

THERMAL and THERMAL TRANSFER PRINTERS

Wirings and parameters for I/O signals



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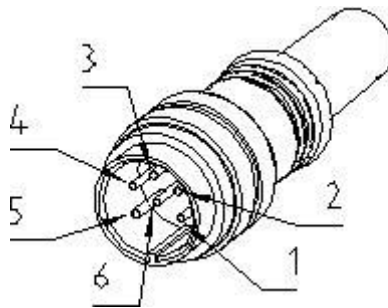
Wiring for I/O signals 6 poles DIN connector

Pick & Place working mode allows an external device (i.e. PLC, photocell, pneumatic applicator, etc...) to start or halt printing.

When Pick & Place options is enabled 3 optoisolated signals are available:

START PRINT	Input – print consent
PRINT END	Output – print end signal
ALARM	Output – auxiliary output for error conditions

These 3 signals are mapped on a 6 poles DIN tap.
DIN plug has following outline:



External view

Wiring for I/O signals 3,4 and 5 poles connectors

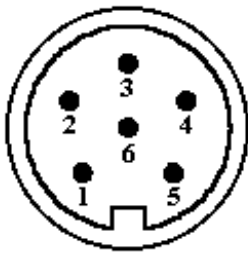
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Devices with I/O expanded control unit, internale +24V supply and ground have these 3 signals mapped, besides on a 6 poles female connector, also on a 3,4 and 5 poles male connector .
See details ahead in these pages.

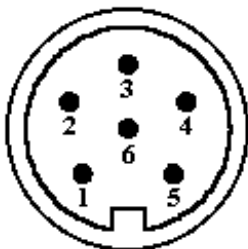
Pin out for Electronic Unit without expansion board - External power supply and ground



- 1) + START PRINT (INPUT)
- 2) - START PRINT (INPUT)
- 3) + ALARM (OUTPUT)
- 4) - ALARM (OUTPUT)
- 5) + PRINT END (OUTPUT)
- 6) - PRINT END (OUTPUT)

DIN plug
Internal view, soldering side

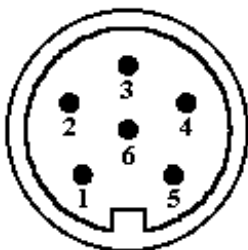
Pin out for Electronic Unit without expansion board - Internal power supply and ground



- 1) + START PRINT (INPUT)
- 2) - START PRINT (INPUT)
- 3) +24/20/10,5 V
- 4) GND
- 5) + PRINT END (OUTPUT)
- 6) - PRINT END (OUTPUT)

DIN plug
Internal view, soldering side

Pin out for Electronic Unit with expansion board – Internal +24V power supply and ground



- 1) + START PRINT (INPUT)
- 2) GND
- 3) + ALARM (OUTPUT)
- 4) GND
- 5) + PRINT END (OUTPUT)
- 6) +24V

DIN plug
Internal view, soldering side

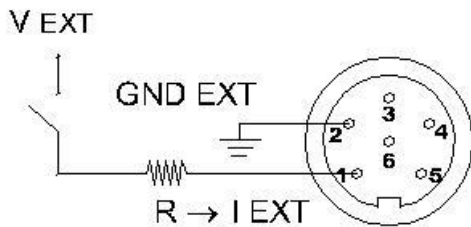
Wiring for I/O signals

Electronic Unit without expansion board

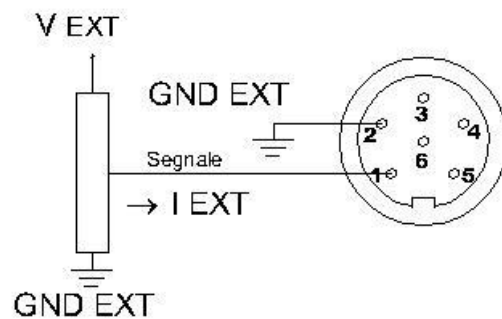
External power supply and ground

START PRINT
(soldering side view)

