Quick Guide

Connection Scheme

RC3D – FT-11xD

Cable Version

New Generation

flintec

Introduction

Flintec offers digital compression load cells RC3D in two variants:
-   The version with installed cable and
-   The new generation RC3D v2 with two M12 connectors. It is designed so, that multiple cells can be wired together in a daisy chain to the indicator, greatly simplifying installations by avoiding the need for a junction box.

Included in the scope of FT-111D or FT-112D delivery is a LPK24 box made of stainless steel with integrated surge protection. It serves as a power supply between the indicator and the connected digital load cells.

Purpose

This document serves as a help to establish the connection between FT-111D or FT-112D indicators with RC3D load cell(s).

Required Components

FT-111D or FT-112D indicator

RC3D load cell
Junction box KPFD-8

Or

RC3D v2 (next generation)
Daisy chain cable(s)
Home-run cable
Termination resistor

Contents

1 FT-11xD and RC3D (cable version)
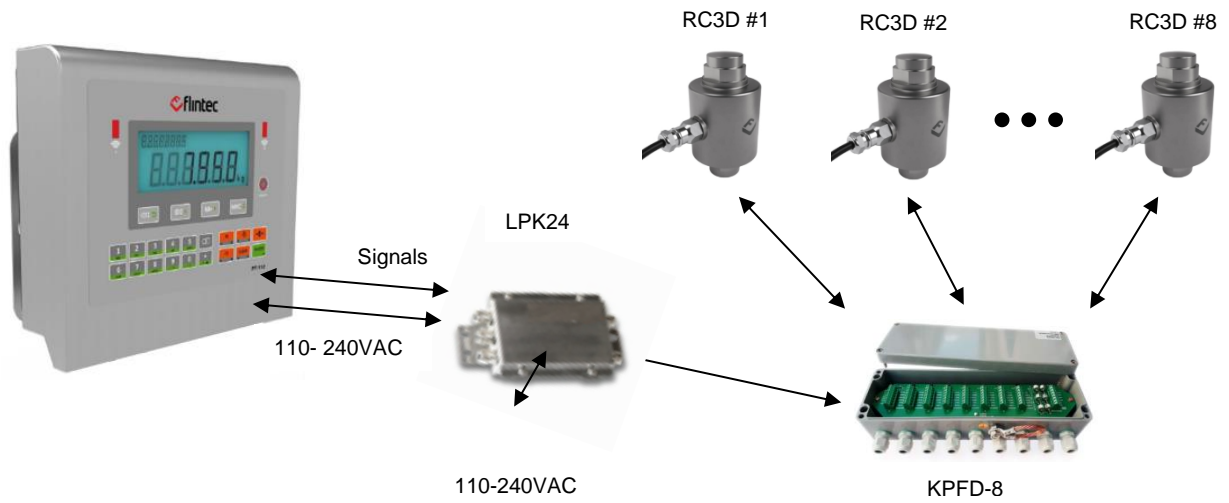
Figure 1 – System configuration RC3D Cable

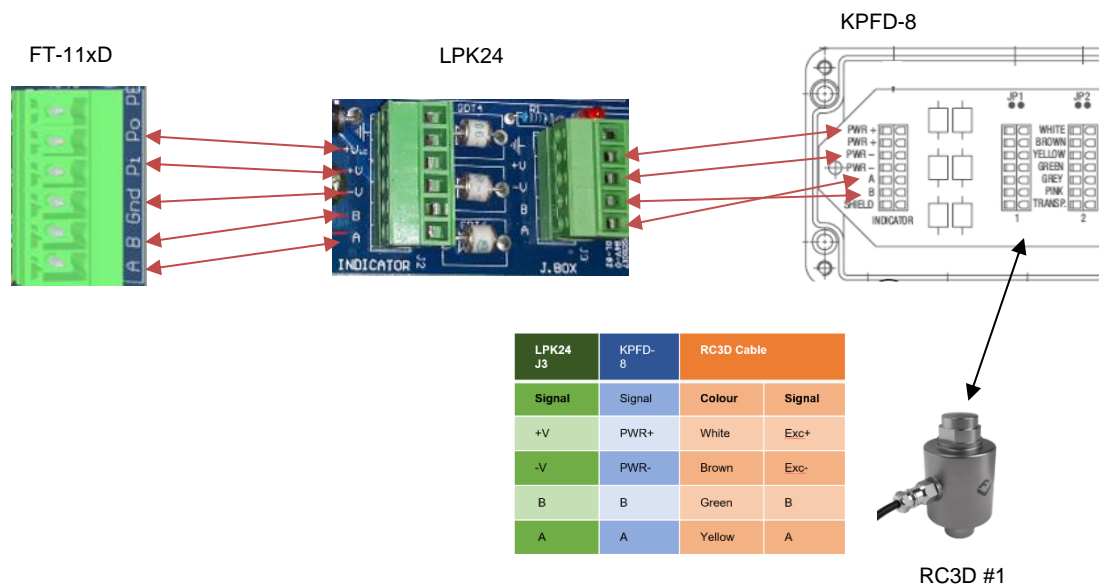| LPK24 J3	KPFD-8	RC3D Cable	
Signal	Signal	Colour	Signal
+V	PWR+	White	Exc+
-V	PWR-	Brown	Exc-
B	B	Green	B
A	A	Yellow	A

