

# Explosion Proof Non Contact Safety Interlock Switches

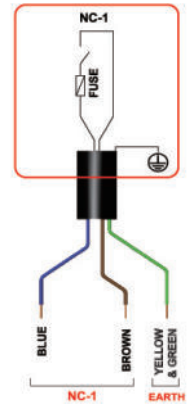
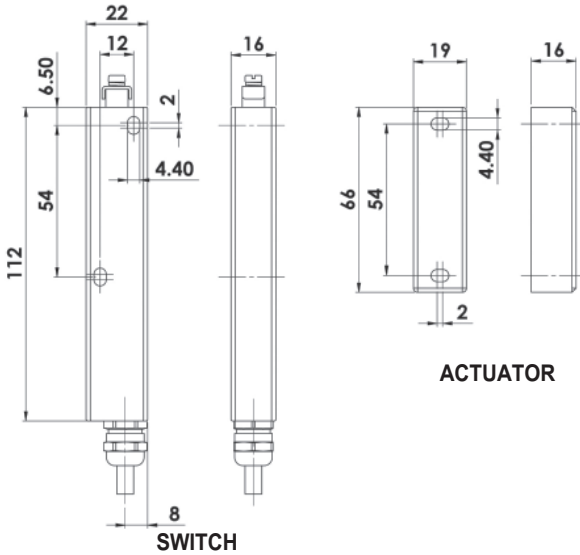


## CM1-Ex STAINLESS STEEL 316

**Ex** II 2G Ex mb IIC T6 Gb

**Ex** II 2D Ex mb IIIC T80 Db IP67\*

Zones 1, 21, 2, 22 Gas and Dust



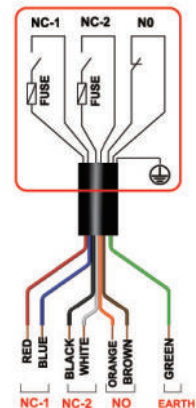
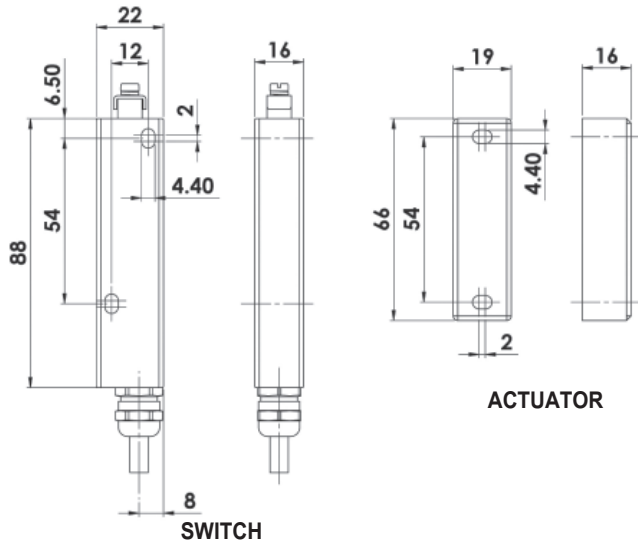
SALES NUMBER	TYPE ZONES 1,21,2,22	BODY HOUSING	CABLE LENGTH 6mm OD	CIRCUITS	ELECTRICAL RATING NORMALLY CLOSED CIRCUITS (Actuator Present) NC
901101	CM1-Ex	S/Steel	5M	1NC	230Vac/24Vdc 2A Max.
901102	CM1-Ex	S/Steel	10M	1NC	INTERNALLY FUSED

