tegrated	
Automation Portal	

Understanding FB and FC_Training

Project							
Name:	Understanding FB and FC_Training	Creation time:	1/13/2023 6:19:43 PM	Last change	1/20/2023 7:06:03 PM	Author:	thegeterrdone
Last modified	thegeterrdone	Version:				JI	
by:							

Description
Microsoft Windows 10 Pro
6.3.9600.0
11.789.19041.0
DOCTORCODE
DOCTORCODE\thegeterrdone
C:\Program Files\Siemens\Automation\Portal V16

Components	V	Dalama
	Version	Release
FIA Portal Project Server V16 - TIA Portal Project Server Single SetupPackage	V16.0	V16.00.00.00_31.02.00.01
/16.0 (MUSERVERV16)		
• • • • • • • • • • • • • • • • • • • •	V1.0 + SP2	V01.00.02.00_01.10.00.01
<u> </u>	V1.0 + SP2	V01.00.02.00_01.10.00.01
FIA Administrator - TIA UMC Agent Configurator Module V1.0 + SP2 (TIAADMIN)	V1.0 + SP2	V01.00.02.00_01.10.00.01
FIA Administrator - TIA Administrator V1.0 SP2 (TIAADMIN)	V1.0 + SP2	V01.00.02.00_01.10.00.01
Siemens Totally Integrated Automation Portal V16 - HM All Editions Single SetupPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - HM NoBasic Single Se- supPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
siemens Totally Integrated Automation Portal V16 - Hardware Support Base Package 0 V16.0 (TIAP16)	V16.0	V16.00.00.00_27.01.00.01
Siemens Totally Integrated Automation Portal V16 - Multiuser Client Single SetupPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - Version Control Inter- ace SetupPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - STEP 7 Safety Single SetupPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
siemens Totally Integrated Automation Portal V16 - STEP 7 Single Setup- Package V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
siemens Totally Integrated Automation Portal V16 - Hardware Support Base Package 02 V16.0 (TIAP16)	V16.0	V16.00.00.00_27.01.00.01
siemens Totally Integrated Automation Portal V16 - Hardware Support Base Package 03 V16.0 (TIAP16)	V16.0	V16.00.00.00_27.01.00.01
siemens Totally Integrated Automation Portal V16 - Hardware Support Base Package 04 V16.0 (TIAP16)	V16.0	V16.00.00.00_27.01.00.01
siemens Totally Integrated Automation Portal V16 - Support Base Package O-01 V16.0 (TIAP16)	V16.0	V16.00.00.00_27.01.00.01
O-02 V16.0 (TIAP16)	V16.0	V16.00.00.00_27.01.00.01
Siemens Totally Integrated Automation Portal V16 - Hardware Support Base Package WCF-01 V16.0 (TIAP16)	V16.0	V16.00.00.00_27.01.00.01
Siemens Totally Integrated Automation Portal V16 - TIACOMPCHECK Single SetupPackage V16.0 (TIAP16)		V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - Simatic Single Setup- Package V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Package V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
age V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - WinCC Transfer Manda- cory Single SetupPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
(UMC64)	V2.7	V02.07.00.00_04.06.00.07
cupPackage V16.0 (HMIRTM_V11)	V16.0	V16.00.00.00_31.02.00.01
Package 32 Bit V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Package 32 Bit V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
IMATIC HMI License Manager Panel Plugin (x64)	16.0.0.0	V16.00.00.00_31.02.00.01
IMATIC WinCC Runtime Advanced Driver (x64)	16.0.0.0	V16.00.00.00_31.02.00.01
TWEventCollector	16.0.0.0	V16.00.00.00_31.02.00.01
IMATIC NCM FWL 64	5.6.0.3	K5.6.0.3_1.1.0.2
	01.02.00.00	V1.2.0.0_2.1.0.1
	9.2	09.02.04.00_01.04.00.05
elemetryConnector	1.0.2.57	V01.00.02.57_01.00.00.01
•	02.05.0000	V02.05.00.00_01.03.00.02
· · · · · · · · · · · · · · · · · · ·	3.9	03.09.10.00_01.04.00.08
SIMATIC HMI ProSave	16.0.0.0	V16.00.00.00_31.02.00.01
	16.0.0.0	
SIMATIC HMI Touch Input		V16.00.00.00_31.02.00.01
SIMATIC HMI Touch Input	16.0.0.0	V16.00.00.00_31.02.00.01
	29.2	29.02.04.00_01.04.00.05
	5.6	05.06.02.00_01.01.00.01
	D 6	V02.06.01.00_01.08.00.01
	2.6 16.0.0.0	V16.00.00.00_31.02.00.01

