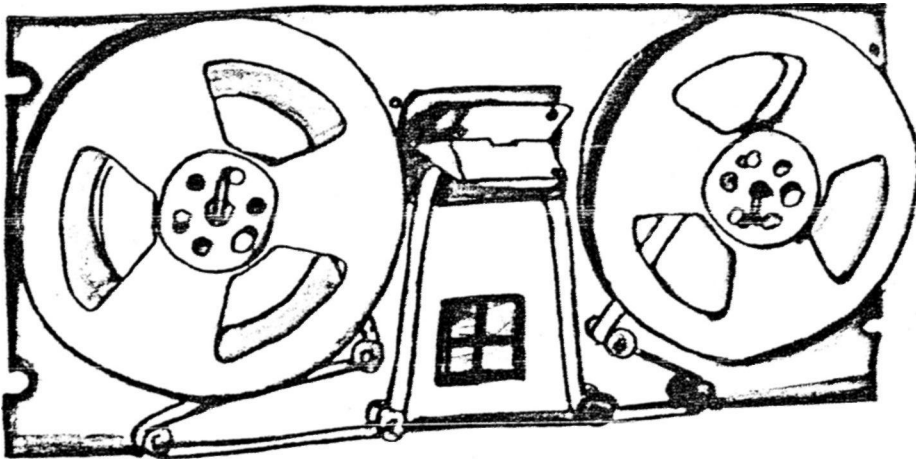
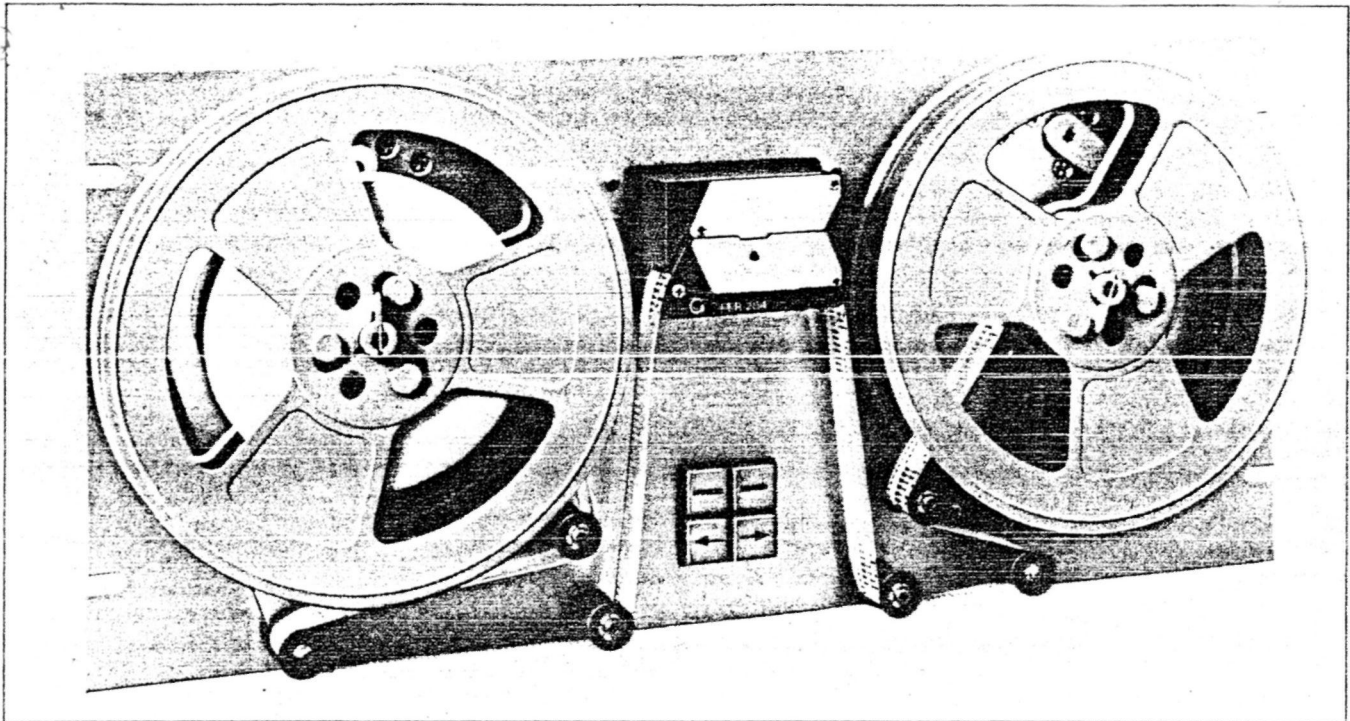


409325-19



PAPER TAPE READER/ SPOOLER

Reliability even in adverse
environments



The paper tape reader FER 204 is characterized by its compact construction, low power consumption and a high read speed of 280 CPS. A long life for the reader and tape are assured by the robust all-metal hard anodized reading head coupled with c tape protective transport system. A unique, highly reliable optical reading system is provided through the use of a single LED in combination with fiber optics. The entire unit is then subjected to over 100 hours of computer and burn-in testing.

