Standex DETECT Electronics

INNOVATE / CONSULT / ENGINEER / DELIVER

Reed Relays & Optocouplers

Standex Designed and Manufactured Switching Solutions

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From bare reed switches to finished, qualified assemblies designed and built in-house

Standex Engineering & Manufacturing Legacy

Standex DETECT Electronics

KENT REED SWITCHES A STANDEX ELECTRONICS BRAND

SANYU REED RELAYS A STANDEX ELECTRONICS BRAND

MEDER electronic REED RELAYS A STANDEX ELECTRONICS BRAND

KOFU REED SWITCHES A STANDEX ELECTRONICS JAPAN BRAND

OKI

Sensor Solutions A STANDEX ELECTRONICS COMPANY

Center of Excellence - Engineering heritage feeding one manufacturing platform

OUR STORY

Standex Detect designs, manufactures, and qualifies reed relays and optocouplers in our own global facilities.

Our legacy brands—MEDER, OKI/KOFU, Sensor Solutions, and Sanyu represent engineering centers of excellence, unified under one manufacturing, quality, and testing system.

We build the reed switch, the relay, the tooling, and the test infrastructure—end to end **delivering the right design at the right time and at the optimal cost.**

This combination of scale, technical expertise, and global reach enables Standex Detect to support customers across a wide range of critical industries.

Standex Detect operates under the strategic leadership and corporate governance of Standex Electronics and Standex International Corporation (NYSE: SXI).

PRODUCTS

Proven performance across three core product categories:

From Reed Switch to Qualified System-Level Solution

Reed metallurgy | Switch fabrication | Relay design | Coil winding | Packaging | Testing | Customer application

- **Reed Switches** - Hermetically sealed magnetic sensors delivering precise, reliable switching in compact form factors. Available across a wide range of sizes and power ratings to support applications from low-power miniaturized devices to high-voltage systems.
- **Sensors** - Reed- and Hall-effect–based sensors providing accurate, contactless position, proximity, and speed sensing. Designed for harsh environments across automotive, transportation, renewable energy, industrial, and medical markets.
- **Relays** - Electromagnetic and solid-state relay solutions with excellent signal integrity. Our portfolio of reed, Photo-MOSFET, and optocoupler relays supports high-reliability switching for ATE, semiconductor test, EV, data centers, renewable energy, battery management, medical and industrial automation applications.

WHY ENGINEERS CHOOSE US AS THEIR MANUFACTURING PARTNER

World's largest reed switch manufacturer (>700M/year), proprietary life-cycle test systems, in-house tooling and automation

Custom Engineered

Designed to your exact mechanical, magnetic, electrical, environmental and cost requirements.

Proven Reed Switch Manufacturing Reliability

Industry-leading hermetic sealing and proven performance in extreme environments.

Multi-Technology Expertise

Reed, Hall-effect, solid-state, and hybrid technologies in one integrated partner.

Application Leadership

High-reliability reed switches, sensors, relays for critical application requiring precision and reliability.

Global Manufacturing

Manufacturing across the U.S., Germany, China, Mexico, Japan, India & the U.K. for reduced supply-chain risk.

Co-Engineering Partnership

Direct integration with customer engineering teams from concept to production.

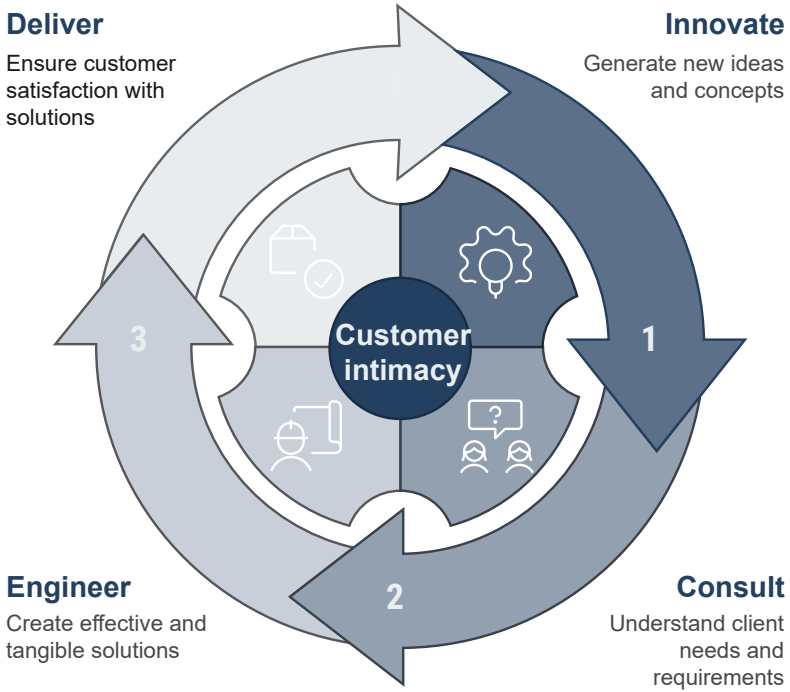
The Standex Detect Advantage : End-to-end design, unmatched reliability, and global scale engineered into every solution.

- 35,000+ custom solutions delivered
- Global manufacturing across 3 continents
- Decades of reed, sensor, and relay manufacturing leadership
- World's largest manufacturer of reed switches (>700M/yr)
- Proprietary life-cycle test systems
- In-house tooling and automation

APPROACH

Partnering to Engineer What's Next

At Standex Detect, we go beyond components we engineer complete sensing, switching, and control solutions. Our global team collaborates with customers from concept through production, using deep technical expertise to transform application challenges into optimized, manufacturable designs.



What Manufacturing Control Means for You

- Custom magnetic geometry not just packaging
- Load-specific lifetime testing (not generic datasheets)
- Coil, shielding, and creepage designed to your system
- PPAP, qualification, and change control inside one partner

CAPABILITIES

Proprietary Tooling, Test, and Automation

MANUFACTURING

Automated Optical Inspection (AOI)
Auto AT Switch Sorting
SMT Line with Pick & Place & Reflow
Reed Switch Manufacturing
Reed Relay Design & Manufacturing
Automatic CNC Winding & Termination
Bobbin, Layer, & Self-Supporting Winding
Thermoplastic & Thermoset Overmolding
Wave & Selective Soldering
Low Pressure (Hot Melt) & Injection Molding
Potting - 2 Component
Reflow Oven – Multiple Zone Convection
Stainless Steel, Metal & Plastic Fabrication
Lean Manufacturing Principles
Complete, In-House Machine Shop

ENGINEERING

3-D Magnetic Sensor Mapping
3-D CAD Modeling & 3-D Printing
Electronic sensor engineering
Circuit Design and PCB Layout
Mechanical Design & Packaging
Rapid Prototyping
Magnetic Simulation Software
Mechanical, Thermal & FEA Analysis
Plastic Mold Flow Simulation
APQP Project Management

QUALITY & COMPLIANCE

AS9100, ISO9001 & IATF16949 Certifications
ITAR Compliance
Automotive Core Tools
RoHS, REACH, UL, ATEX, IEC-60810-4, IECEx, VDE, Vds, AEC-Q

TESTING & LAB CAPABILITIES

High Voltage/Partial Discharge Testing
Specialized Lab Testing Equipment: Network Analyzers, Nanovoltmeters, Gauss / Teslameters, Fluxmeters, Picoammeters
Full Load & Temperature Rise Testing
2-D/3-D Microfocus X-ray Inspection
Digital Microscopic Inspection
Burn-In & Life Testing
Thermal Shock & Temperature Cycling
Humidity, Salt Fog, & Solderability
Moisture Resistance & Seal Testing

REED RELAY TECHNOLOGY

Fast, precise, and reliable switching for demanding applications

Reed relays are designed for applications requiring measurement accuracy, signal integrity, and long-term stability. Hermetically sealed contacts and low parasitic effects make them ideal for low-level signals, RF paths, and high-voltage switching.

WHY REED RELAYS

- Hermetically sealed contacts for stable long-term performance
- Very low leakage for precision measurement systems
- Low capacitance for fast settling and signal integrity
- Long life up to billions of operations
- High isolation capability for kV-level applications

PERFORMANCE SNAPSHOT

Switching voltage:	up to 10 kVDC
Stand-Off voltage:	up to 20 kVDC
Insulation resistance:	$>10^{15}\ \Omega$
Open contact capacitance:	< 0.2 pF performance
Life expectancy:	> 1 billion cycles

DESIGNED FOR REAL-WORLD APPLICATIONS

Standex Detect reed relays are widely used in:

- Test & Measurement systems for precision switching and low leakage
- Semiconductor test systems with high-speed and high-density signal routing
- EV and Energy Storage systems for isolation monitoring and safety functions
- Medical equipment requiring reliable switching and high isolation
- Industrial and automation systems operating in demanding environments
- Designed and validated using IEC 61810-4 relay qualification principles

STANDEX DETECT DIFFERENTIATION

In-house reed switch manufacturing for consistent quality and supply

Proprietary life cycle testing with real-time load monitoring

Broad portfolio covering RF, high voltage, high density, and low-level switching

Custom engineering support for application-specific designs

REED RELAYS

Customer Focused Engineering Solutions

high frequency

- Ability to carry RF signals from DC up to 7GHz
- Internal coaxial shields for 50 Ω impedance
- <0.3pF typical capacitance across open switch

high voltage & isolation

- Up to 10kVDC switching
- Up to 20kVDC isolation
- Switching currents up to 3 amps and carry currents up to 5 amps

high density

- Small thru-hole and SMD packages for closely stacked matrices
- Multiple pole packages for reduced material handling
- High voltage and high carry currents in standard packages

intrinsically safe

- ATEX/IECEx approved relays and optocouplers
- High isolation and non-arcing
- ATEX relays used for galvanic separation

low thermal

- Thermal offset <1µV
- Insulation resistance >10^12Ω
- High voltage isolation up to 1.5kVDC

general purpose

- Hermetically sealed reed switch technology
- Multitude of package sizes in SMD and thru-hole
- Long life expectancy and high insulation resistance

relay modules

- 4-8 pole relays in single package
- Built-in relay drivers and shift registers
- Up to 4GHz RF signals

REED RELAY SELECTION GUIDE

Over 35,000 Standex Detect programs began with a standard series and ended with a custom engineered solution.

