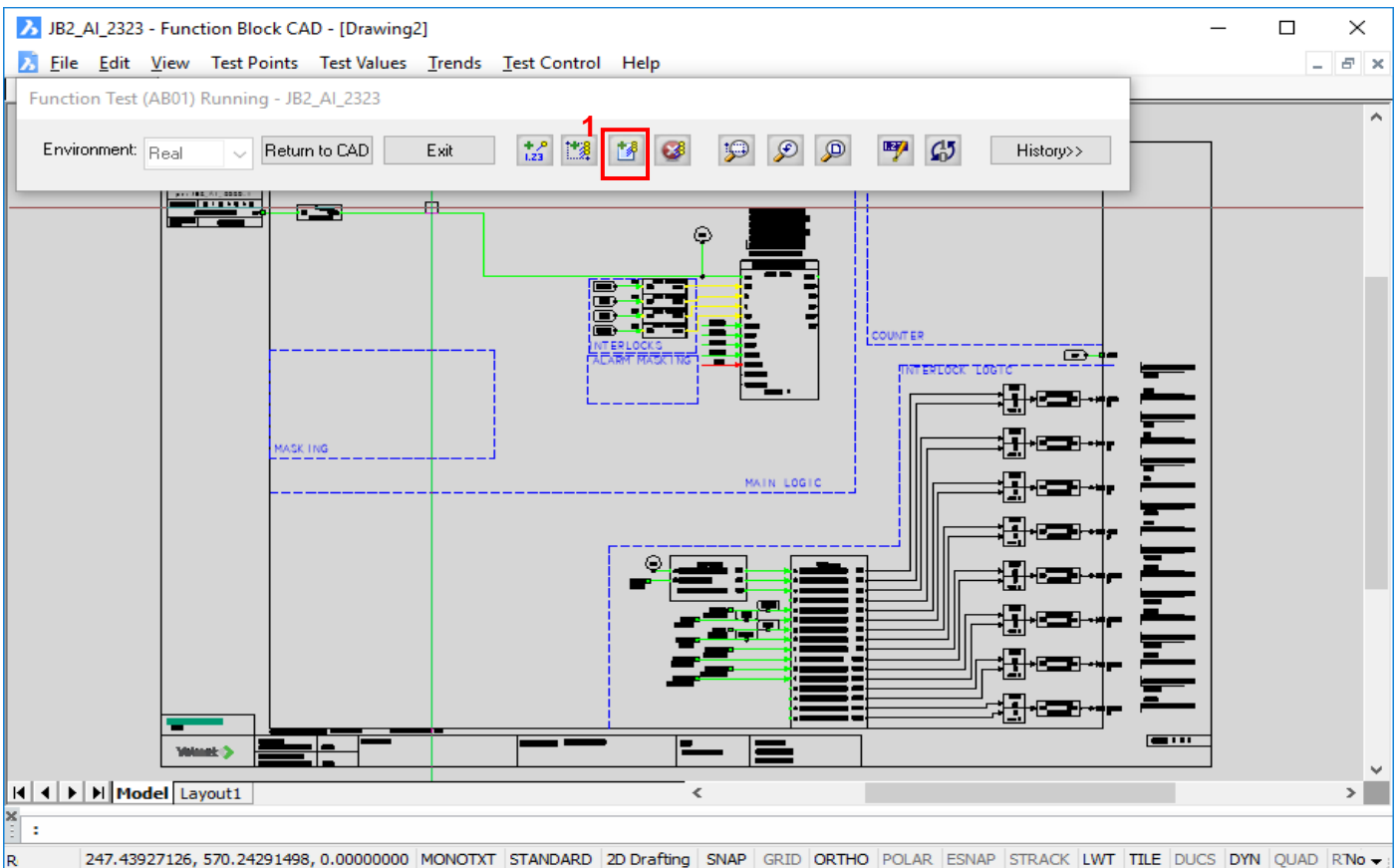
