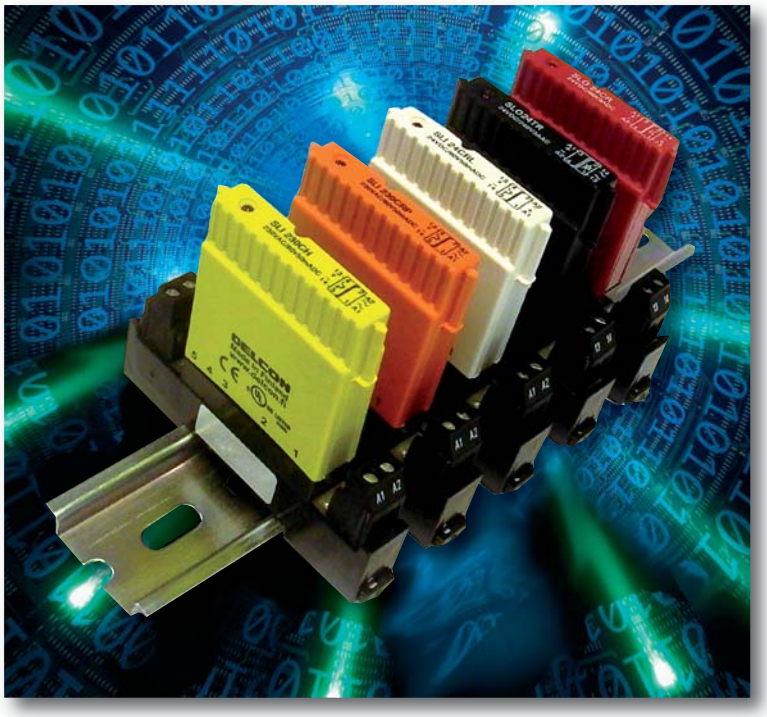
Datasheet

DELCON Relays

The optimal interface relay for demanding industrial applications



Pulse transformer technology for isolating I/O signals offers significant advantages over optical isolation and electromechanical relays. Most notably, pulse transformer I/O modules provide higher transient immunity and high input-to-output isolation.

The high transient immunity means the Weidmuller - Delcon I/O modules are ideal for I/O applications where electrical noise is a problem. No additional suppression components are needed even when used with long unshielded signal cables, inductive loads or 'noisy' power lines.

The limitations of optocoupler based solid state relays disappear when Pulse Transformer I/O modules are used. For instance, the standard AC output module SLO 24TR has near zero leakage current; requires no minimum load; can be used with any power factor 0 to 1; is rated for both general use and inductive loads at 3A; and is immune to both load line and signal line spikes.

Features:

- virtually no off-state leakage currents
- high current and high voltage DC output versions
- compact packaging
- optional rail mounting base
- high surge current rating
- fast switching
- large selection of input and output types
- industry standard pin connection
- cULus listed

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Weidmüller

Innovative – Finnish – Delcon

Delcon has manufactured Pulse -Transformer technology based Solid State Relays for demanding industrial applications since the end of the 70´s. Delcon has its product development and assembly near Helsinki, Finland. The extremely high quality of the products is guaranteed by the design, the choice of the right components, good workmanship and 100 % testing.

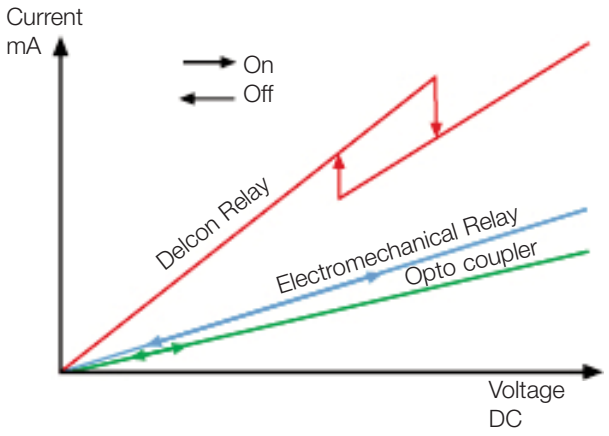
Avoid production downtime

Customers choose Delcon because of reliability, safe operation and costs savings in maintenance due to fewer unexpected production stoppages.

Add reliability to a control system

Delcon relays improve the reliability of the whole control system. The exceptionally clear function and condition indication of Delcon relays is based on a unique current-voltage-hysteresis that guarantees 100 % switching and signalling even under the worst conditions.