## CM2-Ex STAINLESS STEEL 316

**Ex** II 2G Ex mb IIC T6 Gb

**Ex** II 2D Ex mb IIIC T80 Db IP67\*

Zones 1, 21, 2, 22 Gas and Dust



SALES NUMBER	TYPE ZONES 1,21,2,22	BODY HOUSING	CABLE LENGTH 6mm OD	CIRCUITS	ELECTRICAL RATING NORMALLY CLOSED CIRCUITS (Actuator Present) NC	ELECTRICAL RATING NORMALLY OPEN CIRCUITS (Actuator Present) NO
902103	CM2-Ex	S/Steel	5M	1NC	230Vac/24Vdc 1A Max.	
902104	CM2-Ex	S/Steel	10M	1NC	INTERNALLY FUSED	
902105	CM2-Ex	S/Steel	5M	2NC 1NO	230Vac/24Vdc 0.6A Max.	230Vac/24Vdc
902106	CM2-Ex	S/Steel	10M	2NC 1NO	INTERNALLY FUSED	200mA. Max.

\*Product is fully encapsulated which is considered to provide ingress protection to at least IP67.

# Explosion Proof Non Contact Safety Interlock Switches

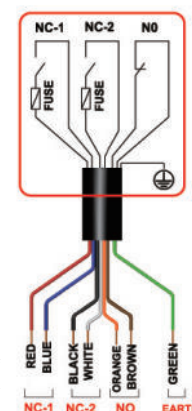
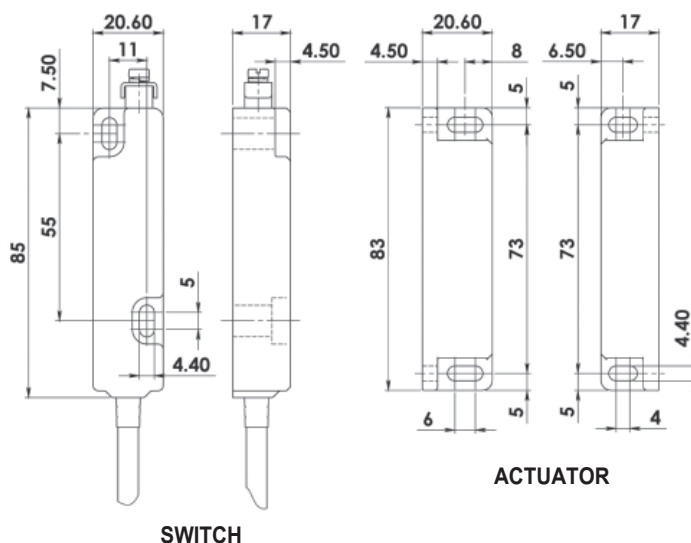


## CM3-Ex STAINLESS STEEL 316

**Ex** II 2G Ex mb IIC T6 Gb

**Ex** II 2D Ex mb IIIC T80 Db IP67\*

Zones 1, 21, 2, 22 Gas and Dust



SALES NUMBER	TYPE ZONES 1,21,2,22	BODY HOUSING	CABLE LENGTH 6mm OD	CIRCUITS	ELECTRICAL RATING	ELECTRICAL RATING
					NORMALLY CLOSED CIRCUITS (Actuator Present) NC	NORMALLY OPEN CIRCUITS (Actuator Present) NO
903101	CM3-Ex	S/Steel	5M	2NC 1NO	230Vac/24Vdc 0.6A Max.	230Vac/24Vdc
903102	CM3-Ex	S/Steel	10M	2NC 1NO	INTERNALLY FUSED	200mA. Max.

# Explosion Proof Non Contact Safety Interlock Switches



## SUMMARY SPECIFICATION AND SELECTION GUIDE:

SWITCH TYPE	HOUSING MATERIAL	PART NUMBER SERIES	MAXIMUM CURRENT	ZONES
WM1-Ex	Stainless Steel 316 and fitted with Stainless Steel Flexible Conduit	9001.....	0.6A	Zone 0 Gas Zone 20 Dust (An area where Gas and Dust are continuously present)
WM2-Ex	Stainless Steel 316	9002.....	2.0A	Zone 1 Gas Zone 21 Dust Zone 2 Gas Zone 22 Dust (An area where Gas and Dust is likely to occur in use)
CM1-Ex	Stainless Steel 316	901.....	2.0A	
CM2-Ex	Stainless Steel 316	902.....	1.0A / 0.6A	
CM3-Ex	Stainless Steel 316	903.....	0.6A	
LM-Ex	Stainless Steel 316	904.....	0.6A	
RM-Ex	Stainless Steel 316	905.....	0.6A	

