

# 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

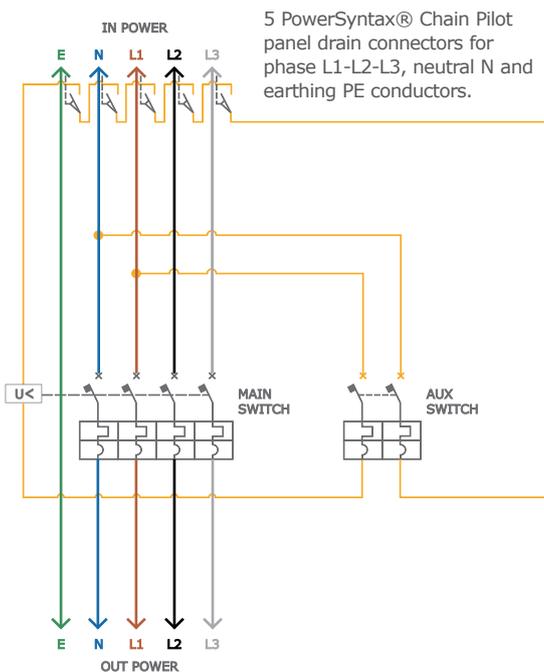
### Pilot microswitch technical data

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

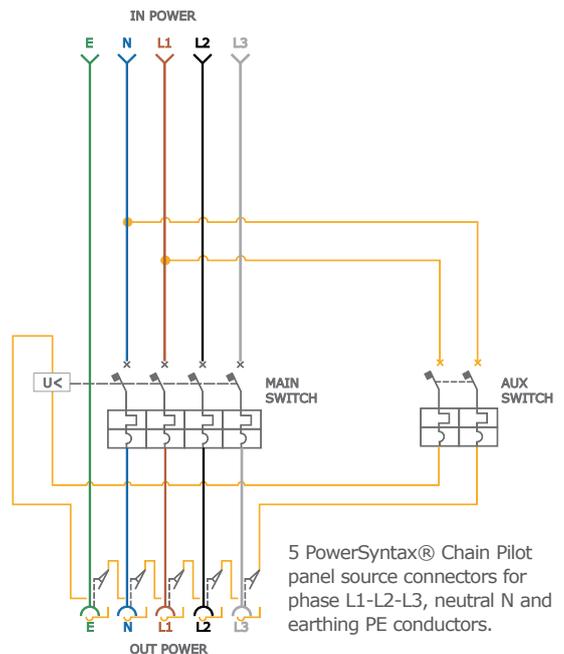
### Wiring diagrams

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

**EXAMPLE 1: 5 PANEL DRAIN CIRCUIT**

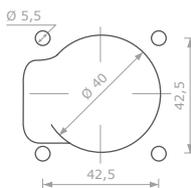


**EXAMPLE 2: 5 PANEL SOURCE CIRCUIT**

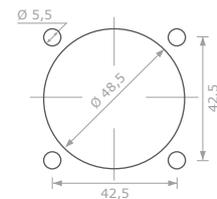


### Panel mount cut-out options

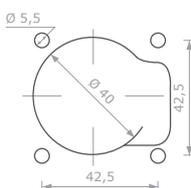
Panel drain front mount



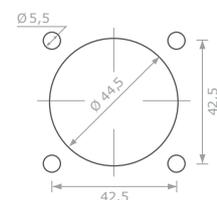
Panel drain rear mount



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.