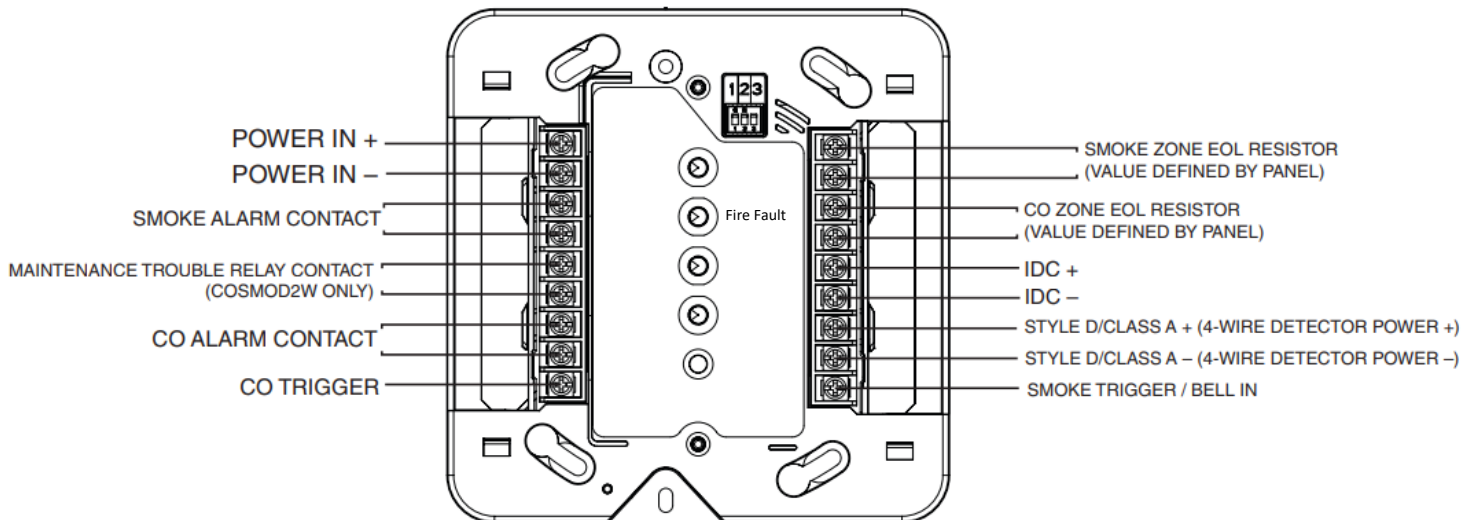# System Sensor – COSMOD2W

PG9WLSHW8 & PG9HRDW8

The IQ Panel 4 can support the System Sensor COSMOD2W and the System Sensor COSMO-2W smoke/co detectors by using the IQ Hardwired PowerG module, a HSM2300 power supply and a HSM2108 zone expander.

The COSMO2W loop is monitored by the system for three states of the detector's circuit through the fire zone connection to the COSMOD2W (SMK IDC +, SMK IDC -).

- 3.9k resistance is a Normal state on the loop. 5.6k is presented to the zone.
- Reduction of resistance toward 0k is an Alarm state. (Detector alarm or short)
- Increase of resistance toward ∞ is a Trouble state. (Loose or broken wire)

➢ **Tech Tip:** Test each smoke/co detector for alarm state and the loop for trouble state. Follow the manufacturer's instructions as needed for testing.

➢ **Tech Tip:** Only use compatible detectors (COSMO-2W and/or 2WTA-B). Do not install other devices on the alarm circuit (e.g., heat detectors, manual pulls, etc.)

➢ **Tech Tip:** Follow the manufacturer's installation instructions for testing, power calculations, operation, and installation requirements as needed.