The Spooler S2 was specifically designed for use with Ghilmetti's photoelectric paper tape reader FER 204/204A. The Spooler S2 consists principally of two independent drive systems utilizing permanent magnet DC motors for the winding/rewinding of tape. Each drive system is controlled via the tope and compensating (dancer) arm attached to a Hallgenerator switch, thus allowing a rapid wind/rewind speed and the most protective tape transport in the industry.

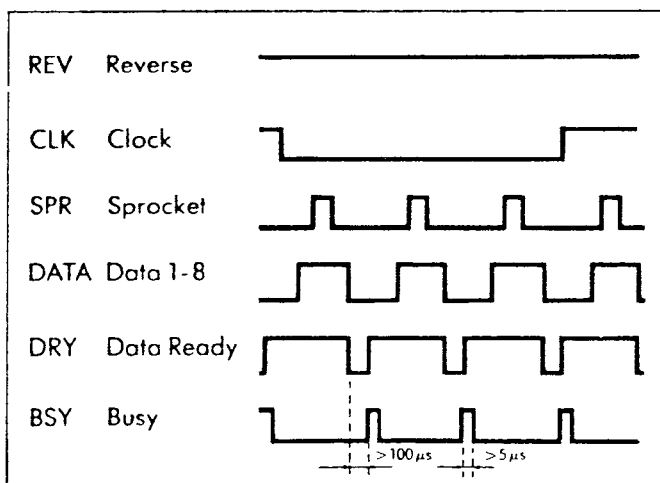
An independent reader (Loop) operation is provided by means of four pushbuttons on the front panel. Now, the processing of continuous programs on a tape loop can be handled by the same reader/spooler mechanism. The endless application possibilities of the Spooler S2 are owed primarily to its electronic and mechanical module construction.

Features

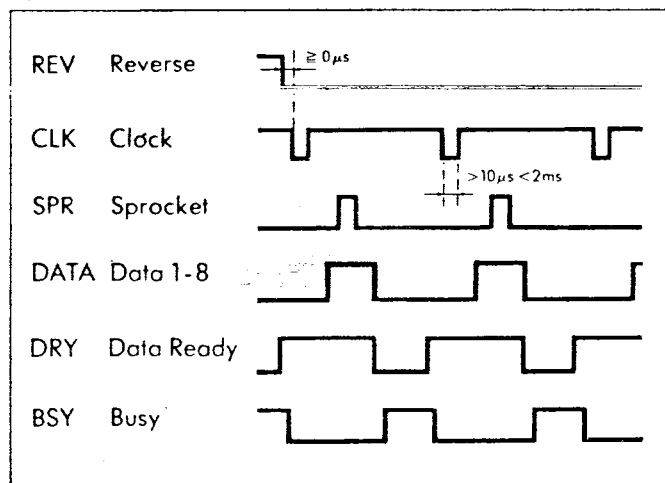
- Wind/Rewind at 1000 cps
- Bi-directional 280 cps
- Stop on character
- Independent operation of reader and spooler
- Loop-operation
- Tape transparency 60%
- Maintenance-free operation (No user adjustments)
- Long life (MTBF 20.000 hours)
- Interfaces: parallel, RS 232 C / V 24 or Remex
- Tope Reel Size: 5 1/4", 7 1/2", 8 1/2"

Pulse diagram

Static



Dynamic



Technical Data to Paper Tape Reader FER 204/204A

Reading speed

Synchronous: up to max. 300 cps
typical 280 cps
Approx. 320 cps with active zero at rest input.
Stop on character is no longer guaranteed with this reading mode.

Asynchronous: up to max. 275 cps
typical 250 cps
With a tape tension up to approx. 1N, reading speed in synchronous and asynchronous operation is reduced by approx. 10%.

Power input

Supply voltage: 24VDC +20%, -10%

Current consumption: average value 0.5ADC typ.
max. value 1.1ADC
peak value 1.6ADC

Connection: max. line impedance between feeder and reader: 0.5 ohms.

Paper tapes

5-, 6 and 8 track, tape transparency 0 to 60%.

