0

SFB4 - SFB OnDelay Timer
SFB4_OnDelayTimer

SFB4 - SFB OnDelay Timer		
SFB4_OnDelayTimer	SFB4_OnDelayTimer	...
iP100Ms	SFB4_OnDelayTimer.iP100Ms	0
IN	SFB4_OnDelayTimer.IN	0
PT	SFB4_OnDelayTimer.PT	0
Q	SFB4_OnDelayTimer.Q	0

1

SFB5 - SFB OffDelay Timer
SFB5_OffDelayTimer

SFB5 - SFB OffDelay Timer		
SFB5_OffDelayTimer	SFB5_OffDelayTimer	...
iP100Ms	SFB5_OffDelayTimer.iP100Ms	0
IN	SFB5_OffDelayTimer.IN	0
PT	SFB5_OffDelayTimer.PT	0
Q	SFB5_OffDelayTimer.Q	0

2

FB112_VerticaalConveyor

FB112_VerticaalConveyor	FB112_VerticaalConveyor ...
iINIT	FB112_VerticaalConveyor.iINIT 0
iEnableAutomatic	FB112_VerticaalConveyor.iEnableAutomatic 0
iEnableElevator	FB112_VerticaalConveyor.iEnableElevator 0
iDischargeCoveyor_Ready	FB112_VerticaalConveyor.iDischargeCoveyor_Ready 0
iEnableManual	FB112_VerticaalConveyor.iEnableManual 0
iManualForward	FB112_VerticaalConveyor.iManualForward 0
iManualReverse	FB112_VerticaalConveyor.iManualReverse 0
iProductReadyForInfeed	FB112_VerticaalConveyor.iProductReadyForInfeed 0
iReset	FB112_VerticaalConveyor.iReset 0
iProductRelease_B1	FB112_VerticaalConveyor.iProductRelease_B1 0
iEndInfeedConveyor_B7	FB112_VerticaalConveyor.iEndInfeedConveyor_B7 0
iStartTimeFrame_B3	FB112_VerticaalConveyor.iStartTimeFrame_B3 0
iProductOnOutfeed_B8	FB112_VerticaalConveyor.iProductOnOutfeed_B8 0
iProductLeftOutfeed_B9	FB112_VerticaalConveyor.iProductLeftOutfeed_B9 0
iMonitorRotation	FB112_VerticaalConveyor.iMonitorRotation 0
iSupplyEmpty	FB112_VerticaalConveyor.iSupplyEmpty 0
iPuls_FP_100msec	FB112_VerticaalConveyor.iPuls_FP_100msec 0
iEmptyTimeEnabled	FB112_VerticaalConveyor.iEmptyTimeEnabled 0
iTimeInfeedAllowed	FB112_VerticaalConveyor.iTimeInfeedAllowed 0
iTimeProductOnInfeed	FB112_VerticaalConveyor.iTimeProductOnInfeed 0
iTimeCheckSensors	FB112_VerticaalConveyor.iTimeCheckSensors 0
iTimeMonitorInfeed	FB112_VerticaalConveyor.iTimeMonitorInfeed 0
iTimeCheckOutfeed	FB112_VerticaalConveyor.iTimeCheckOutfeed 0
iTimeMonitorRotation	FB112_VerticaalConveyor.iTimeMonitorRotation 0
iTimeDelayMonitorRotation	FB112_VerticaalConveyor.iTimeDelayMonitorRotation 0
oProrunnerForward	FB112_VerticaalConveyor.oProrunnerForward 0
oProrunnerReverse	FB112_VerticaalConveyor.oProrunnerReverse 0
oSupplyConveyor	FB112_VerticaalConveyor.oSupplyConveyor 0
oInfeedConveyor	FB112_VerticaalConveyor.oInfeedConveyor 0
oOutfeedConveyor	FB112_VerticaalConveyor.oOutfeedConveyor 0
oProrunnerIsEmpty	FB112_VerticaalConveyor.oProrunnerIsEmpty 0
oFaultTimeFrameSensor	FB112_VerticaalConveyor.oFaultTimeFrameSensor 0
oFaultProdReleaseSensor	FB112_VerticaalConveyor.oFaultProdReleaseSensor 0
oFaultProductOnOutfeed	FB112_VerticaalConveyor.oFaultProductOnOutfeed

oFaultProductInfeedtime	FB112_VerticaalConveyor.oFaultProductInfeedtime 0
oFaultMonitorRotation	FB112_VerticaalConveyor.oFaultMonitorRotation 0

(End)

General			
Vendor:	Allen-Bradley	Mode:	Offline
Revision:	16.21	Key Switch Position:	Offline
Chassis Type:	1756-A10 10-Slot ControlLogix Chassis	Created:	7/04/2008 15:38:59
Slot:	0	Edited:	7/05/2014 17:12:32
Serial Port			
Mode:	System	Control Line:	No Handshake
Baud Rate:	19200	RTS Send Delay:	0 (x20 ms)
Date Bits:	8	RTS Off Delay:	0 (x20 ms)
Parity:	None	DCD Wait Delay:	0 (x1 sec)
Stop Bits:	1		
System Protocol - DF1 Master			
Station Address:	0	Polling Mode:	Message Based (slave can initiate messages)
Transmit Retries:	3	Error Detection:	BCC
ACK Timeout:	50 (x20 ms)	Enable Duplicate Detection:	Yes
Relay Message Wait:	5 (x20 ms)		
System Protocol - DF1 Point to Point (Current)			
Station Address:	0	Embedded Responses:	Autodetect
NAK Receive Limit:	3	Error Detection:	BCC
ENQ Transmit Limit:	3	Enable Duplicate Detection:	Yes
ACK Timeout:	50 (x20 ms)		
System Protocol - DF1 Radio Modem			
Station Address:	0	Error Detection:	BCC
Store and Foward:	No		
System Protocol - DF1 Slave			
Station Address:	0	EOT Suppression:	No
Transmit Retries:	3	Error Detection:	BCC
Slave Poll Timeout:	3000 (x20 ms)	Enable Duplicate Detection:	Yes
System Protocol - DH485			
Station Address:	0	Token Hold Factor:	1
Max Station Address:	31	Error Detection:	CRC
User Protocol - ASCII			
Read/Write Buffer Size:	82 bytes	Append Character 2:	'$l'
Termination Character 1:	'$r'	XON/XOFF:	No
Termination Character 2:	'$FF'	Echo Mode:	No
Append Character 1:	'$r'	Delete Mode:	Ignore
Date/Time			
Date and Time:	<offline>		
Time Zone:	<offline>		
Daylight Saving (+00:00):	<offline>		
CST Master:	No		
Is Master:	<offline>	Duplicate Master Detected:	<offline>
Synchronized with Master:	<offline>	Timer Hardware Faulted:	<offline>
Advanced			
Controller Fault Handler:	<none>	Security:	No Protection
Power-Up Handler:	<none>	Match Project To Controller:	No
System Overhead Time Slice:	20 %	Serial Number:	004CD9F1
During unused System Overhead Time Slice:	Run Continuous Task		
SFC Execution			
Execution Control:	Execute current active steps only	Last Scan of Active Step:	Don't scan
Restart Position:	Restart at most recently executed step		
Redundancy			
Redundancy Enabled:	No		
Nonvolatile Memory			
<offline>			
Memory (Estimate)			
Memory Option:	1756-L55 M12		
Estimated I/O Memory			
Total Memory:	229,376 bytes	Max Used:	42,540 bytes
Free Memory:	186,836 bytes	Largest Block Free:	186,836 bytes
Used Memory:	42,540 bytes		

