A flexible and intelligent solution for you and your business safety.

ABB is a leader in Arc Guard Systems™ technology for over 35 years and has become the industry standard in several key markets helping protect personnel and businesses around the world. The TVOC-2 is built off of the well known TVOC design. It’s new features and functions puts even more focus on reliability, flexibility and simplicity.

Reliability
Certified according to functional safety (SIL 2) standard.
Over 35 years of experience in Arc Guard Systems.
Pre-calibrated optical sensors.

Flexibility
HMI can be mounted on the panel-door.
Expand with up to 30 optical sensors.
Configure the system according to various needs.

Simplicity
User-friendly start-up menu.
DIN-Rail or wall-mounted.
Easy to expand as the switchgear grows.

Arc Guard System components
Arc monitor (TVOC-2)
Extension unit (detector inputs)
HMI (display and menu)
Optical detectors
Current Sensing Unit, CSU (optional)
Technical data

Reacting time (typical)  
Approx. 1 ms (depends on light intensity)

Optical detectors  
10 inputs on Arc Monitor  
10 inputs on Extension unit X2 (optional)  
10 inputs on Extension unit X3 (optional)

Breaker trip contacts  
3 NO solid state type IGBT

Signal relay outputs (K2, K3)  
Manual or auto resetable:  
2 CO gold-plated contacts  
Rated voltage:  
250 V AC/DC  
Continuous carry \( I_{in} \):  
5 A  
Make and carry for 0.2 s:  
30 A  
Make and carry for 3 s 10% duty ratio:  
15 A

Breaking capacity:  
250 V: 30 A, AC-15  
250 V: 0.3 A, DC-13  
110 V: 0.6 A, DC-13  
48 V: 2 A, DC-13

Reinforced insulation between separate contacts:  
\( I_{in} = 5 \) A

Min switching load:  
1 mA at 5 V DC with contacts not used for switching current  
> 0.5 A if inductive/capacitive load before

Configuration (DIP switches):  
Manual or auto reset of K1 and K3  
Use of CSU or not  
Trip Configuration

HMI / User interface:  
Full text display (55 x 26 mm)

Trip log with time stamp:  
Yes

Power supply:  
Rated supply voltage, \( U_s \):  
100-240 V AC, 50-60 Hz  
100-250 V DC  
Power consumption:  
5 W

Weight:  
0.95 kg

Standards

UL508  
Industrial control equipment

CSA C22.2 No.14  
Industrial control equipment

IEC 61508  
Functional safety of electrical/electronic/programmable electronic safety-related systems

IEC / EN60947-1  
Low voltage switchgear and controlgear – Part 1: General rules

IEC / EN60947-5-1  
Low voltage switchgear and controlgear – Part 5-1: Control circuit devices & switching elements - Electromechanical control

IEC61010-1  
Safety requirements for electrical equipment for measurement, control and laboratory use

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