Totally Integrated			
Automation Portal			
oducts			
ime	Version	Release	
A Portal Project Server	V16.0	V16.00.00.00_31.02.00.01	
A Administrator	V1.0	01.00.02.00_01.10.00.01	
MATIC STEP 7 Prof - STEP 7 Safety - WinCC Adv	V16.0	V16.00.00.00_31.02.00.01	
er Management Component	V2.7	V02.07.00.00_00.00.00	
MATIC WinCC Runtime Advanced Simulation	V16.0	V16.00.00.00_31.02.00.01	
tomation License Manager MATIC ProSave	V6.0 + SP5 + Upd1 V16.0	06.00.05.01_02.01.00.05 V16.00.00.00_31.02.00.01	
-PCT	V3.5 + SP1	K3.5.1.0_1.19.0.1	

Totally Integrated Automation Porta					
Understandi PLC_1 [CPU 15	ng FB and FC_Training 16-3 PN/DP]				
PLC_1					
General\Project infor	mation				
Name	PLC_1	Author	thegeterrdone	Comment	
Rack	0	Slot	1		
General\Catalog info	rmation	"			
Chart designation		Description	CDU with displays work managers 1 MD	Autiala mumahan	CECT E1C 24NO1 04D0

Name	PLC_1		Author		thegeterrdone		Comment	
Rack	0		Slot		1			
General\Catalog info								
Short designation	CPU 1516-3 I	PN/DP	Description		CPU with display; work me code and 5 MB data; 10 ns tion time; 4-stage protecti technology functions: more closed-loop control, count measuring; tracing; Runtin isochronous mode (centra PROFINET interfaces: transcol TCP/IP, secure Open Us nication, S7 communication, IP forwarding, Web seclient, OPC UA: Server DA, methods, companion spectist interface: PROFINET IO supports RT/IRT, performal PROFINET V2.3, 2 ports, I-IMRPD, isochronous mode; face: PROFINET IO controll RT, I-Device; 3rd interface: DP Master, S7 communica chronous mode, S7 routin V2.8	s bit opera- con concept, tion control, ting and me options; il); for all sport proto- ser Commu- on, S7 rout- erver, DNS , Client DA, cifications; 0 controller, nce upgrade Device, MRP, ; 2nd inter- ler, supports : PROFIBUS tion, iso-		6ES7 516-3AN01-0AB0
Firmware version	V2.8							
General\Identification	n & Maintenai	nce	II	. 1 61				
Plant designation			Location id	entifier			Installation date	2023-01-14 13:14:29.163
Additional informa- tion								
General\Checksums	54 30 50 35	10.51.05.00			20.46.20.76.40.00.52.20			
Text lists	FA 70 E8 75	1D 5A 8E 29	Software		38 16 D0 76 42 88 EB DB			
Connection resources	S)	- · · · ·				a		
		Station resources - Resemble	erved - Max-	figured		figured	ources - Dynamic - Con-	Module resources - PLC_1 [CPU 1516-3 PN/DP] - Configured
Maximum number of	resources:			10		118		128
DC		Maximum		Configured	<u> </u>	Configured		Configured
PG communication:		4		-		-		-
HMI communication:		4		0		0		0
S7 communication:	***	0		-		0		0
Open user communication:		0		-		0		0
OPC UA client/server c		0		_		_		-
tion:	.ommunica-	U		_		_		
Other communication	:	-		_		0		0
Total resources used:	•			0		0		0
Available resources:				10		118		128
	es\Overview o	of addresses\Overview of						
Inputs	True		Outputs		True		Address gaps	False
Clot	True		1		-		gp	-

Slot

True

Totally Integrated Automation Portal		
Understanding	FB and FC_Training / PLC_1 [CPU 1516-3 PN/DP]	
Software units		
This folder is empty.		