Total Memory:	769,200 bytes	Max Used:	964,808 bytes
Free Memory:	0 bytes	Largest Block Free:	-195,608 bytes
Used Memory:	964,808 bytes		
Memory Option:	1756-L55 M22		
Estimated I/O Memory			
Total Memory:	229,376 bytes	Max Used:	42,540 bytes
Free Memory:	186,836 bytes	Largest Block Free:	186,836 bytes
Used Memory:	42,540 bytes		
Estimated Data and Logic Memory			
Total Memory:	769,200 bytes	Max Used:	964,808 bytes
Free Memory:	0 bytes	Largest Block Free:	-195,608 bytes
Used Memory:	964,808 bytes		
Memory Option:	1756-L55 M13		
Estimated I/O Memory			
Total Memory:	229,376 bytes	Max Used:	42,540 bytes
Free Memory:	186,836 bytes	Largest Block Free:	186,836 bytes
Used Memory:	42,540 bytes		
Estimated Data and Logic Memory			
Total Memory:	1,605,632 bytes	Max Used:	964,808 bytes
Free Memory:	640,824 bytes	Largest Block Free:	-195,608 bytes
Used Memory:	964,808 bytes		
Memory Option:	1756-L55 M23		
Estimated I/O Memory			
Total Memory:	229,376 bytes	Max Used:	42,540 bytes
Free Memory:	186,836 bytes	Largest Block Free:	186,836 bytes
Used Memory:	42,540 bytes		
Estimated Data and Logic Memory			
Total Memory:	1,605,632 bytes	Max Used:	964,808 bytes
Free Memory:	640,824 bytes	Largest Block Free:	-195,608 bytes
Used Memory:	964,808 bytes		
Memory Option:	1756-L55 M14		
Estimated I/O Memory			
Total Memory:	229,376 bytes	Max Used:	42,540 bytes
Free Memory:	186,836 bytes	Largest Block Free:	186,836 bytes
Used Memory:	42,540 bytes		
Estimated Data and Logic Memory			
Total Memory:	3,702,784 bytes	Max Used:	964,808 bytes
Free Memory:	2,737,976 bytes	Largest Block Free:	-195,608 bytes
Used Memory:	964,808 bytes		
Memory Option:	1756-L55 M24		
Estimated I/O Memory			
Total Memory:	229,376 bytes	Max Used:	42,540 bytes
Free Memory:	186,836 bytes	Largest Block Free:	186,836 bytes
Used Memory:	42,540 bytes		
Estimated Data and Logic Memory			
Total Memory:	3,702,784 bytes	Max Used:	964,808 bytes
Free Memory:	2,737,976 bytes	Largest Block Free:	-195,608 bytes
Used Memory:	964,808 bytes		
Memory Option:	1756-L55 M16		
Estimated I/O Memory			
Total Memory:	229,376 bytes	Max Used:	42,540 bytes
Free Memory:	186,836 bytes	Largest Block Free:	186,836 bytes
Used Memory:	42,540 bytes		
Estimated Data and Logic Memory			
Total Memory:	3,702,784 bytes	Max Used:	964,808 bytes
Free Memory:	2,737,976 bytes	Largest Block Free:	-195,608 bytes
Used Memory:	964,808 bytes		
Estimated Logic Memory			
Total Memory:	4,194,304 bytes	Max Used:	0 bytes
Free Memory:	4,194,304 bytes	Largest Block Free:	0 bytes
Used Memory:	0 bytes		

FB112_VerticaalConveyor v1.0

Available Languages

Relay Ladder

```
FB112_VerticaalConveyor
FB112_VerticaalConveyor          ? ...
iINIT                            ?
                                 ??
iEnableAutomatic                 ?
                                 ??
iEnableElevator                  ?
                                 ??
iDischargeCoveyor_Ready          ?
                                 ??
iEnableManual                    ?
                                 ??
iManualForward                   ?
                                 ??
iManualReverse                   ?
                                 ??
iProductReadyForInfeed           ?
                                 ??
iReset                           ?
                                 ??
iProductRelease_B1               ?
                                 ??
iEndInfeedConveyor_B7            ?
                                 ??
iStartTimeFrame_B3               ?
                                 ??
iProductOnOutfeed_B8             ?
                                 ??
iProductLeftOutfeed_B9           ?
                                 ??
iMonitorRotation                 ?
                                 ??
iSupplyEmpty                     ?
                                 ??
iPuls_FP_100msec                 ?
                                 ??
iEmptyTimeEnabled                ?
                                 ??
iTimeInfeedAllowed               ?
                                 ??
iTimeProductOnInfeed             ?
                                 ??
iTimeCheckSensors                ?
                                 ??
iTimeMonitorInfeed               ?
                                 ??
iTimeCheckOutfeed                ?
                                 ??
iTimeMonitorRotation             ?
                                 ??
iTimeDelayMonitorRotation        ?
                                 ??
oProrunnerForward                ?
                                 ??
oProrunnerReverse                ?
                                 ??
oSupplyConveyor                  ?
                                 ??
oInfeedConveyor                  ?
                                 ??
oOutfeedConveyor                 ?
                                 ??
oProrunnerIsEmpty                ?
                                 ??
oFaultTimeFrameSensor            ?
                                 ??
oFaultProdReleaseSensor          ?
                                 ??
oFaultProductOnOutfeed           ?
                                 ??
oFaultProductInfeedtime          ?
                                 ??
oFaultMonitorRotation            ?
```

Function Block

Structured Text

FB112_VerticaalConveyor(iINIT, iEnableAutomatic, iEnableElevator, iDischargeCoveyor_Ready, iEnableManual, iManualForward, iManualReverse, iProductReadyForInfeed, iReset, iProductRelease_B1, iEndInfeedConveyor_B7, iStartTimeFrame_B3, iProductOnOutfeed_B8, iProductLeftOutfeed_B9, iMonitorRotation, iSupplyEmpty, iPuls_FP_100msec, iEmptyTimeEnabled, iTimeInfeedAllowed, iTimeProductOnInfeed, iTimeCheckSensors, iTimeMonitorInfeed, iTimeCheckOutfeed, iTimeMonitorRotation, iTimeDelayMonitorRotation, oProrunnerForward, oProrunnerReverse, oSupplyConveyor, oInfeedConveyor, oOutfeedConveyor, oProrunnerIsEmpty, oFaultTimeFrameSensor, oFaultProdReleaseSensor, oFaultProductOnOutfeed, oFaultProductInfeedtime, oFaultMonitorRotation);

Parameters

Required	Name	Data Type	Usage	Description
X	FB112_VerticaalConveyor	FB112_VerticaalConveyor	InOut	
	EnableIn	BOOL	Input	
	EnableOut	BOOL	Output	
X	iINIT	BOOL	Input	Inintialising the Prorunner
X	iEnableAutomatic	BOOL	Input	Enable mode automatic
X	iEnableElevator	BOOL	Input	Enable clearence emergencystop, thermal etc.
X	iDischargeCoveyor_Ready	BOOL	Input	Input Discharge conveyor is running an ready for product
X	iEnableManual	BOOL	Input	False = Mode manual, True = Mode automatic
X	iManualForward	BOOL	Input	Pushbutton Manual forward (normal run)
X	iManualReverse	BOOL	Input	Pushbutton Manual

X	iProductReadyForInfeed	BOOL	Input	Photocell in front of infeed
X	iReset	BOOL	Input	Pushbutton Reset
X	iProductRelease_B1	BOOL	Input	Sensor infeedproduct
X	iEndInfeedConveyor_B7	BOOL	Input	Photocell on infeedconveyor
X	iStartTimeFrame_B3	BOOL	Input	Sensor Forksecurity for outfeed
X	iProductOnOutfeed_B8	BOOL	Input	Dropoff position diagonial occupied
X	iProductLeftOutfeed_B9	BOOL	Input	Dropoff position straight occupied
X	iMonitorRotation	BOOL	Input	Sensor on bottom sprocket (Not standard)
X	iSupplyEmpty	BOOL	Input	Supply is empty for a amount off time
X	iPuls_FP_100msec	BOOL	Input	Flank positive 100 msec pulses
X	iEmptyTimeEnabled	INT	Input	Empty time enabled
X	iTimeInfeedAllowed	INT	Input	Time of window infeed allowed
X	iTimeProductOnInfeed	INT	Input	Time for delay on B7
X	iTimeCheckSensors	INT	Input	Delay check sensors in 0,1 sec.
X	iTimeMonitorInfeed	INT	Input	Time monitoring of product infeed
X	iTimeCheckOutfeed	INT	Input	Time off delay on B3, when time is past outfeed must be empty, if not lift stop
X	iTimeMonitorRotation	INT	Input	Time for monitoring of rotation bottom sprocket (0=disabled)
X	iTimeDelayMonitorRotation	INT	Input	Time to delay monitor rotation at startup
X	oProrunnerForward	BOOL	Output	Forward vertical conveyor
X	oProrunnerReverse	BOOL	Output	Reverse vertical conveyor
X	oSupplyConveyor	BOOL	Output	Supply conveyor before Prorunner
X	oInfeedConveyor	BOOL	Output	Infeed conveyor in Prorunner

