# KNX: Eine Codesys-Steuerung einbinden

Die Codesys-Steuerung unterstützt nur eine IP-basierende Anbindung.

## Hardware

- 1x ABB Spannungsversorgung: SV/S 30.640.5.1
- 1x ABB IP-Schnittstelle: IPR/S 3.1.1
- 1x ABB Schaltaktor: SA/S 4.6.2.1
- 1x Gira Taster-BA 2f 1-Punkt: 5161 30

## Voraussetzungen ETS

Die ETS lag in der Version 5.6.5 Build 1109 vor.

- Installation der Produktdateien (\*.knxprod) für oben genannte Geräte
- Installation der Produktdatei KNX\_CDS\_Gateway.knxprod f
  ür die Codesys-Steuerung. Die Datei befindet sich im CODESYS-KNX-Package (<Installations-Pfad>\CODESYS KNX\<Version>\ETS5\KNX\_CDS\_Gateway.knxprod).

nload	🛛 🕨 3S-Smart	Software Solutions GmbH 🕨 Controller	Controller			
*	Security	Manufacturer *	Name	Order Numbe	Medium Type	Application
1	]	3S-Smart Software Solutions GmbH	CODESYS KNX	23030000232	P	PLC Application
•						
					45	
r	nload (	Noad 💮 > 35-Smart	nload       Image: Security     Manufacturer *       Security     Manufacturer *       Image: Security     35-Smart Software Solutions GmbH	nload       Image: Security     Manufacturer *     Name       Image: Security     Manufacturer *     Name       Image: Security     3S-Smart Software Solutions GmbH     CODESYS KNX	nload  Security Manufacturer * Name Order Numbo Security Software Solutions GmbH CODESYS KNX 23030000232	nload  Security Manufacturer  Name Order Numb/ Medium Type Solutions GmbH CODESYS KNX 23030000232 IP

• IP-Schnittstelle als Kommunikationsschnittstelle eingetragen

	<ul> <li>Configured Interfaces</li> <li>Discovered Interfaces</li> </ul>
	Intel(R) Ethernet Connection (2) I219-LM (224.0.23.12)
Items: 1 in Building Parts 🔹 R	💁 1.1.0 IPR/S3.1.1 IP-Router,REG (192.168.99.112:3671)
IPR/S3.1.1 IP-Router,REG (192.168.99.112:3671)	

- Installation und Aktivierung des "DcaCodeSys"-Plugins.
   Die Datei befindet sich im CODESYS-KNX-Package (<Installations-Pfad>\CODESYS KNX\<Version>\ETS5\DcaCodeSys.etsapp).
- Installation und Aktivierung des "Compatibility Mode App"

Ap	ps	+ 0		2 aktiv / 1	) installier
		Name	Hersteller	Version	Lizenz
v	*	Compatibility Mode App	KNX Association	5.6.1109.31179	,
V	۲	DcaCodeSys	CodeSys	0.1.0.10	G.
	9	Device Compare	KNX Association	5.6.1109.31179	•
	ſ,	Device Templates	KNX Association	5.6.1109.31179	•
	٠	EIBlib/IP	KNX Association	5.6.1109.31179	•
	••	Extended Copy	KNX Association	5.6.1109.31179	•
	ø	Labels	KNX Association	5.6.1109.31179	•
	:=	Project Tracing	KNX Association	5.6.1109.31179	•
	0	Replace Device	KNX Association	5.6.1109.31179	•
		Split and Merge	KNX Association	5.6.1109.31179	•
		ETS Version ETS 5.6.5	(Build 1109) Li	zenz ETSS Lite	Apps 2 al

Den unter der Hardware genannten Geräte wurde eine physikalische Adresse zugewiesen

• Die unter "Hardware" genannten Geräte wurden mit folgenden Gruppenadressen verbunden

Schaltaktor:

