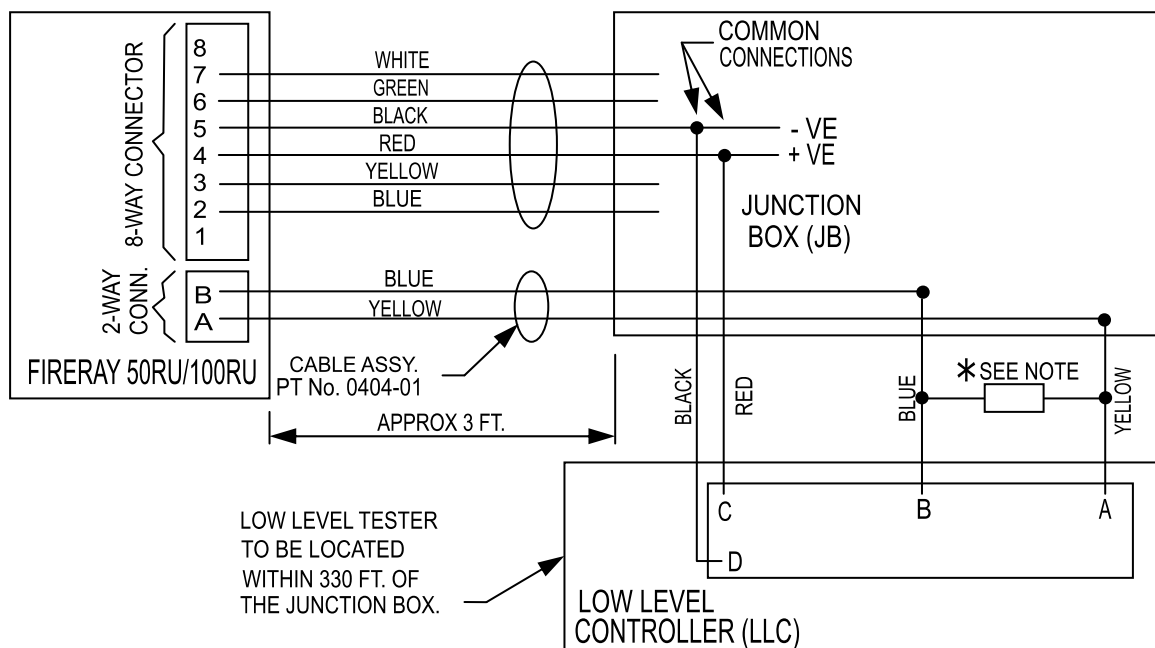


Fireray 50RU/100RU UL Low Level Controller (LLC) Product No. 0400-01-04 (Issue 4)

Technical Bulletin 22318.17.03

- Remotely tests Issue 2 (and above) Fireray 50RU/100RU for correct operation for fire.
- Simple key-switch operation.
- Power and serial communication connections via 4 wires.
- Designed to fit standard back box.
- Simple two-lamp indication.



WIRING CONNECTION CHART FOR LOW LEVEL CONTROLLER							
FIRERAY 50RU/100RU				JUNCTION BOX		LOW LEVEL CONTROLLER	
	PIN No.	WIRE COLOUR	FUNCTION	OPERATION		WIRE COLOUR	WIRE REF.
8-WAY CONNECTOR	8		SPARE				
	7	WHITE	TROUBLE COM	FIRE ALARM			
	6	GREEN	TROUBLE N/C	FIRE ALARM			
	5	BLACK	POWER -VE	FIRE ALARM/LLC	CONNECT	BLACK	D
	4	RED	POWER +VE	FIRE ALARM/LLC	CONNECT	RED	C
	3	YELLOW	FIRE N/O	FIRE ALARM			
	2	BLUE	FIRE COM	FIRE ALARM			
	1		SPARE				
2-WAY CONN.	B	BLUE		COMMUNICATIONS	CONNECT	BLUE	B
	A	YELLOW		COMMUNICATIONS	CONNECT	YELLOW	A

* NOTE: Fit resistor supplied (150 Ohm) across 'Yellow' and 'Blue' communications lines by LLC. The use of the resistor is not essential for short cable runs, but if greater than 20m (60ft), use of the resistor may be required. It will do no harm if the resistor is fitted on all installations.

System Operation:

The LLC is a low level aid to prove that the Fireray 50RU/100RU is operational and can achieve an alarm condition within working parameters.

Test initiation:

To initialise the test, the Fireray 50RU/100RU beam detector must be powered, aligned, and in its quiescent non-trouble state. The key for the LLC should be inserted and turned 90 degrees clockwise to the **TEST** position (the key cannot be removed when in this position). Once communication has been established between the beam detector and the LLC, the green lamp on the LLC will flash each time it is polled by the beam detector, and the receiver amplifier gain will be automatically clocked down forcing the beam detector into an alarm condition. Both the red ALARM lamp on the beam detector and LLC will then illuminate, and the alarm relay will operate.

Beam Detector Latching Configuration: The beam detector will latch into alarm, and will stay in alarm until the key switch is turned to its **RUN** position and the beam detector is reset.

Beam Detector Non-Latching Configuration: The beam detector will go into alarm for 20 seconds, and then return to its pre-test state. No further alarms will be triggered by the LLC unless the LLC is turned to **RUN** for a minimum of 5 seconds and then put back into **TEST** again.

Key switch to RUN position:

The key switch may be turned to its **RUN** position at any time. With the LLC turned to **RUN**, the beam detector amplifier will return to its pre-test state.

LLC Lamp logic:

Function	LLC red lamp	LLC green Lamp	Beam detector - Latching	Beam detector - Non Latching	Fire Panel
RUN	OFF	OFF	Quiescent	Quiescent	Quiescent
Key switch to TEST	OFF	FLASH	Quiescent	Quiescent	Quiescent
Wait a short while	ON	FLASH	FIRE	FIRE	FIRE
After a further 20 seconds	ON	FLASH	FIRE	Quiescent	FIRE
RUN (after test)	OFF	OFF	FIRE	Quiescent	FIRE
Reset Fire panel and Beam	OFF	OFF	Quiescent	Quiescent	Quiescent

Specification:

- Operating voltage 10.2 to 30 volts (dc)
- Off current 0mA
- On current (alarm) 8mA maximum
- Operating temperature 32 °F to 100 °F
- Key reference A126
- Moisture max 93% RH (non condensating)
- Weight (approx) 60z
- Cable (not supplied) 4 core twisted cable (each core to have a minimum of 7 x 0.2mm strands with a current capacity of 1 Amp, and a breakdown voltage of 100Vdc or 50Vac.)