Voltage/current - signal diagram



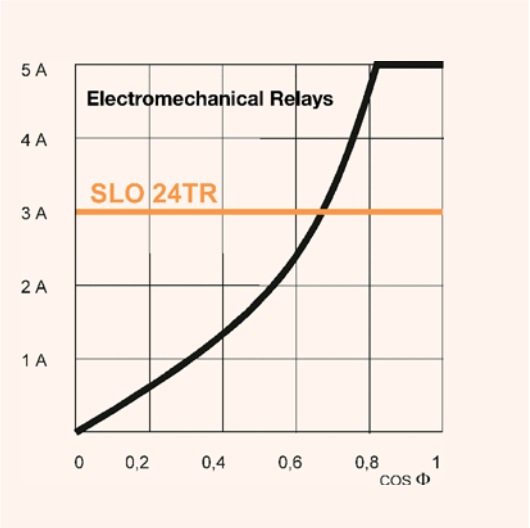
AC relays are immune from interference and guarantee safe switching and reliable signal indication with

- long and/or parallel signal and load cables
- unshielded cables
- 2-wire sensors
- fast operations, off-delay 0,5 ms
- high switching frequencies up to 1000 Hz
- high momentary currents of up to 30 x In

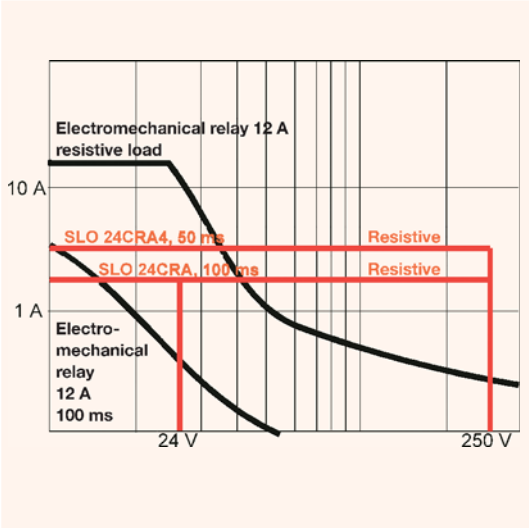
Highly reliable DC relays also for extremely difficult loads

- switch 4 amp DC-loads with voltages of up to 250 V without problems and without derating.
- switch difficult and highly inductive loads such as solenoid valves having time factors as high as 100 ms
- have a long lifetime with high currents (up to 10 A / 24 VDC)

