



BROCHURE

AM5000EX Isolated Safety Barriers



Intelligence For Excellence

www.hollysys.com

About AM5000EX

AM5000EX Isolated Safety Barriers facilitate signal transmission, conversion, monitoring, and control between hazardous and safe areas, featuring high-precision conversion, isolation, and transmission characteristics that more accurately replicate on-site signals. The product's internal design eschews mechanical potentiometers, reducing vibration and long-term operational drift, and its surface is treated with anti-corrosion measures, ensuring stable and reliable long-term operation. Additionally, it boasts an ultra-fast response, enabling the monitoring or control of field equipment with minimal delay.

Product Advantages

Intelligent Diagnosis, Convenient Configuration, Clear Areas



Wide Temperature Range

Analog channels temperature drift
(working range -30 to 70° C) $\leq 0.005\% \text{ F.S./}^\circ \text{C}$



Flexible Configuration



Easy Installation

Featuring an entirely new design structure, it facilitates quick installation and disassembly for customers, making maintenance and replacement more convenient.

Anti-Interference Design

Utilizing advanced signal processing algorithms, it effectively filters out interference caused by electromagnetic environments, delivering stable and reliable output.

Selection List

Product Name	Product Model	Signal Type	Number of Channels	Hazardous Side	Safe Side	Additional Functions
Digital input isolated safety barrier	AM5011EX	DI	1-input 1-output	Switch, proximity switch input	Relay output	Equipped with circuit fault detection function
	AM5011EX.T	DI	1-input 1-output		Transistor output	
	AM5012EX	DI	1-input 2-output		Relay output	
	AM5013EX	DI	2-input 2-output		Relay output	
Digital output isolated safety barrier	AM5021EX	DO	1-input 1-output	Output voltage is 212 V when the drive current is 45 mA	Dry contact input	/
	AM5021EX.T	DO	1-input 1-output		Wet contact input	/
Analog input isolated safety barrier	AM5031EX	AI	1-input 1-output	2, 3-wire transmitter input	0/4 to 20 mA	/
	AM5032EX	AI	1-input 2-output	Current source input	(HART) output	/
Analog output isolated safety barrier	AM5041EX	AO	1-input 1-output	0/4 to 20 mA (HART) output	0/4 to 20 mA input	/
	AM5041EX.D	AO	1-input 1-output	4 to 20 mA (HART) output	4 to 20 mA input	With loop detection
Analog output isolated safety barrier	AM5051EX	TC	1-input 1-output	Thermocouple, mV input	0/4 to 20 mA output	USB Type-C programming interface Supporting NFC configuration
RTD input isolated safety barrier	AM5061EX	RTD	1-input 1-output	Thermocouple, mV input		
TC/RTD input isolated safety barrier	AM5071EX	TC/RTD	1-input 1-output	Thermocouple, thermal resistance, mV input		

Technical Data

Input signal	Supporting AI, AO, DI, DO, TC/RTD signal
Power supply voltage	24 V DC (19 to 30 V DC)
Number of channels	1-input 1-output, 1-input 2-output, 2-input 2-output
Matched signals and intrinsic safety instruments	Switch, proximity switch input, two-wire transmitter input (including HART), current signal input, thermocouple, thermal resistance input
Power protection	Reverse power protection
Insulation strength	2,500 V AC; 1 min (intrinsic safety side and non-intrinsic safety side)
Electromagnetic compatibility	Comply with GB/T 18268 "Electromagnetic compatibility requirements for electric equipment for measurement, control and laboratory use" (equivalent to IEC 61326-1)
Operating environment	Temperature: -30°C to 70°C
	Humidity: 5% to 95% RH, no condensation
	Altitude: ≤ 2,000 m
Explosion-proof level	[Ex ia Ga] IIC, [Ex ia Da] III C
Dimensions	(Depth × Height × Width: 99 mm × 112.95 mm * 12.5 mm/17.5 mm)
Application scenarios	Installed in safe areas or Zone 2 hazardous areas (ec explosion-proof applicable) Can be connected to intrinsically safe instruments in Zone 0 II C, Zone 20 III C hazardous areas

Manufacturing and Testing



SMT Production Line

Our state-of-the-art SMT automated production line delivers unparalleled efficiency and precision, enabling large-scale, high-mix flexible manufacturing. Each product is meticulously crafted to meet stringent design and certification standards, ensuring consistent and reliable quality that our clients can trust.