Main Propertie General									_
Name Numbering	Main Automatic	Number	1		Туре	ОВ		Language	LAD
Information	Automatic								
Title	"Main Program Sweep (Cy-	Author			Comment			Family	
Version	cle)" 0.1	User-defined	d ID						
	U. 1	oser defined							
Name				Dat	ta type		Default v	alue	
▼ Input	sii			D	ما				
Initial_Ca Remaner				Boo Boo					
Temp	ice			ВОС	<u> </u>				
· · · · · · · · · · · · · · · · · · ·									
Constant Network 1:					%DB2 "conveyor_D	3"			
					%DB2 "conveyor_D %FB2 "conveyor"				
Network 1:				W.110.1	"conveyor_D %FB2	ENO	V010.2		
			"	%I10.1 b_StartButton_0" —	"conveyor_D %FB2 "conveyor" — EN	ENO	%Q10.2 b_motor"		
				%I10.1 b_StartButton_0" — %I10.2 b_StopButton_0" —	"conveyor_D %FB2 "conveyor" — EN — Start — Stop	ENO ——	b_motor" %Q10.0 b green		
			% I10.0	b_StartButton_0" – %110.2	"conveyor_D %FB2 "conveyor" — EN — Start — Stop	ENO ————————————————————————————————————	b_motor" 6Q10.0 b_green_ ndicator_0"		
			%l10.0 "b_ DiffuseSensor_	b_StartButton_0" – %110.2	"conveyor_D %FB2 "conveyor" — EN — Start — Stop	Motor — "	b_motor" 6Q10.0 b_green_ ndicator_0" 6Q10.1 b_red		
		С	%110.0 "b_ DiffuseSensor_ 0"	b_StartButton_0" – %110.2	"conveyor_D %FB2 "conveyor" EN Start Stop	ENO ————————————————————————————————————	b_motor" 6Q10.0 b_green_ ndicator_0" 6Q10.1 b_red		
			%I10.0 "b_ DiffuseSensor_ 0" P %M0.0	b_StartButton_0" — %I10.2 b_StopButton_0" —	"conveyor_D %FB2 "conveyor" — EN — Start — Stop	Motor — "	b_motor" 6Q10.0 b_green_ ndicator_0" 6Q10.1 b_red		
			%110.0 "b_ DiffuseSensor_ 0" P %M0.0 "b_Trigger_1"	b_StartButton_0" — %I10.2 b_StopButton_0" — "parameter instance".	"conveyor_D %FB2 "conveyor" EN Start Stop Gr	Motor — "	b_motor" 6Q10.0 b_green_ ndicator_0" 6Q10.1 b_red		
			%110.0 "b_ DiffuseSensor_ 0" P %M0.0 "b_Trigger_1"	b_StartButton_0" = %110.2 b_StopButton_0" = %10.2 "parameter_	"conveyor_D %FB2 "conveyor" EN Start Stop	Motor — "	b_motor" 6Q10.0 b_green_ ndicator_0" 6Q10.1 b_red		

Startup	ıp Proper	DB100]							
Automatic ation "Complete Restart" 0.1 Samily Comment Family	eral ne		Number	100	Type	OR		Language	SCI
"Complete Restart" Author User-defined ID Data type Default value ut Bool stant "parameter instance".data[0] := "increment 1";	bering		Number	100	Туре	ОВ		Language	JCL
Data type Default value ut costRetentive Bool stant "parameter instance".data[0] := "increment 1";	!				Commer	it		Family	
stant "parameter instance".data[0] := "increment 1";	sion	0.1	User-defined	ID					
<pre>costRTC dep stant "parameter instance".data[0] := "increment 1";</pre>	e nput				Data type		Default value		
<pre>"parameter instance".data[0] := "increment 1";</pre>									
"parameter instance".data[0] := "increment 1";	Temp				BOOI				
<pre>"parameter_instance".data(0) := "increment_2"; "parameter_instance".data(2) := "increment_3"; "parameter_instance".data(2) := "increment_3";</pre>	Constant								

eral	Properties					".	-
e bering	Data_block_1 Automatic	Number 1		Туре	DB	Language	DB
mation ion	0.1	Author User-defined ID		Comment		Family	
e	0.1	oser-defined ib	Data type		Start value		Retain
tatic count			Int		0		False
Count			IIIC		ļo .		raise

-										
Fotally Inte Automatior										
		FC_Training /	PLC_1	[CPU 1516	5-3 PN/DP] / Progr	am block	s / Functio	ns	
Inction_ nction_1 Pro										
eneral ame	function_1	Number	1		Type	FC		Languago	SCL	
umbering	Automatic	Number	l l		Туре	rC .		Language	JCL	
formation										
tle		Author			Comment			Family		
ersion	0.1	User-defined II)							
ame				Data ty	/pe		Default value			
▼ Input										
In_1				Bool						
Output										
InOut										
Temp										
count				Int						
Constant										
Return										
function	_1			Void						
	ount := #count + ata block 1".cour	1; nt := "Data_bloc!	k_1".coun	t + 1;						

