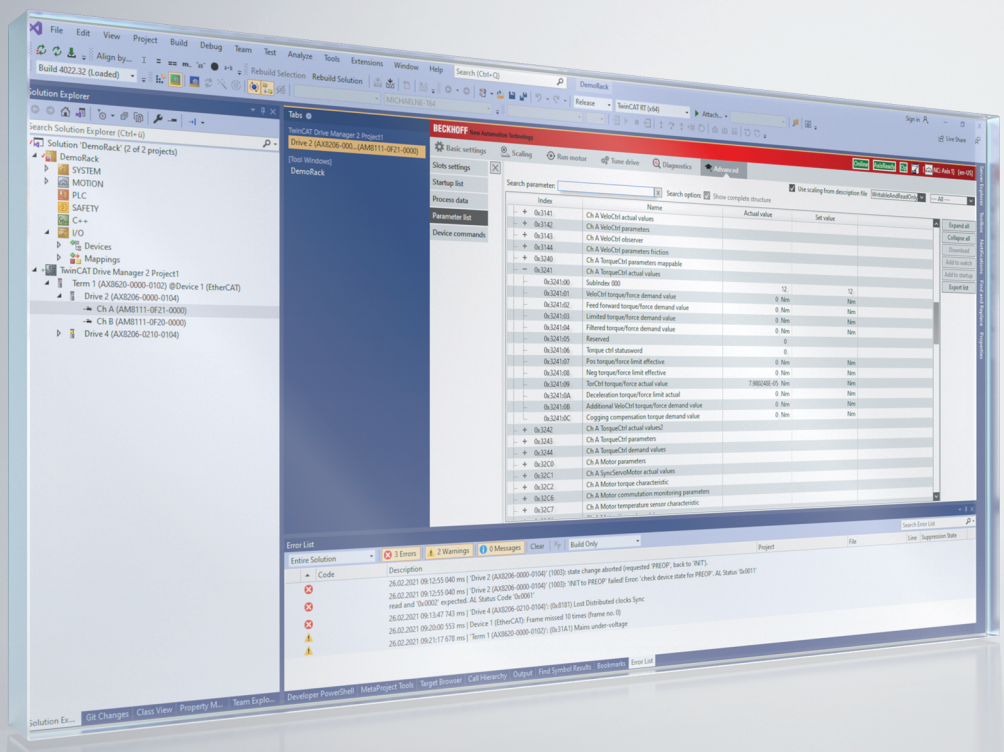
BECKHOFF New Automation Technology

Object Dictionary for objects of module safety | EN

AX1106-1101-0000

Object description for objects of module safety for Economy servo drive, single-phase, single-axis module, 6.9 A, STO/SS1 (FSoE)



2026-11-05 | Version: FW1.03b0003

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1 Documentation notes

Version Info

This reference manual contains the CoE objects and Diag Messages of the following device.

Description	Value
Device	AX1106-1101
ESI Revision	103 (AX1106-1101-0103)
Firmware Version	FW1.03b0003

Explanation of substitutes and symbols

ESI Modules

ESI modules are used to encapsulate and selectively activate specific functions or properties of a device. They have a separate set of objects and PDOs that are independent of the device's basic object dictionary. When an ESI module is activated, the device object dictionary is extended by the objects and PDOs of the specific module. The device's ESI file contains information about which modules can be used for that device.

Slots and Supported Modules

A slot is a placeholder for an ESI module. A device can support multiple slots. Only one module can be plugged into a slot. The number of slots supported by a device limits the maximum number of ESI modules that can be plugged into the device simultaneously. Each slot has a predefined subset of modules that can be used. Modules can only be plugged into slots that accept the respective module.

Multiple Use of a Module

An ESI module can be activated on multiple slots in order to use the functionality it contains multiple times. Each time a module is instantiated, the relevant object indices are incremented depending on the slot group and slot position. This ensures that object indices remain unique even if the module is used multiple times. The increment step is defined in the EtherCAT device and depends on the module and the slot.

Readability

For orientation purposes independent of the object index, identifiers are used in the names of module objects to make the assignment to a slot and slot group readable. In the configuration tool, these identifiers are replaced by a designation derived from the respective slot and slot group.

Description of the Identifiers

The following identifiers apply exclusively to objects of ESI modules and not to device objects. When instantiated, objects of an ESI module replace the following identifiers in their object names according to the system described below:

Substitute	Name	Replaced in the object name by
[SL]	Slot name	The specific slot name
[SG]	Slot group	The specific slot group name
%S	Slot number	The specific slot number, starting at 1
%G	Slot group number	The specific slot group number, starting at 1
%C	Slot number within the slot group	The specific slot number within the slot group, starting at 1

Nomenclature

Name	Description
Module	ESI module; a named, separate set of objects and PDOs.
Slot	Depending on the context, this refers either to the slot as a whole or to the slot position.
Slot group	Depending on the context, this refers either to the slot group number or to the slot group name.