🔲 Buildings	Nu	umber 4	Name	Object Function	Description	Group Address	Length	C R	w	т	U Data Type	Priority
Dynamic Folders	■2 0		General	In Operation			1 bit	C R	-	T -	boolean	Low
A 🛱 MyBuilding	■2 10		Output A	Switch	Switch Channel A Switch	0/0/1, 0/1/0	1 bit	с -	W		switch, switch	Low
4 Election	■2 29		Output A	Status Switch	Switch Channel A State	0/0/2	1 bit	C R	-	т -	switch	Low
	<b>=</b> ‡ 30		Output B	Switch	Switch Channel B Switch	0/0/3, 0/1/0	1 bit	с -	W		switch, switch	Low
د Room01.06	∎‡ 49		Output B	Status Switch	Switch Channel B State	0/0/4	1 bit	C R	-	т -	switch	Low
I.1.0 IPR/S3.1.1 IP Router, MDRC	■‡ 50		Output C	Switch	Switch Channel C Switch	0/0/5, 0/1/0	1 bit	с -	W		switch, switch	Low
I.1.6 SV/S30.640.5.1 Power Supply, Diagnosis, MDRC	■‡ 69		Output C	Status Switch	Switch Channel C State	0/0/6	1 bit	C R	-	т -	switch	Low
1.1.7 SA/S4.6.2.1 Switch Actuator 4f.6A M MDRC	■‡ 70		Output D	Switch	Switch Channel D Switch	0/0/7, 0/1/0	1 bit	с -	W		switch, switch	Low
I.1.8 2-g water-prot surf-mnt push-butn bus coup 1-pt op	■2 89		Output D	Status Switch	Switch Channel D State	0/0/8	1 bit	C R	-	т -	switch	Low

Schalter:

🔝 Buildings 🔹		Number '	Name	Object Function	Description	Group Address	Length	С	RV	VТ	U	Data Type	Priority
Dynamic Folders	<b>#</b> #	)	Button 1	Switching	Switch Channel A Switch	0/0/1	1 bit	C F	W	т	U	1-bit, 1-bit	Low
🔺 💼 MyBuilding	<b>■</b> ‡ 1		Button 2	Switching	All Channels Off	0/1/0	1 bit	C F	W	Т	U	1-bit, 1-bit	Low
4 📑 Floor1													
4 🗔 Room01.06													
1.1.0 IPR/S3.1.1 IP Router, MDRC													
I.1.6 SV/S30.640.5.1 Power Supply, Diagnosis, MDRC													
I.1.7 SA/S4.6.2.1 Switch Actuator,4f,6A,M,MDRC													
1.1.8 2-g water-prot surf-mnt push-butn bus coup 1-pt op													

## Vorbereitung der Codesys-Steuerung

- Stellen Sie sicher, das die Steuerung die KNX-Anbindung unterstützt.
  Ab Version 3.5SP14 unterstützen die Control SL Produkte den KNX Stack (Es muss keine Komponente hinzugefügt werden) ausser für CODESYS Control WIN. Hier muss die KNX-Komponente im CODESYSControl.cfg hinzugefügt werden
- Fügen Sie die Komponente in der Datei CODESYSControl.cfg ein:

[ComponentManager] Component.X=CmpKNXStack.dll

## Vorbereitung im Codesys-Projekt

- Erzeugen Sie ein "Standardprojekt" und wählen Sie als Gerät CODESYS Control Win V3 aus.
- Definieren Sie das Zielsystem via Netzwerksuche.

KNX_SupportEquipment_project* - CODESYS	
Ele Edit View Brojekt Build Omine Debug Tools Window jep B&/Olet	
비율·비용·Iooxy:@@XIMA@G@I@IM-DIEIMG@Y==KifaA	
Lences V 4 X	
The coupon experience     Communication Settings     Communication Settings     Communication Settings	
i Di Pic Logic	
C Application Applications	
Bin concentration Backup and Restore	
Files	
· 倒 PLC_PRG Gateway Gateway	
Gateway-1 • [0301.4000.034A] (active)	•
PLC Settings IP-Address: Device Name: localbot KERNTDC	
PLC Shell	
1217 0301.4000.034A	
Users and Groups Target ID:	
Symbol Rights 0000 0001	
Target Type:	
Task Deployment 4090	
Status Target Vendor: 35-5mart Software Solutions Gm	эΗ
Taroet Version:	
Information 3.5.13.10	

• Hängen Sie im Gerätebaum einen Ethernet-Adapter Ethernet ein und bestimmen Sie, welches Interface genutzt werden soll

Sollte noch kein Zielsystem bestimmt sein, erscheint eine Fehlermeldung "Gateway nicht konfiguriert"

