Ford_SYSR：FS_REQ0025_V3 Turn Indicator Feedback

2024-10-24 18:02 -

:		:	2024-10-29
:		:	2024-11-07
:		% :	100%
:		:	0.00
:	H003_SW0007169.A001.8	:	0.00

Under normal operating conditions, the LDM shall report Turn indicator status to the BCM by outputting the received signal from the BCM over the 'L/RF_LED_Turn_Outage_Ckt' line. The feedback must be stable 70ms after BCM output Turn on. The BCM does a 50ms (max) debounce. The BCM makes the decision 120ms (70+ 50) after Turn on.

TI outage detection report shall also occur via a hard wire back to BCM. Feedback signal will follow the "on/off" pattern matching the input signal from turn indicator input when no outage is detected. In case of outage Signal will remain "LOW" status the whole time.
- No Outage: Signal goes "HIGH" when TURN LEDs are activated.
- Outage: Signal remains "LOW" when TURN LEDs are activated.
- Outage: Signal remains continuous "High" when TI is activated and TI input short to Battery.

Note: BCM uses an active high input which has a 1.3K Ohm pull down resistor. The LDM module shall implement a high side driver with built-in short to ground protection circuit for outage feedback.

Following BCM TI outage feedback input max values to be considered:
Input Voltage Range: 8 – 19V
Input Current Range: 0.007 - 0.015A

If no TI outage detected, the feedback should be equal or more than 8V (Shall consider to meet the requirement while 9-16V power supply);
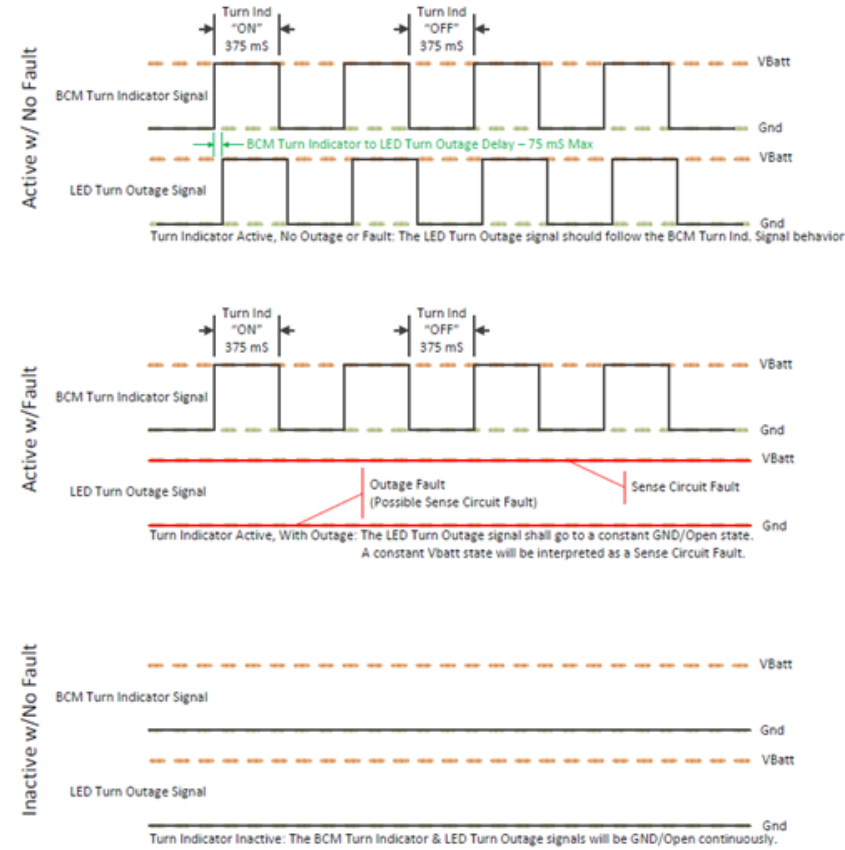If any TI outage detected, the feedback should be less than 2V.

Figure 8: Turn Indicator Feedback Description

#1 - 2024-10-25 09:43 -

#2 - 2024-11-12 09:35 -

- *clipboard-202411120933-ddnon.png*

- *Ford_SYSR   FS_REQ0025_V2 Turn Indicator Feedback   Ford_SYSR   FS_REQ0025_V3 Turn Indicator Feedback*

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#3 - 2024-11-18 14:01 -

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#4 - 2025-04-14 08:33 -

- *clipboard-202504140832-am6qx.png*

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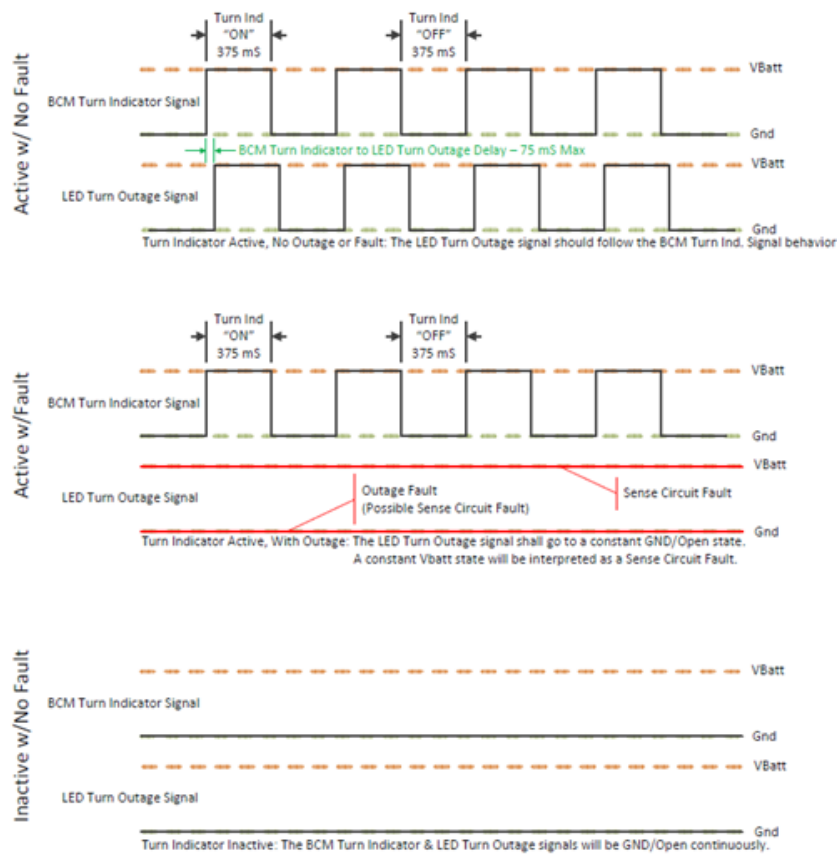If any TI outage detected, the feedback should be less than 2V.

Figure 8: Turn Indicator Feedback Description

#5 - 2025-04-14 08:59 -

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Updated REQ0025 to include outage with High level

clipboard-202410241802-yjage.png	89.6 KB	2024-10-24
clipboard-202411120933-ddnon.png	89.6 KB	2024-11-12
clipboard-202504140832-am6qx.png	89.6 KB	2025-04-14