Total	ly Integ	grated
Auto	mation	Porta

Understanding FB and FC_Training / PLC_1 [CPU 1516-3 PN/DP] / Program blocks / FunctionBlocks

conveyor [FB2]

conveyor Proper	rties						
General							
Name	conveyor	Number	2	Туре	FB	Language	SCL
Numbering	Automatic						
Information							
Title		Author		Comment		Family	
Version	0.1	User-defined ID					

Name	Data type	Default value	Retain
▼ Input			
Start	Bool	false	Non-retain
Stop	Bool	false	Non-retain
Sensor	Bool	false	Non-retain
▼ Output			
Motor	Bool	false	Non-retain
GreenIndicator	Bool	false	Non-retain
RedIndicator	Bool	false	Non-retain
▼ InOut			
increment_Instance	"increment"		
▼ Static			
step	Int	0	Non-retain
Temp			
Constant			

```
0001 IF NOT #Stop THEN
0002 #step := 0;
0003 END_IF;
0004
0005 IF #Start AND #Stop THEN
0006 #step := 1;
0007 END_IF;
0008
0009 IF \#step = 1 THEN
0010
0011
     #Motor := true;
0012
      #GreenIndicator := True;
0013 #RedIndicator := False;
0014 END_IF;
0015
0016 IF \#step = 0 THEN
0017 #Motor := false;
0018
      #GreenIndicator := False;
0019 #RedIndicator := True;
0020 END_IF;
0021
0022 #increment_Instance(In_1 := #Sensor);
0023
0024
0025
0026
```

veyor_DB neral	Properties						
ne	conveyor_DB	Number 2		Туре	DB	Language	DB
mbering ormation	Automatic						
e e		Author		Comment		Family	
sion	0.1	User-defined ID			,		
ne			Data type		Start value		Retain
nput							
Start			Bool Bool		false false		False False
Stop Sensor			Bool		false		False
Output							
Motor			Bool		false		False
GreenIn			Bool		false		False
RedIndi nOut	cator		Bool	•	false		False
	ent_Instance		"increment"				False
tatic			c.cment				, 4150
step			Int		0		False

nderstanding FB and ecrement [FB3]	FC_Training / PLC_1 [CPI	U 1516-3 PN/DP] / Program	blocks / FunctionBlocks
crement Properties			
eneral decrement	Number 2	T	l an mun na
ume decrement umbering Automatic	Number 3	Type FB	Language SCL
formation			
le	Author	Comment	Family
rsion 0.1	User-defined ID		
me	Data type	Default value	Retain
Input	Juliu typo	50,441,741,45	,1334
 In_1	Bool	false	Non-retain
Output	200.		
InOut			
Static			
count_1	Int	0	Non-retain
Temp			

me mbering prmation e sion me Input In_1 Output InOut Static count_2	increment_1 Automatic 0.1	Author User-defined ID	Data type Bool Int	Comment	Start value false 0	Family	Retain False False
e sion ne Input In_1 Output InOut Static			Data type Bool	Commen	Start value false	Family	False
ne Input In_1 Output InOut			Data type Bool		Start value false		False
nput In_1 Output nOut Static			Bool		false		False
In_1 Output nOut tatic							
utput Out tatic							
tatic			Int		0		False
count_2			Int		0		False

Totally Integ Automation							
Understa increment		FC_Training /	PLC_1 [CPU 1516	-3 PN/DP]	/ Program block	s / Paramet	terInstance
increment Prop							
increment Prop General							
-		Number	1	Туре	FB	Language	SCL
General	erties	Number	1	Туре	FB	Language	SCL
General Name	erties increment	Number	1	Туре	FB	Language	SCL
General Name Numbering	erties increment	Number	1	Type Comment	FB	Language	SCL

Name	Data type	Default value	Retain
▼ Input			
ln_1	Bool	false	Non-retain
Output			
InOut			
▼ Static			
count_2	Int	0	Non-retain
▼ Temp			
count_1	Int		
Constant			

```
0001 IF #In_1 THEN

0002  #count_1 := #count_1 + 1;

0003  #count_2 := #count_2 + 1;

0004 END_IF;
```

	Properties	100					
ering	increment_2 Automatic	Number 4		Туре	DB	Language	DB
nation		Author		Comment		Family	
n	0.1	User-defined ID	Data tupo		Start value		Retain
out			Data type		Start value		Retain
In_1 itput			Bool		false		False
Out							
ntic			link.				F-1
count_2	<u>'</u>		Int		0		False