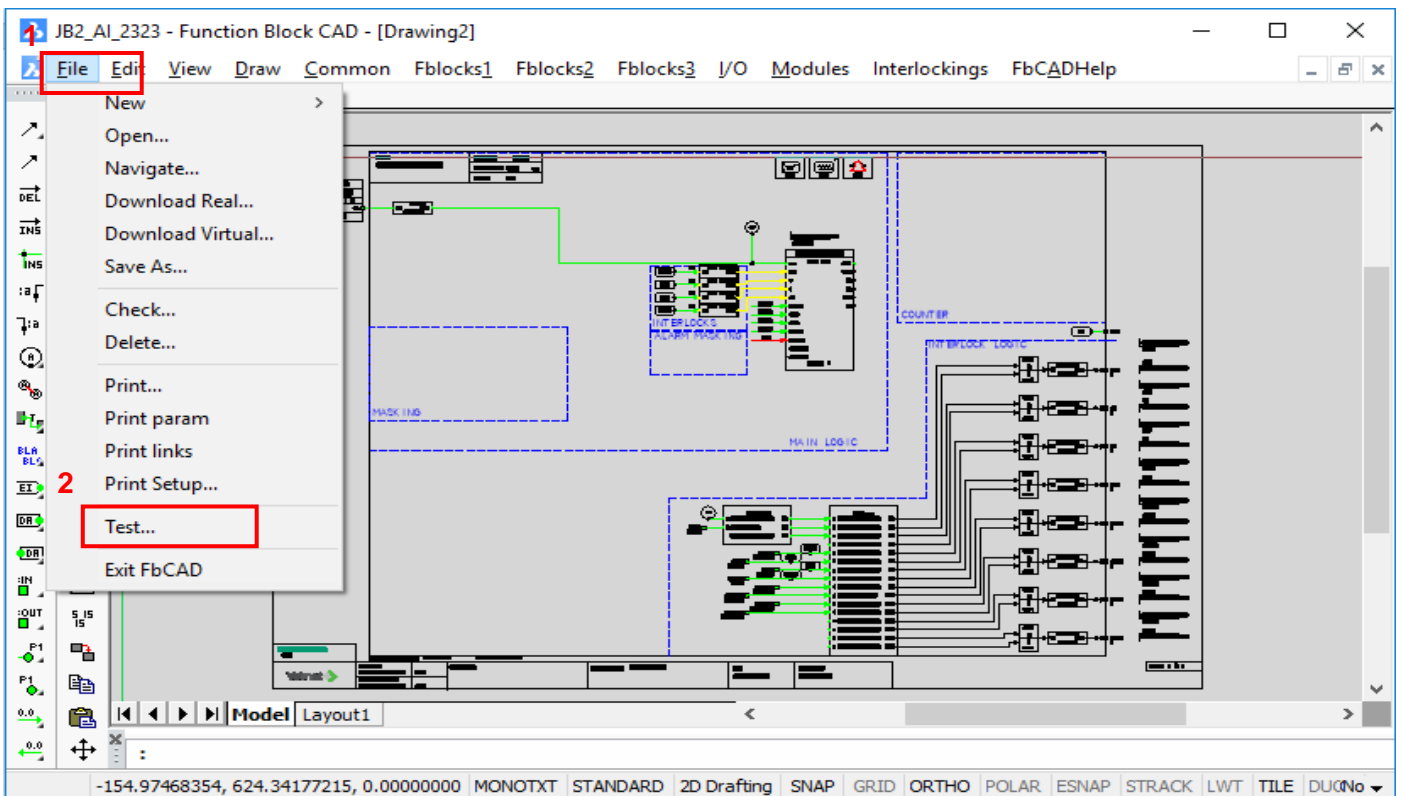
10. Check.



