

Ultra Switch Safety Manual

Safety Manual

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User instruction

Introduction

The Ultra Switch Safety is a switch box with a safety function designed primarily for monitoring on/off or modulating valves in systems based on safety standards in accordance with IEC 61511.

The Ultra Switch Safety is available in 4 different model versions.

This manual focuses on the specific information for the safety functions. It is a complement to the manual of respective regular Ultra Switch and respective switch manuals.

Safety function

The Ultra Switch Safety does not make safety related decisions as it reacts and monitor an externally controlled movement.

The Ultra Switch Safety is designed to work together with a safety valve, safety actuator and a safety system.

The only intended functionality of the Ultra Switch Safety is to facilitate the activation and deactivation of the switch elements and to protect the switch elements from environmental factors.

Safety System integration

When the Ultra Switch Safety has been integrated in a safety system in an industrial environment the overall application has to be validated according to IEC 61511. Evidence to that fact has to be provided by the operator of the final system in form of validation documentation and documentation supporting the effectiveness of the validation.

System Delay

The delay time in case of a critical event is dependent on the whole safety system of which Ultra Switch Safety is part. Thus, it is imperative that the operator evaluates the safety function behavior of the final system and document this by way of analysis or test results.

Function

See respective Ultra switch manual

- Ultra-Switch XCL/XML User Instruction
- Ultra-Switch PS/PM User Instruction
- Ultra-Switch DS/DM User Instruction
- Ultra-Switch WS/WM User instruction

Mounting

No special mounting required, but consider environmental factors when choosing brackets and linkage.

Condition of use

Environmental conditions:

Mounting position does not affect the product.

It is designed to withstand a vibration of 10g.

Ultra switch Safety is available in different temperature ranges depending on both switch and housing ranges. For actual temperature range see both switch element and housing specification.

It is suitable for indoor and outdoor use.

When used under +2°C, a protection should be used against icing-up.

Life-span (storage + operation):

For units with Pepperl & Fuchs switches maximum life span is 20 years in this application. For Supplier information see table in part 8. Available switches.

Maintenance

The responsibility for the maintenance and repair of the Ultra Switch Safety lies with the user or the supervisory authority.

Use in explosive areas

When used in hazardous areas reference the relevant Ultra Switch user instruction.

Manufacturer notification

PMV Automation AB is not liable for damages occurring as a result of incompatible or inaccurate valve system design.

Available Switches

Switch and Switch Type	Supplier	Part Number	vSwitch Code Available			
			DS/DM	WS/WM	PS/PSM	XCL
M1 - SPDT Mechanical	Honeywell	V7-1C17D8-201 (Alt.V7-1C17D9-201)	✓	✓	✓	✓
MC - SPDT Mechanical	Honeywell	V7-1C13D8-201	✓	x	✓	✓
MG - SPDT Gold Mechanical	Honeywell	V7-1D11D8-201	✓	✓	✓	✓
MK - SPDT Mechanical	Essen Deinki	MV25-4 (alt. MV25-2)	✓	×	✓	✓
N3-NAMUR	Pepperl Fuchs	SJ3,5 S1N 2-wire	✓	✓	✓	×
N4 - NAMUR	Pepperl Fuchs	NJ2-12GK-SN 2-wire	✓	✓	✓	×
N8 - NAMUR	Pepperl Fuchs	NJ2-V3-N 2-wire	✓	✓	✓	✓
NG - NAMUR	Pepperl Fuchs	NJ5-11-N-G 2-wire	✓	✓	✓	×
NM - NAMUR	Pepperl Fuchs	NJ2-11-SN-G 2-wire	✓	✓	✓	×
NP - NAMUR	Pepperl Fuchs	SJ3,5-N 2-wire	✓	✓	✓	✓
NQ - NAMUR	Pepperl Fuchs	NJ4-12GK-N 2-wire	✓	✓	✓	×
NW -NAMUR	Pepperl Fuchs	SJ3,5 SN 2-wire	✓	✓	✓	×
NY - NAMUR	Pepperl Fuchs	NJ4-12GK-SN 2-wire	✓	✓	✓	×
P5 - SPDT Proximity	Littlefuse	59135-3... (alt. 59150-3...)	✓	✓	✓	✓
PE - SPDT Sabre Proximity	Flowserve	PRS-3	✓	✓	✓	✓
PP - SPDT Phazer Proximity	Flowserve	PRS-2	✓	✓	✓	✓
PT- SPST Phazer BRS Proximity	Flowserve	PRS-1	✓	✓	✓	✓



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