Standards: DIN 66014, ECMA-10,
ISO R1154-1969, BS 3880.

Input signals

CMOS, TTL or open collector logic 5-30V, active "0".

Output signals

5V, CMOS-buffer 4049, 4050.

Technical Data to Spooler S2 5 1/4", 7 1/2", 8 1/2"

Operation modes

Reading: automatic via paper tape reader.

Rewinding: manual operation via push-button or remote controlled.

Spool core adapter

All commercially available 2" plastic cores to DIN 6720 or equal.

Tape length: 100m, 250m, 340m at 0.1mm thickness.

TTY adapter

Adapter for TTY spools.

Diameters: 5 1/4", 7 1/2" and 8 1/2".

Length of punched tape: 100m, 240m, 300m at 0.1mm thickness.

Tape tension

0,5-0,7 Newton

Number of runs: approx. 1000 for normal paper tapes 0.1mm thick and normal climate.

Power supply

110/220/240V, 50-60 Hz
(with voltage switch)

Climatic conditions

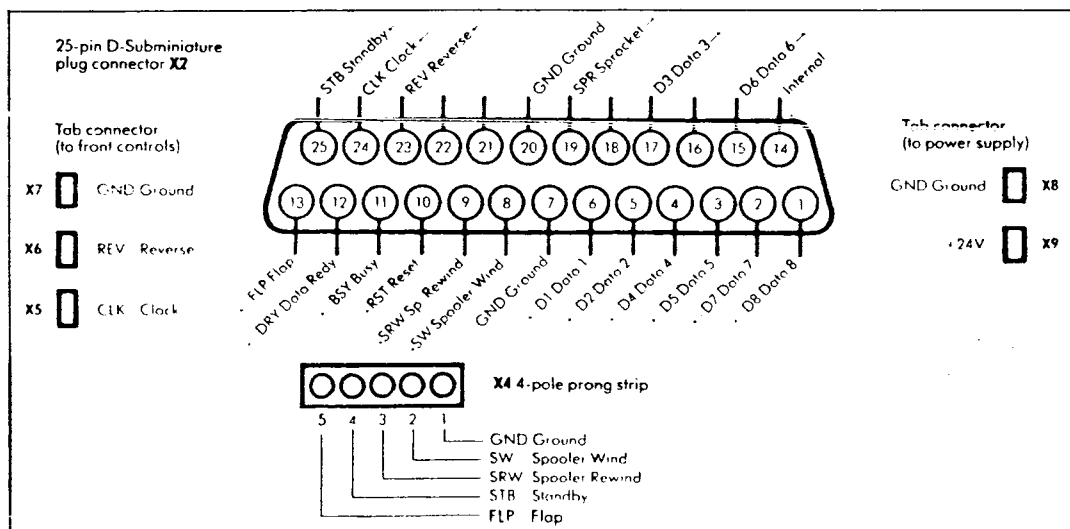
Operation: conform with KUF DIN 40040
0°C to +60°C

Storage: conform with HRF DIN 40040
-25°C to +75°C

Weight: approx. 6,5kg

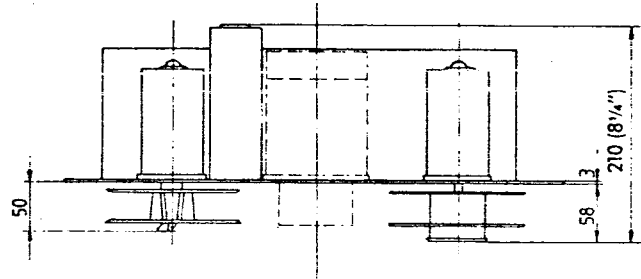
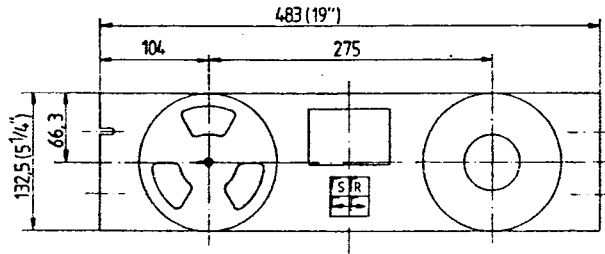
relative air humidity max. 95%
without condensation.