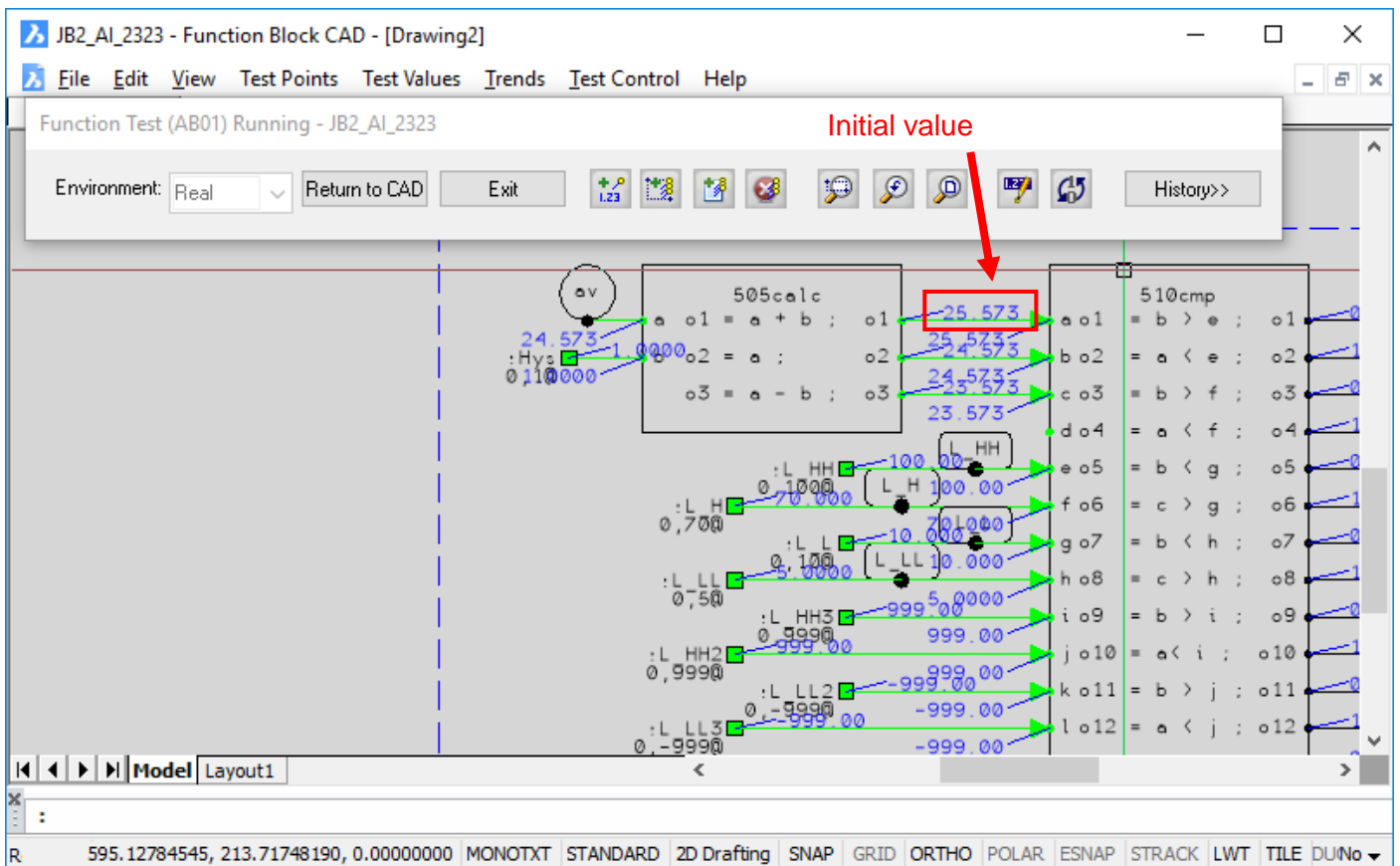
11. Download.



