

EcoEtruxure™
Innovation At Every Level

PIX

Air insulated switchgear

Catalog 2023

Up to 24 kV, up to 40 kA, up to 4000 A
With Evo**Pact** HVX circuit breaker



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Life Is  On

Schneider
 Electric

Normal operating conditions according to IEC 62271-200: 2011 and IEC 62271-1: 2017

Rated voltage	Ur	kV	12	17.5	24
Rated power frequency withstand voltage - 1 min	Ud (3)	kV	28	38	50
Rated lightning impulse withstand voltage - peak	Up	kV	75	95	125
Rated frequency	f	Hz	50/60	50/60	50/60
Rated short circuit breaking current	Isc	kA	up to 40	up to 40	up to 31.5
Rated peak withstand current	Ip @50Hz	kA	100	100	80
	Ip @60Hz	kA	104 (2)	104 (2)	82 (2)
Rated duration of short circuit	tk	s	3	3	3
Rated current busbar, max	I _r bb	A	up to 4000 (1)	up to 4000 (1)	up to 3150 (4)
Rated current circuit breaker	I _r	A	630	630	630
	I _r	A	1250	1250	1250
	I _r	A	2000	2000	2000
	I _r	A	2500	2500	2500
	I _r	A	3150	3150	3150 (1)
	I _r	A	4000 (1)	4000 (1)	
Rated current contactor (see detail in PIX-M)	I _r	A	195	NA	NA
Rated current switch disconnecter	I _r	A	630	630	630
Rated current fused switch disconnecter	I _r	A	200	200	200
Internal arc classification					
Internal arc	Isc	kA	40	40	31.5
Arc duration	t	s	1	1	1
Classification			AFLR	AFLR	AFLR
Degree of protection					
Enclosure	StandardOption		IP3X	IP3X	IP3X
			IP4X	IP4X	IP4X
Between compartments			IP2X	IP2X	IP2X

(1) Forced cooling / **(2)** 60 Hz / **(3)** Ratings above IEC on request / **(4)** On request – to be evaluated with SLD

PM108940



IAC (Internal Arc Classification)

The metal-enclosed switchgear may have different types of accessibility on the various sides of its enclosure.

For identification purposes in terms of the different sides of the enclosure, the following code shall be used (according to the IEC 62271-200: 2011 standard):

- **A:** Access to authorized personnel only.

Sides of the enclosure which meet the criteria of the internal arc test:

- **F:** Front side
- **L:** Lateral side
- **R:** Rear side

PIX106862



Standards



The PIX meets the following international standards:

- **IEC 62271-1: 2017:** High-voltage switchgear and controlgear: common specifications
- **IEC 62271-200: 2011:** AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kA
- **IEC 62271-100: 2008:** High-voltage switchgear and controlgear - Alternating current circuit-breakers
- **IEC 62271-106: 2011:** High-voltage switchgear and controlgear - Alternating current contactors, contactor-based controllers and motor-starters
- **IEC 60282-1: 2020:** High-voltage fuses - Current-limiting fuses
- **IEC 62271-102: 2018:** High-voltage switchgear and controlgear - Alternating current disconnectors and earthing switches
- **IEC 60255-1: 2009:** Measuring relays and protection equipment - Common requirements
- **IEC 61869-2: 2012:** Instrument transformers - Current transformers
- **IEC 61869-3: 2011:** Instrument transformers - Inductive voltage transformers
- **IEC 60044-8: 2008:** Instrument transformers - Electronic current transformers

Operating conditions

Normal operating conditions, according to the IEC International Standards listed below, for indoor switchgear.