Pin assignments (parallel-Interface)

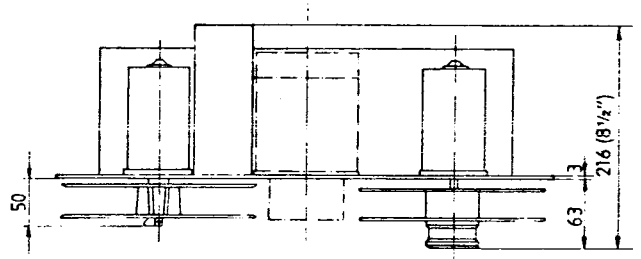
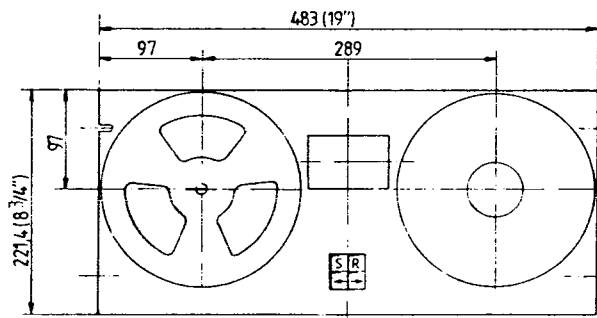


Dimensional sketch

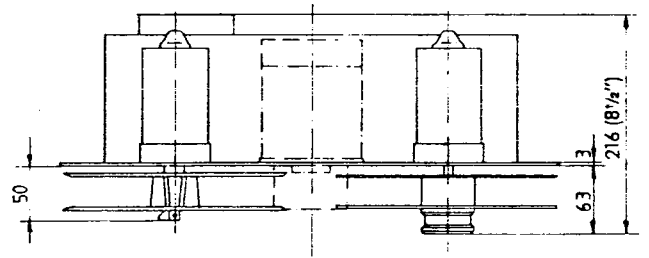
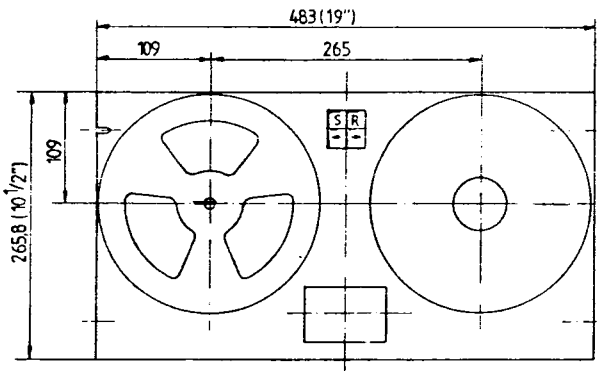
1 Reader/Spooler FER 204/S2 5 1/4"



2 Reader/Spooler FER 204/S2 7 1/2"



3 Reader/Spooler FER 204/S2 8 1/2"



Ghielmetti AG
Biberiststrasse 24
CH-4501 Solothurn

Schalt- und Datengeräte
Commutation et programmation
Switches and data devices

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Woking GU21 1LJ (Surrey)
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Tel 86267420 Telex 859617

U.S. A.