System Sensor – COSMOD2W
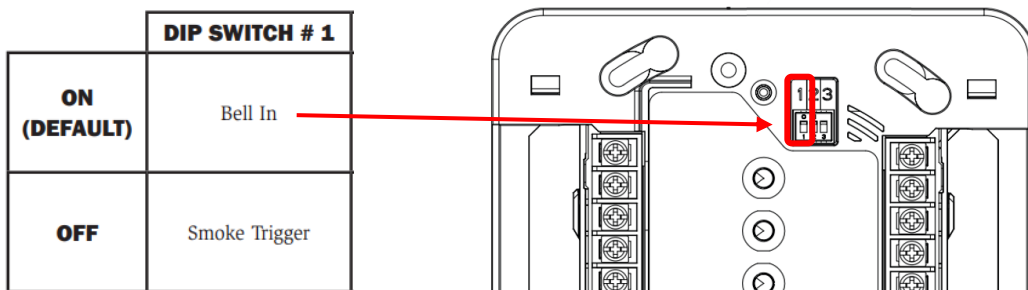
COSMOD2W Wiring:
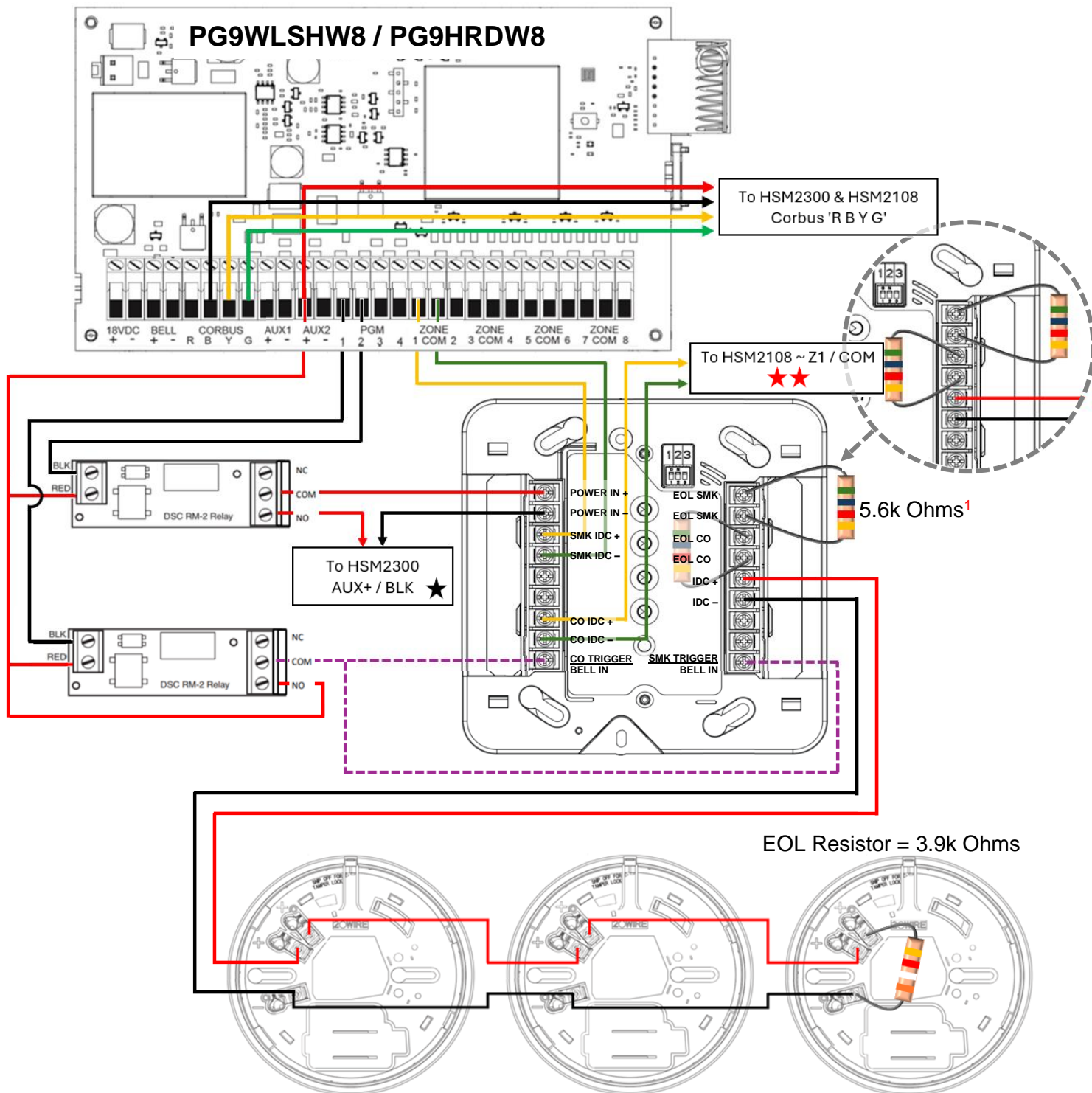