Ambient air temperature

- Less than or equal to 40°C
- Less than or equal to 35°C on average over 24 hours
- Greater than or equal to -5°C (-25°C on request)

Altitude

- Less than or equal to 1000 m;
- Above 1000 m, a derating coefficient is applied (please consult us)

Atmosphere

- No dust, smoke, or corrosive, or inflammable gas and vapor, or salt

Humidity

- Average relative humidity over a 24 hour period $\leq 95\%$
- Average relative humidity over a 1 month period $\leq 90\%$
- Average vapor pressure over a 24 hour period ≤ 2.2 kPa
- Average vapor pressure over a 1 month period ≤ 1.8 kPa

Specific operating conditions (please consult us)

PIX has been developed to meet the following specific conditions:

- High ambient temperature (possible derating)
- Corrosive atmospheres, vibrations, (possible adaptation)

Storage conditions

In order to retain all of the functional unit's qualities when stored for prolonged periods, we recommend that the equipment is stored in its original packaging, in dry conditions, and sheltered from the sun and rain at a temperature ranging from -25°C up to +55°C.

Equipment			Type of cubicle					
			F	PIX-M7	PIX-M12	BSR	BME	FS
Switchgear								
Circuit-breaker			●		●			
Contactors				●	●			
Fuse switch								●
Disconnectors			●	●	●			
Earthing truck			○	○	○	○		
Fixed busbars						●	●	
Racking position indication contact for the withdrawable part	4 NO + 4 NC 2 NO + 2 NC		■			●	●	
Padlocking of isolating shutters for withdrawable parts			●	●	●			
Locking of withdrawable part/cable compartment			○	○	○	○		
Automatic discharge mechanism			○					
Voltage present indicator			●	●	●	●	●	●
Locking of mechanical racking of the withdrawable part (padlock)			●	●	●	●		
Locking of mechanical racking of the withdrawable part (keylock)			○	○	○	○		
Locking of the electromagnetic racking of the withdrawable part			○	○	○	○		
Earthing switch								
Earthing switch			○	○	○	○	○	○
Earthing switch position indication contacts	4 NO + 4 NC		○ (1)	○ (1)	○ (1)	○ (1)	○ (1)	○ (1)
Earthing switch position key locking			○	○	○	○	○	○
Electromagnetic earthing switch position locking			○	○	○	○	○	
Transformers								
Voltage Transformers (1 per phase)	Without fuse	Phase-phase						
		Phase-earth	○	○		○	○	○
	With plug-in fuses	Phase-phase						
		Phase-earth	○	○		○	○	○
Fuse melting indication contact		1 NO						
Current Transformer	Single set	3 CT's	●	●		○	○	
	Double set	6 CT's	○	○				
	LV toroid transformer CT (3)		○					
Connections								
Connection with cable terminal height > 460 mm			●	●	●			●
Connection from top bar			○	○	○			
Connection by cable from the top			○	○	○			
Connection by cable from the bottom			●	●	●			●
Cubicle								
Protection index (6)	Enclosure	IP3X	●	●	●	●	●	●
		IP4X	○	○	○	○	○	○
		IPX1						
		IPX2						
Anti-arcing protection (2)	Compartments (4)	IP2XC	●	●	●	●	●	●
		25 kA - 1 s	○	○	○	○	○	○
		31.5 kA - 1 s	○	○	○	○	○	○
		40 kA - 1 s	○	○	○	○	○	
Thermal diagnosis system (6)			○	○	○	○	○	
Surge arrester			○	○	○		○	
Busbars								
1250 A / 2500 A / 3150 A / 4000 A (5)	Exposed		●	●	●	●	●	●
	Insulated		○	○	○	○	○	○
LV control cabinet key locking			○	○	○	○	○	○
LV control cabinet lighting			○	○	○	○	○	○
Anti-condensation heating element			○	○	○	○	○	○

● Basic equipment / ○ Option

(1) Basic equipment with earthing switch option / (2) According to the room in which the PIX switchboard is installed, you can choose an option for 3 or 4 sides, and possibly an exhaust tunnel for hot gases (see page E-9) / (3) Connection of 1 or 2 cables per phase / (4) Compartment protection /

(5) For 4000 A equipped with fans / (6) Consult us.