Figure 2 – Pin assignment RC3D Cable

2 FT-11xD and RC3D v2 (next generation)
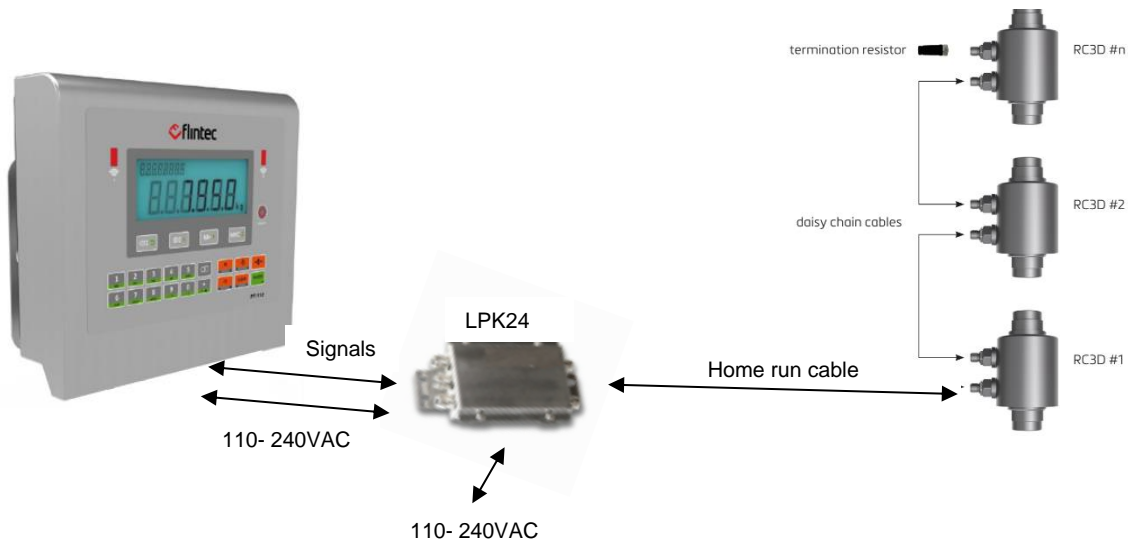
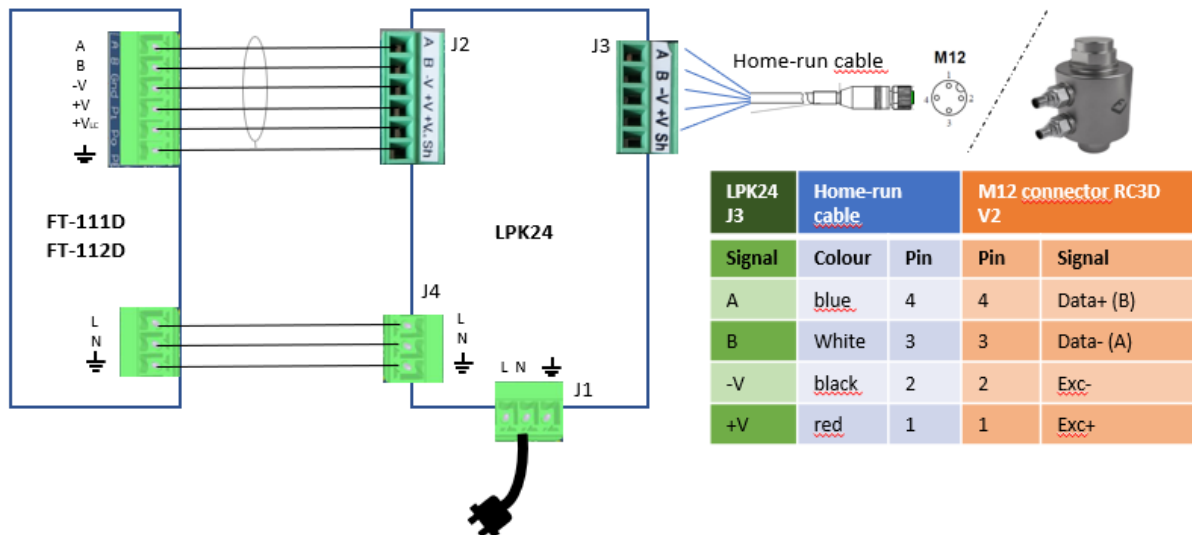Figure 3 – System configuration RC3D v2

Figure 4 – Pin assignment RC3D v2

Note: The colour code of the home run cable may differ depending on used cable. For correct connection use pin assignment as stated above.
Note: On the load cell the plug-in positions of the home run and the daisy chain cables are not important. The connectors can be freely selected, at the top or bottom.

