

X axis unit

TwinCAT_Device.PlcProject.Wp202_A140_X_Axis					
Expression	Type	Value	Pre...	Add...	Comment
Unit	SingleAxisUnit				
_stdObjectData	OpconObjectData				Standard object data
InstanceID	DWORD	63			Gets or sets instance ID
EtCall	OpconTimeStatisticsLong				Elapsed time of POU call
_stdUnitData	OpconUnitData				standard data of an OpconUnit
EventClear	BOOL	FALSE			Event clear input
ExecState	OPCONEXECSTATE	NOTREADY			Execution state output
ExtensionToken	BYTE	1			
HasError	BOOL	FALSE			Unit has error (no subtree evaluation)
HasInfo	BOOL	FALSE			Unit has info (no subtree evaluation)
HasWarning	BOOL	FALSE			Unit has warning (no subtree evaluation)
UnitState	OPCONUNITSTATE	DISABLED			Unit state output
UnitStateReq	OPCONUNITSTATEREQ	BACKBONE_CONTROLLED			Unit state request input
EtExec	OpconTimeStatisticsLong				Elapsed execution time
_stdExecUnitData	OpconExecFsmData				standard data of OpconExecUnit
Activate	BOOL	FALSE			Activate the unit (needed to be set if ExecState is D...
Cancel	BOOL	FALSE			Cancel input
Execute	BOOL	FALSE			Execute input
ClassName	STRING(6)	'Axis'			
ParCfg	SingleAxisParCfg				Configuration parameters (loaded in DIS->OP)
ParCmd	SingleAxisParCmd				Command parameters (loaded at execution start)
ParImm	SingleAxisParImm				immediate parameters (loaded every cycle)
Enable	BOOL	TRUE			enable axis movement
DisableOverride	BOOL	TRUE			disable internal override control
AxisState	OpconDriveBaseState				Command outputs
AxisConfig	OpconDriveBaseConfig				axis configuration
UserOvChanged	BOOL	FALSE			
_parCfg	SingleAxisParCfg				Internal copy of configuration parameters
_parCmd	SingleAxisParCmd				Internal copy of command parameters

X_Axis_Peripheral_Operational

General
EtherCAT
DC
Process Data
Startup
SoE - Online
Online

State Machine

Init
Bootstrap
Pre-Op
Safe-Op
Op
Clear Error

Current State: OP
Requested State: OP

DLL Status

Port A: Carrier / Open
Port B: Carrier / Open
Port C: No Carrier / Closed
Port D: No Carrier / Closed

File Access over EtherCAT

Download...
Upload...

Name	Online	Type	Size	>Add...	In/O...	User...	Linked to
Drive status word	X 32768	UINT	2.0	216.0	Input	0	State . Peripherals_...
Position feedback value 1	X 65	DINT	4.0	218.0	Input	0	ActPos . Peripherals_...
Signal status word	X 12	UINT	2.0	222.0	Input	0	SignalState . Peripher...
Velocity feedback value	X 0	DINT	4.0	224.0	Input	0	ActVel . Peripherals_...
Torque/force feedback value	X 0	INT	2.0	228.0	Input	0	ActTorque . Peripher...
Diagnosis number	X 0x000a0016	DWORD	4.0	230.0	Input	0	DiagNo . Peripherals...
Effective velocity command value	X 0x00000000	DWORD	4.0	234.0	Input	0	ActVelo . Peripherals...
Laser and Saw Switch	X 2	INT	2.0	238.0	Input	0	Station_LaserAndSaw...
X Axis In Signal	X 0	INT	2.0	240.0	Input	0	Station_xAxisInSigna...
X Axis Error Number	X 0	DINT	4.0	242.0	Input	0	Station_xAxisErrNo , ...
WcState	0	BIT	0.1	1522.3	Input	0	
InputToggle		BIT	0.1	1524.3	Input	0	
State	X 8	UINT	2.0	1644.0	Input	0	State . Peripherals_...

