

Specification Type 1.1 Interface

The following description shows the specification for the Type 1 Interface for digital printing machines.

Signals used on the Type 1 Interface

- Slave connected** The Slave connected signal is received from the slave unit and shows the master unit that a Slave is connected. As soon as the signal is on a "high level" and the contact (NO) has been closed, the Master knows that an additional slave is connected or switched on, otherwise the "Ready", "Stop" and "Jog from Slave" signals will be ignored from this slave.
- Ready** The Ready signal is received from the slave unit and tells the master unit that everything is OK with this slave unit. The ready signal has to be a "high level", the contact (NO) will be closed.
As soon as the ready signal is on "low level", the contact (NO) is open and the transport will do an E-Stop (Fast Stop).
The ready signal is used for signals like:
- Web break
 - E-Stop
 - Drive fault
 - Paper jam
 - ...
- Stop** The Stop signal is received from the slave unit and tells the master unit that everything is ok with this slave unit. The Stop signal has to be a "high level", the contact (NO) will be closed.
As soon as the Stop signal is on "low level", the contact (NO) is open and the transport will do a Normal Stop.
The stop signal is used for signals like:
- End of Roll
 - Full Roll
 - Stacker full
 - Pack splicer empty
 - ...
- Jog from Slave** The Jog from Slave signal is received from the slave unit and tells the master unit to start jogging. The jog signal must be a "high level", the contact must be closed.
The master unit starts jogging after the following timing sequence:
3s ON, 0.5s OFF, Xs ON. X is the time for how long the transport will jog.
After jogging is stopped, there is a delay of 2s to restart jogging again without running the timing sequence again. The operator must do this timing sequence to make sure he gives his full attention to the jogging transport.
- Jog to Slave** The Jog to Slave signal is sent to each slave unit and tells them to start jogging. As soon as the contact (NO) is closed the slave will start jogging (if needed).
- Run to Slave** The Run to Slave signal is sent to each slave unit and tells them to switch in run mode (if needed).

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6ppi

The 6ppi Signal supports the Slave units with a Pulse train signal of 6 Pulse per inch. The signal runs a 50% duty cycle and a Voltage of 5V.

Power requirements Type 1 Interface

The Type 1 Interface supplies the +24V and 0V (Ground) for the communication to the Slaves.

The +24V Power drop is just for the interface communications. Do not use this power for anything else.