X	oOutfeedConveyor	BOOL	Output	Outfeed conveyor in Prorunner
X	oProrunnerIsEmpty	BOOL	Output	Vertical conveyor is empty
X	oFaultTimeFrameSensor	BOOL	Output	Fault time frame sensor (sensor not triggered)
X	oFaultProdReleaseSensor	BOOL	Output	Fault sensor product release (sensor not triggered)
X	oFaultProductOnOutfeed	BOOL	Output	Fault product on outfeed conveyor present
X	oFaultProductInfeedtime	BOOL	Output	Fault overtime box inserted
X	oFaultMonitorRotation	BOOL	Output	Fault monitor rotation

Extended Description

Execution

Condition	Description
EnableIn is true	

Revision v1.0 Notes

Name	Default	Data Type	Scope
iDischargeCoveyor_Ready	0	BOOL	FB112_VerticaalConveyor

Input Discharge conveyor is running an ready for product
Usage: Input Parameter
Required: Yes
Visible: Yes
iDischargeCoveyor_Ready - FB112_VerticaalConveyor/Logic - 31(XIC)

iEmptyTimeEnabled	0	INT	FB112_VerticaalConveyor

Empty time enabled
Usage: Input Parameter
Required: Yes
Visible: Yes
iEmptyTimeEnabled - FB112_VerticaalConveyor/Logic - 6(SFB4_OnDelayTimer)

iEnableAutomatic	0	BOOL	FB112_VerticaalConveyor

Enable mode automatic
Usage: Input Parameter
Required: Yes
Visible: Yes
iEnableAutomatic - FB112_VerticaalConveyor/Logic - 2(XIC)

iEnableElevator	0	BOOL	FB112_VerticaalConveyor

Enable clearence emergencystop, thermal etc.
Usage: Input Parameter
Required: Yes
Visible: Yes
iEnableElevator - FB112_VerticaalConveyor/Logic - 2(XIC), 3(XIC), 3(XIO), 43(XIC)

iEnableManual	0	BOOL	FB112_VerticaalConveyor

False = Mode manual, True = Mode automatic
Usage: Input Parameter
Required: Yes
Visible: Yes
iEnableManual - FB112_VerticaalConveyor/Logic - 2(XIO), 3(XIC), 3(XIO)

iEndInfeedConveyor_B7	0	BOOL	FB112_VerticaalConveyor

Photocell on infeedconveyor
Usage: Input Parameter
Required: Yes
Visible: Yes
iEndInfeedConveyor_B7 - FB112_VerticaalConveyor/Logic - 25(XIO), 26(SFB4_OnDelayTimer), 28(XIC), 30(XIC), 5(XIO), 7(XIC)

iINIT	0	BOOL	FB112_VerticaalConveyor

Inintialising the Prorunner
Usage: Input Parameter
Required: Yes
Visible: Yes
iINIT - FB112_VerticaalConveyor/Logic - 0(XIC)

iManualForward	0	BOOL	FB112_VerticaalConveyor

Pushbutton Manual forward (normal run)
Usage: Input Parameter
Required: Yes
Visible: Yes
iManualForward - FB112_VerticaalConveyor/Logic - 19(XIC), 3(XIO)

iManualReverse 0 BOOL FB112_VerticaalConveyor

Pushbutton Manual reverse
Usage: Input Parameter
Required: Yes
Visible: Yes
iManualReverse - FB112_VerticaalConveyor/Logic - 20(XIC), 3(XIO)

iMonitorRotation 0 BOOL FB112_VerticaalConveyor

Sensor on bottom sprocket (Not standard)
Usage: Input Parameter
Required: Yes
Visible: Yes
iMonitorRotation - FB112_VerticaalConveyor/Logic - 38(XIC), 39(XIC)

iProductLeftOutfeed_B9 0 BOOL FB112_VerticaalConveyor

Dropoff position straight occupied
Usage: Input Parameter
Required: Yes
Visible: Yes
iProductLeftOutfeed_B9 - FB112_VerticaalConveyor/Logic - 11(XIC), 12(XIC), 14(XIO), 5(XIO), 7(XIC)

iProductOnOutfeed_B8 0 BOOL FB112_VerticaalConveyor

Dropoff position diagonial occupied
Usage: Input Parameter
Required: Yes
Visible: Yes
iProductOnOutfeed_B8 - FB112_VerticaalConveyor/Logic - 12(XIC), 12(XIO), 14(XIO), 5(XIO), 7(XIC)

iProductReadyForInfeed 0 BOOL FB112_VerticaalConveyor

Photocell in front of infeed
Usage: Input Parameter
Required: Yes
Visible: Yes
iProductReadyForInfeed - FB112_VerticaalConveyor/Logic - 22(XIC), 25(XIO), 5(XIO), 7(XIC)

iProductRelease_B1 0 BOOL FB112_VerticaalConveyor

Sensor infeedproduct
Usage: Input Parameter
Required: Yes
Visible: Yes
iProductRelease_B1 - FB112_VerticaalConveyor/Logic - 21(XIC), 32(XIO)

iPuls_FP_100msec 0 BOOL FB112_VerticaalConveyor

Flank positive 100 msec pulses
Usage: Input Parameter
Required: Yes
Visible: Yes
iPuls_FP_100msec - FB112_VerticaalConveyor/Logic - 16(SFB4_OnDelayTimer), 23(SFB5_OffDelayTimer), 26(SFB4_OnDelayTimer), 29(SFB4_OnDelayTimer), 33(SFB4_OnDelayTimer), 36(SFB4_OnDelayTimer), 41(SFB4_OnDelayTimer), 44(SFB4_OnDelayTimer), 6(SFB4_OnDelayTimer), 9(SFB5_OffDelayTimer)

iReset 0 BOOL FB112_VerticaalConveyor

Pushbutton Reset
Usage: Input Parameter
Required: Yes
Visible: Yes

iStartTimeFrame_B3	0	BOOL	FB112_VerticaalConveyor

Sensor Forksecurity for outfeed
Usage: Input Parameter
Required: Yes
Visible: Yes
iStartTimeFrame_B3 - FB112_VerticaalConveyor/Logic - 35(XIO), 8(XIC)

iTimeCheckOutfeed	0	INT	FB112_VerticaalConveyor

Time off delay on B3, when time is past outfeed must be empty, if not lift stop
Usage: Input Parameter
Required: Yes
Visible: Yes
iTimeCheckOutfeed - FB112_VerticaalConveyor/Logic - 9(SFB5_OffDelayTimer)

iTimeCheckSensors	0	INT	FB112_VerticaalConveyor

Delay check sensors in 0,1 sec.
Usage: Input Parameter
Required: Yes
Visible: Yes
iTimeCheckSensors - FB112_VerticaalConveyor/Logic - 33(SFB4_OnDelayTimer), 36(SFB4_OnDelayTimer)

iTimeDelayMonitorRotation	0	INT	FB112_VerticaalConveyor

Time to delay monitor rotation at startup
Usage: Input Parameter
Required: Yes
Visible: Yes
iTimeDelayMonitorRotation - FB112_VerticaalConveyor/Logic - 41(SFB4_OnDelayTimer)

iTimeInfeedAllowed	0	INT	FB112_VerticaalConveyor

Time of window infeed allowed
Usage: Input Parameter
Required: Yes
Visible: Yes
iTimeInfeedAllowed - FB112_VerticaalConveyor/Logic - 23(SFB5_OffDelayTimer)

iTimeMonitorInfeed	0	INT	FB112_VerticaalConveyor

Time monitoring of product infeed
Usage: Input Parameter
Required: Yes
Visible: Yes
iTimeMonitorInfeed - FB112_VerticaalConveyor/Logic - 29(SFB4_OnDelayTimer)

iTimeMonitorRotation	0	INT	FB112_VerticaalConveyor

Time for monitoring of rotation bottom sprocket (0=disabled)
Usage: Input Parameter
Required: Yes
Visible: Yes
iTimeMonitorRotation - FB112_VerticaalConveyor/Logic - 42(NEQ), 44(SFB4_OnDelayTimer)

iTimeProductOnInfeed	0	INT	FB112_VerticaalConveyor

Time for delay on B7
Usage: Input Parameter
Required: Yes
Visible: Yes
iTimeProductOnInfeed - FB112_VerticaalConveyor/Logic - 26(SFB4_OnDelayTimer)

oFaultMonitorRotation (Continued)

