

Machine References and Naming - Autoflow

Describes the names used for the Inputs, Outputs and Servo drives

Contents

Inputs And Outputs

IO

IO-Infeed

Spindle IO

1.2 Inputs

1.3 Outputs

1.4 Axes

Comments

Inputs And Outputs

Inputs and outputs can be viewed from the IO screen

To set an output on / off, or move an axis independently, you must first put the machine into a manual mode. This can be done in 3 ways

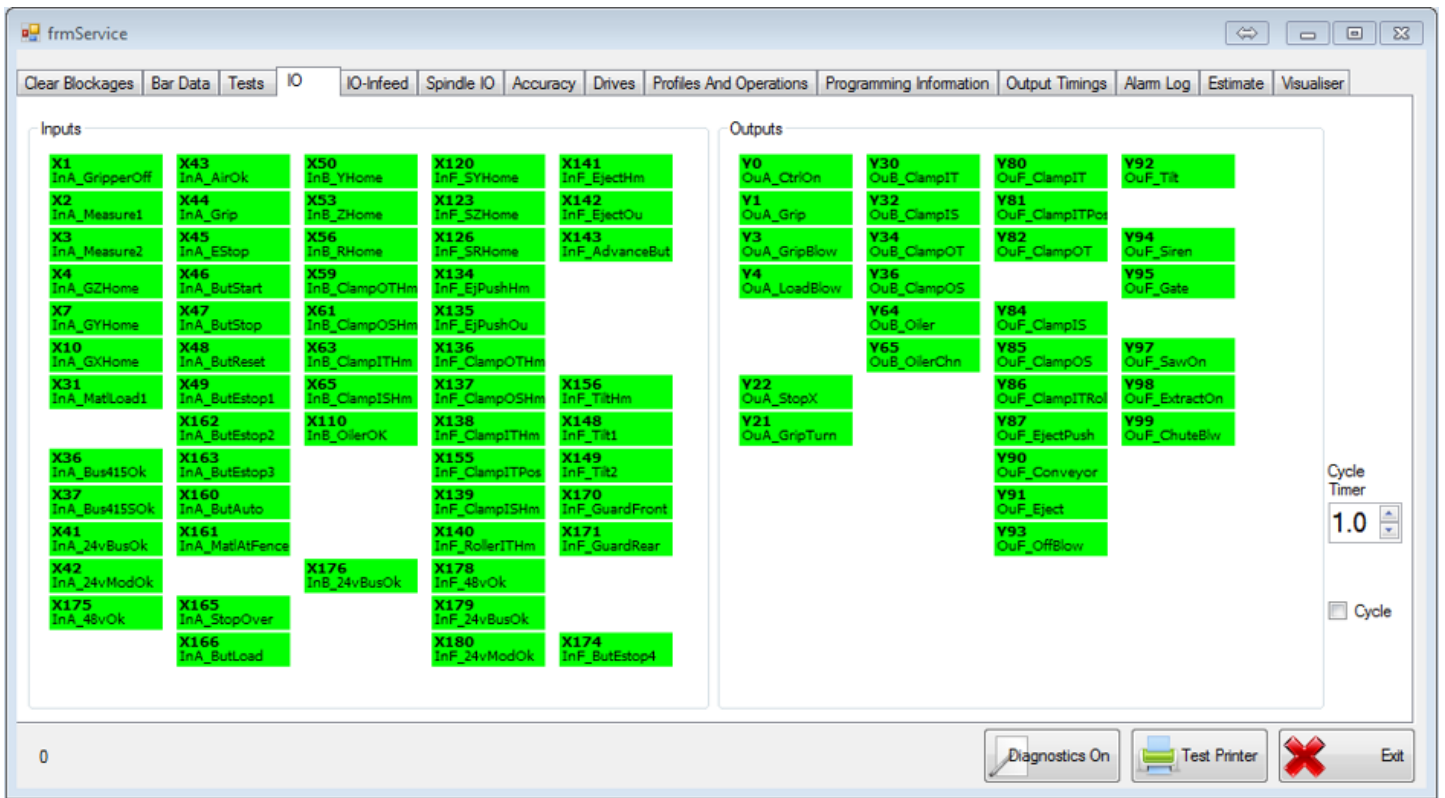
1. Press the stop button (Puts the machine in "Manual Mode")
2. Click the "Enter Setup Mode" tab. This puts the machine in a permanent manual mode, and must be reset to return the machine to normal
3. When an alarm condition happens – this allows outputs to be activated, then Start is pressed to return to normal operation
- 4.