SWITCH



PNP Photocell



Input signal

V_{ext} = external tension

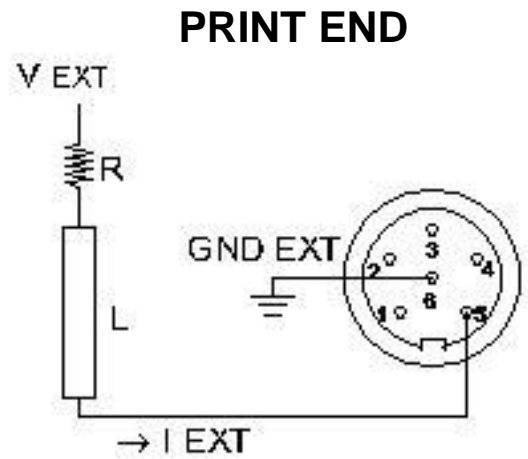
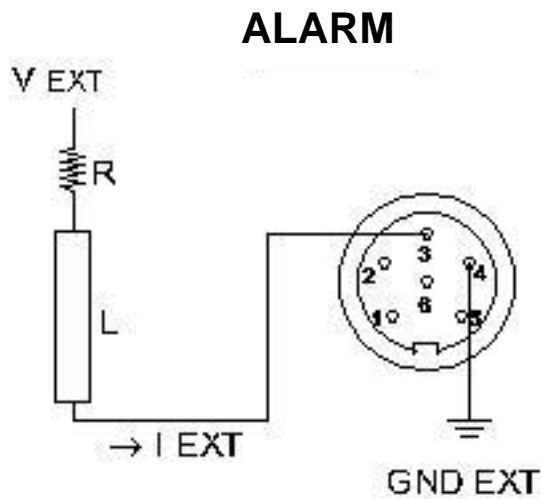
I_{ext} = current on external circuit

R = external circuit resistance

V_{ext} (Volt)	I_{ext} (mA)	R (Ohm)
24	15	1270
24	30	470
24	50	150
12	15	470
12	30	70
5	15	0

suggested values in **bold**

ALARM and PRINT END signals
(soldering side view)



Output signals

Alarm and Print End

V_{ext} = external tension

i_{ext} = current on external circuit

R = Current limiting resistance of external circuit

L = Load impedance of external circuit

V_{ext} (Volt)	i_{ext} (mA)	$R + L$ (Ohm)
24	10	2400
24	20	1200
24	50	240
12	10	1200
12	20	600
12	50	120
5	10	500
5	20	250
5	50	100

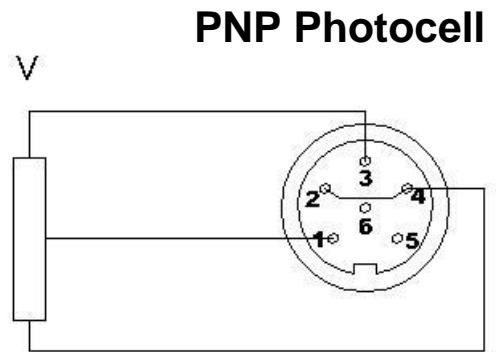
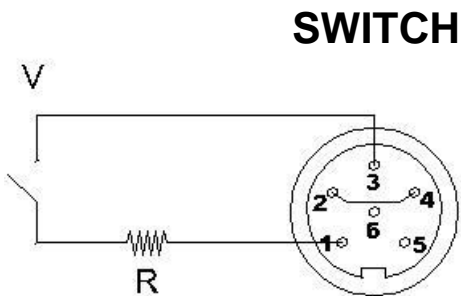
suggested values in **bold**

Wiring of I/O signals

Electronic Unit without expansion board

Internal power supply and ground

START PRINT
(soldering side view)



Input signal

V = Internal tension

I = current

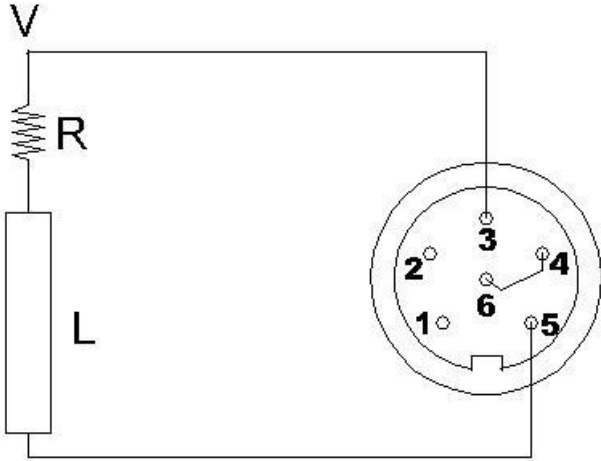
R = external circuit resistance

V (Volt)	I (mA)	R (Ohm)
24	15	1270
24	30	470
24	50	150
12	15	470
12	30	70
5	15	0

suggested values in **bold**

PRINT END signal – ALARM signal is unavailable
(soldering side view)