FB112_VerticaalConveyor

Fault monitor rotation
Usage: Output Parameter
Required: Yes
Visible: Yes
*oFaultMonitorRotation - FB112_VerticaalConveyor/Logic - *45(OTL), *45(OTU), 2(XIO), 4(XIO), 43(XIO)*

oFaultProdReleaseSensor 0 BOOL FB112_VerticaalConveyor

Fault sensor product release (sensor not triggered)
Usage: Output Parameter
Required: Yes
Visible: Yes
*oFaultProdReleaseSensor - FB112_VerticaalConveyor/Logic - *34(OTL), *46(OTU), 2(XIO), 32(XIO)*

oFaultProductInfeedtime 0 BOOL FB112_VerticaalConveyor

Fault overtime box inserted
Usage: Output Parameter
Required: Yes
Visible: Yes
*oFaultProductInfeedtime - FB112_VerticaalConveyor/Logic - *30(OTL), *30(OTU), *46(OTU), 19(XIO), 27(XIO)*

oFaultProductOnOutfeed 0 BOOL FB112_VerticaalConveyor

Fault product on outfeed conveyor present
Usage: Output Parameter
Required: Yes
Visible: Yes
*oFaultProductOnOutfeed - FB112_VerticaalConveyor/Logic - *14(OTL), *14(OTU), *46(OTU)*

oFaultTimeFrameSensor 0 BOOL FB112_VerticaalConveyor

Fault time frame sensor (sensor not triggered)
Usage: Output Parameter
Required: Yes
Visible: Yes
*oFaultTimeFrameSensor - FB112_VerticaalConveyor/Logic - *37(OTL), *46(OTU), 2(XIO), 35(XIO)*

oInfeedConveyor 0 BOOL FB112_VerticaalConveyor

Infeed conveyor in Prorunner
Usage: Output Parameter
Required: Yes
Visible: Yes
*oInfeedConveyor - FB112_VerticaalConveyor/Logic - *27(OTE), 25(XIC)*

oOutfeedConveyor 0 BOOL FB112_VerticaalConveyor

Outfeed conveyor in Prorunner
Usage: Output Parameter
Required: Yes
Visible: Yes
*oOutfeedConveyor - FB112_VerticaalConveyor/Logic - *31(OTE), 14(XIC)*

oProrunnerForward 0 BOOL FB112_VerticaalConveyor

Forward vertical conveyor
Usage: Output Parameter
Required: Yes
Visible: Yes
*oProrunnerForward - FB112_VerticaalConveyor/Logic - *19(OTE), 15(XIO), 17(XIC), 32(XIC), 35(XIC), 40(XIC), 5(XIC)*

oProrunnerIsEmpty	0	BOOL	FB112_VerticaalConveyor

Vertical conveyor is empty
Usage: Output Parameter
Required: Yes
Visible: Yes
*oProrunnerIsEmpty - FB112_VerticaalConveyor/Logic - *7(OTL), *7(OTU), 27(XIO), 31(XIO)*

oProrunnerReverse	0	BOOL	FB112_VerticaalConveyor

Reverse vertical conveyor
Usage: Output Parameter
Required: Yes
Visible: Yes
*oProrunnerReverse - FB112_VerticaalConveyor/Logic - *20(OTE), 15(XIO), 18(XIC), 40(XIC)*

oSupplyConveyor	0	BOOL	FB112_VerticaalConveyor

Supply conveyor before Prorunner
Usage: Output Parameter
Required: Yes
Visible: Yes
*oSupplyConveyor - FB112_VerticaalConveyor/Logic - *25(OTE)*

Name	Default	Data Type	Scope
sCounters		sCounters	FB112_VerticaalConveyor
Usage:	Local Tag		
*sCounters - FB112_VerticaalConveyor/Logic - *24(ADD), 24(ADD)*			
sDelayCheckOutfeed		SFB5_OffDelayTimer	FB112_VerticaalConveyor
SFB5 - SFB OffDelay Timer			
Usage:	Local Tag		
*sDelayCheckOutfeed - FB112_VerticaalConveyor/Logic - *9(SFB5_OffDelayTimer)*			
sDelayCheckOutfeedQ	0	BOOL	FB112_VerticaalConveyor
Usage:	Local Tag		
*sDelayCheckOutfeedQ - FB112_VerticaalConveyor/Logic - *9(SFB5_OffDelayTimer), 10(XIC)*			
sDelayForwardReverse		SFB4_OnDelayTimer	FB112_VerticaalConveyor
SFB4 - SFB OnDelay Timer			
Usage:	Local Tag		
*sDelayForwardReverse - FB112_VerticaalConveyor/Logic - *16(SFB4_OnDelayTimer)*			
sDelayProrunnerEmpty		SFB4_OnDelayTimer	FB112_VerticaalConveyor
SFB4 - SFB OnDelay Timer			
Usage:	Local Tag		
*sDelayProrunnerEmpty - FB112_VerticaalConveyor/Logic - *6(SFB4_OnDelayTimer)*			
sDelayRelease		SFB5_OffDelayTimer	FB112_VerticaalConveyor
SFB5 - SFB OffDelay Timer			
Usage:	Local Tag		
*sDelayRelease - FB112_VerticaalConveyor/Logic - *23(SFB5_OffDelayTimer)*			
sEmptyVerticaalConceyor	0	BOOL	FB112_VerticaalConveyor
Usage:	Local Tag		
*sEmptyVerticaalConceyor - FB112_VerticaalConveyor/Logic - *0(OTU), *6(SFB4_OnDelayTimer), 14(XIO), 2(XIO), 7(XIC)*			
sExtendedRelease	0	BOOL	FB112_VerticaalConveyor
Usage:	Local Tag		
*sExtendedRelease - FB112_VerticaalConveyor/Logic - *23(SFB5_OffDelayTimer), 25(XIC)*			
sHM_FN		sHM_FN	FB112_VerticaalConveyor
Usage:	Local Tag		
*sHM_FN.CheckRotation - FB112_VerticaalConveyor/Logic - *39(OSF)*			
*sHM_FN.ProductLeftoutfeed_B9 - FB112_VerticaalConveyor/Logic - *11(OSF)*			
*sHM_FN.ProductReleased - FB112_VerticaalConveyor/Logic - *22(OSF)*			
*sHM_FN.TimeFrameOutfeed - FB112_VerticaalConveyor/Logic - *10(OSF)*			
sHM_FP		sHM_FP	FB112_VerticaalConveyor
Usage:	Local Tag		
*sHM_FP.Checkdropoffposition - FB112_VerticaalConveyor/Logic - *8(OSR)*			
*sHM_FP.ChekRotation - FB112_VerticaalConveyor/Logic - *38(OSR)*			
*sHM_FP.PorductRelease - FB112_VerticaalConveyor/Logic - *21(OSR)*			
*sHM_FP.Reset - FB112_VerticaalConveyor/Logic - *1(OSR)*			
sManualActive	0	BOOL	FB112_VerticaalConveyor
Usage:	Local Tag		

sProductInserted 0 BOOL FB112_VerticaalConveyor

Usage: Local Tag
*sProductInserted - FB112_VerticaalConveyor/Logic - *0(OTU), *28(OTL), *28(OTU), 25(XIO), 29(SFB4_OnDelayTimer)*

sProductOnOutfeed 0 BOOL FB112_VerticaalConveyor

Usage: Local Tag
*sProductOnOutfeed - FB112_VerticaalConveyor/Logic - *0(OTU), *12(OTL), *12(OTU), 13(XIC), 13(XIO), 14(XIC), 14(XIO)*

sStopLiftProdOnOutfeed 0 BOOL FB112_VerticaalConveyor

Usage: Local Tag
*sStopLiftProdOnOutfeed - FB112_VerticaalConveyor/Logic - *0(OTU), *13(OTL), *13(OTU), 19(XIO)*