X_Axis_Peripheral

General	EtherCAT	DC	Process Data	Startup	SoE - Online	Online
Type:	IndraDrive MPH06/07					
Product/Revision:	2369537 / 1					
Auto Inc Addr:	FFEB					
EtherCAT Addr:	☐	1022	Advanced Settings...			
Identification Value:	0					
Previous Port:	_K971F0 (BIS V-6110-063-C002) - B					

Name	Online	Type	Size	>Add...	In/O...	User...	Linked to
Drive status word	X 32768	UINT	2.0	216.0	Input	0	State . Peripherals_...
Position feedback value 1	X 66	DINT	4.0	218.0	Input	0	ActPos . Peripherals_...
Signal status word	X 12	UINT	2.0	222.0	Input	0	SignalState . Peripher...
Velocity feedback value	X 2289	DINT	4.0	224.0	Input	0	ActVel . Peripherals_...
Torque/force feedback value	X 0	INT	2.0	228.0	Input	0	ActTorque . Peripher...
Diagnosis number	X 0x000a0016	DWORD	4.0	230.0	Input	0	DiagNo . Peripherals....
Effective velocity command value	X 0x00000000	DWORD	4.0	234.0	Input	0	ActVelo . Peripherals....
Laser and Saw Switch	X 2	INT	2.0	238.0	Input	0	Station_laserAndSaw...
X Axis In Signal	X 0	INT	2.0	240.0	Input	0	Station_xAxisInSigna...
X Axis Error Number	X 0	DINT	4.0	242.0	Input	0	Station_xAxisErrNo
WcState	0	BIT	0.1	1522.3	Input	0	
InputToggle		BIT	0.1	1524.3	Input	0	
State	X 8	UINT	2.0	1644.0	Input	0	State . Peripherals_...
AdsAddr	X 0.0.0.0.2.1:1022	AMSADDR	8.0	1646.0	Input	0	AdsAddr . Peripheral...
Chn0	0	USINT	1.0	1654.0	Input	0	
DcOutputShift	2135600	DINT	4.0	1655.0	Input	0	
DcInputShift	7864400	DINT	4.0	1659.0	Input	0	
Master control word	X 0	UINT	2.0	216.0	Out...	0	Ctrl . Peripherals_M1...
Position command value	X 0	DINT	4.0	218.0	Out...	0	PosSetNc . Peripheral...

H_Axis_Unit

TwinCAT_Device.PlcProject.Wp401_A152_H_Axis					
Expression	Type	Value	Pre...	Add...	Comment
Unit	SingleAxisUnit				
_stdObjectData	OpconObjectData				Standard object data
InstanceID	DWORD	79			Gets or sets instance ID
EtCall	OpconTimeStatisticsLong				Elapsed time of POU call
_stdUnitData	OpconUnitData				standard data of an OpconUnit
EventClear	BOOL	FALSE			Event clear input
ExecState	OPCONEXECSTATE	DEACTIVATED			Execution state output
ExtensionToken	BYTE	1			
HasError	BOOL	FALSE			Unit has error (no subtree evaluation)
HasInfo	BOOL	FALSE			Unit has info (no subtree evaluation)
HasWarning	BOOL	FALSE			Unit has warning (no subtree evaluation)
UnitState	OPCONUNITSTATE	OPERATIONAL			Unit state output
UnitStateReq	OPCONUNITSTATEREQ	BACKBONE_CONTROLLED			Unit state request input
EtExec	OpconTimeStatisticsLong				Elapsed execution time
_stdExecUnitData	OpconExecFsmData				standard data of OpconExecUnit
Activate	BOOL	FALSE			Activate the unit (needed to be set if ExecState is D...
Cancel	BOOL	FALSE			Cancel input
Execute	BOOL	FALSE			Execute input
ClassName	STRING(6)	'Axis'			
ParCfg	SingleAxisParCfg				Configuration parameters (loaded in D15->OP)
ParCmd	SingleAxisParCmd				Command parameters (loaded at execution start)
ParImm	SingleAxisParImm				immediate parameters (loaded every cycle)
Enable	BOOL	FALSE			enable axis movement
DisableOverride	BOOL	TRUE			disable internal override control
AxisState	OpconDriveBaseState				Command outputs
AxisConfig	OpconDriveBaseConfig				axis configuration
UserOvChanged	BOOL	FALSE			
_parCfg	SingleAxisParCfg				Internal copy of configuration parameters
_parCmd	SingleAxisParCmd				Internal copy of command parameters

H_Axis_Peripheral_Operational

General
EtherCAT
DC
Process Data
Startup
SoE - Online
Online

State Machine

Init
Bootstrap
Pre-Op
Safe-Op
Op
Clear Error

Current State: OP
Requested State: OP

DLL Status

Port A: Carrier / Open
Port B: Carrier / Open
Port C: No Carrier / Closed
Port D: No Carrier / Closed

File Access over EtherCAT

Download...
Upload...