Reed Relays are ideally used for switching applications requiring low and stable contact resistance, low capacitance, high insulation resistance, long life and small size. For specialty requirements such as high RF switching, very high voltage switching, extremely low voltage or low current switching, reed relays are ideal. Coil parameters, shielding, creepage, pin-outs, and testing profiles are routinely customized to match application requirements.

Selection Guides Are Starting Points—not Limitations

		GENERAL PURPOSE			HIGH DENSITY						RELAY MODULE	HIGH VOLTAGE & HIGH ISOLATION								
								NEW				NEW	NEW		NEW		NEW			
	RELAY SERIES	BE	DIP	SIL	CRR	MFS	FS	ASR	MS	UMS	RM	DIM	SIM	KT	KTP	SHV	SHV-2A	MHV	LI	H
KEY ATTRIBUTES	High-Voltage Switching (>1 kVDC)	■										■	■	■	■	■	■	■	■	■
	High Stand-Off / Isolation Voltage (>2 kVDC)	■										■	■	■	■	■	■	■	■	■
	High Insulation Resistance (>10^{13} Ω)	■										■	■	■	■	■	■	■	■	■
	Low-Level Signal Switching (µV / pA)	■	■	■	■	■	■	■	■	■	■	■	■							
	Low Thermal EMF (<1 µV)				■															
	RF & High-Speed Signal (>1 GHz)										■									
	Low Parasitic Capacitance (<1 pF)		■	■	■	■	■	■	■	■	■	■	■							
	Magnetic Shielding (dense arrays)	■	■	■	■	■	■	■		■	■	■	■			■	■			
	Safety-Critical (AEC-Q200, IECEx, Defense)													■	■			■		
	Mercury-Wetted Replacement (>2 A)	■												■	■	■	■			
	Mounting	THT	THT	THT	SMD	THT	THT	THT	THT	THT	THT	THT	THT	SMD/THT	SMD/THT	THT	THT	SMD	THT	Open
	Details on Page #	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18	18

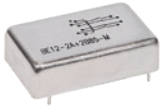
Can't find the exact fit?

60%+ of our programs begin with a standard series and end with a custom-engineered relay or optocoupler designed, validated, and manufactured by Standex Detect.

START A CONVERSATION

Selection Guides Are Starting Points—not Limitations

		HIGH VOLTAGE & HIGH ISOLATION				HIGH CURRENT			HIGH FREQUENCY							SPECIAL TRAITS				
	RELAY SERIES	HE	HM	BH	HI	MRE	USM	HF	C	CRF	M	MT	MH	SIL-RF	U	MRX	BT/BTS	SB	BE-1E	NP-CL/ DIP-CL
KEY ATTRIBUTES	High-Voltage Switching (>1 kVDC)	■	■	■	■	■	■										■		■	
	High Stand-Off / Isolation Voltage (>2 kVDC)	■	■	■	■	■	■	■									■		■	
	High Insulation Resistance (>10^{13} Ω)	■	■	■	■	■	■													
	Low-Level Signal Switching (µV / pA)			■	■				■	■	■	■	■	■	■		■	■	■	■
	Low Thermal EMF (<1 µV)									■							■	■	■	
	RF & High-Speed Signal (>1 GHz)							■	■	■	■	■	■	■	■					
	Low Parasitic Capacitance (<1 pF)				■				■	■	■	■	■	■	■		■	■	■	
	Magnetic Shielding (dense arrays)			■		■		■	■	■	■	■	■	■	■		■	■	■	■
	Safety-Critical (AEC-Q200, IECEx, Defense)							■								■				
	Mercury-Wetted Replacement (>2 A)			■		■	■													
	Mounting	THT	THT	THT	THT	THT	THT	THT	SMD	SMD	SMD	SMD	SMD	THT	SMD	THT	THT	THT	THT	THT
	Details on Page #	18	19	19	19	19	20	20	20	20	21	21	21	21	22	22	22	22	23	23

	GENERAL PURPOSE			HIGH DENSITY
Relay Series	**BE**	**DIP**	**SIL**	**CRR**
				
Highlights	• Various contact forms 1–5A, 2B, 2A+2B • Insulation resistance up to 10^{13} Ω • Plastic or metal case options • T&M, industrial, medical, aerospace	• IC-compatible dual in-line package • Low profile package • General purpose applications • T&M, Industrial, DAQ	• Single In-Line pinout • Optional diode and shield • Contact forms 1A, 1B, 1C • T&M, industrial, telecom	• Low capacitance and thermovoltage • Magnetic shielding • Stable signal integrity • Analog test and ATE
Package / Mounting	Potted / THT	Molded / THT	Molded / THT	Molded / SMD
Contact Form	1-5A, 2B, 2A+2B	1A, 1B, 1C, 2A	1A, 1B, 1C	1A
Power Rating Max. (W)	100	10	10	10
Switching Voltage Max. (VDC)	1000	200	200	170
Switching Current Max. (A)	1.0	0.5	0.5	0.5
Carry Current Max. (A)	2.5	1.0	1.0	1.0
Breakdown Voltage Min. (VDC)	2500	250	250	210
Insulation Resistance Min. (Ω)	10 ^14	10 ^10	10 ^10	10 ^10
Coil Resistance Min-Max. (Ω)	140-8000	500-2000	20-2000	70-150
Coil Voltage(s)	5, 12, 24	3, 5, 12, 24	3, 5, 12, 24	3, 5
Options and Features	Plastic/metal case Many pin-outs Up to 5-NO switches	Flyback diode Magnetic shield	Flyback diode Magnetic shield	Internal magnetic shield Ceramic SMD package
Body Dimensions inches (mm)	1.276" L (33.0) 0.394-0.787" W (10-20) 0.394" H (10.0)	0.760" L (19.3) 0.256-0.276" W (6.5-7) 0.201-0.303" H (5.1-7.7)	0.779-0.811" L (19.8-20.6) 0.200-0.232" W (5.08-5.9) 0.307-0.327" H (7.8-8.3)	0.338" L (8.6) 0.173" W (4.4) 0.142" H (3.6)
Compliance and Packaging		c UL us	c UL us	c UL us
Product Page/Datasheet Link				

c UL us UL Recognized

Tape & Reel Packaging

Note: All dimensions are in mm and tolerances according to ISO 2768-m. Please refer to the product datasheets on our website for full dimensions, specifications, tolerances, etc.
Not all part number combinations are possible, consult the factory for more info. We reserve the right to make any changes according to technological progress or further developments.

HIGH DENSITY

Relay Series	MFS	FS	ASR NEW	MS
				
Highlights	• High temperature +155°C • High-density PCB mounting • Vertical square shape • DAQ and high-temp ATE	• High-density PCB mounting • Vertical square shape • LED option for easy debugging • DAQ and high-temp ATE	• Miniature single-in-line package • Low leakage current • Compact matrix spacing • Analog ATE, DAQ and Instrumentation	• Micro single-in-line package • Low leakage current • Compact matrix spacing • Analog ATE, DAQ and Instrumentation
Package / Mounting	Potted / THT	Potted / THT	Molded / THT	Molded / THT
Contact Form	1A	1A	1A	1A
Power Rating Max. (W)	10	10	10	10
Switching Voltage Max. (VDC)	100	100	200	200
Switching Current Max. (A)	0.5	0.5	0.5	0.5
Carry Current Max. (A)	1.0	1.0	1.0	1.0
Breakdown Voltage Min. (VDC)	200	200	220	225
Insulation Resistance Min. (Ω)	10 ^10	10 ^10	10^10	10^10
Coil Resistance Min-Max. (Ω)	100-450	150-600	500	280-700
Coil Voltage(s)	5, 12	5, 12	5	5, 12
Options and Features	Magnetic shielding Electrostatic shield	Magnetic shielding Electrostatic shield Status signal LED	Flyback diode Internal magnetic shielding	Flyback diode
Body Dimensions inches (mm)	0.193" L (4.90) 0.193" W (4.90) 0.413" H (10.5)	0.193" L (4.90) 0.193" W (4.90) 0.472" H (12)	0.400" L (10.16) 0.150" W (3.81) 0.400" H (10.16)	0.598" L (15.2) 0.150" W (3.8) 0.240" H (6.1)
Compliance and Packaging				c UL us
Product Page/Datasheet Link				