Timing Inputs Type 1 Interface

Slave1 connected

Ready Slave 1

Stop Slave 1

Jog from Slave

Jog to Slave

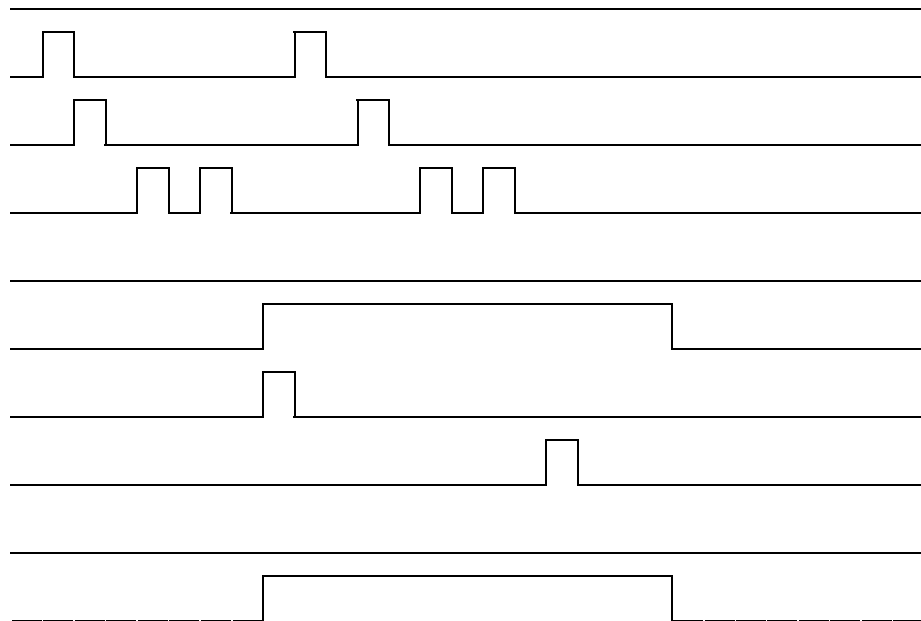
Run to Slave

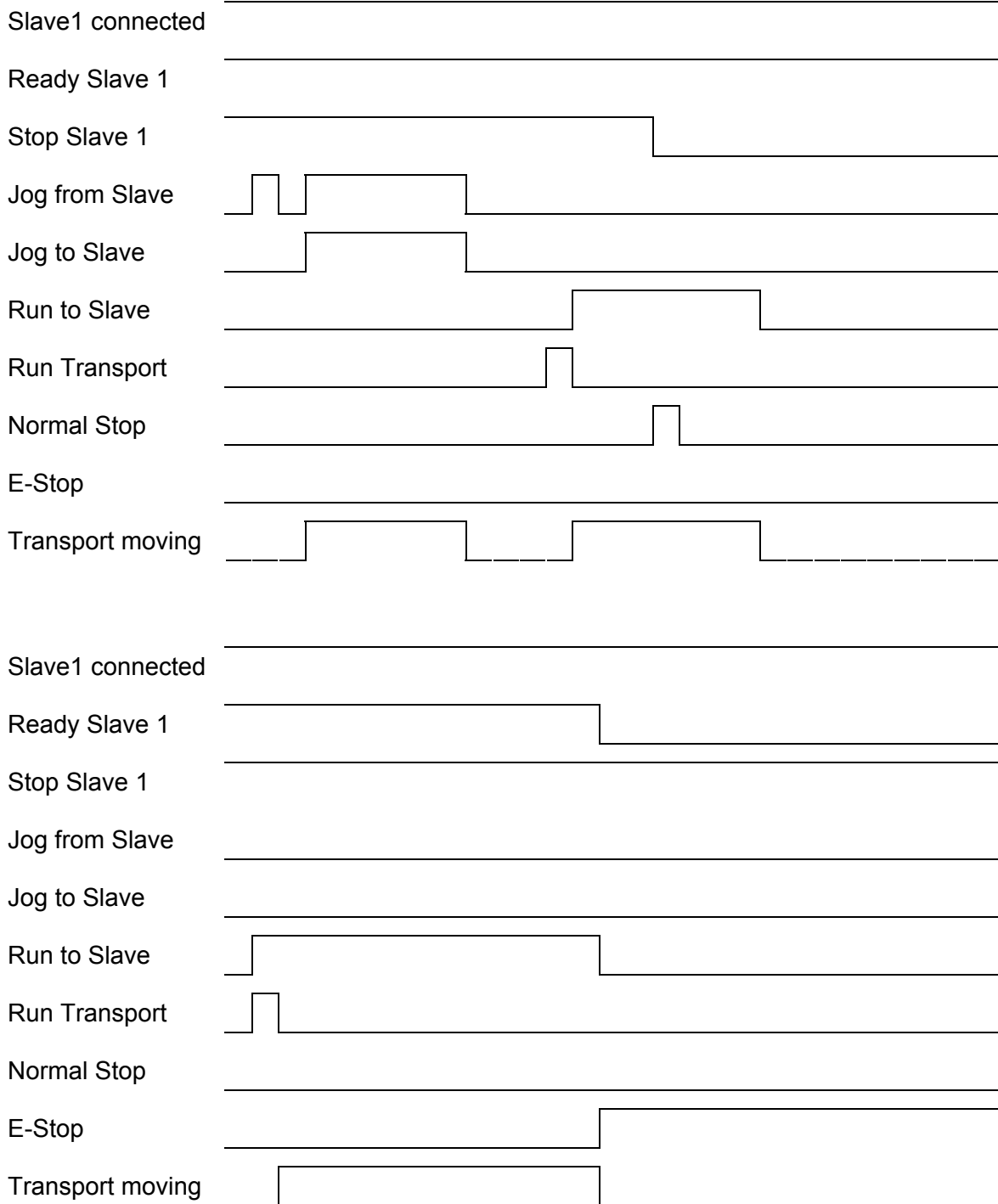
Run Transport

Normal Stop

E-Stop

Transport moving





Interface 25 pin connector for unwind and rewind units

Connector (socket)