Loading capacity, AC Relays



Loading capacity, DC Relays



DELCON Relays

Colour	Plug-in relay	Description	Control Voltage	Max. load current	Load voltage	Power Factor Range	Base
	AC apps. / input relays - DC low current output						
Yellow	SLI 25CRI	normally closed	24 VAC	0 - 100 mA	0 – 60 VDC	Resistive load	9908910000
Yellow	SLI 25CR	regular operation	24 VAC	0 - 50 mA	0 – 60 VDC	Resistive load	9908910000
Yellow	SLI 49CR	regular operation	48 VAC	0 - 50 mA	0 – 60 VDC	Resistive load	9908910000
Yellow	SLI 49CRI	normally closed	48 VAC	0 - 100 mA	0 – 60 VDC	Resistive load	9908910000
Yellow	SLI 120CRI	normally closed	120 VAC	0 - 100 mA	0 – 60 VDC	Resistive load	9908910000
Yellow	SLI 120CH	transient protection added on output	120 VAC	0 - 50 mA	0 – 60 VDC	Resistive load	9908910000
Orange	SLI 120CR	regular operation	120 VAC	0 - 50 mA	0 – 60 VDC	Resistive load	9908910000
Yellow	SLI 120CRP	3.5mA leakage immunity on input	120 VAC	0 - 50 mA	0 – 60 VDC	Resistive load	9908910000
Yellow	SLI 230CH	transient protection added on input	230 VAC	0 - 50 mA	0 – 60 VDC	Resistive load	9908910000
Yellow	SLI 230CR	regular operation	230 VAC	0 - 50 mA	0 – 60 VDC	Resistive load	9908910000
Yellow	SLI 230CRI	normally closed	230 VAC	0 - 100 mA	0 – 60 VDC	Resistive load	9908910000
Orange	SLI 230CRP	3.5mA leakage immunity on input	230 VAC	0 - 50 mA	0 – 60 VDC	Resistive load	9908910000
	AC apps. / output relays - AC/DC input voltage						
Black	SLO 5IRA	fast AC switching, off-delay 0,5 ms	5 VDC	0 - 1,2 A	0 – 240 VAC/DC	0.3 - 1 @ 1.2 A AC	9908920000
Black	SLO 5TR	regular operation	5 VDC	0 - 3 A	0 – 240 VAC	0 - 1	9908920000
Black	SLO 12TR	regular operation	12 VDC	0 - 3 A	0 – 240 VAC	0 - 1	9908920000
Black	SLO 24IRA	fast AC switching, off-delay 0,5 ms	24 VDC	0 - 1,2 A	0 – 240 VAC/DC	0.3 - 1 @ 1.2 A AC	9908920000
Black	SLO 24TH	transient protection added	24 VDC	0 - 3 A	0 – 240 VAC	0 - 1	9908920000
Black	SLO 24TR	regular operation	24 VDC	0 - 3 A	0 – 240 VAC	0 - 1	9908920000
Black	SLO 24TRA	1-phase motors on-off and reverse	24 VDC	0 - 2,5 A	0 – 240/415 VAC	0 - 1	9908920000
Black	SLO A120TR	regular operation	120 VAC	0 - 1 A	0 – 240 VAC	0 - 1	9908920000
Black	SLO P120TR	2mA leakage immunity on input	120 VAC	0 - 3 A	0 – 240 VAC	0 - 1	9908920000
Black	SLO A230TR	regular operation	230 VAC	0 - 1 A	0 – 240 VAC	0 - 1	9908920000
Black	SLO P230TR	2mA leakage immunity on input	230 VAC	0 - 1,5 A	0 – 240 VAC	0 - 1	9908920000
Black	SRO 24M	electromechanical relay, make (NO)	24 VDC	0 - 6 A	240 VAC	Resistive load @ 3A	9908920000
Black	SRO 24B	electromechanical relay, break (NC)	24 VDC	0 - 3 A	240 VAC	Resistive load @ 3A	9908920000
	DC apps / input relays - DC low current output						
White	SLI 12CRI	normally closed	12 VDC	0 - 100 mA	0 – 60 VDC	Resistive load	9908910000
White	SLI 12CR	regular operation	12 VDC	0 - 50 mA	0 – 60 VDC	Resistive load	9908910000
White	SLI 24CR	regular operation	24 VDC	0 - 50 mA	0 – 60 VDC	Resistive load	9908910000
White	SLI 24CRF	fast switching, 10.000 Hz	24 VDC	0 - 50 mA	0 – 60 VDC	Resistive load	9908910000
White	SLI 24CRI	normally closed	24 VDC	0 - 100 mA	0 – 60 VDC	Resistive load	9908910000
White	SLI 24CRL	to maintain min. input load 15 mA	24 VDC	0 - 50 mA	0 – 60 VDC	Resistive load	9908910000
White	SLI 48CRI	normally closed	48 VDC	0 - 100 mA	0 – 60 VDC	Resistive load	9908910000
White	SLI 48CR	regular operation	48 VDC	0 - 50 mA	0 – 60 VDC	Resistive load	9908910000
White	SLI 125CRI	normally closed	125 VDC	0 - 100 mA	0 – 60 VDC	Resistive load	9908910000
White	SLI 125CH	transient protection added on input	125 VDC	0 - 50 mA	0 – 60 VDC	Resistive load	9908910000
White	SLI 125CR	regular operation	125 VDC	0 - 50 mA	0 – 60 VDC	Resistive load	9908910000
White	SLI 250CRI	normally closed	250 VDC	0 - 100 mA	0 – 60 VDC	Resistive load	9908910000
White	SLI 250CH	transient protection added on input	250 VDC	0 - 50 mA	0 – 60 VDC	Resistive load	9908910000
White	SLI 250CR	regular operation	250 VDC	0 - 50 mA	0 – 60 VDC	Resistive load	9908910000
	DC apps / output relays - DC input voltage						
Red	SLO 5CRA	100 ms time constant*	5 VDC	0 - 1,8 A	0 – 250 VDC	L/R = 100 ms @ 24V 1.8 A **	9908920000
Red	SLO 5CR	normal use	5 VDC	0 - 3 A	0 – 60 VDC	L/R = 5 ms @ 24 V 2 A **	9908920000
Red	SLO 5CRX	high current, resistive load	5 VDC	0 - 10 A	0 – 24 VDC	L/R = 2 ms @ 24 V 5 A **	9908920000
Red	SLO 12CR	normal use	12 VDC	0 - 3 A	0 – 60 VDC	L/R = 5 ms @ 24 V 2 A **	9908920000
Red	SLO 12CRA	100 ms time constant*	12 VDC	0 - 1,8 A	0 – 250 VDC	L/R = 100 ms @ 24 V 1.8 A **	9908920000
Red	SLO 12CRA4	50 ms time constant*	12 VDC	0 - 4 A	0 – 250 VDC	L/R = 50 ms @ 24 V 4 A **	9908920000
Red	SLO 12CRX	high current, resistive load	12 VDC	0 - 10 A	0 – 24 VDC	L/R = 2 ms @ 24 V 5 A **	9908920000
Red	SLO 24CRA	100 ms time constant*	24 VDC	0 - 1,8 A	0 – 250 VDC	L/R = 100 ms @ 24 V 1.8 A **	9908920000
Red	SLO 24CR	normal use	24 VDC	0 - 3 A	0 – 60 VDC	L/R = 5 ms @ 24 V 2 A **	9908920000
Red	SLO 24CRA4	50 ms time constant*	24 VDC	0 - 4 A	0 – 250 VDC	L/R = 50 ms @ 24 V 4 A **	9908920000
Red	SLO 24CRX	high current, resistive load	24 VDC	0 - 10 A	0 – 24 VDC	L/R = 2 ms @ 24 V 5 A **	9908920000
Red	SLO 48CRA	100 ms time constant*	48 VDC	0 - 1,8 A	0 – 250 VDC	L/R = 100 ms @ 24 V 1.8 A **	9908920000
Red	SLO 48CRA4	50 ms time constant*	48 VDC	0 - 4 A	0 – 250 VDC	L/R = 50 ms @ 24 V 4 A **	9908920000
Red	SLO 120CRA	high control voltages	120 VDC	0 - 1,8 A	0 – 250 VDC	L/R = 100 ms @ 24 V 1.8 A **	9908920000
Red	SLO 120CRA4	high control voltages	120 VDC	0 - 4 A	0 – 250 VDC	L/R = 50 ms @ 24 V 4 A **	9908920000
Red	SLO 220CRA	high control voltages	220 VDC	0 - 1,8 A	0 – 250 VDC	L/R = 100 ms @ 24 V 1.8 A **	9908920000
Red	SLO 220CRA4	high control voltages	220 VDC	0 - 4 A	0 – 250 VDC	L/R = 50 ms @ 24 V 4 A **	9908920000