c UL us UL Recognized

	HIGH DENSITY	RELAY MODULE	HIGH VOLTAGE & ISOLATION	
Relay Series	**UMS**	**RM**	**DIM** NEW	**SIM** NEW
				
Highlights	• Ultra-miniature size • Magnetic shielding • Very low capacitance • Analog ATE, DAQ and Instrumentation	• 8-channel relay module Integrated driver • No external electronics • Compact size • DAQ and ATE	• Enhanced DIP design • 500 VDC switching • Stand-Off Voltage up to 3 kVDC • T&M, Industrial, DAQ	• Enhanced SIL design • 500 VDC switching • Stand-Off Voltage up to 3 kVDC • T&M, Industrial, DAQ
Package / Mounting	Molded / THT	Molded / THT	Molded / THT	Molded / THT
Contact Form	1A	8A + shift register	1A	1A
Power Rating Max. (W)	10	10	20	20
Switching Voltage Max. (VDC)	170	170	500	500
Switching Current Max. (A)	0.5	0.5	0.5	0.5
Carry Current Max. (A)	1.0	0.5	1.5	1.5
Breakdown Voltage Min. (VDC)	210	210	2000 (3000 optional)	2000 (3000 optional)
Insulation Resistance Min. (Ω)	10 ^11	10 ^10	10 ^12	10 ^12
Coil Resistance Min-Max. (Ω)	400-500	8x50	200-2000	200-2000
Coil Voltage(s)	5	5 (3.3 driver)	3, 5, 12, 24	3, 5, 12, 24
Options and Features	Int. mag shield Flyback diode	Driver MAX4823 Kickback Protection Serial Interface	Flyback diode Magnetic shield	Flyback diode Magnetic shield
Body Dimensions inches (mm)	0.270" L (6.85) 0.142" W (3.6) 0.374" H (9.5)	1.299" L (33.0) 0.289" W (7.35) 0.579" H (14.7)	0.760" L (19.3) 0.256-0.276" W (6.5-7) 0.201-0.303" H (5.1-7.7)	0.779-0.811" L (19.8-20.6) 0.200-0.232" W (5.08-5.9) 0.307-0.327" H (7.8-8.3)
Compliance and Packaging	c UL us			
Product Page/Datasheet Link				

c UL us UL Recognized

Note: All dimensions are in mm and tolerances according to ISO 2768-m. Please refer to the product datasheets on our website for full dimensions, specifications, tolerances, etc.
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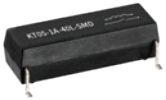
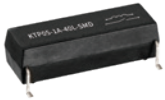
HIGH VOLTAGE & ISOLATION

Relay Series	KT	KTP NEW	SHV	SHV-2A NEW
				
Highlights	• 7 kV isolation • AEC-Q200 and UL • Automotive and Renewables	• Enhanced KT relay with higher switching voltage 2.5 kVDC • Automotive and Renewables	• 1.5 kVDC switching voltage • Compact housing • ATE and semiconductor test	• Dual HV contacts for high density • Compact housing • ATE and semiconductor test
Package / Mounting	Molded / SMD, THT	Molded / SMD, THT	Molded / THT	Molded / THT
Contact Form	1A	1A	1A	2A
Power Rating Max. (W)	100	100	100	100
Switching Voltage Max. (VDC)	1500	2500	1500	1000
Switching Current Max. (A)	1.0	1.5	1.5	1.0
Carry Current Max. (A)	2.5	3.0	2.5	2.5
Breakdown Voltage Min. (VDC)	4500	6000	5000	2000 (3000 optional)
Insulation Resistance Min. (Ω)	10 ^13	10 ^13	10^12	10^12
Coil Resistance Min-Max. (Ω)	65-1800	65-1800	140-2000	225
Coil Voltage(s)	3, 5, 12, 24	3, 5, 12, 24	5, 12, 24	5 (12, 24 optional)
Options and Features	Isolation 7kVDC High creepage/clearance Tape & Reel	Isolation 7kVDC High creepage/clearance Tape & Reel	Flyback diode Internal magnetic shield Option with longer pins	Flyback diode Internal magnetic shield
Body Dimensions inches (mm)	1.189" L (30.2) 0.401" W (10.2) 0.342" H (8.7)	1.189" L (30.2) 0.401" W (10.2) 0.342" H (8.7)	0.950" L (24.13) 0.245" W (6.22) 0.320" H (8.13)	1.14" L (28.96) 0.25" W (6.22) 0.49" H (12.45)
Compliance and Packaging	AEC-Q200 c UL us	c UL us	c UL us	c UL us
Product Page/Datasheet Link				

AEC-Q200 AEC-Q200 Tested c UL us UL Recognized Tape & Reel Packaging

HIGH VOLTAGE & ISOLATION

Relay Series	MHV	LI	H	HE
				
Highlights	• Small HV SMD relay • High dielectric strength • Very low leakage • T&M, Automotive, ESS and medical	• Compact high-voltage relay • High insulation resistance • Very high dielectric strength • T&M, Medical	• Open frame design • High Insulation Resistance • Low leakage current • Precise Test & Measurement	• HV relay with narrow housing • Various pinouts and axial wire • Long creepage distance • Medical and HV test
Package / Mounting	Molded / SMD	Potted / THT	Molded / Open Frame	Potted / THT, Cable
Contact Form	1A	1A	1A, 1B	1A, 1B, 2A
Power Rating Max. (W)	10	100	50	50
Switching Voltage Max. (VDC)	1000	1000	10000	10000
Switching Current Max. (A)	0.7	1.0	3.0	3.0
Carry Current Max. (A)	1.25	2.5	5.0	5.0
Breakdown Voltage Min. (VDC)	3000	4500	15000	15000, (2A serial = 25000)
Insulation Resistance Min. (Ω)	10 ^12	10^12	10 ^14	10 ^13
Coil Resistance Min-Max. (Ω)	140	150-2000	180-700	50-1500
Coil Voltage(s)	5	5, 12, 24	12, 24	5, 12, 24
Options and Features	Isolation 5kVDC Off-State leakage current typical 1nA Meets IEC creepage/clearance	Isolation 7kVDC High creepage/clearance	Wire lead connections Screw-mount fixation	Creepage distance >26mm
Body Dimensions inches (mm)	0.677" L (17.2) 0.413" W (10.5) 0.335" H (8.5)	1.181" L (30.0) 0.394" W (10.0) 0.409" H (10.4)	2.126" L (54.0) 0.709" W (18.0) 1.181" H (30.0)	2.559" L (65.0) 0.571" W (14.5) 0.610" H (15.5)
Compliance and Packaging	AEC-Q200 c UL us		c UL us	
Product Page/Datasheet Link				

AEC-Q200 AEC-Q200 Tested c UL us UL Recognized Tape & Reel Packaging

Note: All dimensions are in mm and tolerances according to ISO 2768-m. Please refer to the product datasheets on our website for full dimensions, specifications, tolerances, etc.
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	HIGH VOLTAGE & ISOLATION			HIGH CURRENT
Relay Series	**HM**	**BH**	**HI**	**MRE**
				
Highlights	• Powerful High Voltage option • High creepage distance • Insulation Resistance >10 TΩ • Testers, Renewables, Medical and Industrial	• Multi-contact High Voltage relay • Very high insulation resistance • Shielded dry switching • T&M and medical	• Open-frame construction • Low leakage current • Precision measurement	• Very high breakdown or carry current • Compact housing • ARC Testers, Medical
Package / Mounting	Potted / THT	Molded / THT	Open Frame / THT	Potted / THT
Contact Form	1A, 1B	1-4A, 1E	1A	1A, 2A
Power Rating Max. (W)	50	100	100	100
Switching Voltage Max. (VDC)	10000	1000	1000	1000
Switching Current Max. (A)	3.0	1.0	1.0	1.0
Carry Current Max. (A)	5.0	2.5	2.5	5.0
Breakdown Voltage Min. (VDC)	15000	3000 (5000 optional)	140-3000	7000
Insulation Resistance Min. (Ω)	10 ^13	10 ^13	10 ^12	10 ^12
Coil Resistance Min-Max. (Ω)	30-1000	70-1600	140-300	120-2000
Coil Voltage(s)	5, 12, 24	5, 12, 24	5, 12	5, 12, 24
Options and Features	Creepage distance >32mm Multiple mounting options Axial or vertical wire lead	Isolation 5kVDC Off-State leakage current typical 1 nA Meets creepage/clearance	Axial leads	Dual-switch architecture Integrated Magnetic Shield High creepage/clearance
Body Dimensions inches (mm)	2.677" L (68.0) 0.748" W (19.0) 0.779" H (19.8)	1.102" L (28.0) 0.335-0.772" W (8.5-19.6) 0.354-0.366" H (9-9.3)	1.102" L (28.0) 0.295" W (7.5) 0.291" H (7.4)	1.181" L (30.0) 0.394" W (10.0) 0.512" H (13.0)
Compliance and Packaging				
Product Page/Datasheet Link				

	HIGH CURRENT		HIGH FREQUENCY	
Relay Series	**USM**	**HF**	**C**	**CRF**
				
Highlights	• Dual-switch architecture • Compact housing • Very high breakdown or carry current • T&M, Medical	• High current RF switching • Patented shielding • Specialized pin-out • RF and antenna switching	• RF switching up to 7 GHz • 300M switching cycles • Matrix-optimized SMD • RF and SoC testers	• Multi-GHz RF switching • Low capacitance and thermovoltage • Ceramic SMD package • High insulation resistance • Semiconductor ATE
Package / Mounting	Potted / Axial leads	Potted / THT	Molded / SMD	Ceramic / SMD
Contact Form	1A, 2A	1A, 1B, 2A	1A	1A
Power Rating Max. (W)	60	25	10	10
Switching Voltage Max. (VDC)	1000	500	100	170
Switching Current Max. (A)	1.0	1.5	0.5	0.5
Carry Current Max. (A)	13	5.0A@30MHz	1.0	1.0
Breakdown Voltage Min. (VDC)	3000	9000	200	210
Insulation Resistance Min. (Ω)	10 ^13	10 ^11	10^11	10^10
Coil Resistance Min-Max. (Ω)	30-550	40-1000	100-200	70-150
Coil Voltage(s)	5, 12, 24	5, 12, 24	3, 5	3, 5
Options and Features	Axial leads Coaxial shielding	Electrostatic and magnetic shielding	1 Form A with excellent shielding and 7GHz RF performance Impedance Z = 50 Ω	Internal magnetic shield Coax screen Z=50Ω Ceramic SMD package
Body Dimensions inches (mm)	1.732" L (44.0) 0.492" W (12.5) 0.492" H (12.5)	2.114" L (53.7) 0.748" W (19.0) 0.787" H (20.0)	0.350" L (8.9) 0.150-0.184" W (3.81-4.67) 0.142" H (3.6)	0.338" L (8.6) 0.173" W (4.4) 0.142" H (3.6)
Compliance and Packaging				
Product Page/Datasheet Link				

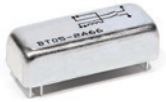
UL Recognized Tape & Reel Packaging

Note: All dimensions are in mm and tolerances according to ISO 2768-m. Please refer to the product datasheets on our website for full dimensions, specifications, tolerances, etc.
Not all part number combinations are possible, consult the factory for more info. We reserve the right to make any changes according to technological progress or further developments.

