TECHNICAL DATA

Fluke PQ400 Electrical Measurement Window

The Fluke PQ400 Electrical Measurement Window enables the connection of three phase measurement equipment to energized panels, without the need to open the panel door, or wear supplemental personal protective equipment (PPE)[1]

Compliance without compromise. Safety without sacrifice.

The Fluke PQ400 gives you access to the critical power quality and energy data you need, all while decreasing testing time and helping you to maintain safety.

- Reduce the risk of arc-flash and electrocution, while increasing the safety of your personnel
- Decrease maintenance costs and reduce downtime by making critical power quality and energy measurements without opening the panel door, enabling logging and monitoring at any time—without disrupting operations
- Reduce work permit requirements and processes by reducing the hazards associated with taking measurements on open panels, saving time and effort
- Increase measurement efficiency and reduce the need for arc-flash PPE[1], saving time, increasing efficiency and increasing operator comfort

Features

- Permanently connected voltage and current sensors located inside the electrical panel allow you to make power quality and energy measurements using the external access points without opening the panel door, reducing operator risk
- Voltage and current connections for three-phase voltages, neutral and ground cover most measurement scenarios
- Automatic probe detection for Fluke 1740 and 1730 series power quality and energy loggers and compatible clamps, eliminates the need to open cabinet to check the clamp model
- Full 360 degree rotation allows the PQ400 window to be oriented in any direction
- Simple installation using a step drill bit and electro-hydraulic hole punch (114.3 mm, 4.5 inch diameter)
- CAT IV, 600V and CATIII 1,000V rating according to IEC61010-2-30
- Compatibility with standard 4mm shrouded safety-socket voltage test leads makes it easier to make voltage connections, increases safety by reducing the risk of accidently touching live electrical components, and reduces the need for purchasing specialized voltage leads

REDUCED RISK
Permanently installed voltage and current connections can be accessed without opening the panel door

INCREASED EFFICIENCY
Quickly connect your logger or analyzer and begin taking measurements faster than ever

EASY INSTALLATION
A standard step drill bit and electro-hydraulic hole punch provide the simple means to quickly mount the window in the panel

[1]Comply with local and national safety codes. Use personal protective equipment (approved rubber gloves, face protection, and flame-resistant clothes) to prevent shock and arc blast injury wh0ere hazardous live conductors are exposed.

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How it works

The Fluke PQ400 Electrical Measurement Window is a permanently installed interface that provides technicians with near instant access to electrical panels for making critical power quality and energy measurements. The PQ400 installs using a standard step drill bit and electro-hydraulic hole punch (114.3 mm, 4.5-inch hole diameter), and allows users to make three-phase voltage, current and ground connects covering most measurement configurations. Once installed users can simply unlock the window cover, lift the lid, and connect the voltage leads of the logger or analyzer. Then, connect the leads for the current sensors and start making critical measurements. Once complete, simply remove the voltage and current connections from the front panel interface and lock the window lid, leaving the internal connections in place for future use.

Specifications

General specifications	
Maximum voltage between any voltage terminal and earth ground	1000 V
Maximum voltage between any current terminal and earth ground	30 V
Safety	
General	IEC 61010-1: pollution degree 2
Measurement	IEC 61010-2-030: CAT IV 600 V / CAT III 1000 V
Dimensions	
Outside	148 mm x 187 mm x 23 mm (W x H x D) (148 mm x 370 mm x 19 mm with cover opened)
Inside	140 mm x 158 mm x Di (W x H x D) Di = 58 – thickness of panel door in mm
Supported electrical enclosures	
Enclosure	UL 50/NEMA environmental type 1 (Type 12 when PQ400 cover is closed)
Panel thickness	Max. 3.5 mm (10 gauge)
Environment	
Operating/storage temperature	-25 °C to 60 °C (-13 °F to 140 °F)
Humidity	10 % to 90 % in dependency of temperature according to IEC 60721-3-3 Class 3K6 (modified):-25 °C to 35 °C: 10 % to 90 %, 50°C: max. 35 %, 60°C: max. 23 %
Altitude	
Operating	2,000 m (up to 4000 m derate to CAT II 1000 V, CAT III 600 V, CAT IV 300 V)
Storage	12 000 m
Ingress protection	
Rating	IEC 60529: IP67 with cover closed, IP50 with cover opened and all connectors attached
Vibration	IEC 60068-2-6 , MIL-PRF28800F: Random vibration class 2
Weight	2.1 kg (4.6 lb)