Name	Online	Type	Size	>Add...	In/O...	User...	Linked to
Drive status word	X 18432	UINT	2.0	430.0	Input	0	State . Peripherals_...
Position feedback value 1	X 57	DINT	4.0	432.0	Input	0	ActPos . Peripherals_...
Signal status word	X 12	UINT	2.0	436.0	Input	0	SignalState . Peripher...
Velocity feedback value	X -429	DINT	4.0	438.0	Input	0	ActVel . Peripherals_...
Torque/force feedback value	X 0	INT	2.0	442.0	Input	0	ActTorque . Peripher...
Diagnosis number	X 0x000a0016	DWORD	4.0	444.0	Input	0	DiagNo . Peripherals....
Effective velocity command value	X 0x00000000	DWORD	4.0	448.0	Input	0	ActVelo . Peripherals....
WcState	0	BIT	0.1	1522.3	Input	0	
InputToggle		BIT	0.1	1524.3	Input	0	
State	X 8	UINT	2.0	1714.0	Input	0	State . Peripherals_...
AdsAddr	X 0.0.0.0.2.1:1032	AMSADDR	8.0	1716.0	Input	0	AdsAddr . Peripheral...
Chn0	0	USINT	1.0	1724.0	Input	0	
DcOutputShift	2135600	DINT	4.0	1725.0	Input	0	

H_Axis_Peripheral

General	EtherCAT	DC	Process Data	Startup	SoE - Online	Online
Type:	IndraDrive MPH06/07					
Product/Revision:	2369537 / 1					
Auto Inc Addr:	FFE1					
EtherCAT Addr:	☐	1032	Advanced Settings...			
Identification Value:	0					
Previous Port:	_K056A3 (EP1018-0001) - B					

Name	Online	Type	Size	>Add...	In/O...	User...	Linked to
Drive status word	X 18432	UINT	2.0	430.0	Input	0	State . Peripherals_...
Position feedback value 1	X 57	DINT	4.0	432.0	Input	0	ActPos . Peripherals_...
Signal status word	X 12	UINT	2.0	436.0	Input	0	SignalState . Peripher...
Velocity feedback value	X 143	DINT	4.0	438.0	Input	0	ActVel . Peripherals_...
Torque/force feedback value	X 0	INT	2.0	442.0	Input	0	ActTorque . Peripher...
Diagnosis number	X 0x000a0016	DWORD	4.0	444.0	Input	0	DiagNo . Peripherals...
Effective velocity command value	X 0x00000000	DWORD	4.0	448.0	Input	0	ActVelo . Peripherals...
WcState	0	BIT	0.1	1522.3	Input	0	
InputToggle	0	BIT	0.1	1524.3	Input	0	
State	X 8	UINT	2.0	1714.0	Input	0	State . Peripherals_...
AdsAddr	X 0.0.0.0.2.1:1032	AMSADDR	8.0	1716.0	Input	0	AdsAddr . Peripheral...
Chn0	0	USINT	1.0	1724.0	Input	0	
DcOutputShift	2135600	DINT	4.0	1725.0	Input	0	
DclnputShift	7864400	DINT	4.0	1729.0	Input	0	
Master control word	X 0	UINT	2.0	430.0	Out...	0	Ctrl . Peripherals_M1...
Position command value	X 0	DINT	4.0	432.0	Out...	0	PosSetNc . Peripheral...
Signal control word	X 0	UINT	2.0	436.0	Out...	0	SignalCtrl . Peripheral...
Positioning command value	X 0	DINT	4.0	438.0	Out...	0	PosSetValue . Periphe...
Positioning velocity	X 0	DINT	4.0	442.0	Out...	0	VelSetValue . Periphe...
Positioning acceleration	X 0	DINT	4.0	446.0	Out...	0	AccSetValue . Periphe...
Positioning deceleration	X 0	DINT	4.0	450.0	Out...	0	DecSetValue . Periph...

