

Connect the Smart-binder to downstream equipment

Version 010726

1. Presentation of booklets at the end of the Smart-binder delivery conveyor

The horizontal end of the SB delivery conveyor delivers booklets at 760mm +/- 40mm (by adjusting the feet of the conveyor) above floor level. We do not recommend raising up the end of the conveyor on blocks as this increases the slope of the conveyor and can lead to booklets sliding back down the inclined section.

Booklets arrive roughly centred on the conveyor. Additional guides (Part number B0001594) may be fitted to the end of the conveyor to adjust the side-to-side position of booklets on the conveyor. They also help to straighten any booklets that have twisted.

The Smart-binder normally delivers booklets in an overlapping shingled stream to maximise the capacity of the conveyor. However if required then it can be set up to deliver booklets so that they do not overlap each other and are therefore easier to separate in downstream equipment. Do this by setting the batch size to '0' on the booklet set-up screen.

In this mode the speed of the books at the end of the delivery is 7.8m/min (25ft/min). This speed can be adjusted up to 11.75m/min (38ft/min) by altering P1002 (to 60Hz) in the delivery inverter. See separate instructions on adjusting inverter parameters.

An accelerator roller can be fitted to increase the exit velocity of booklets up to 30m/min if required

2. Signalling to the Smart-binder

The Smart-binder receives a 24VDC 'Ready' signal from the Post (down-stream) Device. When this signal is removed then the Smart-binder stops and displays an error message. The exact behaviour of the Smart-binder when this signal changes state can be defined by means of settings, see 2.2.

2.1 Electrical interface

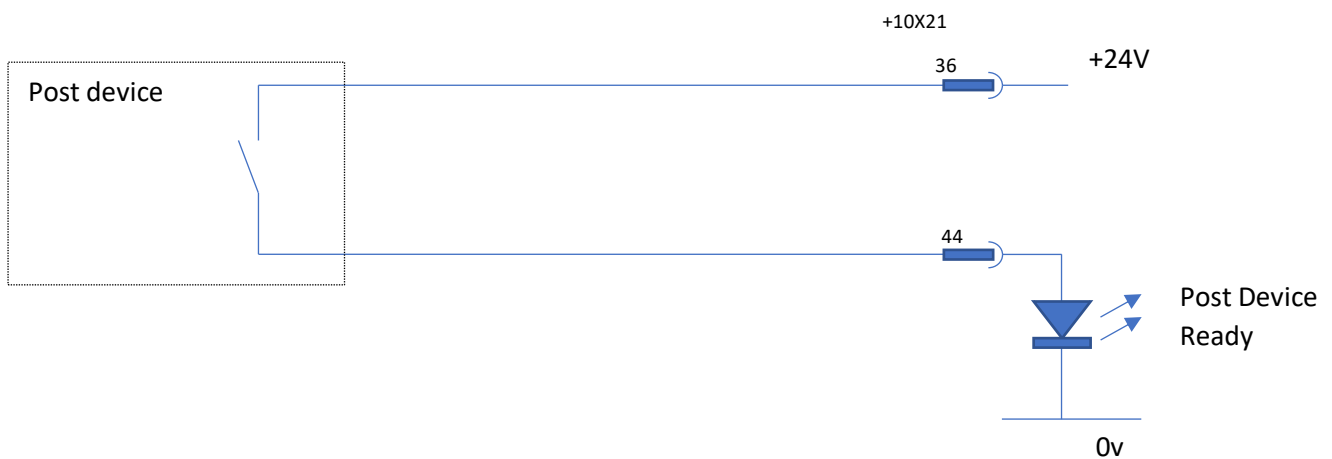
The Post Device Ready signal is connected at the interface connector +10X21 on the upstream side of the main electrical cabinet. Suitable pins (Part No 21703-001) and a plug for the connector are included in the accessory kit supplied with each machine. Note that upstream equipment may also be connected to this connector.