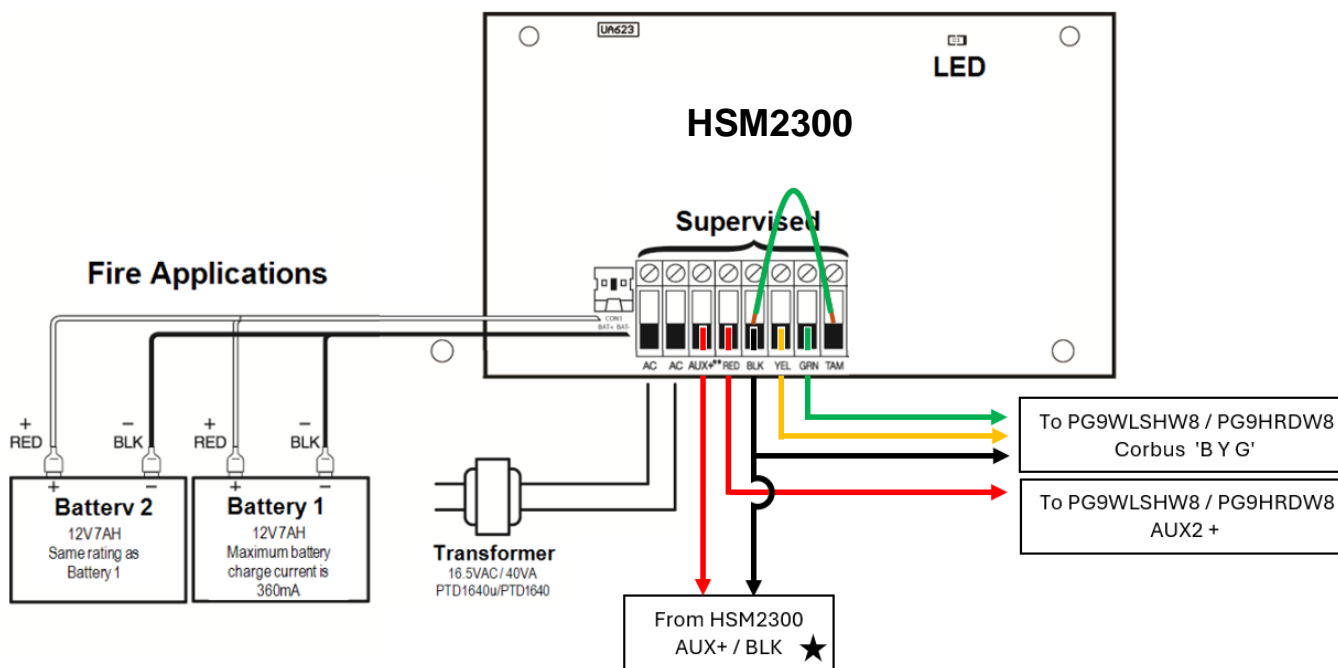[1] Use 5.6k Ohms resistors for the EOL SMK and EOL CO termination.