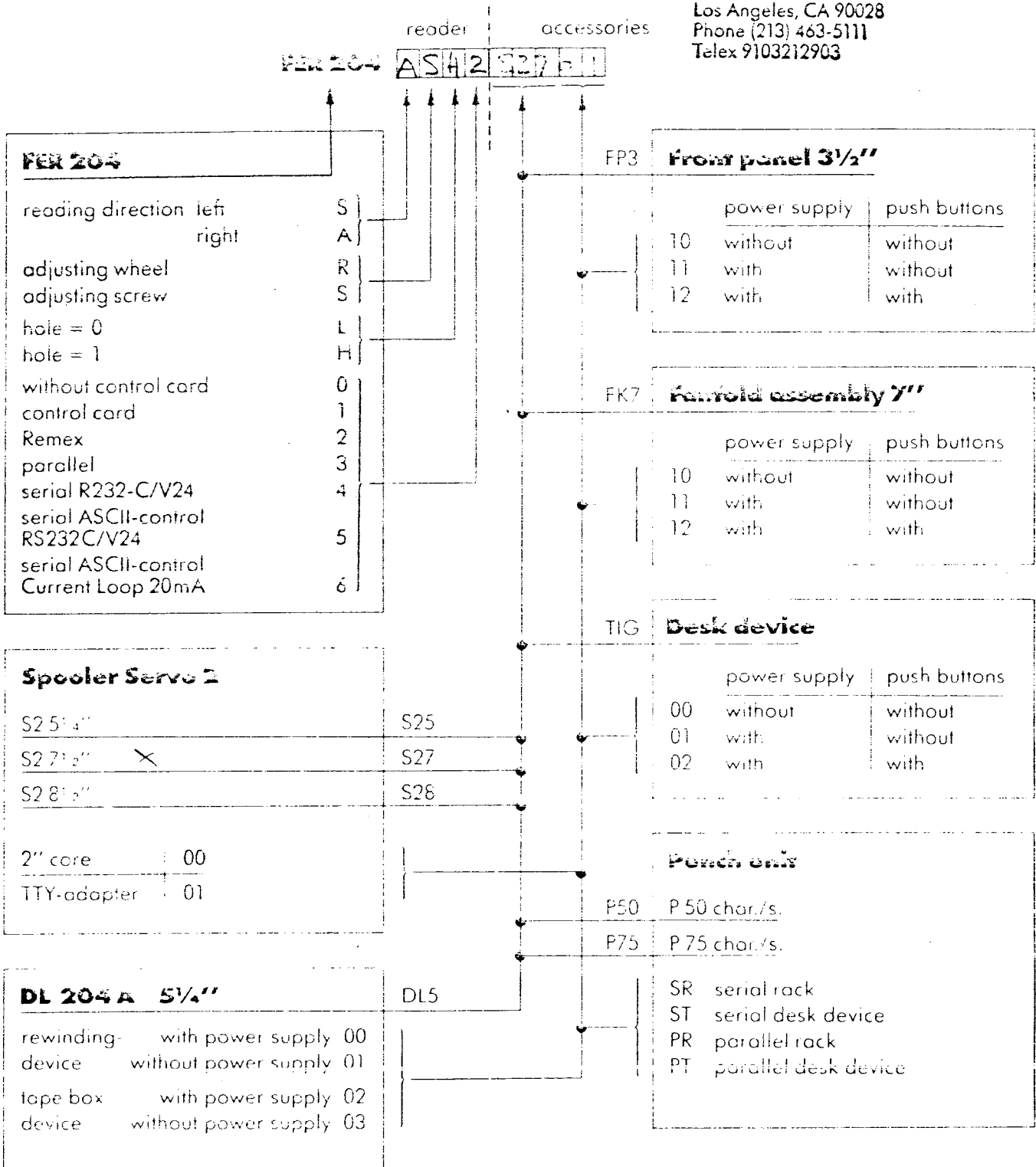
Ghielmetti Inc
Suite 1126, 6290 Sunset Blvd
Los Angeles CA 90028 USA
Tel (213)463-5111 Telex 9103212903

Representatives In Australia - Austria - Belgium - Brazil - Colombia - Denmark - Finland - India - Italy - Japan - Netherlands - Norway - Portugal - Spain - Sweden

Order Key for Paper Tape Reader FER 204 Combinations

GHIELMETTI

Ghielmetti Inc.
Switches and Data Devices
6290 Sunser Blvd., Ste. 1126
Los Angeles, CA 90028
Phone (213) 463-5111
Telex 9103212903



Example:

FER 204 reading direction from left to right, with adjusting wheel, inverted output (hole = 1) with serial interface RS232-C/V24 mounted on a servo spooler S2 spool diameter 7 1/2", with 2" core:

FER 204-AS-H-2-S-2-7-F-1

GHIELMETTI

25 - pin D - subminiature plug connector (X2)

1	D8	Data channel 8
2	D7	Data channel 7
3	D5	Data channel 5
4	D4	Data channel 4
5	D2	Data channel 2
6	D1	Data channel 1
7	GND	Ground
8	SW	Spooler Wind
9	SRW	Spooler Rewind
10	RST	Reset
11	BSY	Busy
12	DRY	Data Ready
13	FLP	Flap
14	+24V	_____
15	D6	Data channel 6
16		
17	D3	Data channel 3
18		
19	SPR	Sprocket
20	GND	Ground
21		
22		
23	REV	Reverse
24	CLK	Clock
25	STB	Stand by

Warning !

1. Under no circumstances may the power supply for the reader FER 204 be connected to the same connector cable as the data lines, nor may it run through pin 14 !
Use only the tab connections X8 (ground) and X9 (+24V) for the FER 204 power supply.
2. The +24V supply on pin 14 is used for interfaces mounted directly on the reader.

If the power supply is to be used for external interfaces in the same connection (e.g. flat cable), the current must be limited by installing a series resistor of min. 22 ohms on the interface supply line. Charge capacitors therefore cannot pick up peak currents for feedback.

Tab connector

X5	CLK	Clock	}	to front controls
X6	REV	Reverse		
X7	GND	Ground		
X8	GND	Ground	}	to power supply
X9	+24V			

4-pole prong strip (X4)

1	GND	Ground	}	to spooler
2	SW	Spooler Wind		
3	SRW	Spooler Rewind		
4	STB	Stand by		

FER 204/204A