Connector on the printing unit 25 pin D-Sub connector female. The following description shows the pin out for this connection:

PIN	Description	Detail information
1	Ready	As long as the unit is ready a free contact (NO) will be closed and makes a connection between pin 1 and 11 or 12. As soon as the Ready signal is lost the Transport will do an E-Stop (Signals like "E-Stop", "Drive fault", ...)
2	Stop	As long as the unit is ready a free contact (NO) will be closed and makes a connection between pin 2 and 11 or 12. As soon as the Stop signal is lost the transport will do an normal stop (Signals like "End of roll", "Full roll",...)
3	Slave connected	Requesting a +24V signal otherwise signal from this unit will be ignored.
4	Spare	Connected to PLC for additional input if needed
5	Jog form Slave	As soon as a Jog button on the Slave is pressed, a free contact on the slave unit will close to make a connection between pin 5 and 11 or 12
6	Jog to Slave	As long as the transport will jog a contact (NO) between pin 6 and 7 will close
7	Jog to Slave	
8	Run to Slave	As long as the transport is in run mode (production) a contact (NO) between pin 8 and 9 will be closed
9	Run to Slave	
10	6ppi Speed signal	Pulse train signal (50% duty cycle, Output signal 5-10VDC, JetBlack 10V, XVantage 5V) 6 Pulse per inch
11	+24V	Power supply
12	+24V	Power supply
13	0V	Power supply
14	0V	Power supply
15	0V	Power supply
16		
17		
18		
19		
20		
21		
22	E-Stop from Slave	22/23 E-Stop button from Slave unit
23	E-Stop from Slave	
24	E-Stop from Slave	24/25 E-Stop button from Slave unit
25	E-Stop from Slave	

In case no unit is connected a jumper plug need to be plugged in to jumper the E-Stop signal on pin 22/23 and 24/25.

Interface 37 pin connector

Connector (socket)

Connector on the printing unit 37 pin D-Sub connector female. The following description shows the pin out for this connection:

PIN	Description	
1		
2		
3	Spare	Additional input on Master unit if needed
4	Ready	As long as the unit is ready a free contact (NO) will be closed and makes a connection between pin 4 and 22. As soon as the Ready signal is lost the Transport will do an E-Stop (Signals like "E-Stop", "Drive fault", ...)
5	Spare	Additional input on Master unit if needed
6	Spare	Additional input on Master unit if needed
7	Spare	Additional output on Master unit if needed
8	6ppi Speed signal	Pulse train signal (50% duty cycle, 5V) 6 Pulse per inch
9	Slave connected	As soon as the slave is connected or switched on, a free contact (NO) will make a connection between pin 9 and 23. While there is no signal on this pin, every other signal will be ignored from this connector.
10	Stop	As long as the unit is ready a free contact (NO) will be closed and makes a connection between pin 10 and 28. As soon as the Stop signal is lost the transport will do an normal stop (Signals like "End of roll", "Full roll",...)
11		
12		
13		
14		
15	Jog from Slave	As soon as the Jog button on the Slave is pressed, a free contact on the slave unit will close to make a connection between pin 15 and 29.
16	Jog to Slave	As long as the transport will jog a contact (NO) between pin 16 and 17 will close
17	Jog to Slave	
18	Run to Slave	As long as the transport is in run mode (production) a contact (NO) between pin 18 and 19 will be closed
19	Run to Slave	
20	E-Stop from Slave	20/21 E-Stop button from Slave unit
21	E-Stop from Slave	
22	+24V	Power supply
23	+24V	Power supply
24	E-Stop from Slave	24/25 E-Stop button from Slave unit
25	E-Stop from Slave	
26		
27		
28	+24V	Power supply
29	+24V	Power supply
30	+24V	Power supply
31	+24V	Power supply
32		

33		
34	0V	Power supply
35	0V	Power supply
36		
37		

In case no unit is connected a jumper plug need to be plugged in to jumper the E-Stop signal on pin 20/21 and 24/25.