PRINT END



Output signal

- Print End
- V = external tension
- I = current on external circuit
- R = Current limiting resistance of external circuit
- L = Load impedance of external circuit

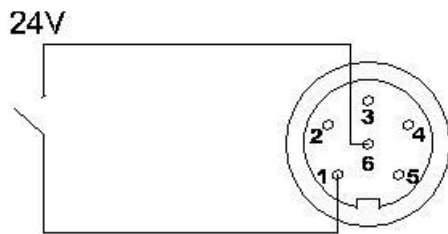
V (Volt)	I (mA)	R + L (Ohm)
24	10	2400
24	20	1200
24	50	240
12	10	1200
12	20	600
12	50	120
5	10	500
5	20	250
5	50	100

suggested values in **bold**

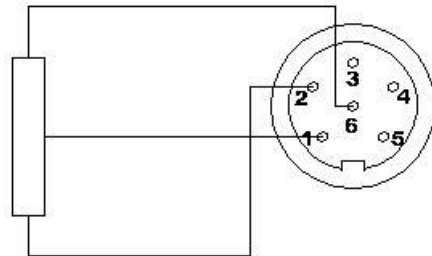
Wiring of I/O signals
Electronic Unit with expansion board
+24V internal power supply and ground

START PRINT signal
(soldering side view)

SWITCH



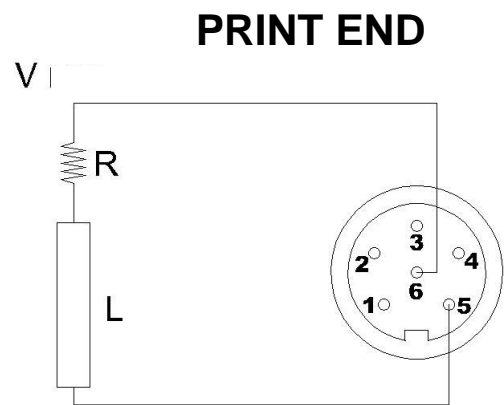
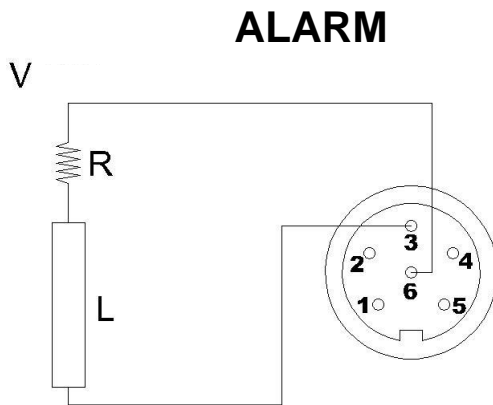
PNP Photocell



Input signal

Internal circuit resistance = 1800 Ohm

ALARM and PRINT END signals
(soldering side view)



Output signals

Alarm and Print End

V = internal tension

I = current

R = Current limiting resistance of external circuit

L = Load impedance of external circuit

V = internal +24 Volt

Output transistor can drive up to 1 ampère.

$$I = V/(R+L)$$

$$I_{max} = 1A$$

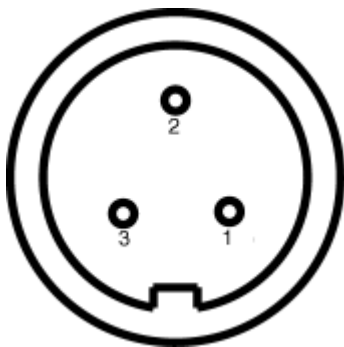
V (Volt)	I (mA)	R + L (Ohm)
24	10	2400
24	20	1200
24	50	240

suggested values in **bold**

Wiring of I/O signals 3, 4 e 5 poles connectors

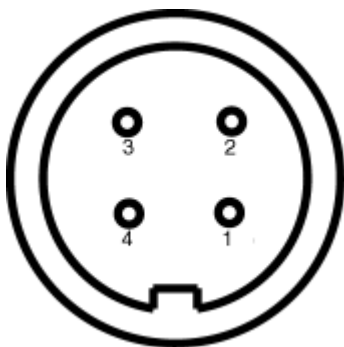
Devices with I/O expanded control unit, internale +24V supply and ground have these 3 signals mapped, besides on a 6 poles female connector, also on a 3,4 and 5 poles male connector .
Sockets for signal wiring have following configurations:

