

# Mul File Specification - Alarms

Specification of the Alarms.mul file

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## Specification

The alarms file allows the commissioning engineer to specialise the alarm messages for each individual machine. The basic premise is that most alarms are generated when

1. an alarm input is activated, such as overload relay, air pressure switch
2. an input is not detected within a specified amount of time, depending on an output state (timeouts on cylinder movements)

An alarm will be triggered if the input matches the "Input Alarm Trigger State" and the output matches the "Output Alarm Trigger State" for a duration of the "Alarm Timeout".



There is also an option for the "Severity" of the alarm

### Field Format

No	Name	Format	Notes	Default Value if missing
1	Alarm Ref No	3N	Reference or code number that appears on the front end screen (easier and more accurate to report a code number than a text description)	Error
2	Input Ref	15A	IO Code name from IODef file	Error
3	Input Alarm Trigger State	2N	Boolean State that will trigger an alarm 0 - Input inactive -1 - Input Active	Error
4	Output Ref	15A	IO Code name from IODef file	Error
5	Output Alarm Trigger State	2N	Boolean State that will trigger an alarm 0 - Input inactive -1 - Input Active	Error
6	Timeout	3N	Time in 10ths of a second that trigger states are triggered before the alarm is triggered	Error
7	Action / Severity	1N	See below	Error
8	Display Message	40A	Text to display on screen when alarm is triggered	Error
9	Enabled	BOOL	Enable the alarm Text True / False or -1/0 can be either depending on version	True
10	ExcludeDemo	BOOL	Enable the alarm when running in Demo / Exhibition mode Text True / False or -1/0 can be either depending on version	True

11	ModuleSide	1N	Which module side of the machine is the error displayed 0 - both 1 - Machining Only 2 - Saw only	0
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### Severity of Alarms

Severity	Action	Description	Notes
1	Log	Write note to diagnostics file and take no action	 ...For programmer use only
2	Display	Report to front end, but take no action	 ...For programmer use only
3	Cycle Stop	Report to front end Pause machine Wait for start or abort	
4	Abort	Report to front end Stop machine Force Abort and restart	

## Auto Generated Alarms

On software versions before v6, the system ensures certain alarms are in existence, creating them if they are not

Alarm Code	Alarm Description	Notes
305	Spindle Plunge Sequence Fault	Ensures dangerous combination of cylinders is never selected (50+300hz at the same time)
306 to 308	Spindle Phase Error 1-3	Alarm to check the balance of phases on the spindle output to detect if a phase is open current Not required on Yaskawa inverters, as this is done internally
309	Spindle 300Hz / 50Hz Relay Fault	Check the function of the 50Hz changeover relay on machines with an IMO Jaguar inverter Catastrophic failure if the relay did not change over the spindle frequency Not required on Delta and Yaskawa Inverters
310	Clamp Infeed Side not Home	Infeed Side clamp on Autoflow
311	Clamp Infeed Positioner not Home	Infeed Side clamp on Autoflow
312 to 319	Tool Broken in Spindle n	Tool break messages - only when useToolBreakDetect=1
320	Idle Time Overrun - Contact Stuga	Nextmove controllers only see Idle Time Override

## Sample

1,InC\_BmPosO,1,OuB\_CLV,True,0,4,V Notching Attempted Beam In,True,False,1  
20,InF\_AIR,-1,-1,False,50,3,Air Pressure Low,True,False,0  
32,InB\_WOVL,-1,-1,False,0,3,Rear V overload Tripped,True,False,1  
33,InB\_VOVL,-1,-1,False,0,3,V Notch Motor Overload,True,False,1  
41,InB\_InvOk,0,SPIN1,True,0,3,Spindle 1 Motor Alarm,True,False,1  
42,InB\_InvOk,0,SPIN2,True,0,3,Spindle 2 Motor Alarm,True,False,1  
43,InB\_InvOk,0,SPIN3,True,0,3,Spindle 3 Motor Alarm,True,False,1  
44,InB\_InvOk,0,SPIN4,True,0,3,Spindle 4 Motor Alarm,True,False,1  
45,InB\_InvOk,0,SPIN5,True,0,3,Spindle 5 Motor Alarm,True,False,1  
46,InB\_InvOk,0,SPIN6,True,0,3,Spindle 6 Motor Alarm,True,False,1  
47,InB\_InvOk,0,SPIN7,True,0,3,Spindle 7 Motor Alarm,True,False,1  
48,InB\_InvOk,0,SPIN8,True,0,3,Spindle 8 Motor Alarm,True,False,1  
52,SPHM1,0,SPPL1,False,20,3,Spindle 1 Not Home,True,False,1  
53,SPHM2,0,SPPL2,False,20,3,Spindle 2 Not Home,True,False,1  
54,SPHM3,0,SPPL3,False,20,3,Spindle 3 Not Home,True,False,1  
55,SPHM4,0,SPPL4,False,20,3,Spindle 4 Not Home,True,False,1  
56,SPHM6,0,SPPL6,False,20,3,Spindle 6 Not Home,True,False,1  
57,SPHM7,0,SPPL7,False,20,3,Spindle 7 Not Home,True,False,1  
58,SPHM8,0,SPPL8,False,20,3,Spindle 8 Not Home,True,False,1