Inputs and Outputs are categorised by "Module". This can be seen

Module	Component on Machine	Input Assignment	Output assignment
A	Infeed	InA_	OuA_
B	Machining ring	InB_	OuB_
F	Sawing Module	InF_	OuF_

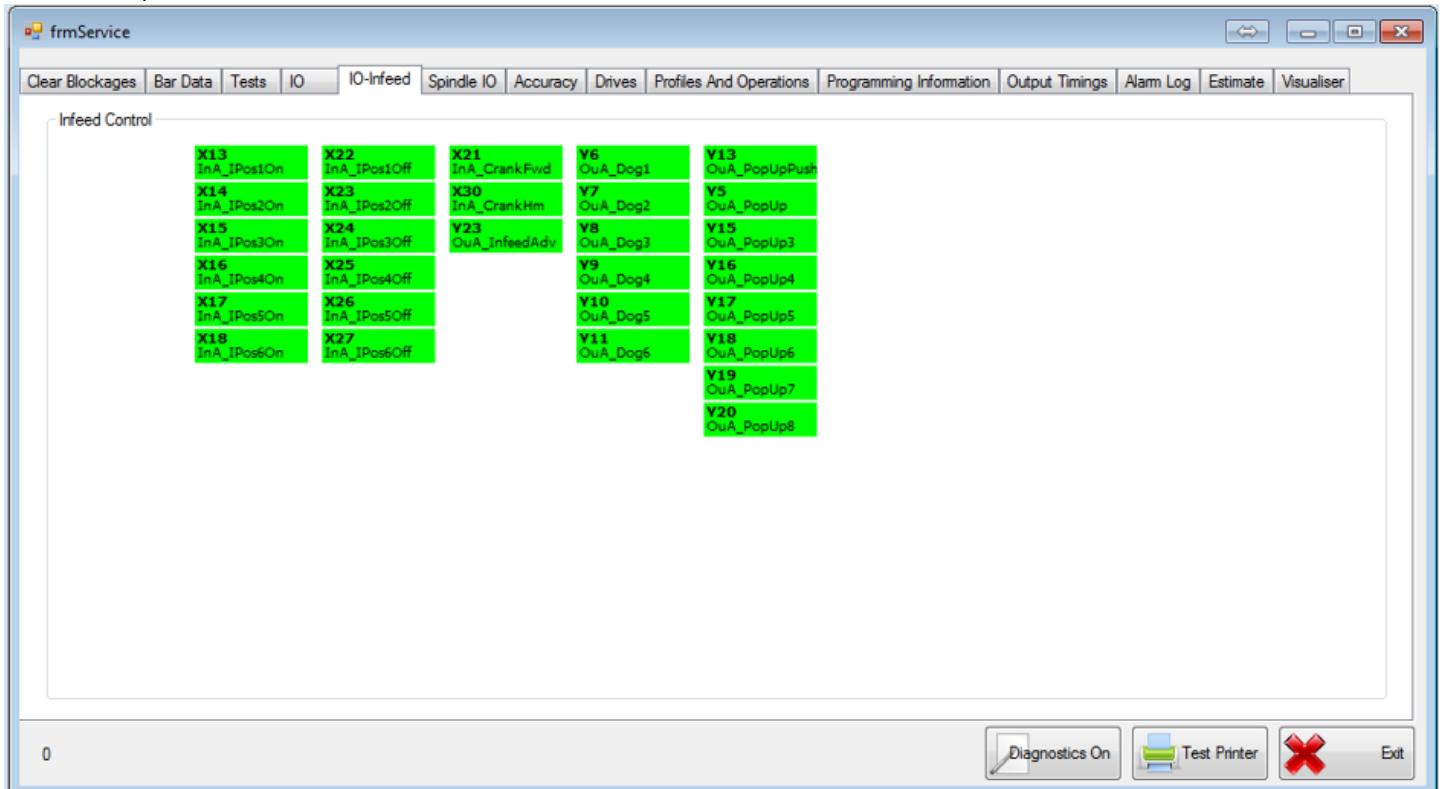
The IO is also separated into 3 tabs in settings

