

# Technical Bulletin - Inverting Inputs

How to invert inputs so an active low signal is correctly processed

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## Problem


The Stuertz infeed table has active low inputs for the axis datum sensors, and for the "Vorlaufwagen" Out sensor

Also

The WEG Inverter "Healthy" signal is active high, yet the software alarm is looking for a low input

## Solution

Additional functionality added to front end v 6.4.11.0 and back end v6.6000 to utilise the "inverted flag in the ioDef file.

 ...This flag has not been utilised in TwinCAT software to this point

## Stuertz Infeed

To flag an input "inverted", set the 6th field in the IODef to 1

```
InA_GZHome,4,1,0,0,1,0,0,0,-1,0,1,  
InA_GZLimitF,5,0,0,1,0,0,0,-1,-1,0,  
InA_GZLimitR,6,0,0,1,0,0,0,-1,-1,0,  
InA_GYHome,7,1,0,0,1,0,0,1,-1,0,1,  
InA_GYLimitF,8,0,0,0,1,0,0,-1,-1,0,  
InA_GYLimitR,9,0,0,0,1,0,0,-1,-1,0,  
InA_GXHome,10,1,0,0,1,0,0,2,-1,0,1,  
InA_GXLimitF,11,0,0,0,1,0,0,-1,-1,  
InA_GXLimitR,12,0,0,0,1,0,0,-1,-1,
```

The signal from the input will then be inverted internally.

To make this identifiable to maintenance staff, the normal Red and Green on the IO screen is darker in colour.

Inputs				
X4 InA_GZHome	X46 InA_ButStart	X50 InB_YHome	X120 InF_SYHome	X195 InF_ESFront
X7 InA_GYHome	X47 InA_ButStop	X53 InB_ZHome	X123 InF_SZHome	X259 InF_EjectHmA
X10 InA_GXHome	X48 InA_ButReset	X56 InB_RHome	X126 InF_SRHome	X260 InF_EjectOuA
X41 InA_24vBusOk	X49 InA_ESConsole	X59 InB_ClampOTH		X193 InF_EjectHmB
X42 InA_24vModO	X160 InA_ButAuto	X61 InB_ClampOSH		X194 InF_EjectOuB
X43 InA_AirOk	X117 InA_ESRearMi	X63 InB_ClampITH	X136 InF_ClampOTH	X202 InF_EjCPadHm
X45 InA_EStop	X131 InA_ESRearEn	X65 InB_ClampISH	X137 InF_ClampOSH	X216 InF_EjectLowH
	X162 InA_ESFront	X110 InB_OilerOK	X139 InF_ClampISH	X217 InF_EjectLowO
	X163 InA_ESFrontEn	X118 InB_ESCabinet	X140 InF_RollerITH	
	X166 InA_ButLoad		X170 InF_GuardFron	
			X171 InF_GuardRea	
			X174 InF_ESRear	

## WEG Ovl Inputs

```

ioDef.mul
File Edit View
InB_InvOk,342,0,0,0,False,True,19,2,-,False,0,X342
OuB_TLBRK,488,1,0,0,False,False,19,4,-,False,0,X488
InA_ModClear,280,1,0,0,False,False,20,0,-,False,0,X280
InA_Ocut1,332,1,0,0,False,False,21,0,-,False,0,X332
InA_Ocut2,333,1,0,0,False,False,21,1,-,False,0,X333
InA_Ocut3,334,1,0,0,False,False,21,2,-,False,0,X334
InA_Ocut4,335,1,0,0,False,False,21,3,-,False,0,X335
InA_Ocut5,336,1,0,0,False,False,21,4,-,False,0,X336
InA_Ocut6,337,1,0,0,False,False,21,5,-,False,0,X337
InA_Ocut7,338,1,0,0,False,False,21,6,-,False,0,X338
InA_Ocut8,339,1,0,0,False,False,21,7,-,False,0,X339
InA_WheelHm,304,1,0,0,False,False,20,1,-,False,0,X304
InA_Chain,345,1,0,0,False,False,20,2,-,False,0,X345
InA_ConvOvl,326,1,0,0,True,False,20,4,-,False,0,X326
InA_WheelOvl,464,1,0,0,True,False,20,5,-,False,0,X464
InF_StartSaw,205,1,0,0,False,False,51,0,-,False,0,X205
InF_StopSaw,204,1,0,0,False,False,51,1,-,False,0,X204
InF_EsRstSaw,206,1,0,0,False,False,51,2,-,False,0,X206
InF_AutoSaw,201,1,0,0,False,False,51,3,-,False,0,X201
InF_Resume,300,0,0,0,False,False,51,5,-,False,0,300

```