sTimeCheckReleaseSensor SFB4_OnDelayTimer FB112_VerticaalConveyor

SFB4 - SFB OnDelay Timer
Usage: Local Tag
*sTimeCheckReleaseSensor - FB112_VerticaalConveyor/Logic - *33(SFB4_OnDelayTimer)*

sTimeCheckReleaseSensorIn 0 BOOL FB112_VerticaalConveyor

Usage: Local Tag
*sTimeCheckReleaseSensorIn - FB112_VerticaalConveyor/Logic - *32(OTE), 33(SFB4_OnDelayTimer)*

sTimeCheckReleaseSensorQ 0 BOOL FB112_VerticaalConveyor

Usage: Local Tag
*sTimeCheckReleaseSensorQ - FB112_VerticaalConveyor/Logic - *33(SFB4_OnDelayTimer), 34(XIC)*

sTimeCheckTimeFrameSensor SFB4_OnDelayTimer FB112_VerticaalConveyor

SFB4 - SFB OnDelay Timer
Usage: Local Tag
*sTimeCheckTimeFrameSensor - FB112_VerticaalConveyor/Logic - *36(SFB4_OnDelayTimer)*

sTimeCheckTimeFrameSensorIn 0 BOOL FB112_VerticaalConveyor

Usage: Local Tag
*sTimeCheckTimeFrameSensorIn - FB112_VerticaalConveyor/Logic - *35(OTE), 36(SFB4_OnDelayTimer)*

sTimeCheckTimeFrameSensorQ 0 BOOL FB112_VerticaalConveyor

Usage: Local Tag
*sTimeCheckTimeFrameSensorQ - FB112_VerticaalConveyor/Logic - *36(SFB4_OnDelayTimer), 37(XIC)*

sTimeDelayInfeed_B7 SFB4_OnDelayTimer FB112_VerticaalConveyor

SFB4 - SFB OnDelay Timer
Usage: Local Tag
*sTimeDelayInfeed_B7 - FB112_VerticaalConveyor/Logic - *26(SFB4_OnDelayTimer)*

sTimeDelayInfeed_B7Q 0 BOOL FB112_VerticaalConveyor

Usage: Local Tag
*sTimeDelayInfeed_B7Q - FB112_VerticaalConveyor/Logic - *26(SFB4_OnDelayTimer), 27(XIO)*

sTimeDelayMonitorRotation SFB4_OnDelayTimer FB112_VerticaalConveyor

SFB4 - SFB OnDelay Timer
Usage: Local Tag
*sTimeDelayMonitorRotation - FB112_VerticaalConveyor/Logic - *41(SFB4_OnDelayTimer)*

sTimeDelayMonitorRotationQ (Continued)

FB112_VerticaalConveyor

Usage: Local Tag
*sTimeDelayMonitorRotationQ - FB112_VerticaalConveyor/Logic - *41(SFB4_OnDelayTimer), 42(XIC)*

sTimeMonitorInfeed		SFB4_OnDelayTimer	FB112_VerticaalConveyor

SFB4 - SFB OnDelay Timer
Usage: Local Tag
*sTimeMonitorInfeed - FB112_VerticaalConveyor/Logic - *29(SFB4_OnDelayTimer)*

sTimeMonitorInfeedQ	0	BOOL	FB112_VerticaalConveyor

Usage: Local Tag
*sTimeMonitorInfeedQ - FB112_VerticaalConveyor/Logic - *29(SFB4_OnDelayTimer), 30(XIC)*

sTimeMonitorRotation		SFB4_OnDelayTimer	FB112_VerticaalConveyor

SFB4 - SFB OnDelay Timer
Usage: Local Tag
*sTimeMonitorRotation - FB112_VerticaalConveyor/Logic - *44(SFB4_OnDelayTimer)*

sTimeMonitorRotationIn	0	BOOL	FB112_VerticaalConveyor

Usage: Local Tag
*sTimeMonitorRotationIn - FB112_VerticaalConveyor/Logic - *43(OTE), 44(SFB4_OnDelayTimer)*

sTimeMonitorRotationQ	0	BOOL	FB112_VerticaalConveyor

Usage: Local Tag
*sTimeMonitorRotationQ - FB112_VerticaalConveyor/Logic - *44(SFB4_OnDelayTimer), 45(XIC)*

tAutomatic	0	BOOL	FB112_VerticaalConveyor

Usage: Local Tag
*tAutomatic - FB112_VerticaalConveyor/Logic - *2(OTE), 19(XIC), 25(XIC), 27(XIC), 28(XIC), 31(XIC), 32(XIC), 35(XIC)*

tEnableMotorForward	0	BOOL	FB112_VerticaalConveyor

Usage: Local Tag
*tEnableMotorForward - FB112_VerticaalConveyor/Logic - *17(OTE), 19(XIC)*

tEnableMotorOn	0	BOOL	FB112_VerticaalConveyor

Usage: Local Tag
*tEnableMotorOn - FB112_VerticaalConveyor/Logic - *16(SFB4_OnDelayTimer), 17(XIC), 18(XIC)*

tEnableMotorReverse	0	BOOL	FB112_VerticaalConveyor

Usage: Local Tag
*tEnableMotorReverse - FB112_VerticaalConveyor/Logic - *18(OTE), 20(XIC)*

tFN		tFN	FB112_VerticaalConveyor

Usage: Local Tag
*tFN.CheckRotation - FB112_VerticaalConveyor/Logic - *39(OSF), 43(XIO)*
*tFN.ProductLeftoutfeed_B9 - FB112_VerticaalConveyor/Logic - *11(OSF), 12(XIC)*
*tFN.ProductReleased - FB112_VerticaalConveyor/Logic - *22(OSF), 24(XIC), 28(XIC)*
*tFN.TimeFrameOutfeed - FB112_VerticaalConveyor/Logic - *10(OSF), 13(XIC), 14(XIC)*

tFP		tFP	FB112_VerticaalConveyor

Usage: Local Tag

tFP (Continued)

*tFP.ChekRotation - FB112_VerticaalConveyor/Logic - *38(OSR), 43(XIO)*
*tFP.PorductRelease - FB112_VerticaalConveyor/Logic - *21(OSR), 23(SFB5_OffDelayTimer)*
*tFP.Reset - FB112_VerticaalConveyor/Logic - *1(OSR), 28(XIC), 30(XIC), 45(XIC), 46(XIC)*

tManual	0	BOOL	FB112_VerticaalConveyor

Usage: Local Tag
*tManual - FB112_VerticaalConveyor/Logic - *4(OTE), 19(XIC), 20(XIC)*

tMonitorRotationEnabled	0	BOOL	FB112_VerticaalConveyor

Usage: Local Tag
*tMonitorRotationEnabled - FB112_VerticaalConveyor/Logic - *42(OTE), 43(XIC)*

tProrunnerRotating	0	BOOL	FB112_VerticaalConveyor

Usage: Local Tag
*tProrunnerRotating - FB112_VerticaalConveyor/Logic - *40(OTE), 41(SFB4_OnDelayTimer), 43(XIC)*

tProrunnerRunning	0	BOOL	FB112_VerticaalConveyor

Usage: Local Tag
*tProrunnerRunning - FB112_VerticaalConveyor/Logic - *5(OTE), 6(SFB4_OnDelayTimer)*

tSignalToDelay	0	BOOL	FB112_VerticaalConveyor

Usage: Local Tag
*tSignalToDelay - FB112_VerticaalConveyor/Logic - *15(OTE), 16(SFB4_OnDelayTimer)*

When Init is activated, the prorunner must be empty.
All memory bits will be reset and the prorunner will start all over.
==========

Init

0

Inintialising the Prorunner
iINIT

sProductOnOutfeed (U)
sEmptyVerticaalConceyor (U)
sProductInserted (U)
sStopLiftProdOnOutfeed (U)

Reset

1

Pushbutton Reset
iReset

OSR
One Shot Rising
Storage Bit sHM_FP.Reset (SB)
Output Bit tFP.Reset (OB)