IO



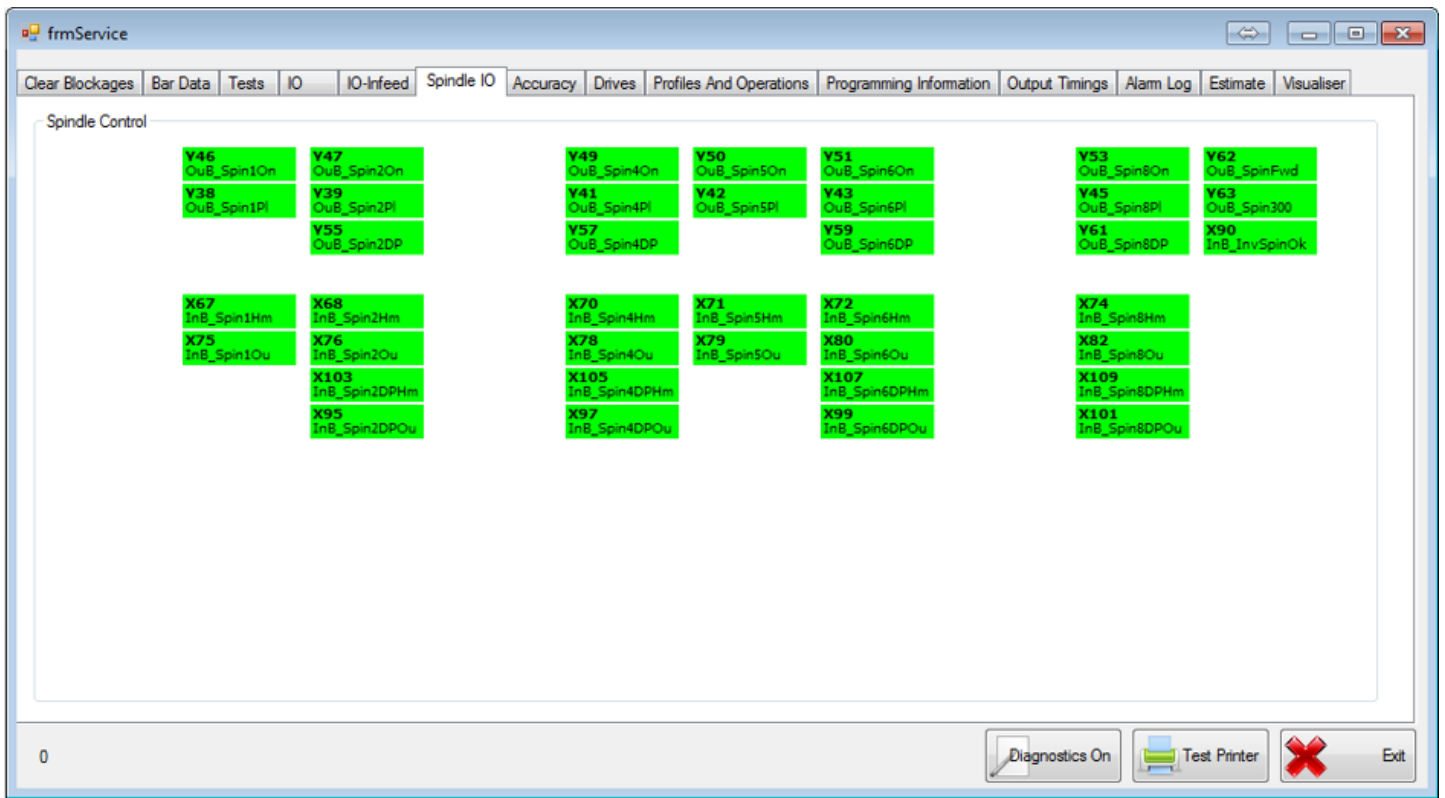
IO-Infeed

Contains IO specific to the Infeed Table



Spindle IO

Contains IO specific to the machining ring



1.2 Inputs

IO Code	Wire No	Function	Location
InA_MatLoaded1	X31	Material Loaded Switch #1	Infeed backfence
InA_MatLoaded2	X32	Material Loaded Switch #2	Infeed backfence
InA_AirOk	X43	Air Supply Sensor	Rear of Module A panel
InA_EStop	X45	Emergency Stop Circuit	Module A panel circuit
InA_ButReset	X48	Reset button	Console
InA_ButESConsole	X49	Estop Button	Console
InF_SRHome	X126	Saw rotation axis home sensor	Base of saw unit
InF_EjectHm	X141	Ejector home sensor	Eject cylinder
InF_EjectOu	X142	Ejector Out sensor	Eject cylinder
InF_SawOvl	X150	Saw Motor Overload	Module F panel circuit
InA_ExtrOvl	X151	Extractor Motor Overload	Module A panel circuit
InF_ConvOvIOk	X152	Conveyor Motor Overload	Module F panel circuit
InF_ConvTempOk	X154	Conveyor Motor Overload	Conveyor Motor
InA_ButESFront	X163	Estop Button	Front of machine
InF_GuardFront	X170	Guard interlock	Front Door
InF_GuardRear	X171	Guard interlock	Rear Door
InA_ButESRear	X174	Estop Button	Rear of machine
InA_AutoSaw	X201	Autoload button	Console
InF_CentHome	X203	Centraliser Home	Inside saw cabinet on centraliser bar
InA_StopSaw	X204	Stop Button	Console
InA_StartSaw	X205	Start Button	Console
InF_SawCutHm	X208	Saw Cut Home	Saw Cut Cylinder
InF_SawCutOut	X209	Saw Cut Out (Top)	Saw Cut Cylinder
InF_SCOuMid	X269	Saw Cut Out (Middle)	Saw Cut Cylinder
InF_ZTurretA	X210	Z Turret stop position sensor A	Z Turret Assembly

InF_ZTurretB	X220	Z Turret stop position sensor A	Z Turret Assembly
InA_DatumSaw	X225	Saw Pusher Datum Switch	Far end of infeed
InF_OutfeedFull	X144	Outfeed table full ultrasonic sensor	Outfeed Table
InA_NextBarOut	X268	End of stroke sensor for infeed conveyor stroke	Under infeed table

1.3 Outputs

IO Code	Wire No	Function	Location
OuF_ClampIT	Y80	Clamp Infeed Top	Saw cabinet infeed side of saw blade
OuF_ClampOT	Y82	Clamp Outfeed Top	Saw cabinet outfeed side of saw blade