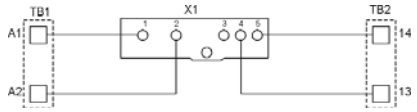
* L/R max. @ 24 V load voltage and max. current

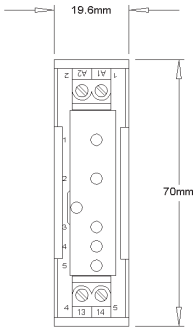
** L/R depends on V and I

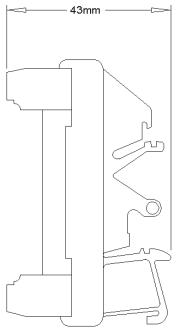
1 channel - Input rail mountable base

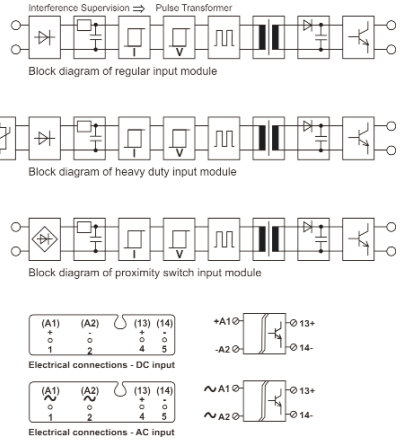
Cat.No. 990891 0000

Input Modules







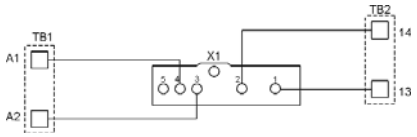


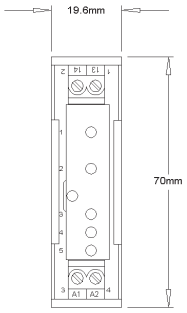
Note: Alternative input tension clamp base - MIS1CCN
Dimensions: l x w x h
80.6mm x 12.8mm x 38mm

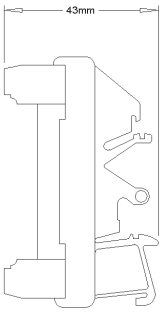
1 channel - Output rail mountable base

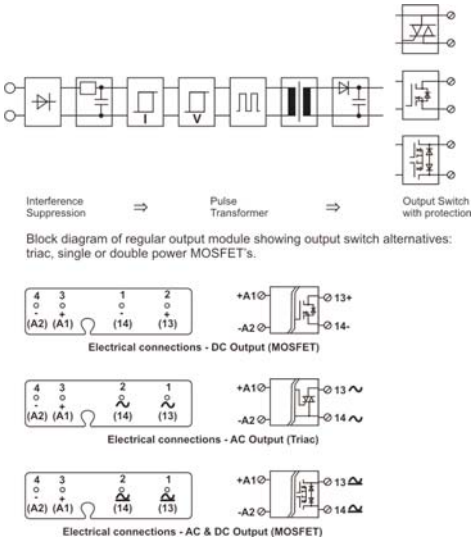
Cat.No. 990892 0000

Output Modules









Note: Alternative output tension clamp base - MOS1CCN
Dimensions: l x w x h
80.6mm x 12.8mm x 38mm