HIGH FREQUENCY

Relay Series	M	MT	MH	SIL-RF
				
Highlights	• RF switching up to 5.5 GHz • 50 Ω impedance • 300M switching cycles • Mixer RF, SoC and Telecom	• Differential signal switching • 1 or 2 changeover contacts • RF up to 4 GHz • High-speed digital test	• Highest channel density • Changeover SMD relay • RF up to 3 GHz • 300M switching cycles • Dense test matrices	• RF switching up to 1.5 GHz • Compact THT package • RF instrumentation
Package / Mounting	Molded / SMD	Molded / SMD	Molded / SMD	Molded / THT
Contact Form	1A, 2A	1C, 2C	1C	1A
Power Rating Max. (W)	10	10	10	10
Switching Voltage Max. (VDC)	100	100	100	200
Switching Current Max. (A)	0.5	0.5	0.5	0.4
Carry Current Max. (A)	1.0	1.0	1.0	0.5
Breakdown Voltage Min. (VDC)	200	200	200	230
Insulation Resistance Min. (Ω)	10^11	10^11	10^11	10 ^9
Coil Resistance Min-Max. (Ω)	80-500	70-550	70-110	500-1000
Coil Voltage(s)	3, 5, 12	3, 5, 12	3, 5	5, 12
Options and Features	1 Form A and 2 Form A Gull-Wing and J-lead SMD Impedance Z = 50 Ω	1 and 2 changeover-like Form in small SMD package Impedance Z = 50 Ω	Miniature changeover vertical SMD relay Magnetic shielding Impedance Z = 50 Ω	Magnetic shielding Impedance Z = 50 Ω
Body Dimensions inches (mm)	0.390-0.400" L (9.9-10.16) 0.184-0.264" W (4.67-6.70) 0.178-0.201" H (4.52-5.10)	0.394-0.400" L (10.00-10.16) 0.300-0.445" W (7.62-11.30) 0.184-0.193" H (4.67-4.90)	0.390" L (9.9) 0.200" W (5.08) 0.323" H (8.2)	0.779" L (19.8) 0.200" W (5.08) 0.307" H (7.8)
Compliance and Packaging	⊛	⊛	⊛	c UL us
Product Page/Datasheet Link				

c UL us UL Recognized ⊛ Tape & Reel Packaging

	HIGH FREQUENCY	SPECIAL		
Relay Series	**U**	**MRX**	**BT/BTS**	**SB**
				
Highlights	• RF switching up to 8 GHz • Series with smallest SMD mounting area • High-density SoC test	• ATEX and IECEx certified • Non-arcing switching • Hazardous location rated • Mining, Oil and Gas	• Ultra-low thermal EMF • Thermal voltage offset <1µV • High voltage capability • Precision instrumentation	• Low Thermal EMF <5µV • Compact size
Package / Mounting	Molded / SMD	Potted / THT	Potted / THT	Potted / THT
Contact Form	1A	1A	1A	1A
Power Rating Max. (W)	3	50	10	10
Switching Voltage Max. (VDC)	100	375	500	100
Switching Current Max. (A)	0.2	0.5	0.5	0.5
Carry Current Max. (A)	0.2	1.0	1.5	1.0
Breakdown Voltage Min. (VDC)	150	500	2000	200
Insulation Resistance Min. (Ω)	10^12	10^10	10^11	10^10
Coil Resistance Min-Max. (Ω)	90-150	250-5880	850-5000	330-1800
Coil Voltage(s)	3, 5	5, 12, 24	5, 12	5, 12
Options and Features	Ultra-compact SMD J-lead Magnetic shielding Impedance Z = 50 Ω	Multiple contact options ATEX and IECEx certified for Intrinsically Safe Circuits	2 Input Coils Metal housing as magnetic shield	Low Power Coils Electrostatic Shield as Standard Feature
Body Dimensions inches (mm)	0.313" L (7.95) 0.184" W (4.67) 0.142" H (3.6)	1.181" L (30.0) 0.394" W (10.0) 0.394" H (10.0)	1.200-1.275" L (30.48-32.4) 0.476-0.500" W (12.1-12.7) 0.394-0.433" H (10-11)	0.800" L (20.32) 0.200" W (5.08) 0.374" H (9.50)
Compliance and Packaging				
Product Page/Datasheet Link				

Tape & Reel Packaging ATEX Certified IECEx Certified

	SPECIAL	
Relay Series	**BE-1E**	**NP-CL/DIL-CL**
		
Highlights	• Latching design • Low current consumption • Low charge injection • Precise instrumentation	• Current-loop sensing • Precise switching • Low Contact Resistance • T&M, Telecommunications, Security
Package / Mounting	Potted / THT	Potted / THT
Contact Form	1E	1A
Power Rating Max. (W)	50	10
Switching Voltage Max. (VDC)	375	200
Switching Current Max. (A)	0.7	0.5
Carry Current Max. (A)	1.0	1.0
Breakdown Voltage Min. (VDC)	2000	250
Insulation Resistance Min. (Ω)	10^10	10^10
Coil Resistance Min-Max. (Ω)	125-5880	350-5000
Coil Voltage(s)	5, 12, 24	5, 12, 24
Options and Features	Special pin-outs 2 Input Coils Metal housing as magnetic shield	Magnetic Shield
Body Dimensions inches (mm)	1.276" L (32.4) 0.472" W (12.0) 0.394" H (10.0)	0.799-0.866" L (20.3-22) 0.394-0.409" W (10-10.4) 0.398-0.413" H (10.1-10.5)
Compliance and Packaging		
Product Page/Datasheet Link		

Customized Relay Solutions

Engineered for your application

Standex Detect designs standard and custom reed relays for high-reliability switching, combining deep reed switch and relay engineering expertise to deliver application-specific solutions. Custom designs reduce PCB changes while meeting critical electrical requirements and are built for optimal performance, quality, and repeatability around your exact specifications.

Customization Options

Standex Detect can support customized reed relay solutions across key design parameters, including:

- Package style and footprint
- Pin configuration and termination
- Contact form and number of channels
- Coil voltage and coil resistance
- Switching voltage and Stand-Off voltage
- Robustness against Partial Discharge and Arcing
- Contact-to-coil isolation
- Enhanced Insulation resistance and low leakage performance
- Magnetic shielding, coaxial screen or special mechanical requirements
- Application-specific validation and testing

OPTOCOUPLER SELECTION GUIDE

Standex optocouplers provide high galvanic isolation for demanding signal-transfer applications, including intrinsically safe circuits, medical high-voltage systems, and industrial control interfaces.

Electronic equipment in hazardous, medical, industrial, and high-voltage systems often requires galvanic isolation between control and field circuits.

Standex optocouplers support analog and digital signal transfer with high input-output isolation, low coupling, and no mechanical contact wear.

Intrinsically safe variants support ATEX / IECEx applications, while special high-isolation platforms provide extended creepage distance and higher isolation voltage for demanding circuit designs.

Selection Guides Are Starting Points—not Limitations

		ATEX / IECEx INTRINSICALLY SAFE				HIGH-ISOLATION & SPECIAL CONFIGURATIONS		
	OPTOCOUPLER SERIES	522	525	535	567	521	528	530
KEY ATTRIBUTES	Intrinsic Safety / ATEX / IECEx	■	■	■	■			
	Compact Package	■	■					
	High Isolation Voltage					■	■	■
	Long Creepage / Clearance					■	■	■
	High CTR (Current Transfer Ratio)			■				
	Fast Digital Signal Transfer				■			
	Dual-Channel Package						■	
	Analog & Digital Signal Transfer	■	■	■	■	■	■	■
	Low Coupling / Noise-Sensitive Isolation	■	■	■	■	■	■	■
	Medical / Therapeutic HV Isolation							■
	Mounting	THT	THT	THT	THT	THT	THT	THT
	Details on Page #	26	26	26	26	27	27	27

Standex optocouplers transfer signals by light, providing galvanic separation between control and field circuits without mechanical contacts.

