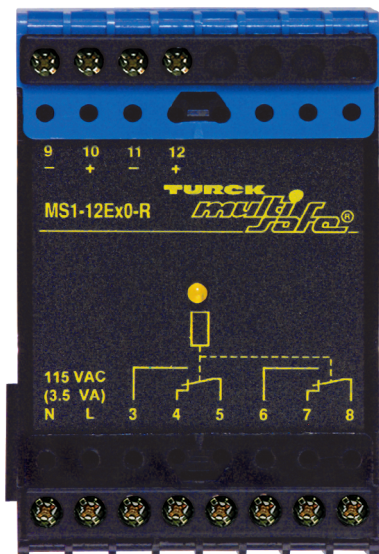




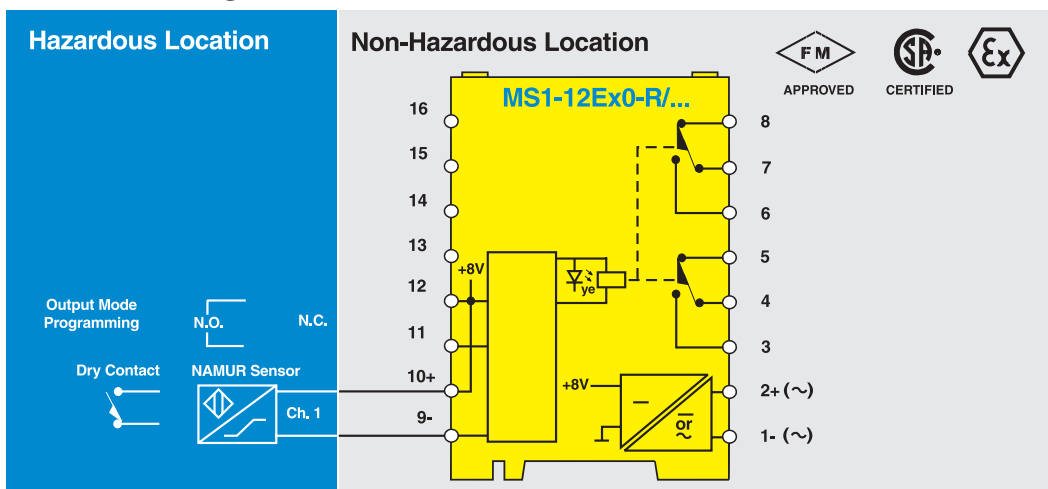
The **MS1-12Ex0-R** is a single-channel switching amplifier with intrinsically safe input circuits. The output circuit consists of one DPDT relay.

The output function is jumper programmable on terminals 11/12 for direct mode (N.O.) or inverse mode (N.C.) (See chart below).

This unit does not have input circuit monitoring. It is an inexpensive alternative in systems that use NAMUR sensors or mechanical contacts as input devices.

MS1-12Ex0-R/24VDC
MS1-12Ex0-R/115VAC
MS1-12Ex0-R/230VAC

Connection Diagram



Single-Channel Relay Output MS1-12Ex0-R/...(24VDC/115VAC/230VAC)

Type ID Number	MS1-12Ex0-R/24VDC M5311700	MS1-12Ex0-R/115VAC M5311400	MS1-12Ex0-R/230VAC M5311100
Supply Voltage Power consumption Galvanic isolation	20-28 VDC, ≤10% ripple ≤3.6 W between hazardous and non-hazardous circuits, test voltage 2.5 kVrms	98-126 VAC, 48-62 Hz ≤3.5 VA between hazardous and non-hazardous circuits, test voltage 2.5 kVrms	184-250 VAC, 48-62 Hz ≤3.5 VA between hazardous and non-hazardous circuits, test voltage 2.5 kVrms
Input Circuit Nominal operating characteristics (per DIN 19 234)			
- Voltage	8.0 V	8.0 V	8.0 V
- Current	8.0 mA	8.0 mA	8.0 mA
Switching threshold	1.55 mA	1.55 mA	1.55 mA
Hysteresis	0.2 mA	0.2 mA	0.2 mA
Intrinsic Safety Parameters	See page K14	See page K14	See page K14
Output Circuit Contact material Switching voltage Switching current Switching power Switching frequency			
	one DPDT relay AgCdO ≤250 VAC/60 VDC ≤4 A ≤1000 VA/60 W 10 Hz	one DPDT relay AgCdO ≤250 VAC/60 VDC ≤4 A ≤1000 VA/60 W 10 Hz	one DPDT relay AgCdO ≤250 VAC/60 VDC ≤4 A ≤1000 VA/60 W 10 Hz
LED Indications Output energized			
	yellow	yellow	yellow
Housing Style	Diagram E (page A18)	Diagram E (page A18)	Diagram E (page A18)

Truth Table

Programming Terminals 11-12	Input (terminals 9-10)			Output (terminals 3-5, 6-8)	
	Dry Contacts	Inductive NAMUR	Capacitive NAMUR	Channel 1	Yellow LED
				De-energized	Off
				Energized	On
				Energized	On
				De-energized	Off