

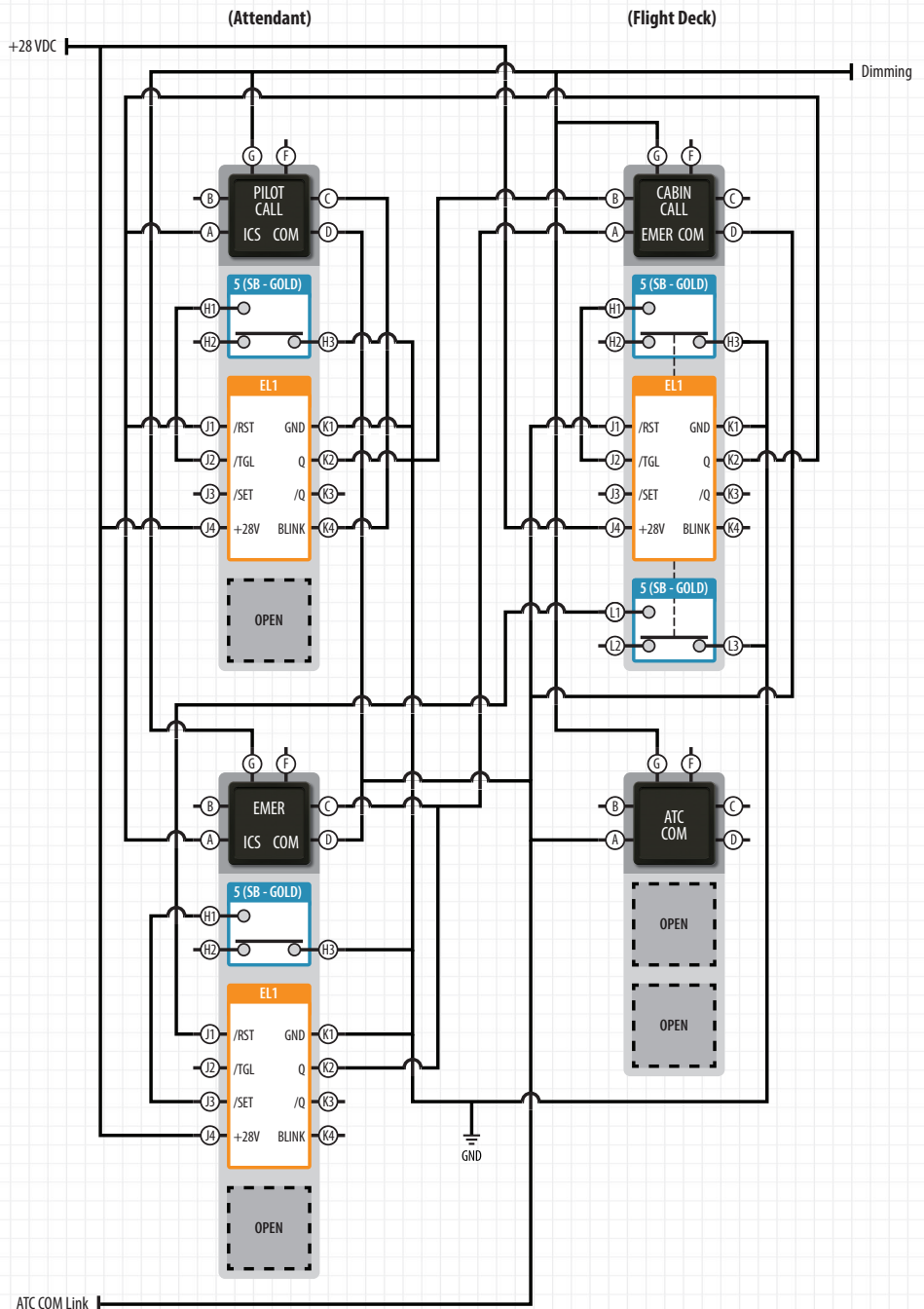
Large Cabin Communications Systems

This application demonstrates an aircraft internal communication system that connects the flight deck with the cabin. The system allows the attendant to request an intercom call but only the flight deck can activate or cancel the call. The system also allows the ATC Com to override an internal call and the cabin has an emergency call option with a visual call indication on the flight deck.

This application uses three momentary switches and an indicator. The switches include a VIVISUN High Capacity Body which contains a NEXSYS Electronic Latch (EL1) and a single switch pole.

When the attendant depresses the momentary PILOT CALL switch the (H1) switch contact provides a ground to the /TGL input of the initial attendant EL1 activating the 1Hz BLINK output (K4) causing the PILOT CALL (C) legend to blink and the /TGL falling edge input to activate the Q output (K2) providing ground to the CABIN CALL legend on the flight deck illuminating the CABIN CALL legend. The pilot can then depress the CABIN CALL switch causing the (H1) contact of the flight deck switch to provide a ground to the /TGL input (J2) of the flight deck EL1 that causes the Q output (K2) of the flight deck EL1 to provide ground to the ICS legend (A) illuminating the legend and opening the intercom link between the flight deck and the cabin attendant station. Depressing the CABIN CALL switch on the flight deck also provides ground to the /RST input (J1) of the initial attendant station EL1 causing the Q output (K2) to go open turning off the CABIN CALL legend (A) and canceling the BLINK output (K4) to the PILOT CALL legend. The PILOT CALL EL1 remains in /RST (J1) so any attempt to cancel the active ICS from the cabin is ignored. The CABIN CALL EL1 however, toggles the (J2) input and the Q output (K2) turning the ICS on and off. If the ATC COM is activated by an external link, ground is provided illuminating each COM legend (D) and the /RST input (J1) is ground causing the Q output (K2) to go open turning off the ICS legend (A) in the cabin. If the attendant depresses the EMER switch and the ATC COM Link remains active at ground, the attendant can initiate an emergency call to the flight deck illuminating the EMER legend on the flight deck switch and the pilot can acknowledge the call but the ICS function cannot be activated since each EL1 remains in /RST (J1). When the ATC COM Link is canceled, the ground to the COM legend (D) is removed and the COM legend is extinguished. To reactivate the ICS link the pilot must once again select the CABIN CALL switch illuminating the ICS legend and opening the channel.

This application utilizes the EL1 to replace the function of external relays and uses a momentary switch to blink and function as an alternate action switch. The EL1 also provides a /SET, /RST and "LOCK OUT" function that is controlled from a local or a remote location.



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