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 where 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)<br>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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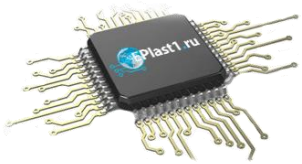
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