Slotconfiguration

Slot (global)	Slotgroup	Name	Modules
1 (1)	0	DeviceMainSlot	DeviceMain
2 (2)	0	PowerManagementSlot	PowerManagementAC1
3 (3)	0	*-- empty --*	
4 (4)	0	*-- empty --*	
5 (5)	0	*-- empty --*	
6 (6)	0	*-- empty --*	
7 (7)	0	*-- empty --*	
8 (8)	0	*-- empty --*	
9 (9)	0	*-- empty --*	
10 (10)	0	*-- empty --*	
11 (11)	0	SafetySlot	Safety
12 (12)	0	*-- empty --*	
13 (13)	0	*-- empty --*	
14 (14)	0	*-- empty --*	
15 (15)	0	*-- empty --*	
16 (16)	0	*-- empty --*	
17 (17)	0	*-- empty --*	
18 (18)	0	*-- empty --*	
19 (19)	0	*-- empty --*	
20 (20)	0	*-- empty --*	
21 (21)	0	*-- empty --*	
22 (22)	0	*-- empty --*	
23 (23)	0	*-- empty --*	
24 (24)	0	*-- empty --*	
25 (25)	0	*-- empty --*	
26 (26)	0	*-- empty --*	
27 (27)	0	*-- empty --*	
28 (28)	0	*-- empty --*	
29 (29)	0	*-- empty --*	
30 (30)	0	*-- empty --*	
31 (31)	0	*-- empty --*	
32 (32)	0	DeviceDebugSlot *(optional)*	DeviceDebug
1 (33)	1	AxisMainSlot	AxisMainAX1
2 (34)	1	*-- empty --*	
3 (35)	1	*-- empty --*	
4 (36)	1	InterpolatorSlot	Interpolator
5 (37)	1	*-- empty --*	
6 (38)	1	*-- empty --*	
7 (39)	1	PositionControlSlot	PositionControl
8 (40)	1	*-- empty --*	
9 (41)	1	*-- empty --*	
10 (42)	1	*-- empty --*	
11 (43)	1	VelocityControlSlot	VelocityControl
12 (44)	1	BiquadFilterSlot *(optional)*	BiquadFilter
13 (45)	1	*-- empty --*	

Slot (global)	Slotgroup	Name	Modules
14 (46)	1	*-- empty --*	
15 (47)	1	*-- empty --*	
16 (48)	1	*-- empty --*	
17 (49)	1	*-- empty --*	
18 (50)	1	*-- empty --*	
19 (51)	1	TorqueControlSlot	TorqueControl
20 (52)	1	*-- empty --*	
21 (53)	1	*-- empty --*	
22 (54)	1	*-- empty --*	
23 (55)	1	MotorSlot	AsynchronousMotor SynchronousMotor
24 (56)	1	PrimaryFeedbackSlot *(optional)*	HpfDslRotary SimulationRotary
25 (57)	1	*-- empty --*	
26 (58)	1	*-- empty --*	
27 (59)	1	*-- empty --*	
28 (60)	1	*-- empty --*	
29 (61)	1	*-- empty --*	
30 (62)	1	*-- empty --*	
31 (63)	1	*-- empty --*	
32 (64)	1	AxisDebugSlot *(optional)*	AxisDebug

UnitTable

A List of the active Units of this Project.

Index	Name	Symbol
0x400	none	
0x401	metre	m
0x402	kilogram	kg
0x403	second	s
0x404	ampere	A
0x405	kelvin	K
0x406	mole	mol
0x407	candela	cd
0x410	Radian	rad
0x411	Steradin	sr
0x420	Hertz	Hz
0x421	Newton	N
0x422	Pascal	Pa
0x423	Joule	J
0x424	Watt	W
0x425	Coulomb	C
0x426	Volt	V
0x427	Farad	F
0x428	Ohm	Ohm
0x429	Siemens	S
0x42A	Weber	Wb
0x42B	Tesla	T