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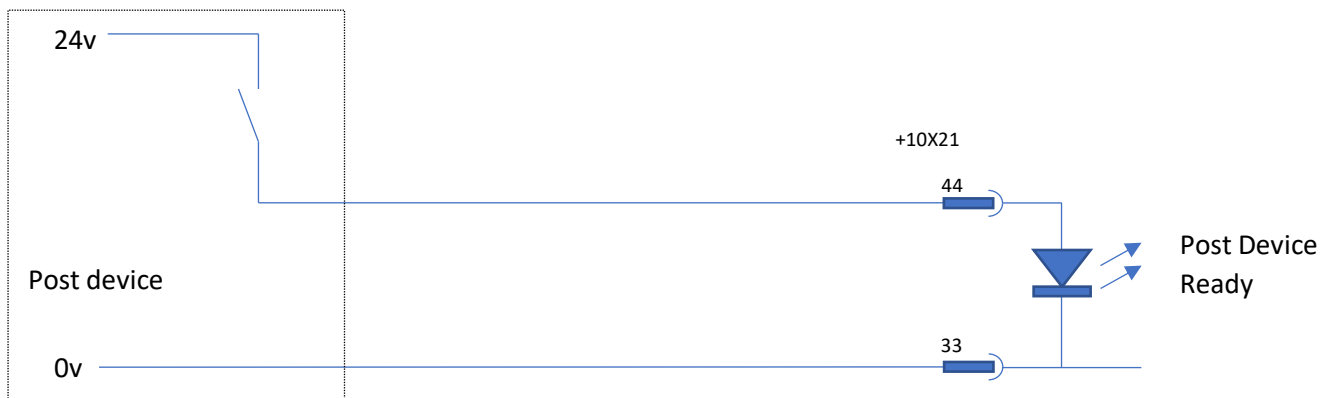


Connect a volt free contact between: one of pins 34,35,36 - 24VDC and pin 44 - 'Post Device Ready Input', the contact should close when the downstream equipment is running.



IBIS recommends using 24VDC from the Smart-binder pins 34,35,36 as these are current limited (to 1.35A) to protect the external wiring.

If an external supply is used the return can be connected to one of pins: 31,32,33




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2.1.1 Behaviour of the interface

The behaviour of the interface is defined by service settings for the delivery conveyor.

	
Delivery length	Determines the distance that the conveyor runs on for after the last booklet is delivered in order to empty the conveyor, for a standard delivery conveyor it is 2350 mm.
Use Post Device	<p>Never – disables Post device signalling.</p> <p>Always – enables Post device signalling.</p> <p>For thick books – For use in Perfect binding configurations that have perfect binding data in the bar code. This is a legacy from version 5 software, do not set to this with version 7 software.</p>
When Post Device starts: Smart-binder restart is	<p>Manual – the operator will have to re-start the Smart-binder from the operator console (green button).</p> <p>Automatic – if the line was stopped by the Post Device and the Smart-binder has no other faults it will automatically re-start when the Post Device becomes Ready again. It will in turn start the device feeding it (providing that interface supports an automatic re-start).</p> <p>Requires software version sb7_37 or later.</p>
When Post device stops	<p>Deliver Booklets – the Smart-binder will continue to deliver booklets (the number depends on the number of sheets in each booklet) as it receives sheets from the feeding device and empties its infeed, the delivery conveyor will continue to run in order to accept these booklets and they typically collect at the entry to the Post Device from where the operator will have to clear them.</p> <p>Reject Booklets – the Smart-binder will reject any booklets made after the Post Device Ready signal goes off so that they are not placed on the delivery conveyor which will stop immediately. This simplifies a re-start, but at the expense of rejecting good booklets.</p> <p>Requires software version sb7_37 or later.</p>

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2.1.2 Operation with the Post Device Ready Signal

If the Post Device stops (the Ready signal goes off) while the Smart-binder is running any upstream devices are stopped and the Smart-binder allows remaining sheets to pass into the collator, making booklets as necessary.

When the line has been cleared the Smart-binder will stop and display the error message:



E0:00 Post Device Stopped

If the “When Post Device starts: Smart-binder restart is” setting is “Manual” the Smart-binder cannot be re-started until the Post Device is ready. Pressing the start button on the Smart-binder when the Post device is not ready will produce the warning:



W20 Post Device Not Ready