TYPICAL OPTOCOUPLER FEATURES

- High galvanic isolation for signal transfer across separated circuits
- Input-output isolation up to 22 kVDC
- High insulation resistance up to 10^13 Ω
- Long creepage / clearance options for demanding insulation designs
- Low coupling capacitance for noise-sensitive interfaces
- Fast signal-transfer variants available
- No contact arcing, bounce, or mechanical wear
- Operation unaffected by magnetic fields
- ATEX / IECEx certified variants for hazardous locations

TYPICAL USE CASES

- Hazardous field instruments
- Gas detection systems
- Medical high-voltage equipment
- Industrial control interfaces
- Test & Measurement systems

ATEX / IECEx INTRINSICALLY SAFE

Optocoupler Series	522	525	535	567
				
Highlights	• Compact intrinsically safe optocoupler	• Extended creepage intrinsically safe optocoupler	• High-CTR Darlington output for low-drive Ex circuits	• Fast Schmitt Trigger output for high-speed Ex interfaces
Output Type	Transistor	Transistor	Darlington	Schmitt Trigger
I/O Isolation Min. (kVDC)	4	4	4	4
I/O Creepage / Clearance Min. (mm)	12	14.5	14.5	14.5
CTR Min. (A)	0.5	0.5	3.0	-
I/O Insulation Resistance (Ω)	10^12	10^12	10^13	10^13
Options and Features	Protection: II(1)G [Ex ia Ga] IIC	Protection: II(1)G [Ex ia Ga] IIC	Protection: II(1)G [Ex ia Ga] IIC	Protection: II(1)G [Ex ia Ga] IIC Transmission frequencies up to 2 MHz
Body Dimensions inches (mm)	0.650" L (16.5) 0.260" W (6.6) 0.354" H (9.0)	0.748" L (19.0) 0.394" W (10.0) 0.315" H (8.0)	0.748" L (19.0) 0.394" W (10.0) 0.315" H (8.0)	0.748" L (19.0) 0.394" W (10.0) 0.394" H (10.0)
Certification				
Product Page/Datasheet Link				

ATEX Certified IECEx Certified

Note: All dimensions are in mm and tolerances according to ISO 2768-m. Please refer to the product datasheets on our website for full dimensions, specifications, tolerances, etc.
Not all part number combinations are possible, consult the factory for more info. We reserve the right to make any changes according to technological progress or further developments.

HIGH-ISOLATION & SPECIAL CONFIGURATIONS

Optocoupler Series	521	528	530
			
Highlights	• Extended creepage distance for high-isolation designs	• Dual-channel optocoupler with 10 kVDC isolation	• Extra-high I/O isolation for medical HV systems
Output Type	Transistor	2 Transistors	Transistor
I/O Isolation Min. (kVDC)	6	10	10-20
I/O Creepage / Clearance Min. (mm)	24.5	42	34
CTR Min. (A)	0.5	0.9	0.5
I/O Insulation Resistance (Ω)	10^13	10^12	10^13
Options and Features	High Creepage Distance	Dual channel	22 kVDC option available
Body Dimensions inches (mm)	1.299" L (33.0) 0.496" W (12.6) 0.394" H (10.0)	2.047" L (52.0) 0.575" W (14.6) 0.650" H (16.5)	1.378" L (35.0) 0.276" W (7.0) 0.354" H (9.0)
Certification			
Product Page/Datasheet Link			

Where You'll Find Standex Reed Relays & Optocouplers

ATE / TEST & MEASUREMENT

Our reed relays support Test & Measurement applications by cleanly switching low- and high-level loads and passing ultra-fast picosecond digital pulses in a 50-ohm environment, with excellent isolation and signal integrity.

COMPUTING & DATA CENTERS

High-isolation reed relays and optocouplers support secure signal routing, fault detection, and high-speed communication by providing low-leakage switching, strong EMI protection, and reliable signal integrity in noisy data center environments.

SEMICONDUCTOR TEST

Standex Detect RF reed relays deliver reliable multi-GHz switching and high-speed digital performance. With bandwidths up to 8 GHz and data rates up to ~6–9 Gb/s, these relays enable high-density, high-performance SoC test architectures.

MEDICAL EQUIPMENT

Reed relays are equipped to handle the high frequency, high current, and high voltage isolation requirements in a reliable and safe manner in medical devices such as surgical generators and automated external defibrillators.

EV / AUTOMOTIVE

High-isolation, energy-efficient reed relays enable accurate isolation resistance measurement and leakage detection in electric vehicle power and safety systems.

INDUSTRIAL AND AUTOMATION

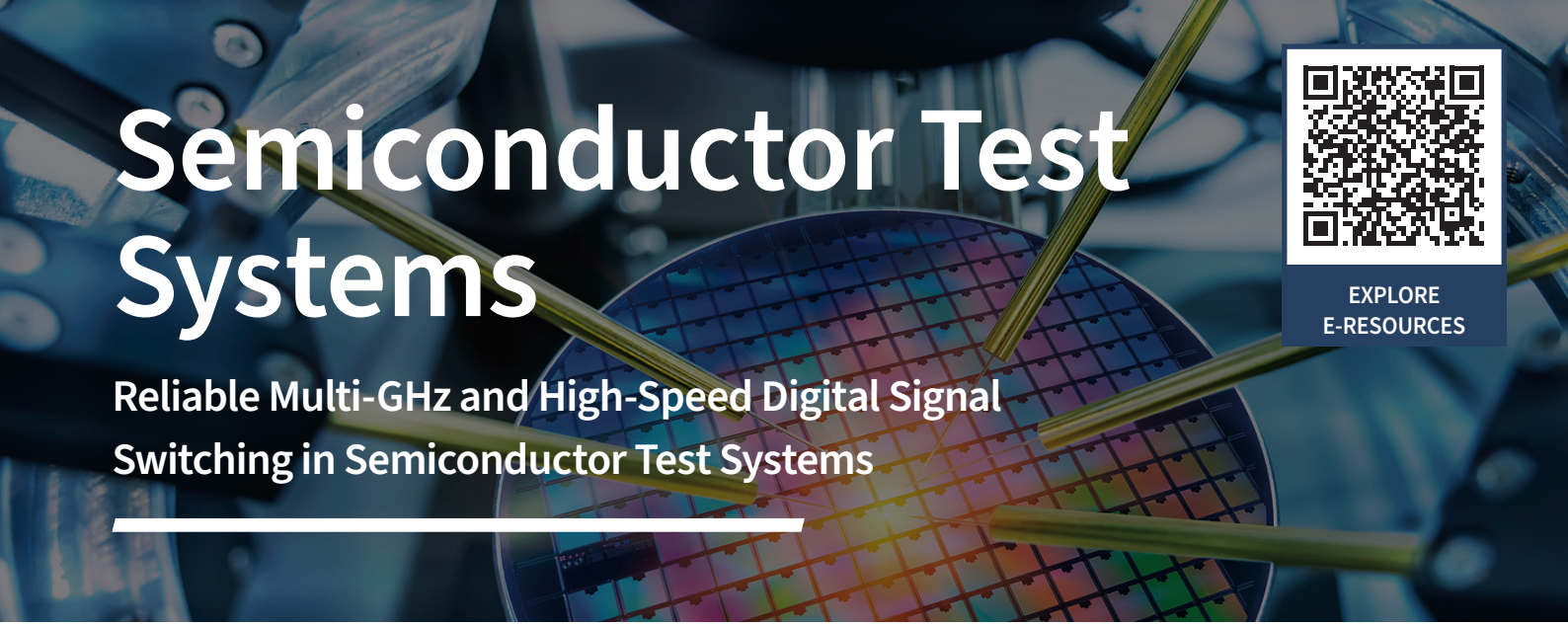
Compact reed relays and optocouplers deliver reliable signal switching, high-voltage isolation, and EMI protection in PLCs, control panels, and automated test systems, ensuring safe and accurate operation in noisy industrial environments.

RENEWABLE ENERGY

Reliable reed relays provide precise isolation control and leakage detection in photovoltaic systems, supporting safe operation and verification prior to grid connection.

HAZARDOUS LOCATIONS

Certified optocouplers and relays provide safe, non-arcing isolation up to 4 kVDC for hazardous environments, meeting stringent ATEX requirements. High insulation resistance, fast response times, and extended creepage distances ensure reliable isolation control in critical applications.



Semiconductor Test Systems

EXPLORE
E-RESOURCES

Reliable Multi-GHz and High-Speed Digital Signal Switching in Semiconductor Test Systems