12. Test.

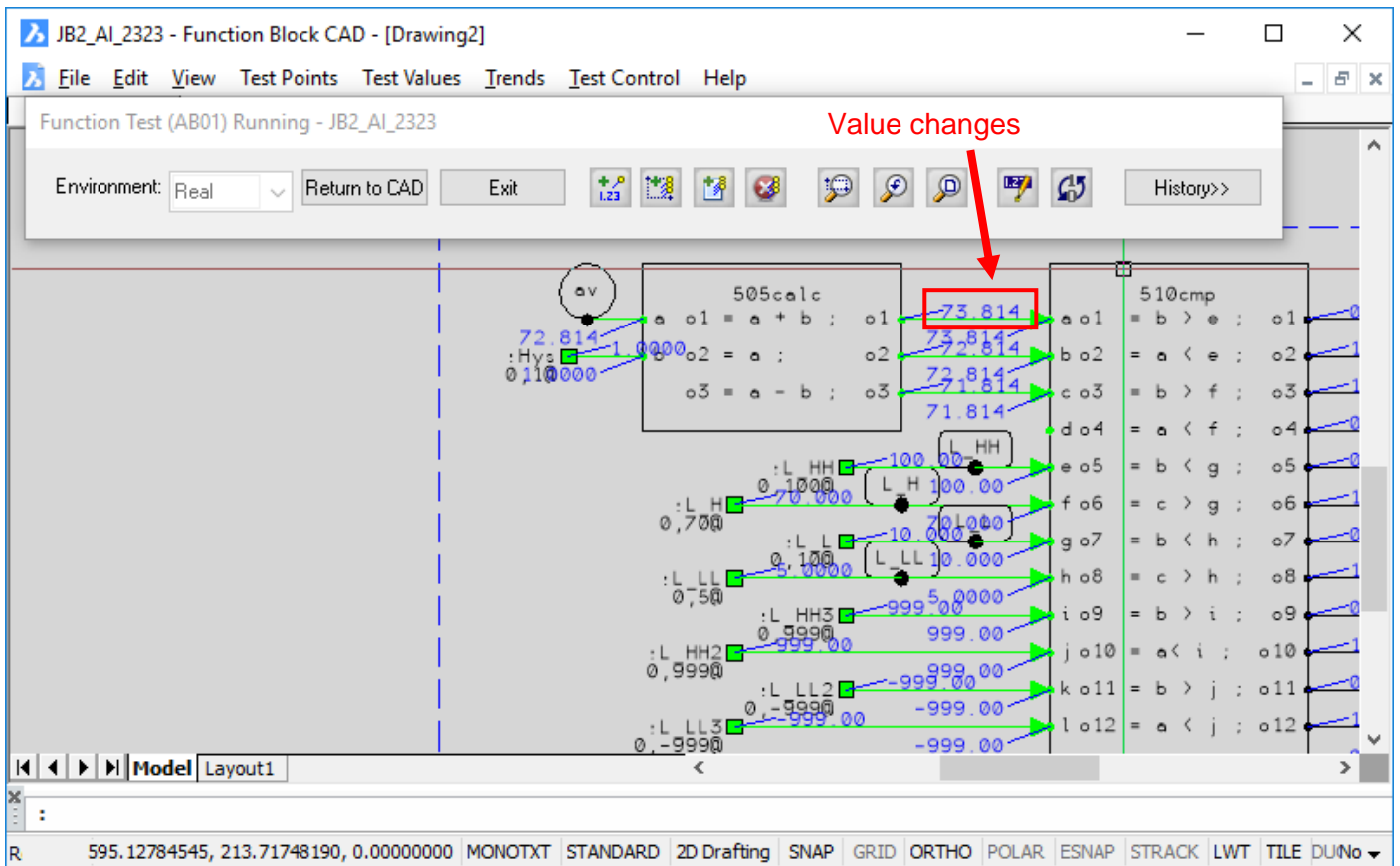


All test points and values will appear on the current page as shown below.



Test using potentiometer.





Alarm is triggered.