Index	Name	Symbol
0x42C	Henry	H
0x42D	Degree Celsius	°C
0x42E	Lumen	lm
0x42F	Lux	lx
0x430	bequerel	Bq
0x431	Gray	Gy
0x432	Sievert	Sv
0x433	Katal	kat
0x440	Grade	g*
0x441	Angle Degree	°
0x442	Angle Minute	'
0x443	Angle Second	"
0x444	Litre	l
0x445	Are	a
0x446	Hectare	ha
0x447	Minute	min
0x448	Hour	h
0x449	Day	D
0x44A	Year	a
0x44B	Gram	g
0x44C	Ton	t
0x44E	Bar	bar
0x44F	Poise	P
0x450	Stokes	St
0x451	Electron Volt	eV
0x452	Atomic Mass Unit	u
0x453	Astronomic Unit	AU
0x454	Parsec	pc
0x455	Meter per square second	m/s^2
0x456	Newtonmetre	Nm
0x457	Square second	s^2
0x458	Square metre	m^2
0x459	Cubic metre	m^3
0x45A	Pascal second	Pa s
0x45B	Joule per kilogram Kelvin	J/(kg K)
0x45C	Watt per meter Kelvin	W/(m K)
0x45D	Joule per mole Kelvin	J/(m K)
0x45E	Watt per square metre steradian	W((m^2 sr)
0x45F	Katal per cubic metre	kat/m^3
0x4B0	Increments	inc
0x4B1	Revolution	rev
0x4B2	Revolution speed	rad/s
0x4B3	Moment of inertia	g cm^2
0x4B4	Moment of inertia SI	kg m^2
0x4B5	Revolutions/Minute	rpm
0x4B6	Meter/Second	m/s
0x4B7	Percent	%
0x4B8	cubic Second	s^3

Index	Name	Symbol
0x4B9	Digits	dig
0x4BA	Degree/Second	°/s
0x4BB	Revolution acceleration	rad/s^2
0x4BC	Steps	step

ScalingTable

A List of the active ScalingTypes of this Project.

Index	Function	Target Datatype
0x0	x * 1	LREAL
0x208	x * (1/256)nm	LREAL
0x1210	x * (360/65536)°	LREAL
0x1211	x * (360/131072)°	LREAL
0x1212	x * (360/262144)°	LREAL
0x1213	x * (360/524288)°	LREAL
0x1214	x * (360/1048576)°	LREAL
0x1215	x * (360/2097152)°	LREAL
0x1216	x * (360/4194304)°	LREAL
0x1217	x * (360/8388608)°	LREAL
0x1218	x * (360/16777216)°	LREAL
0x1219	x * (360/33554432)°	LREAL
0x121A	x * (360/67108864)°	LREAL
0x121B	x * (360/134217728)°	LREAL
0x121C	x * (360/268435456)°	LREAL
0x121D	x * (360/536870912)°	LREAL
0x121E	x * (360/1073741824)°	LREAL
0x121F	x * (360/2147483648)°	LREAL
0x1220	x * (360/4294967296)°	LREAL
0x1A00	x * 1E-06 m	LREAL
0x1A01	x * 1E-07 m	LREAL
0x1A02	x * 1E-08 m	LREAL
0x1A03	x * 1E-09 m	LREAL
0x1A04	x * 1E-10 m	LREAL
0x1A05	x * 1E-11 m	LREAL
0x1A06	x * 1E-12 m	LREAL
0x2000	x * 0.0001 rpm	REAL
0x2100	x * 1E-07 m/s	REAL
0x3000	x * 1 °/s^2	REAL
0x3100	x * 0.001 m/s^2	REAL
0x4000	x * 100 °/s^3	REAL
0x4100	x * 0.1 m/s^3	REAL
0x5000	x * 1 Nm	REAL
0x5100	x * 1 N	REAL
0x6210	x * (360/65536)°/s	LREAL
0x6211	x * (360/131072)°/s	LREAL
0x6212	x * (360/262144)°/s	LREAL
0x6213	x * (360/524288)°/s	LREAL
0x6214	x * (360/1048576)°/s	LREAL
0x6215	x * (360/2097152)°/s	LREAL

Index	Function	Target Datatype
0x6216	x * (360/4194304)°/s	LREAL
0x6217	x * (360/8388608)°/s	LREAL
0x6218	x * (360/16777216)°/s	LREAL
0x6219	x * (360/33554432)°/s	LREAL
0x621A	x * (360/67108864)°/s	LREAL
0x621B	x * (360/134217728)°/s	LREAL
0x621C	x * (360/268435456)°/s	LREAL
0x621D	x * (360/536870912)°/s	LREAL
0x621E	x * (360/1073741824)°/s	LREAL
0x621F	x * (360/2147483648)°/s	LREAL
0x6220	x * (360/4294967296)°/s	LREAL
0x6A00	x * 1E-06 m/s	LREAL
0x6A01	x * 1E-07 m/s	LREAL
0x6A02	x * 1E-08 m/s	LREAL
0x6A03	x * 1E-09 m/s	LREAL
0x6A04	x * 1E-10 m/s	LREAL
0x6A05	x * 1E-11 m/s	LREAL
0x6A06	x * 1E-12 m/s	LREAL
0x7000	x * 0.0001 rpm/s	REAL
0x7100	x * 1E-07 m/s^2	REAL
0x8000	x * 1 rpm	REAL
0x8100	x * 1 m/s	REAL
0x9000	x * 1 Nm/rad/s	REAL
0x9100	x * 1 N/m/s	REAL
0xA000	x * 1 Nm/rad	REAL
0xA100	x * 1 N/m	REAL
0xB000	x * 1 kg m^2	REAL
0xB100	x * 1 kg	REAL

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