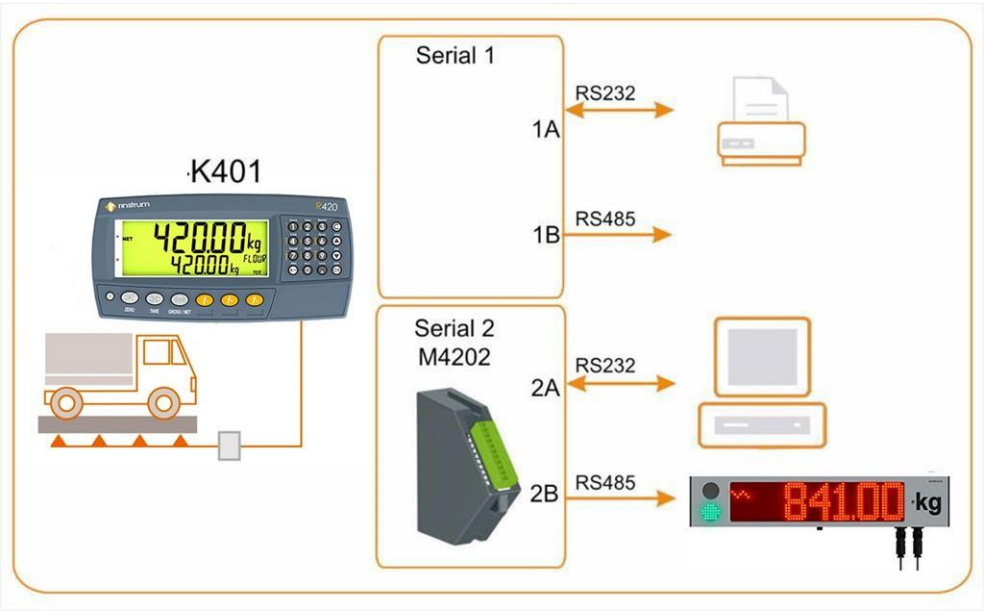
Application Note: Single Deck, Single Pass Weigh Bridge (K401)

Application:



K401 is applicable for single pass operations. Rinstrum also has K404 which has a truck database built in and supports weigh in and out. The K404 would be used in the case where truck IDs are stored as it supports 250 Trucks.

- The onboard RS232 serial port would be used to support the printer.
- The M4202 RS232/RS485 module would be used to support a computer and remote display.
    - The isolated RS232 would be used for a computer
    - The isolated RS485 transmit only port would be used for a remote display.
- The D841 super bright LED (or D850) is recommended as annunciators would be required on a trade approved installation. D841 has traffic lights and 4 inch digits, and the D850 has 5 inch digits.
- One or two summing boxes would be required depending on the number of load cells used.
- Up to two (2) from the six (6) standard print formats can be selected, or custom print strings can be used.
- Along with standard auto transmitting formats, the two auto formats can be customised.

Components:

R420-K401-AC1
ABS Indicator

OR

M4202
RS232/RS485 Module

0077 (shown)
IP65, Stainless steel Junction Box
Seven holes with 7 x PG9
Polymer Glands Signal trimming
OR 0075
IP65, Polymer Junction Box
Five holes with 5 x PG9
Polymer Glands Signal trimming

R427-K401-AC1
Stainless Steel Indicator

D841(shown)
OR D732/ D850
Large Remote Display

*Note: Large remote display can be ordered with either DC or AC supply requirements

Operation:

1. Set up

Enter pre-set tare if required

2. Truck Drives On

K401 Display

If DUAL display setting is used

Where both the gross and net weights are to be displayed the VIEW setting would be DUAL

Error Condition

The remote display will show a blanking screen (--//--) using dashes if there is an error on the indicator

3. Print Docket or Record

Press F1 Print Key

Record Print - FMT.B

The printout can be a simple pre-set one or customised to include specific information and formatting.

```
Joe's Gravel
29/04/2021 9:30
ID: 001234
T: 3000 kg
G: 5094 kg
N: 2094 kg
Thank You!
```

Configuration:

K401 Set up

(To enter the setup mode, hold down the **Power** and **F3** key for a few seconds.)

FUNC:NUM	1 or as required
FUNC: SF1	TYPE to PRINT KEY to F1 or as required
H.WARE: SER1.HW	BAUD 9600 PARITY to NONE DATA to 8 STOP to 1 DTR to ON (connect to paper out detect on printer)
H.WARE: SER2.HW	BAUD 9600 PARITY to NONE DATA to 8 STOP to 1 DTR to OFF TERM to ON
PRINT:PRINT1: SERIAL	**Connection to Printer** (other print settings to be set as required) SER1A
SER.NET: TYPE	RINCMD
SER.NET: SERIAL	**Connection to Computer** SER2A
SER.AUT: NUM	1
SER.AUT: AUTO.1	**Auto output to remote display** TYPE to AUTO.LO SERIAL to SER2B FORMAT to FMT.G* or as required

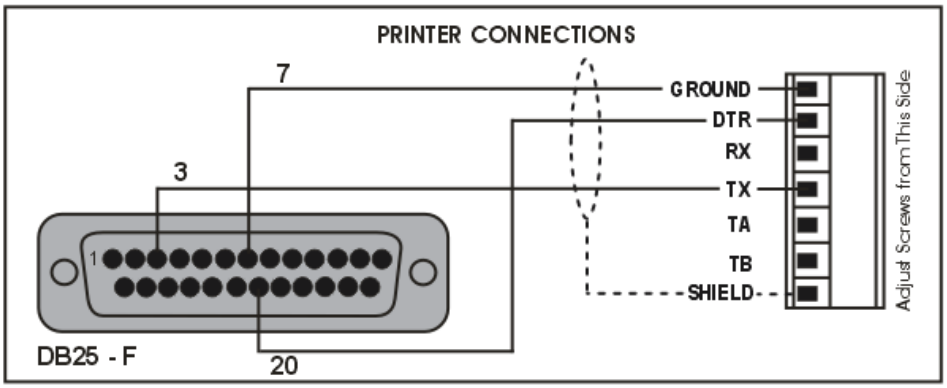
*The sign character of the weight reading, and serial traffic light control can both be displayed at the same time. Setpoint 1 is mapped to the red light (Scale exit) and setpoint 2 is mapped to the green light (Scale ready).