Pin out for Electronic Unit with expansion board – Internal +24V power supply and ground



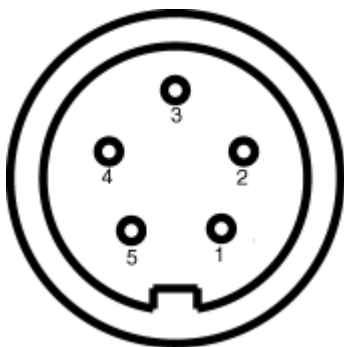
- 1) GND
- 2) +24V
- 3) INPUT - START PRINT signal

**3 poles, female, START PRINT signal
Internal view, soldering side**



- 1) GND
- 2) +24V
- 3) OUTPUT - PRINT END signal
- 4) unused

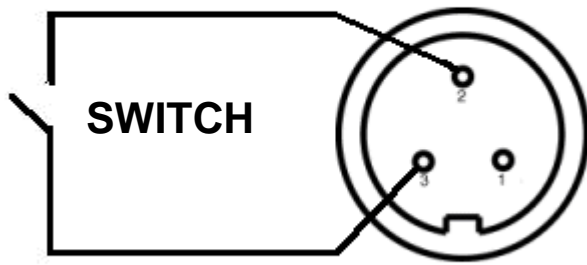
**4 poles, female, PRINT END signal
Internal view, soldering side**



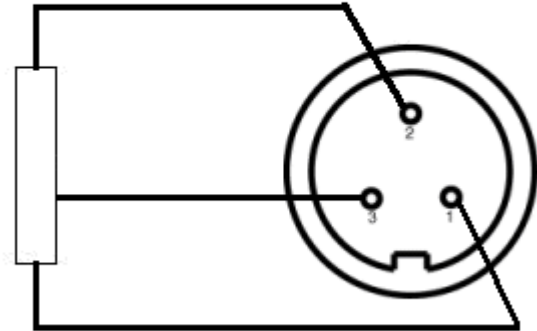
- 1) GND
- 2) +24V
- 3) OUTPUT - ALARM signal
- 4) unused
- 5) unused

**5 poles, female, ALARM signal
Internal view, soldering side**

START PRINT signal
(soldering side view)



PHOTOCELL

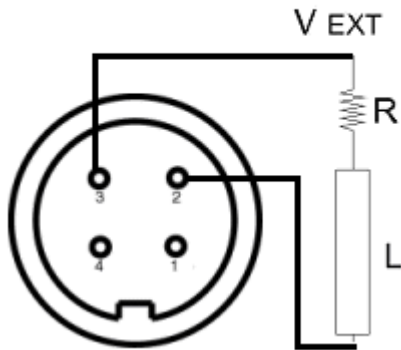


Input signal

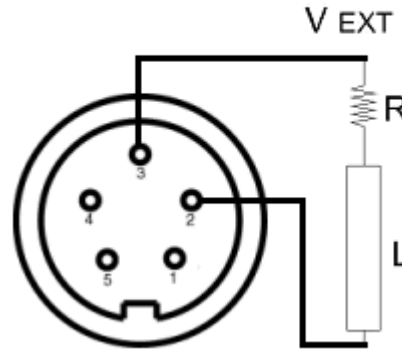
Internal circuit resistance = 1800 Ohm

ALARM and PRINT END signals
(soldering side view)

PRINT END



ALARM



Output signals

Alarm and Print End

V = internal tension

I = current

R = Current limiting resistance of external circuit

L = Load impedance of external circuit

V = internal +24 Volt

Output transistor can drive up to 1 ampère.

$$I = V/(R+L)$$

$$I_{max} = 1A$$

V (Volt)	I (mA)	R + L (Ohm)
24	10	2400
24	20	1200
24	50	240

suggested values in **bold**