~ ~			
ow <u>H</u> elp B <u>A</u> CNet			
🛱   🛅 - 👔   🎬   🧐 🔅 👘 🕞	🔏   Çi 🧐 di 🕂	= \$   ¢   <b>≋</b>   <del>⊽</del>   ∛	2
Device 🔐 Ethernet 🗙	]		
General			
	Interface:		
Status	IP Address	192 . 168 . 0 . 1	
Ethernet Device I/O Manning	Subnet Mask	255 . 255 . 255 . 0	
calculate before to happing			
Ethernet Device IEC Objects	Default Gateway	0.0.0.0	
Ethemet Device IEC Objects	Adjust Operating	g System Settings	
Information			
	ow Help BACNet Device Ethernet X General Status Ethernet Device I/O Mapping Ethernet Device IEC Objects Information	ow Help BACNet Device Ethernet X General Status Ethernet Device I/O Mapping Ethernet Device IEC Objects Information Information	ow Help BACNet   Image: Status Image: Status   Ethernet Device I/O Mapping   Ethernet Device IEC Objects   Information   Information Informati

• Hängen Sie im Gerätebaum unterhalb des Ethernet-Adapters einen KNX ein

KNX_SupportEquipment.project* - CODESYS		_	_	
Eile Edit View Project Build Online Debug Tools Windo	w <u>H</u> elp B <u>A</u> CNet			
🎦 🚔 🔚   🎒   いつべる 🖻 🋍 🗙   🛤 🎼 🌿	🖹   🛅 - 📑   🎬   🞯 🕠 🕞 📲	💐   Çi 🖓 🖕 📲	I\$ ¢  <b>⊼</b>  ╤ ∛	2
Devices 👻 🕂 🗙	Device Ethernet X			
🖃 🎒 KNX_SupportEquipment 💽				
Evice (CODESYS Control Win V3)	General	Interface: AN-Verbi	induna	
	Status	IR Address	102 168 00 74	
		IF Address	152 . 100 . 55 . 74	
	Ethernet Device I/O Mapping	Subnet Mask	255 . 255 . 248 . 0	
a K Configuration		Default Gateway	192 . 168 . 100 . 1	
🖻 🍪 MainTask (IEC-Tasks)	Ethernet Device IEC Objects	Adjust Operating	System Settings	
PLC_PRG	Information		-	
🖹 🔟 Ethernet (Ethernet)				
mill KNX (KNX)				

 Innerhalb des Reiters Allgemein können Sie beliebige Inputs definieren. Im folgenden sind 2 Eingangskanäle zum Empfangen der Telegramme des Tasters und ein Ausgangskanal zum Schalten des Aktors angelegt wurden:



Die KNX-Anbindung ist in der Summe auf 1000 Ein- und Ausgänge begrenzt

• Diese Konfiguration exportieren Sie in ein für die ETS lesbares XML-Format

General       Add        Edit       Delete       Export to ETS       Import CSV       Export CSV         KNX I/O Mapping       Channel Number       Group Object Name       Group Object Function       Type       DPT         1       ReceiveOnOff       From the switch       Input       DPT 1.*         2       ReceiveOffOnly       From the Switch       Input       DPT 1.*         3       SendOoOff       To switch channel 8       Output       DPT 1.*	Device Ethernet	MX X				
KNX I/O Mapping         Channel Number         Group Object Name         Group Object Function         Type         DPT           1         ReceiveOnOff         From the switch         Input         DPT 1.*           2         ReceiveOffOnly         From the Switch         Input         DPT 1.*           3         SendOoOff         To switch drameal B         Output         DPT 1.*	General	🕂 Add 📝 Edit 🗙	Delete Export to ETS Import	CSV Export CSV		
KNX I/O Mapping         1         ReceiveOnOff         From the switch         Input         DPT 1.*           KNX IEC Objects         2         ReceiveOffOnly         From the Switch         Input         DPT 1.*           3         SendOnOff         To switch channel B         Output         DPT 1.*	VNV I/O Managing	Channel Number	Group Object Name	Group Object Function	Туре	DPT
KNX IEC Objects 2 ReceiveOffOnly From the Switch Input DPT 1.* 3 SendOoOff To switch dapped 8 Output DPT 1*	KNX I/O Mapping	1	ReceiveOnOff	From the switch	Input	DPT 1.*
3 SendOnOff To switch channel B Output DPT 1 *	KNX IEC Objects	2	ReceiveOffOnly	From the Switch	Input	DPT 1.*
S Sendorion To switch chamers Output OPT 1.		3	SendOnOff	To switch channel B	Output	DPT 1.*

Innerhalb des IO-Mappings werden für jeden Kanal automatisch Datenbereiche angelegt.

