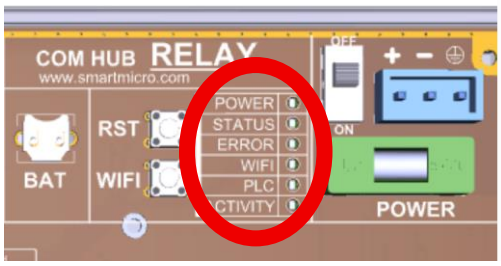
# QUICK TROUBLESHOOTING GUIDE FOR 1ST LINE SUPPORT

## TOPGRD + COM HUB Relay

What to do on-site in case a malfunctioning smartmicro radar system, consisting of TOPGRD radar(s) and COM HUB Relay interface(s) has been reported?

1. Open traffic light controller cabinet and watch the LEDs next to the power switch on COM HUB Relay:




1a. Check status of **POWER LED**:
- If inactive, there is no power: check status of power switch (OFF or ON)
  - If power switch is OFF: move it to the ON position
  - If power switch is ON:
    1. Check power fuse (in green part): if broken, replace fuse (Ø=5mm, L=20mm, 10Amp, 250V)
    2. Measure input voltage on the COM HUB Relay power connector: must be 24-48VDC
    3. If not 24-48VDC, check power supply unit: if not OK, replace power supply
    4. Check power wiring: if not OK, reconnect wiring correctly
- If active green, there is power: go to step **1b**

1b. Check status of **STATUS LED** (= internal watchdog) for 1 minute:
- If solid green, system stuck in update: check fail-safe status (see point 2), do a power cycle (power switch OFF/ON)
- If inactive, software is not properly started: check fail-safe status (see point 2), do a power cycle (power switch OFF/ON)
- If flashing green, system is operational (services are running): go to step **1c**

1c. Check status of **ERROR LED**:
- If active red, there is an error (service/application is crashing): check fail-safe status (see point 2), do a power cycle (power switch OFF/ON)
- If inactive, there is no error: go to step **1d**

1d. Check status of **PLC LED**:
- If inactive, no radar(s) are detected:
  - Check PLC connections (e.g. there can be a bad contact)
  - Check the PLC cables (e.g. the cable can be damaged) between interface and radar(s),
  - On all COM HUB Relay PLC connectors connected to a radar:

- measure resistance between + and - directly (should not be close to zero, otherwise short circuit)
- measure resistance between + and PE (must be >0, otherwise short circuit or bad cables)
- measure resistance between – and PE (must be close to zero, otherwise interrupted cable)

- If active yellow, the PLC bus is OK (at least one radar is available): go to step **2**

2. Check status of configured **OUTPUT LEDs** (24 available on COM HUB Relay 24, 8 available on COM HUB Relay 8):
   - If a certain number active at the same time for at least 5 minutes, independently from traffic movement, fail-safe might be active (full system error, blind detection, interference detection, …): contact **2nd line support**
   - If all inactive at the same time for at least 5 minutes, there can be an issue with the radar or its configuration: contact **2nd line support**
   - If active green and inactive green based on traffic movement: **issue might not be smartmicro radar system related**

Note:
If **Relay 32 XP Module** is connected to COM HUB Relay 24 (important: the expansion module is not compatible with COM HUB Relay 8):

- check **POWER LED**: must be active
- check power supply: must be 24-48VDC
- check power wiring
- check LAN connection: green and yellow LEDs on RJ45 connector should blink
- check **Rxd sensor LED**: should be blinking red for proper functioning)
- check **OUTPUT LEDs**