Release manual/automatic

2

Enable mode automatic
iEnableAutomatic

Enable clearence emergencystop, thermal etc.
iEnableElevator

False = Mode manual, True = Mode automatic
iEnableManual

Fault monitor rotation
oFaultMonitorRotation

Fault sensor product release (sensor not triggered)
oFaultProdReleaseSensor

Fault time frame sensor (sensor not triggered)
oFaultTimeFrameSensor

sEmptyVerticaalConceyor

tAutomatic

3

Enable clearence emergencystop, thermal etc. iEnableElevator

False = Mode manual, True = Mode automatic iEnableManual

Pushbutton Manual forward (normal run) iManualForward

Pushbutton Manual reverse iManualReverse

sManualActive (L)

Enable clearence emergencystop, thermal etc. iEnableElevator

False = Mode manual, True = Mode automatic iEnableManual

sManualActive (U)

4

sManualActive

Fault monitor rotation oFaultMonitorRotation

tManual

5

Empty verticaal conveyor

Photocell in front of infeed iProductReadyForInfeed

Photocell on infeedconveyor iEndInfeedConveyor_B7

Dropoff position diagonial occupied iProductOnOutfeed_B8

Dropoff position straight occupied iProductLeftOutfeed_B9

Forward vertical conveyor oProrunnerForward

tProrunnerRunning

6

SFB4 - SFB OnDelay Timer
SFB4_OnDelayTimer

SFB4 - SFB OnDelay Timer	
SFB4_OnDelayTimer	sDelayProrunnerEmpty ...
iP100Ms	iPuls_FP_100msec 0
IN	tProrunnerRunning 0
PT	iEmptyTimeEnabled 0
Q	sEmptyVerticaalConceyor 0

7

sEmptyVerticaalConceyor — Vertical conveyor is empty oProrunnerIsEmpty (L)

Photocell in front of infeed iProductReadyForInfeed — Vertical conveyor is empty oProrunnerIsEmpty (U)

Photocell on infeedconveyor iEndInfeedConveyor_B7

Dropoff position diagonial occupied iProductOnOutfeed_B8

Dropoff position straight occupied iProductLeftOutfeed_B9

Monitoring outfeed conveyor for next carrier

When a producty is put on the outfeedconveyor, it must be put in photocel -B8.
This photocell sets a memory bit, so the software knows there is a product present on the outfeed conveyor even if this product is not in the photocell -B8 anymore.
The product will travel in photocell -B9, and on a negative edge of this photocell the memory bit is reset.
When the next carrier of the Prorunner activates sensor -B3 a time frame will start.
When this time is past and the memory bit ProductOnOutfeed is still present, the Prorunner must stop until this memory is reset.

8

Sensor Forksecurity for outfeed iStartTimeFrame_B3

OSR
One Shot Rising
Storage Bit sHM_FP.Checkdropoffposition (SB)
Output Bit tFP.Checkdropoffposition (OB)

9

SFB5 - SFB OffDelay Timer
SFB5_OffDelayTimer

SFB5 - SFB OffDelay Timer
SFB5_OffDelayTimer sDelayCheckOutfeed ...
iP100Ms iPuls_FP_100msec
0
IN tFP.Checkdropoffposition
0
PT iTimeCheckOutfeed
0
Q sDelayCheckOutfeedQ
0

10

sDelayCheckOutfeedQ

OSF
One Shot Falling
Storage Bit sHM_FN.TimeFrameOutfeed (SB)
Output Bit tFN.TimeFrameOutfeed (OB)

11
Dropoff position straight occupied iProductLeftOutfeed_B9
OSF
One Shot Falling
Storage Bit sHM_FN.ProductLeftoutfeed_B9 SB
Output Bit tFN.ProductLeftoutfeed_B9 OB

12
Dropoff position diagonial occupied iProductOnOutfeed_B8
sProductOnOutfeed L
Dropoff position straight occupied iProductLeftOutfeed_B9
Dropoff position diagonial occupied iProductOnOutfeed_B8 / tFN.ProductLeftoutfeed_B9 sProductOnOutfeed U

13
sProductOnOutfeed tFN.TimeFrameOutfeed sStopLiftProdOnOutfeed L
sProductOnOutfeed / sStopLiftProdOnOutfeed U

14
sEmptyVerticaalConceyor / Outfeed conveyor in Prorunner oOutfeedConveyor sProductOnOutfeed
tFN.TimeFrameOutfeed Fault product on outfeed conveyor present oFaultProductOnOutfeed L
sProductOnOutfeed / Dropoff position diagonial occupied iProductOnOutfeed_B8 / Dropoff position straight occupied iProductLeftOutfeed_B9 /
Pushbutton Reset iReset
Fault product on outfeed conveyor present oFaultProductOnOutfeed U

15
Delay rotation when changing rotation CW or CCW
Forward vertical conveyor oProrunnerForward / Reverse vertical conveyor oProrunnerReverse / tSignalToDelay

16

SFB4 - SFB OnDelay Timer
SFB4_OnDelayTimer
SFB4 - SFB OnDelay Timer
SFB4_OnDelayTimer sDelayForwardReverse ...
iP100Ms iPuls_FP_100msec
0
IN tSignalToDelay
0
PT 10
Q tEnableMotorOn
0

17

tEnableMotorOn — tEnableMotorForward

Forward vertical conveyor
oProrunnerForward

18

tEnableMotorOn — tEnableMotorReverse

Reverse vertical conveyor
oProrunnerReverse

Motor verticaal conveyor

19

tAutomatic — Fault overtime box inserted oFaultProductInfeedtime — sStopLiftProdOnOutfeed — tEnableMotorForward

tManual — tEnableMotorForward — Pushbutton Manual forward (normal run) iManualForward

Forward vertical conveyor
oProrunnerForward

20

tManual — tEnableMotorReverse — Pushbutton Manual reverse iManualReverse — Reverse vertical conveyor oProrunnerReverse

Release new product in pro

21

Sensor infeedproduct
iProductRelease_B1

OSR
One Shot Rising
Storage Bit sHM_FP.PorductRelease SB
Output Bit tFP.PorductRelease OB

22

Photocell in front of infeed
iProductReadyForInfeed

OSF
One Shot Falling
Storage Bit sHM_FN.ProductReleased SB
Output Bit tFN.ProductReleased OB

23

SFB5 - SFB OffDelay Timer
SFB5_OffDelayTimer
SFB5 - SFB OffDelay Timer
SFB5_OffDelayTimer sDelayRelease ...
iP100Ms iPuls_FP_100msec
0
IN tFP.PorductRelease
0
PT iTimeInfeedAllowed
0
Q sExtendedRelease
0

24

tFN.ProductReleased

ADD
Add
Source A sCounters.CountedPorducts
0
Source B 1
Dest sCounters.CountedPorducts
0

25

Motor supply conveyor

tAutomatic

sExtendedRelease

Infeed conveyor in Prorunner
oInfeedConveyor

sProductInserted

Supply conveyor before Prorunner
oSupplyConveyor

Photocell on infeedconveyor
iEndInfeedConveyor_B7

Photocell in front of infeed
iProductReadyForInfeed

26

Motor infeed conveyor

SFB4 - SFB OnDelay Timer
SFB4_OnDelayTimer

SFB4 - SFB OnDelay Timer		
SFB4_OnDelayTimer	sTimeDelayInfeed_B7	...
iP100Ms	iPuls_FP_100msec	
	0	
IN	iEndInfeedConveyor_B7	
	0	
PT	iTimeProductOnInfeed	
	0	
Q	sTimeDelayInfeed_B7Q	
	0	

27

tAutomatic — Vertical conveyor is empty oProrunnerIsEmpty — sTimeDelayInfeed_B7Q — Fault overtime box inserted oFaultProductInfeedtime

Infeed conveyor in Prorunner oInfeedConveyor

28

Monitoring product infeed time

tAutomatic — tFN.ProductReleased — sProductInserted (L)

Photocell on infeedconveyor iEndInfeedConveyor_B7 — sProductInserted (U)

tFP.Reset

29

SFB4 - SFB OnDelay Timer
SFB4_OnDelayTimer

SFB4 - SFB OnDelay Timer		
SFB4_OnDelayTimer	sTimeMonitorInfeed	...
iP100Ms	iPuls_FP_100msec	
	0	
IN	sProductInserted	
	0	
PT	iTimeMonitorInfeed	
	0	
Q	sTimeMonitorInfeedQ	
	0	