Zudem sind 2 Datenpunkte erstellt wurden, womit die Zuweisung der physikalischen Adresse aus der ETS-Software möglich ist:

General	Find		Filter Show all	for IO chann	or IO channel → Go to instanc			
KNX I/O Mapping	Variable	Mapping	Channel	Address	Type	Unit	Description	
Kix to happing	(m 🐐		Program LED Status	%IX0.0	BOOL		Program LED Stat	
KNX IEC Objects	🍫		Program Button	%QX0.0	BOOL		Program Button	
	💼 🁋		1 - ReceiveOnOff - From the switch	%IB1		DPT 1.*		
Status	🖶 🍢		Control 1 - ReceiveOnOff - From the switch	%QB1	BYTE			
	🖮 ··· 🍫		2 - ReceiveOffOnly - From the Switch	%IB3		DPT 1.*		
Information	😟 🍢		Control 2 - ReceiveOffOnly - From the Switch	%QB2	BYTE			
	<u> </u>		3 - SendOnOff - To switch channel B	%QB3		DPT 1.*		

## Einbinden des Codesys-Gerätes in der ETS

 Über den Katalog kann die Steuerung dem ETS-Projekt hinzugefügt werden. Weißen Sie dem Gerät eine physikalische Adresse zu:

Buildings 🔻							∧ □ <mark>×</mark>	E Proper	ies	
🕂 Add Devices   🐑 🗙 Delete 👲 Download   🔹 🚯 Info 🍨 🐒 F	Reset 👋 Unload 🛪 🚔 Print						Search 🔎	8		6
Buildings	<ul> <li>Address *</li> </ul>	Room	Description	Application Program	Adr Prg Par Grp Cfg	Manufacturer	Order Nurr Product	Settings	Comments	Information
Dynamic Folders	10.1	Room01.06		PLC Application		3S-Smart Software Sol.	23030000 CODESYS KNX	Name		
A B MyBuilding	1.1.0	Room01.06		IP Router/2.0	🛛 🛇	ABB	2CDG 110 1IPR/S3.1.1 IP Router,MDRC	CODESYS KN	x	
A 📕 Floor1	1.1.6	Room01.06		Power Supply, Diagnosis, 640mA/1.1	⊘ ⊘	ABB	2CDG 110 1SV/S30.640.5.1 Power Supply, Dia	Individual A	Idress	
	1.1.7	Room01.06		Switch 4f 6M/3.2b	00000	ABB	2CDG 110 1SA/S4.6.2.1 Switch Actuator,4f,6A		10	* Davis
4 L_ Room01.06	1.1.8	Room01.06		Switching, dim., venet. blind, value, scene 10F		GIRA Giersiepen	5161 30 2-g water-prot surf-mnt push-bu		1.0 1	+ Park
I.0.1 CODESYS KNX								Description		
I.1.0 IPR/S3.1.1 IP Router, MDRC										
I.1.6 SV/S30.640.5.1 Power Supply, Diagnosis, MDRC										
1.1.7 SA/S4.6.2.1 Switch Actuator,4f,6A,M,MDRC										

• Über den Reiter DCA kann die zuvor im Codesys exportierte Konfiguration in die ETS eingelesen werden:



Nach dem Import können die unter Codesys erstellten Ein- und Ausgänge mit Gruppenadressen verbinden

Unload 🔹 🚔	Print									
Number	* Name	Object Function	Description	Group Address	Leng	h C i	w	TUE	Data Type	Priority
<b>■</b> ‡ 1	ReceiveOnOff	From the switch	Switch Channel A Switch	0/0/1	1 bit	с -	W T	U 1-	bit	Low
<b>■‡</b> 2	ReceiveOffOnly	From the Switch	All Channels Off	0/1/0	1 bit	с -	W T	U 1-	bit	Low
<b>1</b>	SendOnOff	To switch channel B	Switch Channel B Switch	0/0/3	1 bit	C R	- T	- 1-	bit	Low
					3					
	Unload * 🚔 Number 211 22 23	Unload * Ame Number * Name #21 ReceiveOnOff #22 ReceiveOffOnly #23 SendOnOff	Unload ¥ Anne Object Function	Unload ▼ Ame Object Function Description	Unload ▼ Ame         Object Function         Description         Group Address           It         ReceiveOnOff         From the switch         Switch Channel A Switch         0/0/1           It         ReceiveOffOnly         From the Switch         All Channels off         0/1/0           It         Sensition         To switch channel B         Switch Channel B Switch         0/0/3	Unload ▼	Unload	Unload ▼ Ame Object Function Description Group Address Length C R W It ReceiveOnOffy From the switch Switch Channel A Switch 0/0/1 1 bit C - W T It ReceiveOffOnly From the Switch All Channel 8 Switch O/1/0 1 bit C R - W It SeecheOff 0/1/0 1 bit C R - T It SeecheOff 0/1/0 1 bit C R - T It C R W It SeecheOff 0/1/0 1 bit C R - T	Unload * ⇔ Print       Unload * ⇔ Print       Number * Name     Object Function     Description     Group Address     Length C     R     W T     U       #2  1     ReceiveOnoff     From the switch     Switch Channel A Switch     0/0/1     1 bit C - W T     U 1       #2  2     ReceiveOffOnOff     To switch channel 8     Switch Channel 8     0/0/2     1 bit C - W T     U 1       #2  3     SendOnOff     To switch channel 8     Switch Channel 8 Switch     0/0/3     1 bit C R - T - 1	Unload * Ame Object Function Description Group Address Length C R W T U Data Type           Image 1         ReceiveOnOfF         From the switch         Switch Channel A Switch         O/U/I         Ibit C - W T U         I Data Type           #2         ReceiveOfOnly         From the Switch         All Channel AG         0/U/O         Ibit C - W T U         I-bit           #2         SendOnOff         To switch channel B         Switch Channel B         0/U/O         Ibit C R + T - 1-bit