Voltage	
Input	
Number of inputs	5 (A/L1, B/L2, C/L3, N, and earth/ground)
Wire gauge	Solid/flexible: 0.25 mm² to 1.5 mm² (AWG 24 to AWG 16)
Voltage	Max. 1000 V
Fuse	2 A 1000 V 1.5 A²s, 10 kA IR (A/L1, B/L2, C/L3, N)
Output	
Connectors	5x 4 mm safety terminals, 3x red for A/L1, B/L2, C/L3, 1x black for N, 1x green for earth/ground
Load current	Max. 1 A rms

Current	
Input/output	
Connectors	5x 4-pin circular compatible with Fluke 354x FC, 173x, and 174x power and energy loggers (these loggers can all be powered from the measured voltage up to 500V)

Current inputs for installing measurement probes inside the electrical panel

Ordering information

Fluke-PQ400, Power Quality Window*

Fluke-PQ400/B, Power Quality Basic**

I17XX-FLEX2M-M2M4P, male-male cable 2m for connection of Fluke-17xx iFlex® current probes (4pcs).

I17XX-FLEX2M-M2M1P male-male cable 2m for connection of Fluke-17xx iFlex® current probes, (1pcs).

I17XX-BNC-M2M, Fluke-17xx 4pin male to BNC male cable 2m (1pcs)

I17XX-BNC-M2F, Fluke-17xx 4pin male to BNC female cable 0.1m (1pcs)

Fluke-PQ-MARKER, cable marker set 3P+N+PE

* **Fluke PQ400 contents:** PQ400 enclosure, 4 x male-male cable 2m for connection of Fluke-17xx iFlex® current probes, cable marker set 3P+N+PE, cable ties and instruction sheet.

** Basic version does not include cables, cable ties or markers.

Additional accessories for Fluke 173x and 174x products

I17XX-FLEX1500	Fluke-17xx iFlex 1500A 12in
I17XX-FLEX1500/3PK	Fluke-17xx iFlex 1500A 12in, 3 pack
I17XX-FLEX1500/4PK	Fluke-17xx iFlex 1500A 12in, 4 pack
I17XX-FLEX3000	Fluke-17xx iFlex 3000A 24in
I17XX-FLEX3000/3PK	Fluke-17xx iFlex 3000A 24in, 3 pack
I17XX-FLEX3000/4PK	Fluke-17xx iFlex 3000A 24 in, 4 pack
I17XX-FLEX6000	Fluke-17xx iFlex 6000A 36in
I17XX-FLEX6000/3PK	Fluke-17xx iFlex 6000A 36in, 3 pack
I17XX-FLEX6000/4PK	Fluke-17xx iFlex 6000A 36in, 4 pack
I40S-EL3X	Fluke-17xx I40S-EL 40A clamp-on current transformer
I40S-EL3X/3PK	Fluke-17xx I40S-EL 40A clamp-on current transformer, 3 pack
I400S-EL	Fluke-17xx I400S-EL 400A clamp-on current transformer
I400S-EL/3PK	Fluke-I400S-EL 3PK, 17xx 400A clamp-on current clamp, 3 pack

Additional accessories for Fluke 430 Series II products

I430-IFLEX-TF-II*	6000A Fluke 430 Thin iFlex 61cm (24in)
I430-IFLEX-TFII-4P*	6000A Fluke 430 Thin iFlex 61cm (24in) 4 pack
I430-FLX-TFII-12*	6000A Fluke 430 Thin iFlex 30cm (12in)
I430-FLX-TFII-48	6000A Fluke 430 Thin iFlex 122cm (48in)
I400S*	Fluke I400S-EL 400A clamp-on current transformer
I5S*	5A AC current probe
I5SPQ3*	5A AC current probe 3 pack for 430

* Requires I17XX-BNC-M2F to connect probe to PQ400

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