30

sTimeMonitorInfeedQ — Fault overtime box inserted oFaultProductInfeedtime (L)

Photocell on infeedconveyor iEndInfeedConveyor_B7 — Fault overtime box inserted oFaultProductInfeedtime (U)

tFP.Reset

31

tAutomatic — Vertical conveyor is empty oProrunnerIsEmpty — Motor outfeed conveyor Input Discharge conveyor is running an ready for product iDischargeCoveyor_Ready — Outfeed conveyor in Prorunner oOutfeedConveyor

Monitoring product release and time frame sensor

32

tAutomatic — Forward vertical conveyor oProrunnerForward — Sensor infeedproduct iProductRelease_B1 — Fault sensor product release (sensor not triggered) oFaultProdReleaseSensor

sTimeCheckReleaseSensorIn

33

SFB4 - SFB OnDelay Timer
SFB4_OnDelayTimer

SFB4 - SFB OnDelay Timer SFB4_OnDelayTimer		
iP100Ms	sTimeCheckReleaseSensor	...
	iPuls_FP_100msec	
	0	
IN	sTimeCheckReleaseSensorIn	
	0	
PT	iTimeCheckSensors	
	0	
Q	sTimeCheckReleaseSensorQ	
	0	

34

sTimeCheckReleaseSensorQ — Fault sensor product release (sensor not triggered) oFaultProdReleaseSensor (L)

35

tAutomatic — Forward vertical conveyor oProrunnerForward — Sensor Forksecurity for outfeed iStartTimeFrame_B3 — Fault time frame sensor (sensor not triggered) oFaultTimeFrameSensor

sTimeCheckTimeFrameSensorIn

36

SFB4 - SFB OnDelay Timer
SFB4_OnDelayTimer

SFB4 - SFB OnDelay Timer		
SFB4_OnDelayTimer	sTimeCheckTimeFrameSensor	...
iP100Ms	iPuls_FP_100msec	
	0	
IN	sTimeCheckTimeFrameSensorIn	
	0	
PT	iTimeCheckSensors	
	0	
Q	sTimeCheckTimeFrameSensorQ	
	0	

37

sTimeCheckTimeFrameSensorQ — Fault time frame sensor (sensor not triggered) oFaultTimeFrameSensor (L)

Check bottom sprocket for rotation

First make a positive and negative edge of the sensor on the bottom sprocket.
The monitoring can be delayed at the start of the motor for a variable time.
The monitoring can be disabled if time is 0 ms.
When the monitoring is enabled the sensor resets the timer at every edge.
When the time is past there is a fault warning and the Prorunner will stop rotating.

38

Sensor on bottom sprocket (Not standard) iMonitorRotation

OSR
One Shot Rising
Storage Bit sHM_FP.CheckRotation (SB)
Output Bit tFP.CheckRotation (OB)

39

Sensor on bottom sprocket (Not standard) iMonitorRotation

OSF
One Shot Falling
Storage Bit sHM_FN.CheckRotation (SB)
Output Bit tFN.CheckRotation (OB)

40

Forward vertical conveyor oProrunnerForward — tProrunnerRotating

Reverse vertical conveyor oProrunnerReverse

41

SFB4 - SFB OnDelay Timer
SFB4_OnDelayTimer

SFB4 - SFB OnDelay Timer		
SFB4_OnDelayTimer	sTimeDelayMonitorRotation	...
iP100Ms	iPuls_FP_100msec	
	0	
IN	tProrunnerRotating	
	0	
PT	iTimeDelayMonitorRotation	
	0	
Q	sTimeDelayMonitorRotationQ	
	0	

42

Time for monitoring of rotation bottom sprocket (0=disabled)
NEQ

Not Equal	
Source A	iTimeMonitorRotation
	0
Source B	0

sTimeDelayMonitorRotationQ — tMonitorRotationEnabled

43

tProrunnerRotating — tMonitorRotationEnabled — Enable clearence emergencystop, thermal etc. iEnableElevator — Fault monitor rotation oFaultMonitorRotation

Pushbutton Reset iReset — tFP.ChekRotation — tFN.CheckRotation — sTimeMonitorRotationIn

44

SFB4 - SFB OnDelay Timer
SFB4_OnDelayTimer

SFB4 - SFB OnDelay Timer		
SFB4_OnDelayTimer	sTimeMonitorRotation	...
iP100Ms	iPuls_FP_100msec	
	0	
IN	sTimeMonitorRotationIn	
	0	
PT	iTimeMonitorRotation	
	0	
Q	sTimeMonitorRotationQ	
	0	

45

sTimeMonitorRotationQ — Fault monitor rotation oFaultMonitorRotation (L)

tFP.Reset — Fault monitor rotation oFaultMonitorRotation (U)

Reset failures

46

tFP.Reset

Fault sensor product release (sensor not triggered) oFaultProdReleaseSensor
U

Fault time frame sensor (sensor not triggered) oFaultTimeFrameSensor
U

Fault product on outfeed conveyor present oFaultProductOnOutfeed
U

Fault overtime box inserted oFaultProductInfeedtime
U

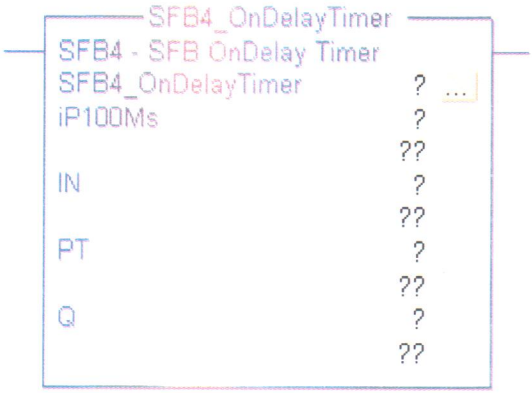
(End)

SFB4_OnDelayTimer v1.0

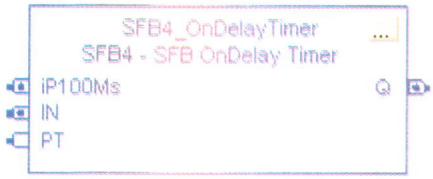
SFB4 - SFB OnDelay Timer

Available Languages

Relay Ladder



Function Block



Structured Text
SFB4_OnDelayTimer(iP100Ms, IN, PT, Q);

Parameters

Required	Name	Data Type	Usage	Description
X	SFB4_OnDelayTimer	SFB4_OnDelayTimer	InOut	SFB4 - SFB OnDelay Timer
	EnableIn	BOOL	Input	
	EnableOut	BOOL	Output	
X	iP100Ms	BOOL	Input	
X	IN	BOOL	Input	Start input
X	PT	INT	Input	On delay time in 0,1 sec.
X	Q	BOOL	Output	Status of the time

Extended Description

Execution

Condition	Description
EnableIn is true	

Revision v1.0 Notes

Name	Default	Data Type	Scope
IN	0	BOOL	SFB4_OnDelayTimer
Start input			
Usage:	Input Parameter		
Required:	Yes		
Visible:	Yes		
IN - SFB4_OnDelayTimer/Logic - 0(XIO)			
iP100Ms	0	BOOL	SFB4_OnDelayTimer
Usage:	Input Parameter		
Required:	Yes		
Visible:	Yes		
iP100Ms - SFB4_OnDelayTimer/Logic - 1(XIO)			
PT	0	INT	SFB4_OnDelayTimer
On delay time in 0,1 sec.			
Usage:	Input Parameter		
Required:	Yes		
Visible:	Yes		
PT - SFB4_OnDelayTimer/Logic - 2(LES), 3(GEQ)			
Q	0	BOOL	SFB4_OnDelayTimer
Status of the time			
Usage:	Output Parameter		
Required:	Yes		
Visible:	Yes		
*Q - SFB4_OnDelayTimer/Logic - *0(OTU), *3(OTL)*			

Name	Default	Data Type	Scope
ET	0	INT	SFB4_OnDelayTimer
Expired time in 0,1 sec.			
Usage:	Local Tag		
*ET - SFB4_OnDelayTimer/Logic - *0(MOV), *2(ADD), 2(ADD), 2(LES), 3(GEQ)*			