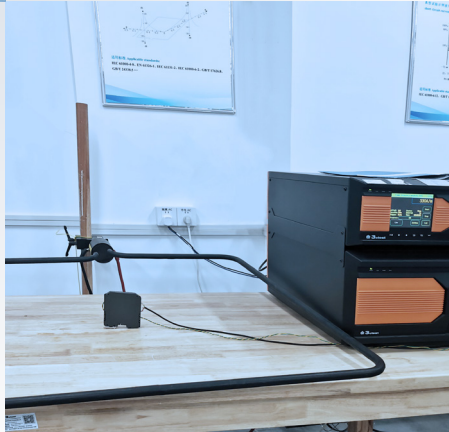


Fully Automated Assembly and Testing Production Line

Our fully automated production system ensures that every customer order is manufactured swiftly and delivered on time, and eliminates the unpredictability associated with manual processes.

Power Frequency Magnetic Field Immunity Test

This test simulates power frequency magnetic field environments to evaluate the product's immunity to interference, ensuring its stability and reliability.



EFT

Our products undergo rigorous testing in simulated harsh electrical environments to ensure they maintain their original performance characteristics during conversion and transmission.



Vibration Testing

Our comprehensive vibration testing simulates the full range of impacts experienced during handling and transportation. Even in environments with significant vibration, our products consistently maintain their original performance characteristics, ensuring reliable conversion and transmission.



Product Aging Testing

Our product aging testing process proactively identifies and filters out potential risks and hidden defects, ensuring that any issues are intercepted at the factory stage. This rigorous screening guarantees that only highly reliable products reach our customers.

Quality Management and Manufacturing Control

At HollySys factory, quality management and manufacturing management function like a set of precise gear, working in unison to propel the company towards excellence. Each employee is a guardian of this intricate machine's operation, steadfastly adhering to the quality policy of "Prevention First, Process Control, Continuous Improvement, and the Pursuit of Excellence."

Quality Management: Crafting Excellence with Precision

Strict Selection of Raw Material

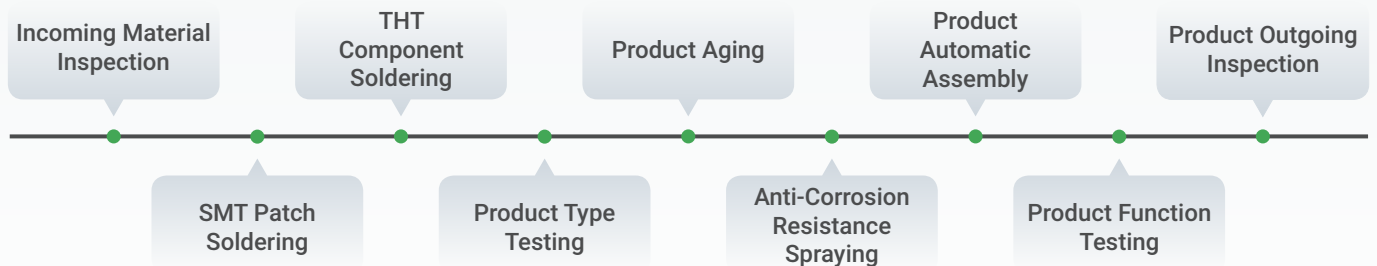
We meticulously screen suppliers to ensure the stable performance of raw materials under any operating conditions, laying a solid foundation for product quality.

Comprehensive Testing System

Our production line simulates various actual application scenarios to test products.

Alignment with Cutting-Edge Standards

We closely monitor the development of cutting-edge standards, and actively participate in standard formulation discussions.



Manufacturing Management: Sculpting Excellence with Masterful Craftsmanship

Advanced Automated Equipment

Our automated SMT production lines, equipped with intelligent feeding systems, accurately identify materials, minimizing the risk of incorrect parts. In the assembly process, robotic arms precisely grasp and install components per preset programs, ensuring meticulous accuracy in each product's internal structure.

Lean Process Control

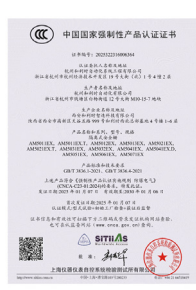
We incorporate lean manufacturing principles to optimize production layouts and regularly conduct 5S workplace organization activities.

Intelligent Production Management System

Utilizing HollySys' self-developed Manufacturing Execution System (MES), we comprehensively coordinate production. This system enables full monitoring and end-to-end management of the production process, enhancing efficiency, reducing costs, and ensuring product quality and delivery timelines.



Certificates



Key Accounts

 We create chemistry				
				
				
				
				

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