

CHAIN PILOT

Panel connector with microswitch International Patent

The new CHAIN PILOT system is an evolution of the PowerSyntax SPX panel-mount connectors.

VALENTINI - Syntax® has become the first manufacturer in the world to have developed and marketed powerlock-style panel-mount connectors with in-built microswitch (international patent).

Thanks to Valentini's innovative solution, protective electrical interlocking and/or additional controls can now be obtained for the first time on powerlock-style connections through a chain of simultaneously operating connectors, allowing constant monitoring of all the conductors in a power circuit (either for source or distribution).

The principle of operation is extremely simple and ensures total electrical safety.

When a cable connector (line source or line drain) is mated with its coupling CHAIN PILOT panel connector, a spring device pressed by the cable connector's body is operated to activate a pilot microswitch housed in the rear of the panel

connector's flange and connected to an auxiliary circuit. In case of a system consisting of 3 phase (L1-L2-L3), a neutral (N) and a protective earth (PE) conductors, the auxiliary circuit will be made up of a chain where all the contacts of the 5 microswitches are connected. The microswitch-controlled auxiliary circuit will only be energised when all 5 mechanically keyed cable connectors have been mated with their corresponding Chain Pilot panel connectors, enabling the operation of a remotely controlled circuit breaker, contactor or other safety device connected to the circuit.

The electrically interlocked connectors will all de-energise should one become disconnected when in use, making it impossible that any connector is removed under load. In fact when a first connector is uncoupled, its **microswitch deactivates the auxiliary circuit before the electrical contact is de-energised, thus preventing electric arcs.** The SPX Chain Pilot panel-mount connectors are available in drain (male) or source (female) versions, for up to 480amp or up to 750amp. They are fully intermateable with standard PowerSyntax or other powerlock-style connectors.



PANEL DRAIN

On the panel drain connector, the spring device activating the microswitch is placed outside the mating part of the connector's shell.

PANEL SOURCE

On the panel source connector, the spring device activating the microswitch is placed inside the mating part of the connector's shell.



CHAIN PILOT

Panel connector with microswitch

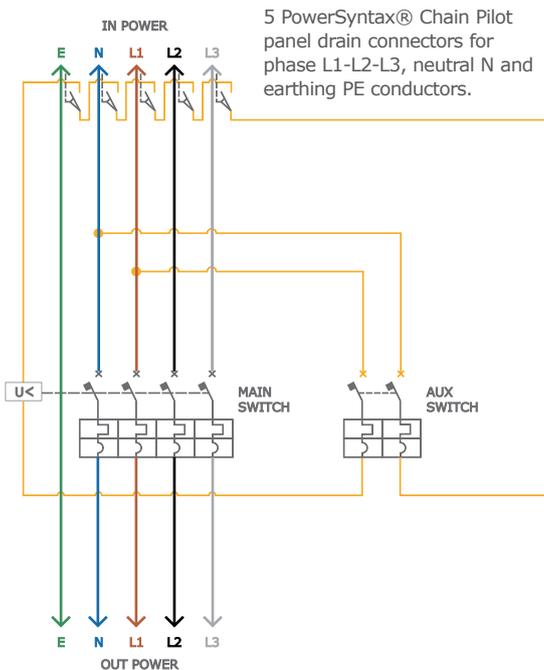
Pilot microswitch technical data

Switching function	Changeover switch (SPDT momentary)
Number of poles	1 - pole
Connections	Quick-connect terminal, 2.8 x 0.5, sealed
Mechanical life endurance	10E6
Rating IEC / Rating North America	10 (3) A 250 V AC 10E3
Design	DIN 41635 B
Contact resistance (new condition)	< 100 (1 A 12 V DC) mohm
Insulation resistance (new condition)	> 100 (500 V DC) Mohm
Voltage strength at 250 V	→ function insulation / basic insulation 1500 V → small contact distance 500 V according to EN 61058 for Reinforced or double insulation
Insulation spacing	Connection IP 00, actuator IP 67
Protection type	
Ambient temperature	Connection side -40°C +100°C
Flammability	UL 94 V-0
Glow wire test temperature	850 °C

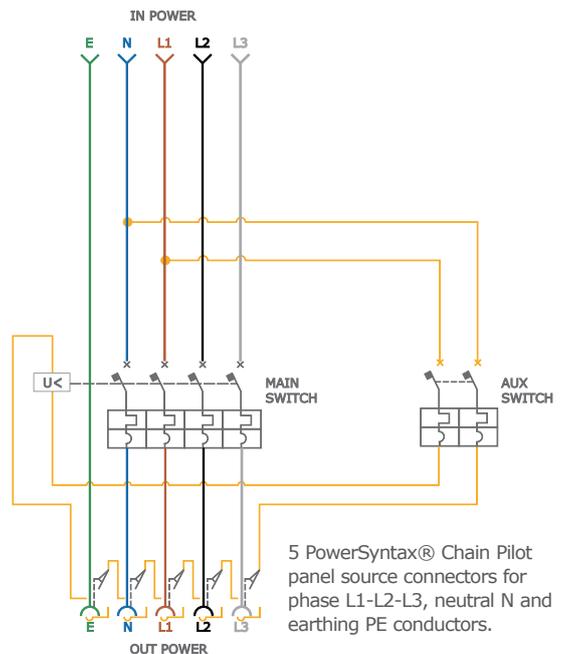
Wiring diagrams

All diagrams show de-energised circuits, with all circuit breakers discharged in their open position.

EXAMPLE 1: 5 PANEL DRAIN CIRCUIT

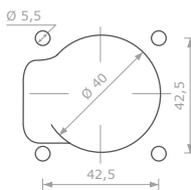


EXAMPLE 2: 5 PANEL SOURCE CIRCUIT

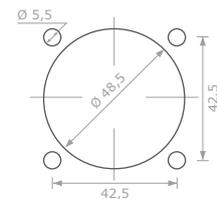


Panel mount cut-out options

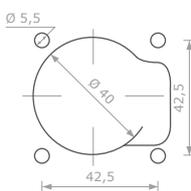
Panel drain front mount



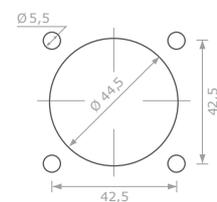
Panel drain rear mount



Panel source front mount



Panel source rear mount



The SPX **CHAIN PILOT** connectors can be front or rear mounted on panels. Cut-out dimensions are different for front and rear mount.

Please contact our Technical Department for CAD drawings. On request, connectors for rear mount can be supplied with M5 threaded inserts.