==
P_PF52x : PROCESS -- PowerFlex 523 / 525 DRIVE
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Revision 3.1-00 Release: 2014-07-08. See V3.1-xx Release Notes for details.
V3.1-00: 2014-07-08. New instruction for PlantPAx Library 3.1
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This Instruction controls and monitors a PowerFlex 523 Variable-Frequency Drive with
optional EtherNet/IP Interface, or a PowerFlex 525 Variable-Frequency
Drive with embedded or optional add-on EtherNet/IP Interface.
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REQUIRED DRIVE CONFIGURATION
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Be certain to set up the drive Datalinks as follows!
'User Choice' Datalinks are not used by this AOI and
may be left unused or set up for your application.

INPUT ASSEMBLY:
Drive Status (standard)
Output Frequency (standard)
1. Fault 1 Code (Par 007)
2. Output Current (Par 003)
3. Output Power (Par 017)
4. User choice

OUTPUT ASSEMBLY:
Drive Logic Comnmand (standard)
Frequency Command (Speed Reference) (standard)
All 4 output datalinks are user choice.
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Create a Tag of type P_PF52x_Inp, and create a Tag of type P_PF52x_Out
to buffer the starter's Input and Output data. Then add these Tags in the Input
and Output parameters of the P_PF52x instruction instance and replace
operands in the "COP" and "MVM"/"MOV" instructions as described below.
In these examples, the names given to various tags are as follows:

* The backing tag for the P_PF52x AOI is "SC105".
* The Input buffer tag (of type P_PF52x_Inp) is "SC105_I".
* The Output buffer tag (of type P_PF52x_Out) is "SC105_O".
* The PowerFlex 525 drive in the I/O tree of the controller
organizer is "SC105_Drive".
* Given that name, the drive's Input Assembly is "SC105_Drive:I"
and its Output Assembly is "SC105_Drive:O".

1. In the COP, replace the Source operand with the actual
Input assembly from the starter, and replace the Destination
operand with the input buffer tag of type P_PF52x_Inp you created,
for example:

COP
SC105_Drive:I
SC105_I
Len=1

2. In the AOI instance, put the buffer tags in the InOut parameters,
for example:

Inp is SC105_I
Out is SC105_O

2. In the MVM, replace the Source operand with the LogicCommand
element of the Tag of type P_PF52x_Out you created, and replace
the Destination operand with the LogicCommand element of the
actual Output Assembly going to the drive, for example:

MVM
SC105_O.LogicCommand
2#0000_0000_0011_1111
SC105_Drive:O.LogicCommand

0

3. In the MOV, replace the Source operand with the Reference
element of the Tag of type P_PF52x_Out which you created, and
replace the Destination operand with the Reference element
of the actual Output Assembly going to the drive, for example:

MOV
SC105_O.FreqCommand
SC105_Drive:O.FreqCommand

PF523 and PF525
Input Assembly

COP	
Copy File	
Source	FanucLoopVFD_N0 45:I
Dest	VFDFanucLoop_I
Length	1

Pump 105 Motor
(PowerFlex 525
drive)

P_PF52x		
PowerFlex 523 / 525 Variable Frequency ...		
P_PF52x	SC105	⟨Sts_Stopped⟩
Inp	VFDFanucLoop_I	⟨Sts_Starting⟩
Out	VFDFanucLoop_O	⟨Sts_Running⟩
Ref_FaultCodeList	PF525_FaultCode List	⟨Sts_Stopping⟩
		⟨Sts_Jogging⟩
Inp_FwdPermOK	1	=⟨Sts_ActualDir⟩=
Inp_FwdNBPermOK	1	⟨Sts_AtSpeed⟩
Inp_RevPermOK	1	⟨Sts_SpeedLimited⟩
Inp_RevNBPermOK	1	⟨Sts_Available⟩
Inp_IntlkOK	1	⟨Sts_Err⟩
Inp_NBIntlkOK	1	⟨Sts_Hand⟩
Inp_Hand	0	⟨Sts_Maint⟩
Inp_Ovrd	0	⟨Sts_Ovrd⟩
Inp_OvrdCmd	0	⟨Sts_Prog⟩
Inp_Reset	0	⟨Sts_Oper⟩
Val_SpeedRef	0.0	
Val_SpeedFdbk	0.0	
Val_Fault	18	

MVM	
Masked Move	
Source	VFDFanucLoop_O. LogicCommand 2#0000_0000_0000_0000
Mask	63
Dest	FanucLoopVFD_N0 45:O.LogicCommand 2#0000_0000_0000_0000

MOV	
Move	
Source	VFDFanucLoop_O. FreqCommand 0
Dest	FanucLoopVFD_N0 45:O.FreqCommand 1800

(End)