# Übertragung der ETS-Konfiguration auf die Steuerung

• Wie bei jedem anderen Gerät, muss auch der Codesys-Steuerung die physikalische Adresse zugewiesen werden. Hierzu muss nach der Aufforderung in der ETS der Datenpunkt auf gesetzt werden:

KNX_SupportEquipment.project*	- CODESYS		-			-		x		-		-				_	
Ele Edit View Project Build	Qnline Debug Tools Window Hel	p B <u>A</u> CNet						₹	iche X						a a		- 10
🎦 🚔 🛃 🕘 🗠 여 👗 🗞	🛍 🗙 I 🗛 🌿 🐴 🌿 I 🖼 I 🖄	•• 🖞   🕮	193 😅	<ul> <li>KID 11 4 4 8 [0 ].</li> </ul>	1412					22		🖸 1	2 Suchen			4	III\ 🗊 S
										_		-					(
Devices v 4 X	Device 🔐 Ethernet 🔐 KNX 🗙														-		
WW_SupportSuppment     WW_SupportSuppment     Good Support     Good S	General The bus is not running. The shown values are perhaps not actual																
	KNX I/O Mapping	I/O Mapping Find Filter Show all					-						∧ □ ×		Properties		
	KNX IEC Objects	Variable	Mapping	Channel	Address	Туре	Current Value	P				Search		ρ	🔎 Find and Replace		
		- <b>*</b>		Program LED Status	%EX0.0	BOOL	TRUE			Adr Prg Par	Grp Cfg		Manufacturer	Or	Workspaces		
🗏 🥵 MainTask	Status			Program Button	%QX0.0	BOOL	TRUE						3S-Smart Software S		Tada Barra		
-∰ PLC_F	Information	8- 🔅		1 - ReceiveOnOff - From the switch	%JB1					9 0	- 📀		ABB	200	V Todo Items		
🖹 😏 🚮 Ethernet (Ethernet		8 🔌		Control 1 - ReceiveOnOff - From the switch	%Q81	BYTE	0			9 0	- 📀		ABB	200	Pending Operations		
		8- 9		2 - ReceiveOffOnly - From the Switch	%IB3				00000		ABB 2C		1.4				
			Control 2 - ReceiveOffOnly - From the Switch		%Q82	BYTE	0		ene 10F (	0 🔿 🔿 🔿 🔿	00		GIRA Giersiepen	516	Active		History
		±-`\$		3 - SendOnOff - To switch channel B	%Q83									S Cancel all			
															1.0.1 CODESYS KNX (Room01.06)		
														Please press programming button			
															<ul> <li>Download(Pny, Addr.): Downloading</li> </ul>		