Reset on delay timer/output

0

Start input
IN
/

Expired time in 0,1 sec.
MOV
Move
Source 0
Dest ET
0

End
JMP

Status of the time
Q
U

If status no FP 0.1sec then block end

1

iP100Ms
/

End
JMP

Increment on delay time

2

Expired time in 0,1 sec.
LES
Less Than (A<B)
Source A ET
0
Source B PT
0

Expired time in 0,1 sec.
ADD
Add
Source A ET
0
Source B 1
Dest ET
0

On delay time not passed

3

Expired time in 0,1 sec.
GEQ
Grtr Than or Eql (A>=B)
Source A ET
0
Source B PT
0

Status of the time
Q
L

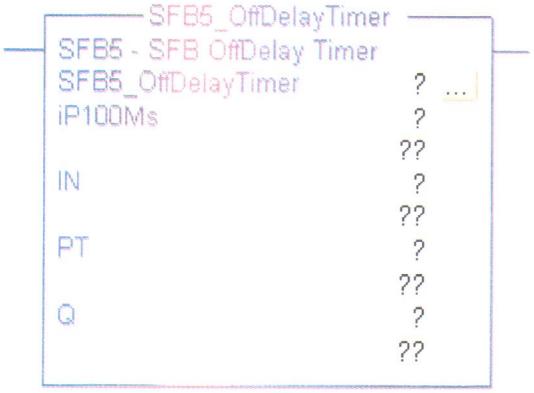
(End)

SFB5_OffDelayTimer v1.0

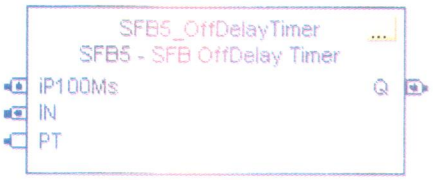
SFB5 - SFB OffDelay Timer

Available Languages

Relay Ladder



Function Block



Structured Text
SFB5_OffDelayTimer(iP100Ms, IN, PT, Q);

Parameters

Required	Name	Data Type	Usage	Description
X	SFB5_OffDelayTimer	SFB5_OffDelayTimer	InOut	SFB5 - SFB OffDelay Timer
	EnableIn	BOOL	Input	
	EnableOut	BOOL	Output	
X	iP100Ms	BOOL	Input	
X	IN	BOOL	Input	Start input
X	PT	INT	Input	On delay time in 0,1 sec.
X	Q	BOOL	Output	Status of the time

Extended Description

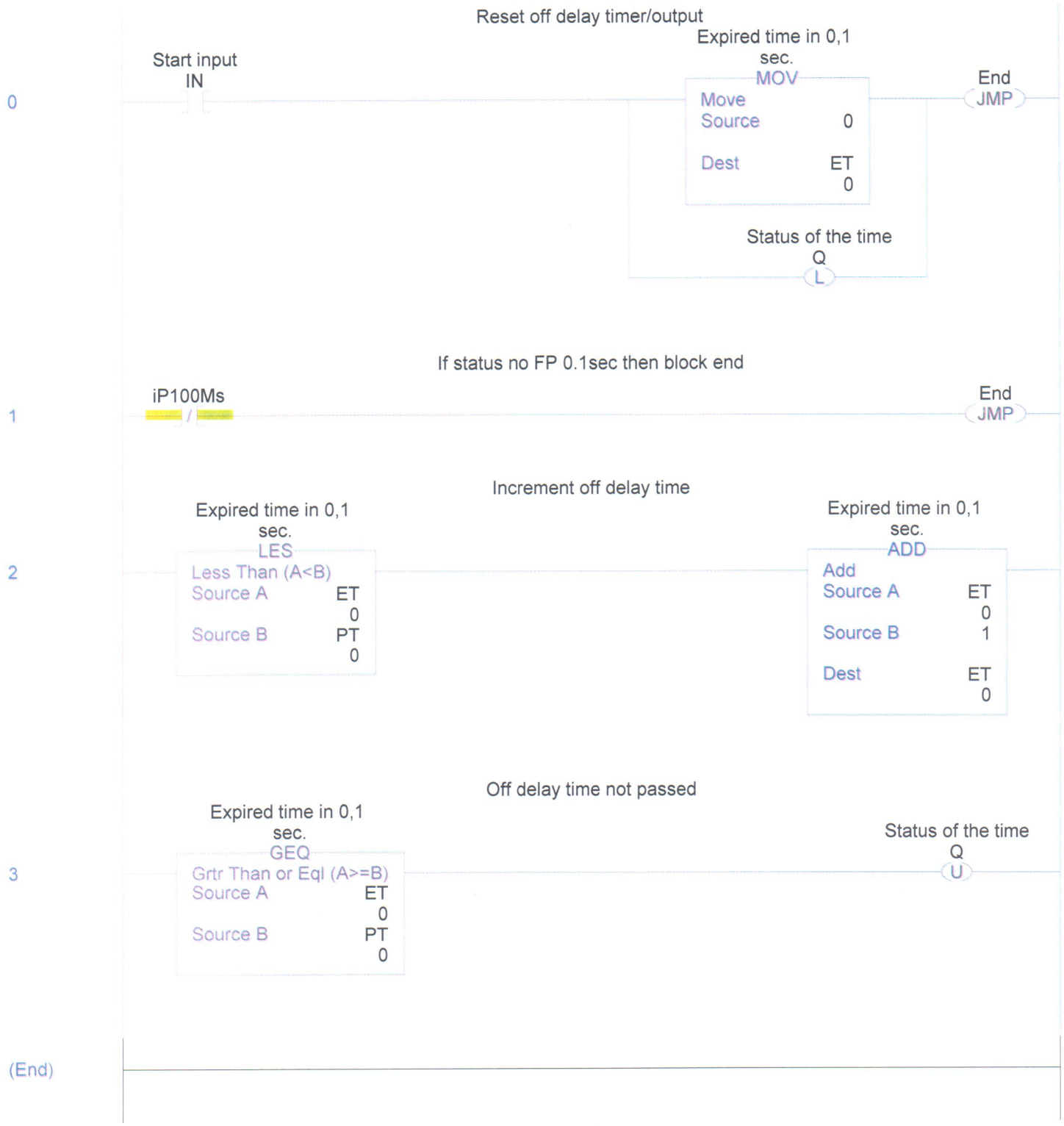
Execution

Condition	Description
EnableIn is true	

Revision v1.0 Notes

Name	Default	Data Type	Scope
IN	0	BOOL	SFB5_OffDelayTimer
Start input			
Usage:	Input Parameter		
Required:	Yes		
Visible:	Yes		
IN - SFB5_OffDelayTimer/Logic - 0(XIC)			
iP100Ms	0	BOOL	SFB5_OffDelayTimer
Usage:	Input Parameter		
Required:	Yes		
Visible:	Yes		
iP100Ms - SFB5_OffDelayTimer/Logic - 1(XIO)			
PT	0	INT	SFB5_OffDelayTimer
On delay time in 0,1 sec.			
Usage:	Input Parameter		
Required:	Yes		
Visible:	Yes		
PT - SFB5_OffDelayTimer/Logic - 2(LES), 3(GEQ)			
Q	0	BOOL	SFB5_OffDelayTimer
Status of the time			
Usage:	Output Parameter		
Required:	Yes		
Visible:	Yes		
*Q - SFB5_OffDelayTimer/Logic - *0(OTL), *3(OTU)*			

Name	Default	Data Type	Scope
ET	0	INT	SFB5_OffDelayTimer
Expired time in 0,1 sec.			
Usage:	Local Tag		
*ET - SFB5_OffDelayTimer/Logic - *0(MOV), *2(ADD), 2(ADD), 2(LES), 3(GEQ)*			


Reset off delay timer/output
Start input
IN
Expired time in 0,1 sec.
MOV
Move
Source 0
Dest ET 0
End
JMP
Status of the time
Q
L
0
If status no FP 0.1sec then block end
iP100Ms
/
End
JMP
1
Increment off delay time
Expired time in 0,1 sec.
LES
Less Than (A<B)
Source A ET 0
Source B PT 0
Expired time in 0,1 sec.
ADD
Add
Source A ET 0
Source B 1
Dest ET 0
2
Off delay time not passed
Expired time in 0,1 sec.
GEQ
Grtr Than or Eql (A>=B)
Source A ET 0
Source B PT 0
Status of the time
Q
U
3
(End)