3 Addressing Digital Load cells

The following diagram shows the recommended load cell addressing principle. Remember, if pair shift adjustment is selected, 1 and 2, 3 and 4 etc. will be sectional pairs.
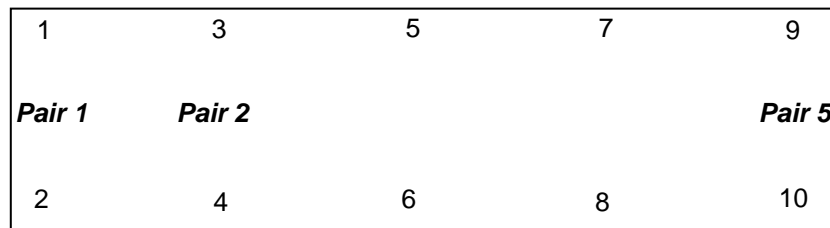
1	3	5	7	9
Pair 1	*Pair 2*			*Pair 5*
2	4	6	8	10

Figure 5 - The addressing principle of RC3D.

Addressing of RC3D digital load cells (first installation)

Enter the parameter [532 Quantity] and define the connected quantity of RC3Ds.

1. Press ENTER key at the [533 ADDRESSING] prompt to start the addressing.
2. The message [WAIT] appears for a short time and then [DLC NUMBER :01] appears. Here 01 is the address of the.
3. Press ENTER key to enter the serial number of the first DLC.
4. After the [SERIAL:] prompt appears, type the serial number value by pressing ↑ key to increase or ↓ key to decrease the blanking digit and press ↻ key to select the next digit.
5. Press ENTER key to start addressing of the digital load cell. [ADDRESSING DLC] message appears on the display for 10 seconds while addressing is being performed.
6. The next DLC number appears on the display. Press ENTER key to enter the serial number and repeat from item 4 until all DLCs have been addressed.
7. [532 QUANTITY :XY] message appears after addressing of all load cells.
8. Press ↰ key to access the "Shift adjustment" block or press ↰ key until [SAVE : YES] prompt appears on the display and press ENTER key to save the changes.
9.

Shift adjustment method (corner adjustment)

A shift adjustment is carried out to eliminate weight reading differences placing a load on different positions on the platform. A calibration is required after shift adjustment.
Each load cell or each sectional pair should be loaded for eccentricity adjustment. Individual shift adjustment is used to eliminate errors in installations that have excessive eccentricity errors. Typical application of sectional pairs are rolling loads on the platform like track scales. Sectional pairs adjustment is easier and faster.

Automatic Shift Adjustment

IMPORTANT NOTE: This adjustment must be performed before calibration. Load the scale few times before performing automatic shift adjustment.

Small mismatches in mechanical and electronic gain of the load sensing paths can cause the same test weight to produce slightly different readings, depending on the location of the test weight on the scale. To eliminate these eccentricity errors, shift adjustment is performed as;

1. Press ENTER key at the [542 AUTO ADJUST] prompt to start the shift adjustment.
2. At the [ZERO CALIBRATION] prompt, press ENTER key to go to next step.
3. [UNLOAD THE PAN] prompt, remove any weight on the platform, then press ENTER key.
4. The terminal automatically starts to capture zero and the [WAIT] message indicating the operation is in progress.

5. After the [LOAD DLC NO : 01] or [LOAD PAIR NO : 01] prompt, place the weight of at least 10% of the DLC capacity as close as possible to the independent load cell or sectional pair 01. Press ENTER key.

6. The terminal automatically starts to capture the values from DLCs and the [WAIT] message indicating the operation is in progress.

7. The following load cell address or pairs number appears on the display and you may repeat from item 5 until all DLCs have been adjusted.

8. After end of adjustment the following sub-block appears.

Manual Shift Adjustment

IMPORTANT NOTE: The shift adjustment must be performed before calibration.

Manual shift adjustment is done to improve small shift errors manually entering shift coefficients of load cells after the instrument has been changed.

1. Press ENTER key at the [543 MANUAL ADJUS] prompt to start the manual shift adjustment.

2. At the [DLC COEFF   :01] and [1.0000] prompt, enter the coefficient by pressing ↑ key to increase or ↓ key to decrease the blanking digit and press ↻ key to select next digit. Press ENTER key change to the next DLC.

3. After entering the value of the last coefficient press ENTER key to check values again or press �backarrow key to exit.

4. Press �backarrow key until [SAVE : YES] prompt appears on the display. Press ENTER key to save the changes.