Author Comment Family Comment Comment					"			
Author User-defined ID Comment Family Comment Comment	ering	increment_3 Automatic	Number 5		Туре	DB	Language	DB
Data type Start value Retain ut n_1 Bool false False tput ut tic					Comment		Family	
ut n_1 but tut tic	n	0.1	User-defined ID	Data tora		Charak valva		Data:
tput put put tic	out			рата туре		Start value		Ketain
tic English of the Control of the Co	In_1			Bool		false		False
	itput Dut							
rount_2 int 0 Faise	atic							
	count_2	2		Int		0		False

neral ne	parameter_instance	Number 6		Туре	DB	Language)B
nbering ormation	Automatic						
e sion	0.1	Author User-defined ID		Comment		Family	
ne			Data type	S	tart value		Retain
Static			Array[02] of DB_AN	IV			False
data value			Int	0			False

Totally Integrated Automation Portal		
	FB and FC_Training / PLC_1 [CPU 1516-3 PN/DP]	
Technology object This folder is empty.	ts	

Totally Integrated Automation Portal	

Understanding FB and FC_Training / PLC_1 [CPU 1516-3 PN/DP]

PLC tags

PLC tags				
Icon	Name	Data type	Address	
43	b_DiffuseSensor_0	Bool	%I10.0	
-13	b_green_Indicator_0	Bool	%Q10.0	
•	b_motor	Bool	%Q10.2	
•	b_red_Indicator_0	Bool	%Q10.1	
•	b_StartButton_0	Bool	%I10.1	
•	b_StopButton_0	Bool	%I10.2	
41	b_Trigger_1	Bool	%M0.0	
•	b_Trigger_2	Bool	%M0.1	
•	b_Trigger_3	Bool	%M0.2	
•	b_Trigger_4	Bool	%M0.3	
•	inputs	Byte	%IB1O	
41	outputs	Byte	%QB10	

Totally Integrated Automation Portal		
Understanding Default tag table	FB and FC_Training / PLC_1 [CPU 1516-3 PN/DP] / PLC tags 62]	
PLC tags		

PLC tags	PLC tags				
Icon	Name	Data type	Address		
4 3	b_DiffuseSensor_0	Bool	%110.0		
-13	b_green_Indicator_0	Bool	%Q10.0		
(1)	b_motor	Bool	%Q10.2		
•	b_red_Indicator_0	Bool	%Q10.1		
•	b_StartButton_0	Bool	%110.1		
•	b_StopButton_0	Bool	%I10.2		
•	b_Trigger_1	Bool	%M0.0		
•	b_Trigger_2	Bool	%MO.1		
•	b_Trigger_3	Bool	%M0.2		
•	b_Trigger_4	Bool	%M0.3		
(1)	inputs	Byte	%IB10		
a	outputs	Byte	%QB10		

me Consequent against the first transfer of	nveyorInpu neral	ts Properties							
mbering ormation Comment Family le Author Comment Family rsion User-defined ID Data type Default value Start Bool false Stop Bool false Reset Bool false Sensor Bool false		ConveyorInputs	Number	1	Туре	UDT	1	_anguage	
Me Author User-defined ID Comment Family Me Data type Default value Start Bool false Stop Bool false Reset Bool false Sensor Bool false	mbering	,			, 3,			.	
rsion User-defined ID Data type Default value Start Bool false Stop Bool false Reset Bool false Sensor Bool false									
meData typeDefault valueStartBoolfalseStopBoolfalseResetBoolfalseSensorBoolfalse					Comment			amily	
Start Bool false Stop Bool false Reset Bool false Sensor Bool false false false false	sion		User-defined ID						
StartBoolfalseStopBoolfalseResetBoolfalseSensorBoolfalse	ne			Data type			Default value		
Bool false sensor Bool false				Bool					
ensor Bool false	top								
Totensiometer Dint 0									
	otentiom	eter		DInt			0		

e ConveyorOutputs Number 2 Type UDT Language bering mation Author Comment Family	veyorOutp eral	outs Properties						
Defining Defining Definition Definit	ie Ie	ConveyorOutputs	Number	2	Туре	UDT	Lang	uage
Author Comment Family Comment Comment Comme	bering							-
Data type Default value DeedConveyor DInt O DeedDisplay DInt O Data type Default value DecedDisplay Dint Dint Dint Dint Dint Dint Dint Dint			Author		Camanaant		Fa.wa	l. ,
Data type Default value DeedConveyor DInt O DeedDisplay DInt O DeartIndicator Bool false Default value	e sion				Comment		Fami	ıy
peedConveyor DInt O peedDisplay DInt O pertartIndicator Bool false copIndicator Bool false			oser definied is					
Dint 0 CartIndicator Bool false CopIndicator Bool false								
Bool false sopIndicator Bool false								
copIndicator Bool false								
· · · · · · · · · · · · · · · · · · ·								