### Erfolgt dies rechtzeitig, wird das Zuweisen der physikalischen Adresse in der ETS dokumentiert:

Address *	Room	Description	Application Program	Adr Prg Par Grp Cfg	Manufacturer	Or Worksp	aces
1.0.1	Room01.06		PLC Application	🛇 🛇	3S-Smart Software Sol	230	
1.1.0	Room01.06		IP Router/2.0	○ ○	ABB	201 000010	ems
1.1.6	Room01.06		Power Supply, Diagnosis, 640mA/1.1	⊘ ⊘	ABB	2CI 💿 Pending	g Operations
1.1.7	Room01.06		Switch 4f 6M/3.2b	00000	ABB	201	
1.1.8	Room01.06		Switching, dim., venet. blind, value, scene 10F	00000	GIRA Giersiepen	516	Active
						🥒 Clear Hi	story
						1.0.1 COI	DESYS KNX
						Down	nload(Phy. Addr.): Finished
	Address *	Address *         Room           ■10.1         Reom0106           ■11.0         Reom0106           ■11.5         Reom0106           ■11.7         Reom0106           ■11.8         Reom0106	Address*         Room         Description           □ 10.1         Room0106	Address*         Room         Description         Application Program           □ 10.1         Room0106         PLC Application           □ 10.0         Room0106         IP Router 2.0           □ 11.0         Room0106         Power Supply, Dagnoss, 640mA/11           □ 11.7         Room0106         Switch 440M32b           □ 11.8         Room0106         Switching, dim, venet. blind, value, scene 10F	Address *         Room         Description         Application         Proc Application           11.01         Room0106         PR-CApplication         -	Address*         Room         Description         Application Program         Add Prg Par Grp Cfg         Manufacturer           □ 1.01         Room01.06         PC. Application         O O         35-Smrt Software Sol           □ 1.01         Room01.06         PR-Neutre 20         O O         A83           □ 1.06         Recond1.06         Prever Supply, Dagroups, 640mA/11         O O         A83           □ 1.17         Room01.06         Switch Ming, dim, venet blind, value, scene 10F- O O O         A83           □ 1.13         Room01.06         Switching, dim, venet blind, value, scene 10F- O O O O         GIRA Giersiepen	Address*         Room         Description         Application Program         Add Prg Par Grp Cfg         Mundracture         Or         Worksp           11.01         Room0106         Pic Application         O         O         35-smart Software 5o.L 230         O         Todo It           11.00         Room0106         PiR Roure/20         O         O         A88         2CC         O         Pendin           11.01         Room0106         Pixews Supply: Dagnois, 640mA/11         O         O         A88         2CC         O         Pendin           11.17         Room0106         Switching, dim, venet. blind, value, scene 10F         O         O         A88         2CC         O         Clear Hi           11.13         Room0106         Switching, dim, venet. blind, value, scene 10F         O         O         O         GIRA Gersiepen         516

### Da die Steuerung noch kein gültiges Programm besitzt, muss dieses noch aus der ETS geladen werden.

1.0.1	Room01.06	PLC Application	00000	3S-Smart Software Sol
1.1.0	Room01.06	IP Router/2.0	⊘ ⊘	ABB
1.1.6	Room01.06	Power Supply, Diagnosis, 640mA/1.1	⊘ ⊘	ABB
1.1.7	Room01.06	Switch 4f 6M/3.2b	00000	ABB
1.1.8	Room01.06	Switching, dim., venet. blind, value, scene 10	JF 🛇 🛇 🛇 🛇 🛇	GIRA Giersiepen



### Ebenso kann der Aktor (Kanal B) über das IO-Mapping geschaltet werden:

Devices v A X	Ethernet 🕤 Device	PLC_PRG										
□ AVX_SupportEquipment					-							
B 😏 🗊 Device [connected] (CODESYS Control Win V3)	General	Find Filter Show all				<ul> <li>Add FB for IO channel * Go to instance</li> </ul>						
B I PLC Logic	KNX I/O Mapping	Variable	Manning	Channel	Address	Type	Current Value	Prepared Value	Unit	Description		
Application [run]						1000						
- Mill Library Manager		- C *		Program LED Status	%IX0.0	BOOL	FALSE			Program LED Status		
	KNX IEC Objects	<b>*</b>		Program Button	%QX0.0	BOOL	FALSE			Program Button		
		iii - *≱		1 - ReceiveOnOff - From the switch	%IB1				DPT 1.*			
MainTask (Conliguration	Status	10 - <b>5</b> 0		Control 1 - ReceiveOnOff - From the switch	%QB1	BYTE	0					
Pin c roc		10- M		2 - ReceiveOffOnly - From the Switch	%IB3				DPT 1.*			
	Information	10 - <b>5</b> 0		Control 2 - ReceiveOffOnly - From the Switch	%Q82	BYTE	0					
Conternet (chernet)		B-50		3 - SendOnOff - To switch channel B	%QB3				DPT 1.*			
C [] NIX ((NX))		÷-**		Trigger/Disable Cyclic, send on change	%QB3	BYTE	0			false -> true send once/true disable object		
		- L. 🍫		Value	%QX4.0	BOOL	TRUE					