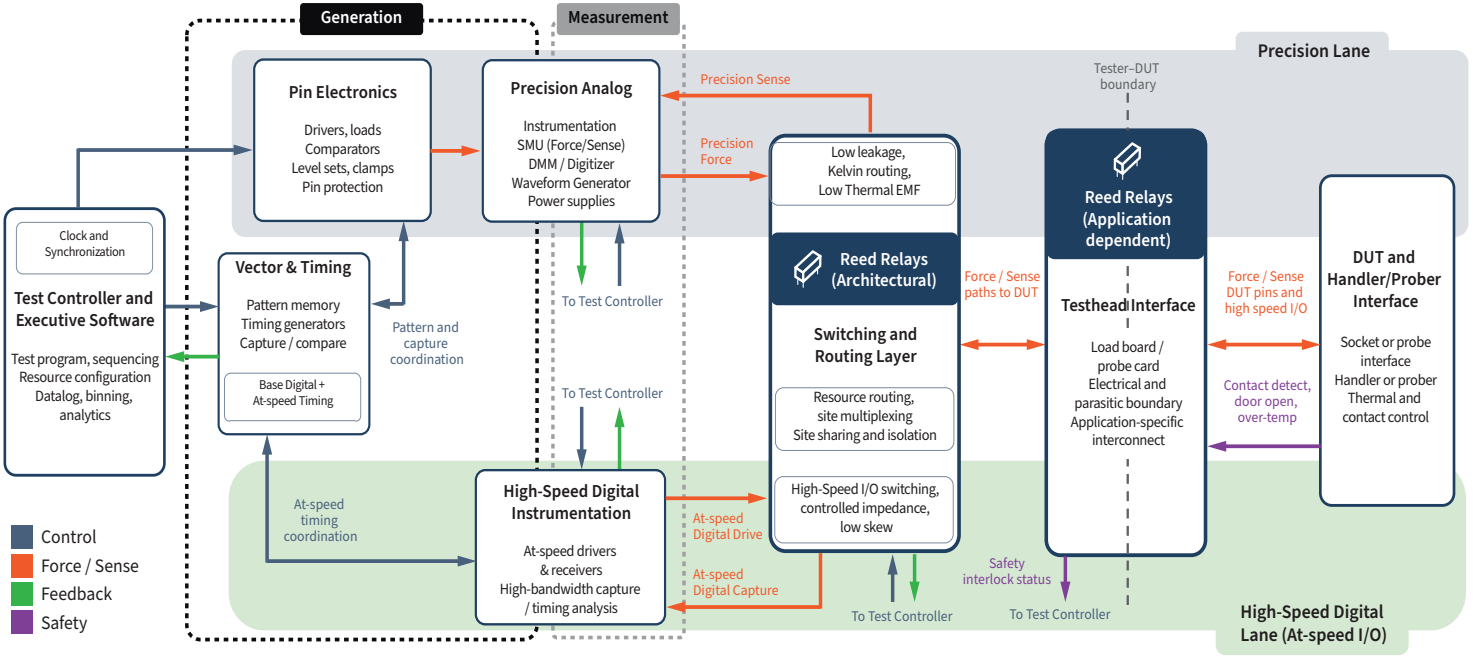
We offer a portfolio of RF reed relays designed to address the full range of SoC test requirements, from compact high-frequency switching to dense matrix architectures.

Signal-level switching performance supports -3 dB bandwidths up to 8 GHz, depending on package style and geometry. Selected series are capable of supporting high-speed digital data transfer with stable eye behavior for high-speed digital data rates up to the ~6 to ~9 Gb/s range under defined test conditions.

This performance is enabled by very low open-contact capacitance (~0.2–0.5 pF), stable contact resistance in the tens of milliohms, and compact electrical length with controlled signal geometry.

When implemented with appropriate PCB interconnect design, these reed relays provide a reliable solution for multi-GHz RF path selection and multi-Gb/s digital switching in complex SoC test systems.

SOC TEST ARCHITECTURE EXAMPLE



CRF Series - Multi-GHz RF signal routing, high-speed digital channels requiring lowest insertion loss

U Series - Ultra-compact load boards, multi-GHz RF and high-Gbps digital switching where space is critical

C Series - High-density surface-mount relay matrices for mixed RF, digital, and analog SoC testing

M Series - General-purpose SoC pin electronics, functional test paths, and mixed-signal routing. Available as Normally Open contact in 1A and 2A Form

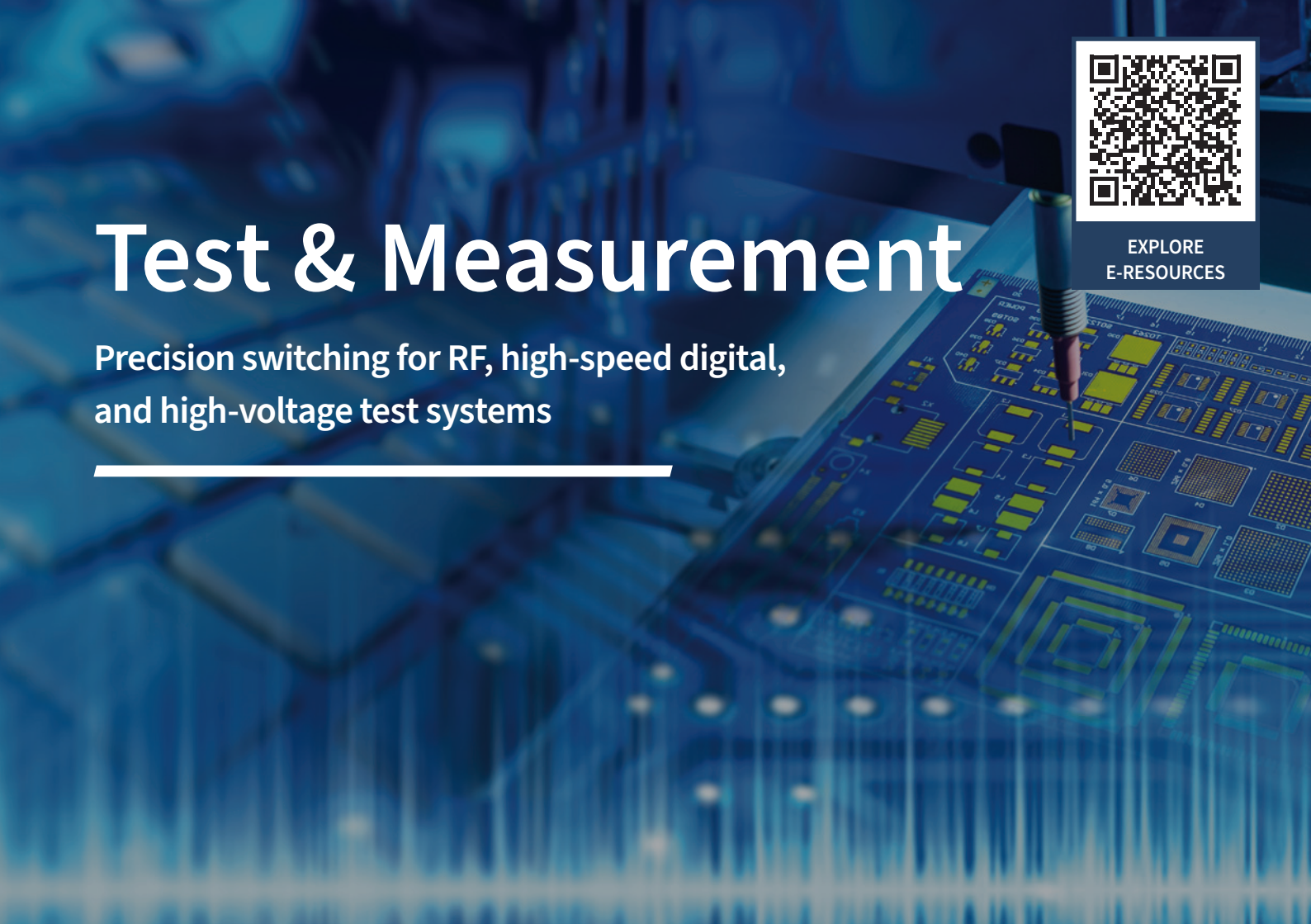
MT Series -Differential signal switching for high-speed serial interfaces. Available in a Changeover Form 1C and 2C

MH Series - Very high channel-count relay matrices and dense ICT/FCT style SoC test systems. Extra small relay, available in a Changeover Form 1C

Test & Measurement

Precision switching for RF, high-speed digital, and high-voltage test systems

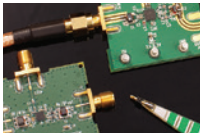
EXPLORE
E-RESOURCES



TEST & MEASUREMENT

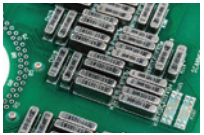
WHERE WE FIT IN YOUR SYSTEM

HIGH-SPEED & RF SIGNAL ROUTING



- GHz-class signal paths
- Low skew, stable signal integrity
- Sub-pF capacitance

MATRIX & ATE SWITCHING



- Dense relay matrices
- Multiplexing and isolation
- Compact PCB layouts

PRECISION MEASUREMENT

- Low leakage paths
- Low thermal EMF
- Stable contact resistance

HIGH-CURRENT & HV TEST PATHS

- kV-level switching
- Pulsed-current testing
- High isolation

WHY REED RELAYS IN TEST SYSTEMS?