Totally Integrated Automation Portal				
Understanding Force table	FB and FC_Training / PLC_1 [CPU 15	16-3 PN/DP] / Watch and	force tables	
Name Name	Address	Display format	Force value	
	,			

10	Address	Display format	Modify value	
reen_Indicator_0"	%Q10.0	Bool	FALSE	
ed_Indicator_0" notor"	%Q10.1 %Q10.2	Bool Bool	FALSE FALSE	
	%Q10.3	Bool		

Totally Integrated Automation Portal		
Understanding	FB and FC_Training / PLC_1 [CPU 1516-3 PN/DP]	
Traces		
Name		

Totally Integrated Automation Portal		
Understanding	FB and FC_Training / PLC_1 [CPU 1516-3 PN/DP] / Traces	
Measurements		
This folder is empty.		

	<u></u>	
Totally Integrated Automation Portal		
Understanding	FB and FC_Training / PLC_1 [CPU 1516-3 PN/DP] / Traces	
Combined measu		
Name		
	T	
	1	

Totally Integrated Automation Portal		
Understanding	FB and FC_Training / PLC_1 [CPU 1516-3 PN/DP] / OPC UA communication	
Server interfaces		
This folder is empty.		

Totally Integrated Automation Portal		
Understanding	FB and FC_Training / PLC_1 [CPU 1516-3 PN/DP] / OPC UA communication	
Client interfaces		
This folder is empty.		
Triis rolder is empty.		
	T	

Totally Integrated Automation Portal		
Understanding	FB and FC_Training / PLC_1 [CPU 1516-3 PN/DP] / PLC supervisions & alarms	
Supervisions		
This folder is empty.		
This rolder is empty.		
ļ		

Totally Integrat Automation Po	ed rtal						
Understand	ding FB and	FC_Train	ing / PLC_1 [Cl	PU 1516-3 PN/	DP] / PLC supervis	ions & alarms	
PLC alarms							
Name	Туре	ID	Alarm text		Info text		Informa- tion only

Totally Integrated	
Automation Portal	

Understanding FB and FC_Training / PLC_1 [CPU 1516-3 PN/DP] / PLC supervisions & alarms