Set Point Configuration

SETP	**NUM**		4
	SETP 1	**TYPE**	LGC.OR
		OUTPUT	IO1
		LOGIC	HIGH
		ALARM	NONE
		SOURCE	STATUS
		MASK	28672
		TIMING	LEVEL
		RESET	NONE
		RST.LGC	HIGH
		NAME	REDLED
SETP	**NUM**		
	SETP 2	**TYPE**	LGC.XOR
		OUTPUT	IO2
		LOGIC	HIGH
		ALARM	NONE
		SOURCE	SETP
		MASK	12
		TIMING	LEVEL
		RESET	NONE
		RST.LGC	HIGH
		NAME	GENLED
SETP	**NUM**		
	SETP 3	**TYPE**	SC.REDY
		OUTPUT	NONE
		LOGIC	HIGH
		ALARM	NONE
		RDY.TIM	1.000s
		TIMING	LEVEL
		RESET	NONE
		RST.LGC	HIGH
		NAME	ENTRY
SETP	**NUM**		
	SETP 4	**TYPE**	SC.EXIT
		OUTPUT	NONE
		LOGIC	HIGH
		ALARM	NONE
		TIMING	LEVEL
		RESET	NONE
		RST.LGC	HIGH
		NAME	EXIT

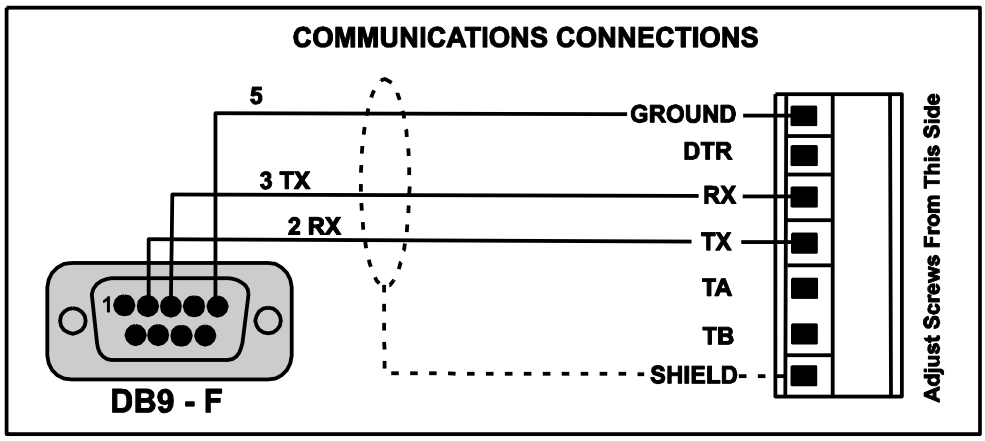
Wiring

RS232 Serial - Printer Connections (TX, DTR and GND) – Serial1A on the R420 in this application



RS232 – Instrument to Printer (DB25)

RS232 Serial - Direct PC Link (RX, TX, GND) – Serial2A on the R420 in this application



RS232 - Instrument to PC using COM Port (DB9)

RS485 Connection to Remote Display – Serial2B on the R420 in this application

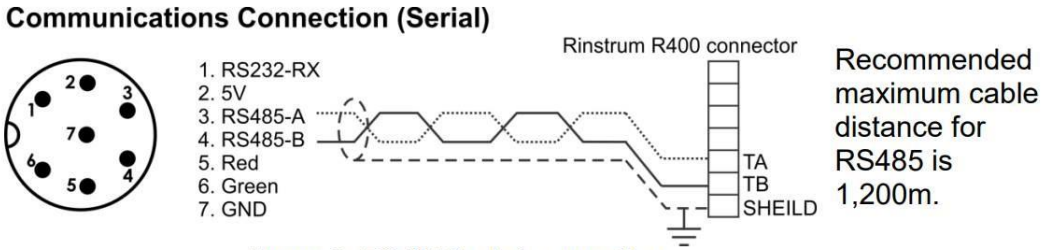
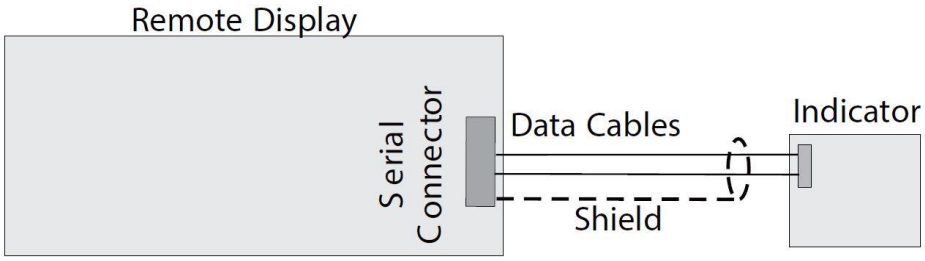


Figure 8 - RS485 Socket connection

Earthing on Remote Display – Shield Pin 1 on Remote Display



For more information refer to the Reference Manual for these products