Ultra-low capacitance
Preserves signal integrity at high frequency

High isolation
Prevents cross-talk in dense test environments

Stable contact resistance
Maintains repeatable readings

Low leakage
Supports precision measurements

RECOMMENDED PRODUCT FAMILIES

CRF, U, M SERIES

RF and high-speed signal routing

ASR, UMS, MFS, SIL SERIES

ATE, matrix, and general signal switching

BH, BT, SB SERIES

Precision measurement and low leakage paths

BH, SHV, HM SERIES

High-voltage and high-current test paths

DESIGN CONSIDERATIONS

Signal type: RF, digital, analog, HV, or power

Bandwidth and capacitance: key for signal integrity

Leakage and thermal EMF: critical for precise measurement

Voltage/current rating: switch, carry, and isolation requirements

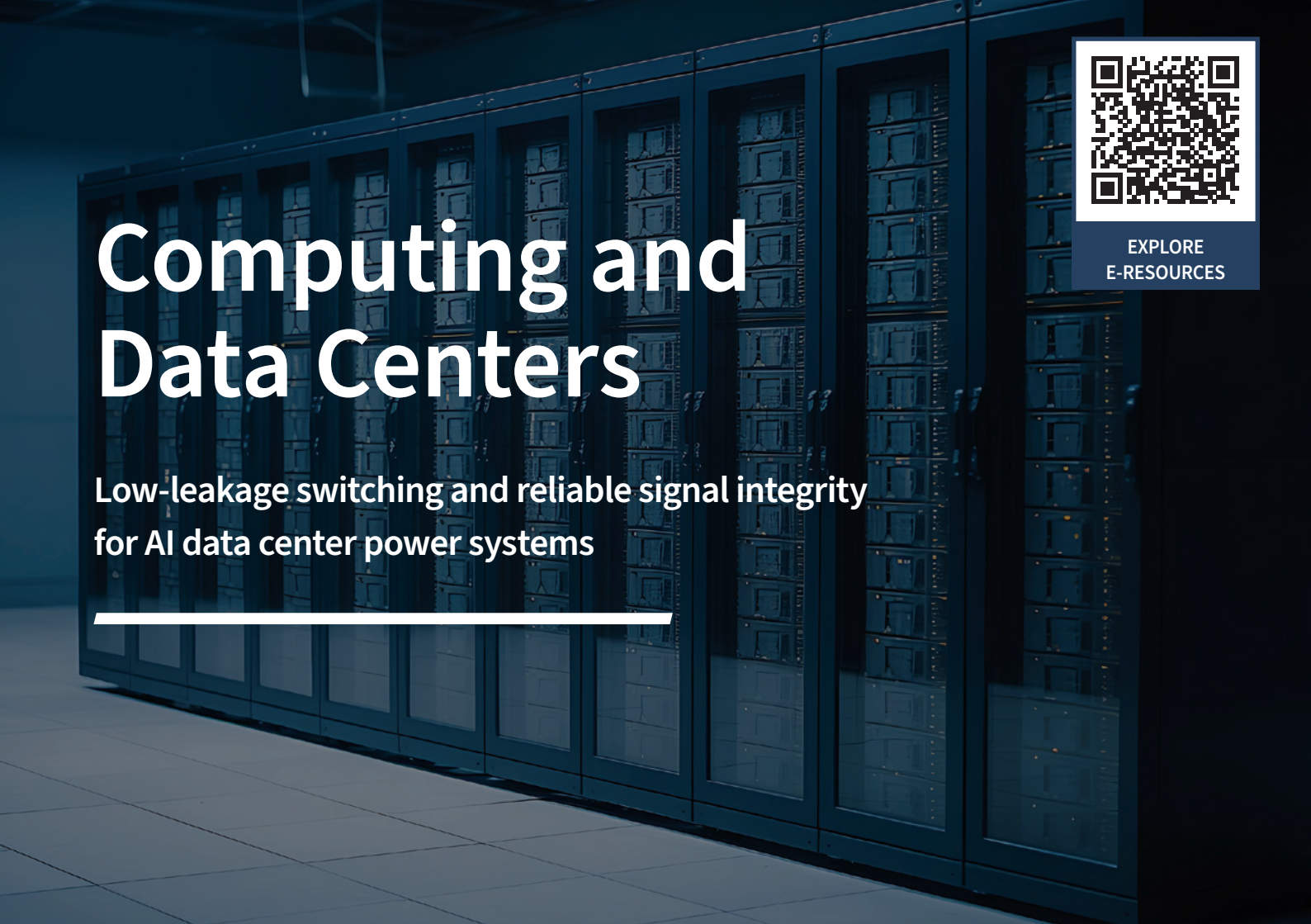
Board density: SMD,THT, matrix architecture

TYPICAL APPLICATIONS

- Semiconductor, SoC, and IC test systems
- ICT / FCT and board-level test
- RF and high-speed digital test platforms
- DMM, SMU, DAQ, and precision instruments
- HV, cable, harness, and power-device test

QUICK SELECTION GUIDE

RF / GHz signal routing	→	**CRF, U, C, M Series**
High-speed digital / differential signals	→	**M, MT, U Series**
High-density matrix switching	→	**MH, C, UMS, MFS Series**
High-voltage test paths	→	**SHV, KT, MHV, LI Series**
High-current / pulsed test	→	**MRE, USM, HM Series**
General ICT / FCT switching	→	**ASR, MS, SIL, SIM, DIM Series**



Computing and Data Centers

Low-leakage switching and reliable signal integrity for AI data center power systems

EXPLORE
E-RESOURCES

COMPUTING AND DATA CENTERS

WHERE WE FIT IN YOUR SYSTEM

800 VDC POWER & BBU MONITORING

- Low-leakage isolation monitoring
- High-insulation measurement paths
- BBU and DC bus diagnostics

CONTROL & DIAGNOSTIC SIGNAL ROUTING

- Low capacitance and low contact resistance
- Routes sensing, control, and test signals
- Supports dense monitoring PCB designs

SAFETY MONITORING & DIAGNOSTICS

- Switches HV monitoring paths
- Detects leakage and insulation faults
- Supports IT / HRG architectures

PRE-CHARGE & BBU STARTUP

- Switches pre-charge resistor path
- Enables controlled inrush limiting
- Supports safe DC bus connection

WHY REED RELAYS IN DATA CENTERS?

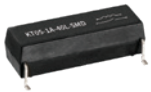
Low leakage currents
Enable accurate isolation and insulation monitoring

High insulation
Supports 400–800 VDC power architectures

Low capacitance
Helps preserve measurement accuracy in noisy systems

Stable performance
Hermetically sealed contacts support long service life

RECOMMENDED PRODUCT FAMILIES



KT SERIES

High-voltage, high-insulation switching
Up to 2 kVDC switching
6 kVDC breakdown

SHV SERIES

Compact high-voltage isolation
Up to 1.5 kVDC switching
5 kVDC breakdown

SIM SERIES

Compact high-voltage relay
Up to 3 kVDC isolation

DESIGN CONSIDERATIONS

Signal type: HV sensing, isolation monitoring, control diagnostics

Voltage levels: 400-800 VDC architectures

Leakage requirement: critical for precise measurement accuracy

Board density: Increasing with rack-level AI power systems

TYPICAL APPLICATIONS

- 800 VDC BBU monitoring
- Isolation monitoring devices
- Rack power shelf diagnostics
- AI hardware and power module testing
- Pre-charge and BBU startup circuits

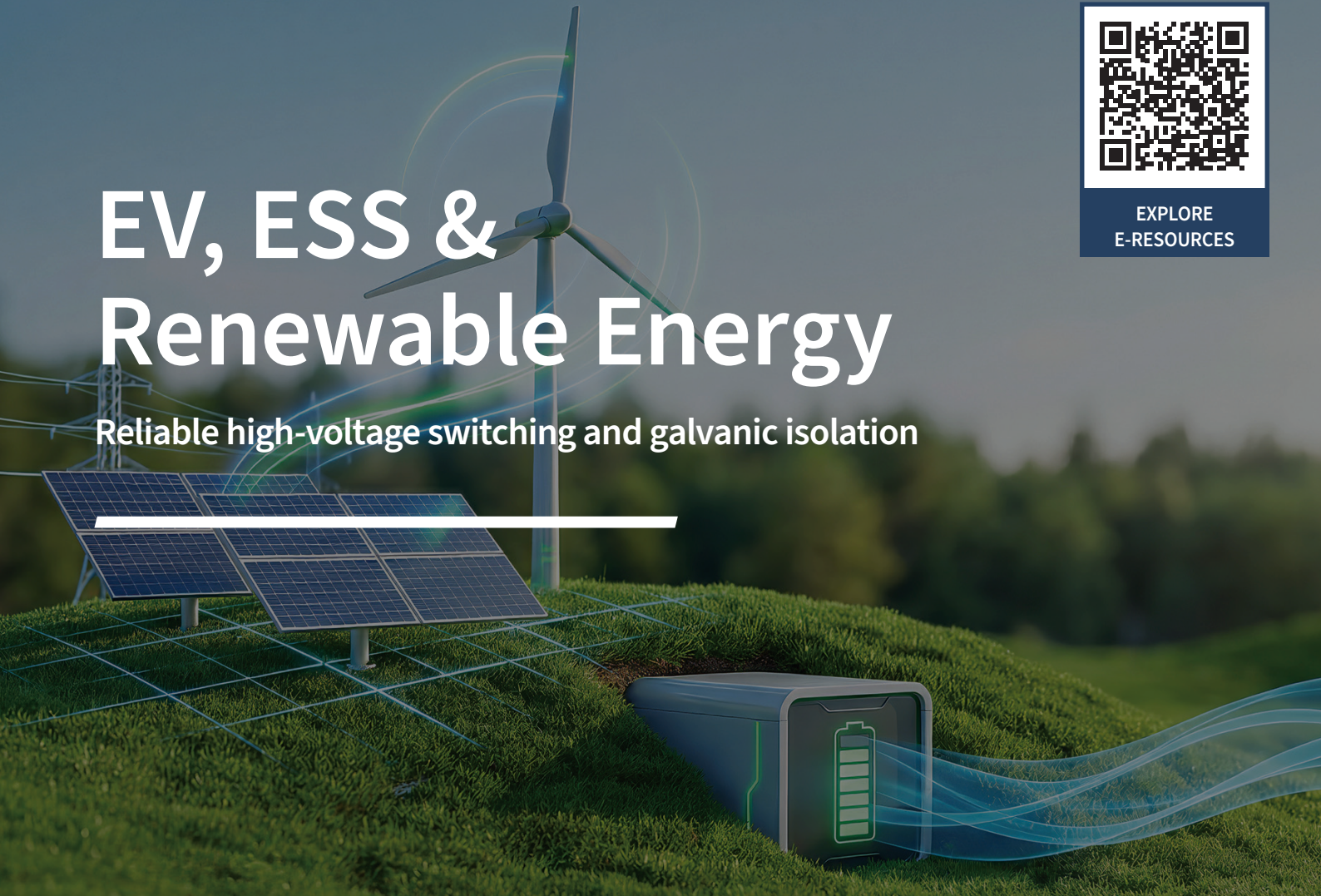
QUICK SELECTION GUIDE

High-voltage monitoring	→ **KT Series**
Space-saving HV switching	→ **SHV Series**
Compact HV isolation	→ **SIM Series**

EV, ESS & Renewable Energy

Reliable high-voltage switching and galvanic isolation

EXPLORE
E-RESOURCES



EV, ESS & RENEWABLE

WHERE WE FIT IN YOUR SYSTEM

BATTERY MANAGEMENT SYSTEMS

- isolation measurement paths
- Leakage fault detection
- Safe HV/LV separation

ISOLATION & SAFETY MONITORING

- Insulation resistance measurement
- Chassis/ground leakage detection
- Safe HV shutdown support

POWER CONVERSION SYSTEMS

- Inverter isolation checks
- HV measurement routing
- Low-leakage diagnostic switching

PRE-CHARGE CIRCUITS

- Switches pre-charge resistor path
- Enables controlled DC-link charging
- Provides HV isolation when open

WHY REED RELAYS IN EV, ESS & RENEWABLE ENERGY?