OuF_EjectPush	Y87	Eject Piece Pusher	Outfeed Table
OuF_Conveyor	Y90	Conveyor contactor	Module F cabinet
OuF_Eject	Y91	Eject cylinder	Saw cabinet outfeed side of saw blade
OuF_Siren	Y94	Siren	Outfeed Table
OuF_Gate	Y95	Safety Gate	Outfeed Table
OuF_SawOn	Y97	Saw Motor On Contactor	Module F cabinet
OuA_ExtractOn	Y98	Extractor On Contactor	Module A cabinet
OuF_ClampS	Y202	Clamp Side Cylinder	Front side clamp assembly
OuF_ClampPos	Y204	Clamp Top Positioners to central position	Top clamps
OuF_ClampCen	Y206	Centraliser Cylinder	Front side clamp assembly
OuF_SawCut	Y207	Saw cut cylinder	Saw blade
OuF_ClampSPos	Y211	Clamp Side Expansion Cylinders [Sill Only]	Front side clamp assembly
OuF_ClampITHi	Y212	Clamp Infeed top High pressure changeover	Saw cabinet infeed side of saw blade
OuF_Blow	Y213	Blower	Saw cabinet top rear
OuF_Zturret	Y214	Z support [Not on Sill saw]	Z turret assembly
OuA_NextBar	Y250	Advance next bar cylinders	Under infeed table
OuA_InfeedLift	Y267	Infeed lift cylinders	Infeed table
OuA_LoadClear	Y203	Load Clear sensors	Infeed table backfence
OuA_SillLift	Y268	Sill profile lifting pop-ups	Infeed table






1.4 Axes

There are 9 axes on the Autoflow Mk2

Axis Code	Function	Location	Sense
GX	Gripper X axis	Infeed	Side to Side
GY	Gripper Y axis	Infeed	Front to rear
GZ	Gripper Z axis	Infeed	Up and Down
Y	Machining Ring Y axis	Machining Centre	Front to Rear
Z	Machining Ring Z axis	Machining Centre	Up And Down
R	Machining Ring Rotation axis	Machining Centre	Rotation
SY	Saw Head Y axis	Saw Module	Front To Rear
SZ	Saw Head cut axis	Saw Module	Up and Down

SR	Saw angle rotation	Saw module	Rotation
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Axes can be manually controlled through the Settings->Drives tab

	Move the Axis in a negative direction (Press and hold)
	Move the Axis in a positive direction (Press and hold)
	Home the axis (seek the datum input sensor for the axis)
	Move to absolute position taken from input box on right
	Stop axis motion