System alarms

System alarms Name	Туре	ID	Alarm text	Info text	Informa- tion only
SDIAG_AL- CAT_SUBMO- DUL_MSG_0002	PLC alarm	1	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_MOD- UL_MSG_0003	PLC alarm	2	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_RACK_MSG _0004	PLC alarm	3	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_DE- VICE_MSG_0005	PLC alarm	4	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ @6W%t#262K@ @6W%t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_IOSYS- TEM_MSG_0006	PLC alarm	5	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#276K@ @6W%t#262K@ @6W%t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_CPU_OST_ MSG_000D	PLC alarm	6	CPU status message: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@ @6W%t#262K@ @6W%t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_CPU_IN- FO_MSG_000F	PLC alarm	7	CPU info: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@ @6W %t#262K@ @6W%t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_CPU_ERR_M SG_0010	PLC alarm	8	CPU error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@ @6W %t#262K@ @6W%t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_CPU_MD_M SG_0011	PLC alarm	9	CPU maintenance demanded: @1W%t#7W@ @6W%t#257K@ / @5W%t#7W@ @6W %t#258K@ @6W%t#262K@ @6W%t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_CPU_MR_M SG1_0012	PLC alarm	10	CPU maintenance required: @1W%t#7W@ @6W%t#257K@ / @5W%t#7W@ @6W %t#258K@ @6W%t#262K@ @6W%t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_CPU_TMPER R_MSG_0013	PLC alarm	11	Temporary CPU error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@ @6W%t#262K@ @6W%t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_CH_ERR_MS G_0015	PLC alarm	12	Error: @1W%t#7W@ on @8W%t#280K@ @6W%t#257K@ / @6W%t#258K@.@6W %t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_ECH_ERR_M SG_0016	PLC alarm	13	Error: @1W%t#7W@ - @5W%t#7W@ on @8W%t#280K@ @6W%t#257K@ / @6W %t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_CH_MD_MS G_0018	PLC alarm	14	Maintenance demanded:@1W%t#7W@ on @8W%t#280K@ @6W%t#257K@ / @6W %t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_ECH_MD_M SG_0019	PLC alarm	15	Maintenance demanded:@1W%t#7W@ - @5W%t#7W@ on @8W%t#280K@ @6W %t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_CH_MR_MS G_001B	PLC alarm	16	Maintenance required:@1W%t#7W@ on @8W%t#280K@ @6W%t#257K@ / @6W %t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_ECH_MR_M SG_001C	PLC alarm	17	Maintenance required:@1W%t#7W@ - @5W%t#7W@ on @8W%t#280K@ @6W %t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_SUB_ERR_M SG_001E	PLC alarm	18	Error: @1W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W %t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_ESUB_ERR_ MSG_001F	PLC alarm	19	Error: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W %t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_SUB_MD_M SG_0021	PLC alarm	20	Maintenance demanded: @1W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W %t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_ESUB_MD_ MSG_0022	PLC alarm	21	Maintenance demanded: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ / @6W %t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_SUB_MR_M SG_0024	PLC alarm	22	Maintenance required: @1W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W %t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_ESUB_MR_ MSG_0025	PLC alarm	23	Maintenance required: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ / @6W %t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_CONFIG_IN- FO_0028	PLC alarm	24	Info: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ @6W%t#262K@ @6W%t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_CONFIG_RE- PORT_0029	PLC alarm	25	Info: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_SE- CU_EV_MSG_00	PLC alarm	26	Security event: @1W%t#7W@ @5W%t#7W@ @6W%t#258K@ @6W%t#262K@ @6W %t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
5E SDIAG_AL- CAT_SE- CU_EV_IN- FO_005F	PLC alarm	27	Security information: @1W%t#7W@ @5W%t#7W@ @6W%t#258K@ @6W%t#262K@ @6W%t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True

Totally Integ	ırated
Automation	Portal

Name	Type	ID	Alarm text		Informa- tion only
SDIAG_AL- CAT_USER_MSG_ 0080	PLC alarm	28	User message: @1W%t#2W@		True
SDIAG_AL- CAT_PLC_MSG_0 OFF	PLC alarm	29	PLC notification: @1W%t#7W@ @5W%t#7W@ @6W%t#256K@ @6W%t#262K@ @6W %t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	True
SDIAG_AL- CAT_SUBMO- DUL_MSG_0102	PLC alarm	30	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	31	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	32	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	33	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ @6W%t#262K@ @6W%t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	34	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#276K@ @6W%t#262K@ @6W%t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	35	CPU status message: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@ @6W%t#262K@ @6W%t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	36	CPU error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@ @6W %t#262K@ @6W%t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	37	CPU maintenance demanded: @1W%t#7W@ @6W%t#257K@ / @5W%t#7W@ @6W %t#258K@ @6W%t#262K@ @6W%t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	38	CPU maintenance required: @1W%t#7W@ @6W%t#257K@ / @5W%t#7W@ @6W %t#258K@ @6W%t#262K@ @6W%t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	39	Error: @1W%t#7W@ on @8W%t#280K@ @6W%t#257K@ / @6W%t#258K@.@6W %t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	40	Error: @1W%t#7W@ - @5W%t#7W@ on @8W%t#280K@ @6W%t#257K@ / @6W %t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	41	Maintenance demanded:@1W%t#7W@ on @8W%t#280K@ @6W%t#257K@ / @6W %t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	42	Maintenance demanded:@1W%t#7W@ - @5W%t#7W@ on @8W%t#280K@ @6W %t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	43	Maintenance required:@1W%t#7W@ on @8W%t#280K@ @6W%t#257K@ / @6W %t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	44	Maintenance required:@1W%t#7W@ - @5W%t#7W@ on @8W%t#280K@ @6W %t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	45	Error: @1W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W %t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	46	Error: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W %t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	47	Maintenance demanded: @1W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W %t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	48	Maintenance demanded: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ / @6W %t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	49	Maintenance required: @1W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W %t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	50	Maintenance required: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ / @6W %t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	51	Info: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ @6W%t#262K@ @6W%t#263K@ @8W%t#7W@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False
	PLC alarm	52	PLC notification: @1W%t#7W@ @5W%t#7W@ @6W%t#256K@ @6W%t#262K@ @6W %t#263K@	Short name: @6W%t#260K@ Order number: @6W%t#265K@	False

Totally Integrated Automation Portal		
Understanding	FB and FC_Training / PLC_1 [CPU 1516-3 PN/DP]	
PLC alarm text list	SS.	
This folder is empty.		