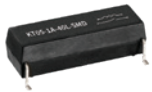
High insulation performance
Supports safe separation in HV battery and inverter systems

Very low leakage current
Enables accurate insulation and leakage measurement

Compact package options
Fits dense BMS, inverter, and monitoring boards

Long operating life
Reliable operation across repeated measurement cycles

RECOMMENDED PRODUCT FAMILIES



KT, KTP SERIES

High-voltage, high-insulation switching
Up to 2.5 kVDC switching
6 kVDC breakdown

SHV SERIES

Compact high-voltage isolation
Up to 1.5 kVDC switching
5 kVDC breakdown

MHV, SIM SERIES

Compact HV board switching
Compact HV isolation
For dense monitoring circuits

DESIGN CONSIDERATIONS

Signal voltage: 400 VDC to 2500 VDC typical

Relay switching voltage: Match to circuit and load case

Leakage sensitivity: Low leakage for accurate Riso measurement

Insulation design: Match creepage, clearance, and dielectric strength

Standards: IEC 60664-1, IEC 62109, ISO 6469-3, UL / AEC-Q as applicable

TYPICAL APPLICATIONS

- BMS insulation monitoring
- ESS safety monitoring
- Solar inverter Riso measurement
- Pre-charge circuits in EV and ESS systems
- HV battery-to-inverter startup circuits
- HV measurement and leakage detection paths

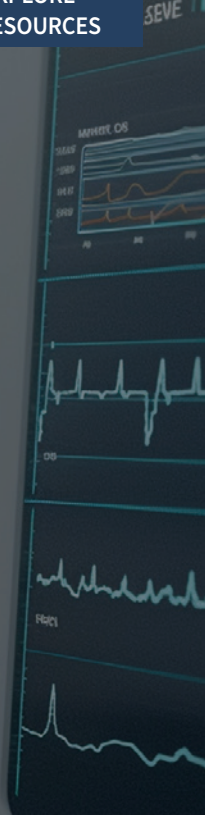
QUICK SELECTION GUIDE

BMS / ESS isolation monitoring	→ **KT, KTP Series**
Higher-voltage switching & isolation	→ **SHV Series**
Compact HV board isolation	→ **MHV, SIM Series**

Medical Electronics

Reliable high-voltage switching and galvanic isolation for critical medical systems

EXPLORE
E-RESOURCES



MEDICAL ELECTRONICS

WHERE WE FIT IN YOUR SYSTEM

SURGICAL GENERATORS

- High-voltage RF switching
- High isolation for patient safety
- Reliable energy path control

AEDs / DEFIBRILLATORS

- High-voltage charging circuit
- Reliable isolation path
- Low-power control switching

CARDIAC ABLATION / PFA

- High-voltage pulse isolation
- Low leakage current
- Reliable energy routing

DIAGNOSTIC EQUIPMENT

- Low leakage current
- Low thermal EMF
- Stable contact resistance

WHY REED RELAYS IN MEDICAL?

High isolation
Supports patient and operator safety

Low leakage current
Helps maintain accurate measurements

Reliable switching
Controls critical high-voltage paths

Long operating life
Reduces maintenance and downtime risk

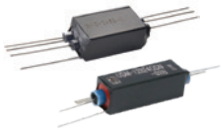
RECOMMENDED PRODUCT FAMILIES

KT, MHV, SHV SERIES

High-voltage switching with high creepage or with compact housing

HE, HM SERIES

Ultra-high-voltage isolation for HF surgical and therapeutic systems



BH, MRE, USM SERIES

Low-leakage and high-current options for demanding medical circuits

OPTOCOUPLERS

Isolated signal transfer between control and HV circuits for medical safety interfaces

DESIGN CONSIDERATIONS

Medical safety: IEC 60601-1 system requirements

Insulation design: Creepage, clearance and dielectric strength

Leakage current: Critical for isolation and measurement accuracy

Load profile: Lifetime depends on voltage, current and switching case

TYPICAL APPLICATIONS

- Surgical generators
- AEDs / defibrillators
- Cardiac ablation / PFA
- Diagnostic equipment
- Patient monitoring systems
- Defibrillator testers

QUICK SELECTION GUIDE

Compact HV relay switching	→ **KT , SHV , MHV Series**
Ultra-HV / RF medical switching	→ **HE , HM Series**
High-current or special load paths	→ **MRE , USM Series**
High-isolation signal transfer	→ **Optocouplers**

Hazardous Locations

ATEX / IECEx switching and signal isolation
for intrinsically safe systems

EXPLORE
E-RESOURCES

HAZARDOUS LOCATIONS

WHERE WE FIT IN YOUR SYSTEM

INTRINSICALLY SAFE INTERFACES

- Signal transfer across Ex barriers
- Isolation between safe and hazardous circuits
- ATEX / IECEx component options

GAS DETECTION

- Gas transmitters and analyzers
- Low-voltage signal isolation
- High isolation in harsh environments

PROCESS INDUSTRIES

- Refineries and chemical plants
- Remote monitoring and control
- Safe signal routing in Ex zones

MINING & HEAVY INDUSTRY

- Equipment monitoring
- Safety shutdown circuits
- Rugged operation in extreme environments

WHY STANDEX IN SWITCHING & ISOLATION COMPONENTS?

ATEX / IECEx certified options
For intrinsically safe circuits in explosive atmospheres

Galvanic isolation
Separates intrinsic and non-intrinsic circuits

Controlled creepage & clearance
Supports insulation coordination and certification requirements

Low-energy signal transfer
Optocoupler options transfer signals without contact arcing

RECOMMENDED PRODUCT FAMILIES

ATEX, IECEx MRX SERIES

Intrinsically safe reed relays
Galvanic isolation for IS circuits
Up to 375 VDC, 50 W switching

ATEX, IECEx OPTOCOUPLERS

High-isolation signal transfer
Creepage up to 14.5 mm
Up to 4 kVDC I/O isolation

DESIGN CONSIDERATIONS

Certification scope: ATEX / IECEx, product-specific

Protection concept: Intrinsic safety, Ex ia

Isolation: Verify I/O isolation by series

Creepage / clearance: Certified air and creepage distances

Environment: Temperature, humidity, dust, vibration

Circuit limits: Voltage, current, power, overload conditions

TYPICAL APPLICATIONS

- Gas detectors and gas transmitters
- Refineries and petrochemical plants
- Mining equipment monitoring
- Chemical processing systems
- Intrinsically safe barriers
- Remote monitoring and control
- Seismic and geothermal instrumentation
- Industrial safety shutdown systems

QUICK SELECTION GUIDE

Intrinsic safety switching	→	**MRX Series**
ATEX / IECEx signal isolation	→	**522 , 525 , 535 , 567 Optocouplers**
High-voltage signal isolation	→	**521 , 528 , 530 Optocouplers**

Ready to Optimize Your Next Design?

For When it Matters - The Right Design, at the Right Time, at the Optimal Cost

When failure, drift, leakage, or lifecycle cost matters, availability is not enough. OEM manufacturing control determines:

- Signal integrity
- Lifetime stability
- Qualification confidence
- Cost over life of your platform

Standex Detect designs and manufactures these outcomes—not just the components.

Whether you're developing semiconductor test equipment, EV systems, or medical devices, Standex Detect engineers and manufactures the reed relays and optocouplers behind your system's most critical isolation and switching functions.

Let‘s Engineer What‘s Next Together!

We do not ask customers to “fit” standard parts. We engineer parts that fit the application.

To learn more about how Standex Detect can support your switching projects with custom relay solutions, visit **standexdetect.com** or contact our engineering team to discuss your specific application needs.

START A CONVERSATION

REQUEST A SAMPLE

FIND A DISTRIBUTOR

Note: Product selection information is provided as general guidance only. Suitability depends on the customer’s specific application, operating conditions, required reliability, and applicable standards. Final component selection and validation remain the responsibility of the user.

A Standex **Electronics** Business

The modern world pulses with silent signals that activate, safeguard, and synchronize the systems that underpin everyday life. As automation, renewable energy, transportation, and smart environments evolve into autonomous, adaptive networks, everything begins with one capability: the power to **Detect** what's next.

Standex Electronics delivers the high-performance sensing and switching solutions that enable this future. Through customer intimacy and deep technical collaboration, we listen, design, refine, and deliver solutions built for unwavering reliability.

Our expertise in reed switches, sensors, and relays enables equipment to sense position, measure speed, **Detect** presence, ensure safety, and control power with precision. We're advancing Detection at the speed of innovation for when it matters. Delivering the right design, at the right time, at the optimal cost.

Tomorrow's breakthroughs depend on our ability to Detect instantly, quietly, and reliably.

Welcome to **Standex Detect**.

STANDEX DETECT LOCATIONS

standexdetect.com

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