H_Axis_Extension

TwinCAT_Device.PlcProject.Wp401_A152_H_Axis					
Expression	Type	Value	Pre...	Add...	Comment
[-] HmiOut	SingleAxisOutHmi				HMI Values
JogMode	SINGLEAXISJOGMODE	I1			actual selected jog mode [Cont. 100 10 1 ...]
[-] AxisState	OpconDriveBaseState				Command outputs (result)
ActPos	LREAL	57000			current position in mm
ActVel	LREAL	334000			current velocity in m/s or °/s
ActTorque	LREAL	1000			current torque in Nm
AxisInReference	BOOL	TRUE			
StandStill	BOOL	TRUE			safety related standstill active
DriveConst	BOOL	FALSE			moving constantly (velocity modes)
Accelerating	BOOL	FALSE			axis is currently accelerating
Decelerating	BOOL	FALSE			axis is currently decelarting
Class1Diag	BOOL	FALSE			
Class2Diag	BOOL	FALSE			
Class3Diag	BOOL	TRUE			
DriveEnabled	BOOL	FALSE			
DiagNo	DWORD	655382			diagnostic number (error etc.)
[-] HmiCtrl	SingleAxisHmiCtrl				control struct for HMI
RefVisible	BOOL	FALSE			ref button visible
AccVisible	BOOL	FALSE			Acc LED visible
DecVisible	BOOL	FALSE			Dec LED visible
EnableOverride	BOOL	FALSE			enable override slider
Unit	OPCONDRIVEBASEUNITS	mm			
HmiHideFlags	DWORD	4294967278			Flags for hide hmi items
[-] ExecTimeActivate	TIME	T#0ms			
[-] ExecTimeDeactivate	TIME	T#0ms			
[-] ExecTimeHoming	TIME	T#0ms			
[-] ExecTimePosAbs	TIME	T#0ms			
[-] ExecTimeRelNeg	TIME	T#0ms			
[-] ExecTimeRelPos	TIME	T#0ms			

AtmoSingleAxis

AtmoSingleAxis Placeholder Properties

Advanced	
Hide reference	False
Publish all IEC symbols	False
Qualified access only	False
Misc	
Description	single axis fb
Name	AtmoSingleAxis
Namespace	OC_AtmoSingleAxis
Resolution	AtmoSingleAxis, 1.1.10.0 (Robert Bosch Gmb

Misc

AtmoEcRxIndraDrive

AtmoEcRxIndraDrive Placeholder Properties

Advanced	
Hide reference	False
Publish all IEC symbols	False
Qualified access only	False
Misc	
Description	device fb for Rexroth IndraDrive C/M/Cs
Name	AtmoEcRxIndraDrive
Namespace	OC_AtmoEcRxIndraDrive
Resolution	AtmoEcRxIndraDrive, 1.1.14.0 (Robert Bosch

Misc

X_Axis_Driver_Infomation

Device settings	
Controller	HCS02.1E-W0012-A-03-NNNN
Control section	CSH01.1C-ET-ENS-NNN-NNN-S2-S-NN-FW
Firmware	FWA-INDRV*-MPH-07V42-D5-1-NNN-ML
Functional package	Closed-loop
Safety technology	S2
	Drive PLC └PaddleCutX_MLD001.pro
Axis settinas	
Address	1
Application type	DF30 Paddle Cut X axis
Control	Field-oriented closed-loop control
Scaling	Linear
Primary mode of op.	Position control lagless, encoder 1
Second. op. mode 1	Drive-controlled positioning (via axis control word S-0-0520)
Second. op. mode 2	Velocity control
Second. op. mode 3	Torque control
Motor	MSK030C-0900-NN-M1-UG0-NNNN
Motor encoder	Encoder with sine signals and HIPERFACE interface (1Vpp, 12V supply), motor encoder
Optional encoder	No encoder

H_Axis_Driver_Infomation

Device settings	
Controller	HCS02.1E-W0012-A-03-NNNN
Control section	CSH01.1C-ET-ENS-NNN-NNN-S2-S-NN-FW
Firmware	FWA-INDRV*-MPH-07V42-D5-1-NNN-NN
Functional package	Closed-loop
Safety technology	S2
Axis settinas	
Address	1
Application type	DF30 Paddle Cut H axis
Control	Field-oriented closed-loop control
Scaling	Linear
Primary mode of op.	Position control lagless, encoder 1
Second. op. mode 1	Drive-controlled positioning (via axis control word S-0-0520)
Second. op. mode 2	Velocity control
Second. op. mode 3	Torque control
Motor	MSK030C-0900-NN-M1-UG0-NNNN
Motor encoder	Encoder with sine signals and HIPERFACE interface (1Vpp, 12V supply), motor encoder
Optional encoder	No encoder