System Sensor – COSMOD2W

COSMOD2W Setup:

The output from PGM1 in this setup is programmed as a 'Siren Follower' trigger (pulsed or steady output based on alarm condition), Dip Switch #1 MUST be set to 'ON'.

HSM2300 Power Supply Wiring:

> **_Tech Tip:_** The HSM2300 should be set up as Charging Options – High Charge when using two batteries.

The PG9WSLHW8 / PG9HRDW8 is limited to 110mA standby current draw for the Corbus, Aux1+ and Aux2+ when meeting an UL Residential Fire and CO listing.

The HSM2300 is limited to 250mA standby current draw when meeting an UL Residential Fire and CO listing.

*** The installer is responsible for properly calculating the backup battery power needs to meet the desired listing and installation requirements.
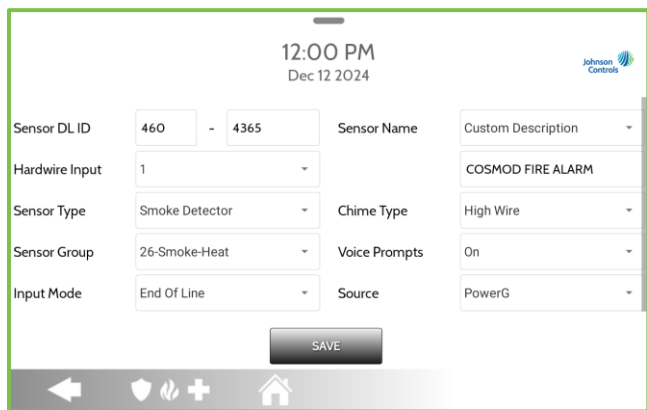
System Sensor – COSMOD2W

HSM2108 Zone Expander Wiring:
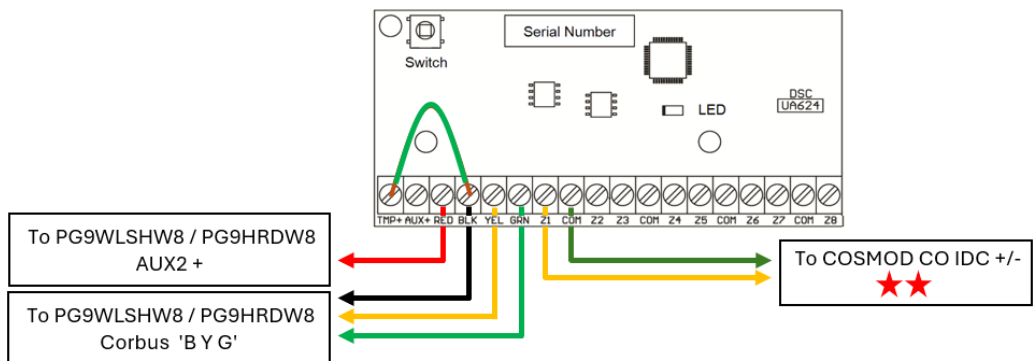
> ➢ ***Tech Tip:*** The Fire zone and the CO zone from the COSMOD cannot be wired into zones on the same module – they <u>MUST</u> be split between the main module zones and the zone expander zones.
>
> *** If the Fire zone and CO zone from the COSMOD are connected to the same module, the IQ4 will ignore Life Safety zone fault troubles.
>
> *** If the panel is not acknowledging the Life Safety zone fault troubles, correct the zone setup and panel programming, then reboot the IQ4 panel.

Programming:

Program the zone for the COSMOD's SMK IDC as '26-Smoke-Heat':

System Sensor – COSMOD2W

Program the zone for the COSMOD's CO IDC output as '34-CO':

Program PGM1 as a 'Siren Follower':

Program PGM2 as a 'Sensor Reset':

System Sensor – COSMOD2W

> ➢ ***Tech Tip:*** When using a POS+ trigger from the PGM programmed as a 'Siren Follower', any alarm that trips the bell output will sound with the siren's cadence through the smoke detector sounders (e.g., Fire Alarm – Temporal 3, CO Alarm – Temporal 4, Flood Alarm – 1 second pulse, Burg Alarm – Steady, etc.)
>
> The annunciation patterns of the sounders will follow the priority assignment of the alarm condition. Higher priority alarms will override the annunciation of the lower priority alarms as needed: Fire, CO, Burg, then all other.

> ➢ ***Tech Tip:*** When using a POS+ trigger that follows the 'Siren Follower' PGM output, the CO Trigger wiring is optional.
>
> The COSMOD will automatically follow the bell trigger from the SMK Trigger as mentioned above.

> ➢ ***Tech Tip:*** When a detector is removed from its base, or the IDC detector loop is disconnected/interrupted from the COSMOD a Wire Fault trouble (Wire Fault LED = solid) will occur on the COSMOD, this will cause a Fire Trouble on the assigned fire zone. Once the detector loop is properly restored, the COSMOD's Wire Fault trouble should clear in approximately 60 seconds, at which point the zone fault trouble on the assigned fire zone will clear.

> ***Tech Tip:*** **When using the COSMOD with the PG9WLSHW8 / PG9HRDW8 module the COSMOD might trigger a momentary zone fault trouble on the assigned Fire and CO zones of the COSMOD when the fire alarm is reset.**
>
> **With the proper setup and wiring of the COSMOD, there is no way to avoid these momentary zone faults on the assigned zones.**