L

Totally Integrated Automation Porta								
Understanding FB and FC_Training / PLC_1 [CPU 1516-3 PN/DP] / Local modules PLC_1 [CPU 1516-3 PN/DP]								
PLC_1								
General\Project infor	mation							
Name	PLC_1	Author	thegeterrdone	Comment				
Rack	0	Slot	1					
General\Catalog info	rmation							
Short designation	CPU 1516-3 PN/DP	Description	CPU with display; work memory 1 MB code and 5 MB data; 10 ns bit operation time; 4-stage protection concept, technology functions: motion control, closed-loop control, counting and measuring; tracing; Runtime options; isochronous mode (central); for all PROFINET interfaces: transport protocol TCP/IP, secure Open User Communication, S7 communication, S7 rout-	Article number	6ES7 516-3AN01-0AB0			

					ing, IP forwarding, Web seclient, OPC UA: Server DA methods, companion specifist interface: PROFINET IC supports RT/IRT, performa PROFINET V2.3, 2 ports, I-MRPD, isochronous mode, face: PROFINET IO control RT, I-Device; 3rd interface DP Master, S7 communicator chronous mode, S7 routin V2.8	erver, DNS , Client DA, cifications; D controller, nce upgrade Device, MRP, ; 2nd inter- ller, supports : PROFIBUS ation, iso-		
Firmware version	V2.8							
General\Identification	ո & Maintenan	ce						
Plant designation			Location ide	entifier			Installation date	2023-01-14 13:14:29.163
Additional informa- tion								
General\Checksums								
Text lists	FA 70 E8 75 1	D 5A 8E 29	Software		38 16 D0 76 42 88 EB DB			
Connection resources	s \							
		Station resources - Reso imum		Station re figured		Station reso	ources - Dynamic - Con-	Module resources - PLC_1 [CPU 1516-3 PN/DP] - Configured
Maximum number of ı	resources:			10		118		128
		Maximum		Configured	d	Configured		Configured
PG communication:		4		-		-		-
HMI communication:		4		0		0		0
S7 communication:		0		-		0		0
Open user communica	ition:	0		-		0		0
Web communication:		2		-		-		-
OPC UA client/server clion:	ommunica-	0		-		-		-
Other communication	:	-		-		0		0
Total resources used:				0		0		0
Available resources:				10		118		128
Overview of addresse	s\Overview of	addresses\Overview of	addresses					
Inputs	True		Outputs		True		Address gaps	False
Slot	True							

Totally Integrated Automation Portal								
Understanding	FB and FC_Training							
Ungrouped devices								
This folder is empty.								
l	I							

L

Totally Integrated Automation Portal		
Understanding	FB and FC_Training	
Security settings		
This folder is empty.		

Totally Integrated Automation Portal		
Understanding Measurements	FB and FC_Training / Cross-device functions / Project traces	
This folder is empty.		
	,	

n classes e	Display name	Acknowledgment	Priority	
owledgement cknowledgement	A NA	True False	0	
5				

Totally Integrated Automation Portal		
Understanding Logs	FB and FC_Training / Common data	
This folder is empty.		

Totally Integrated Automation Portal		
Understanding	FB and FC_Training / Languages & resources	
Project languages	5	
Languages Reference language English (United States)		
Editing language English (United States)		
Other project languages		
Empty		

glish (United States) omplete Restart"	Category	Reference
inplete Restart	Block comment	Understanding FB and FC_Training\PLC_1 [CPU 1516-3 PN/DP]\Program blocks\Startup
n Program Sweep (Cycle)"	Block comment	[OB100]\Block title Understanding FB and FC_Training\PLC_1 [CPU 1516-3 PN/DP]\Program blocks\Main
		[OB1]\Block title
	Alarm class text	Understanding FB and FC_Training\Acknowledgement\AlarmClassData_IDisplayNaming_EplayName
	Alarm class text Alarm class text	Understanding FB and FC_Training\Acknowledgement\ShortName Understanding FB and FC_Training\No Acknowledgement\AlarmClassData_IDisplayNam-
		ing_DisplayName
	Alarm class text	Understanding FB and FC_Training\No Acknowledgement\ShortName