## TECHNICAL AND SAFETY SPECIFICATIONS:

**Standards:** IEC/EN60079-0 IEC/EN60079-18  
ISO14119 EN60947-5-3 EN60204-1  
ISO13849-1 EN62061

**Safety Classification and Reliability Data:**  
Mechanical Reliability B10d 3.3 x 10<sup>6</sup> operations at 100mA load  
ISO13849-1 Up to PLE depending upon system architecture  
Safety Data – Annual Usage 8 cycles per hour/24 hours per day/365 days  
MTTFd 470 years  
Contact Release Time <2ms  
Initial Contact Resistance <500 milliohm  
Minimum Switched Current 10Vdc 1mA  
Insulation Resistance 100 Mohms  
Recommended Setting Gap 5mm

Switching Distance Sao 10mm Close  
(Target to Time) Sar 22mm Open  
Approach Speed 200mm/m to 1000mm/s  
Temperature Range -20/+80 (or +60C for 2A version)  
Enclosure Protection IP67  
Shock Resistance IEC 68-2-27 11ms 30g  
Vibration Resistance IEC 68-2-6 10-55Hz 1mm  
Body Material Stainless Steel 316  
Cable Type 6mm OD  
Mounting Position Any  
Approval Body BASEEFA UK

\*Product is fully encapsulated which is considered to provide ingress protection to at least IP67.

# Explosion Proof Non Contact Safety Interlock Switches

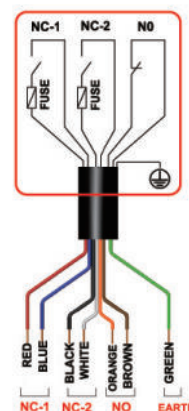
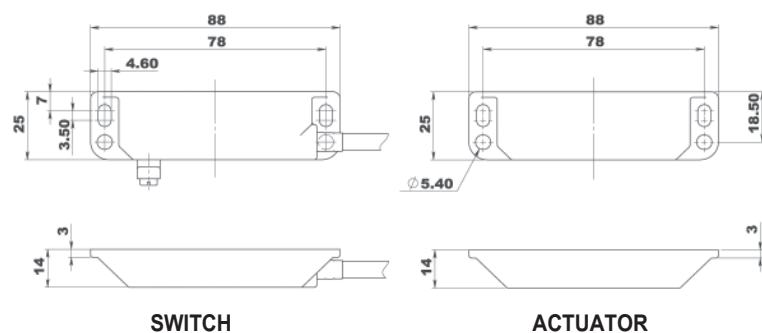


## LM-Ex STAINLESS STEEL 316

**Ex** II 2G Ex mb IIC T6 Gb

**Ex** II 2D Ex mb IIIC T80 Db IP67\*

Zones 1, 21, 2, 22 Gas and Dust



SALES NUMBER	TYPE ZONES 1,21,2,22	BODY HOUSING	CABLE LENGTH 6mm OD	CIRCUITS	ELECTRICAL RATING NORMALLY CLOSED CIRCUITS (Actuator Present)	ELECTRICAL RATING NORMALLY OPEN CIRCUITS (Actuator Present)
					RED/BLUE NC1 WHITE/BLACK NC2 INTERNALLY FUSED	ORANGE/BROWN NO
904101	LM-Ex	S/Steel	5M	2NC 1NO	230Vac/24Vdc 0.6A Max.	230Vac/24Vdc
904102	LM-Ex	S/Steel	10M	2NC 1NO	INTERNALLY FUSED	200mA. Max.

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## SUMMARY SPECIFICATION AND SELECTION GUIDE:

SWITCH TYPE	HOUSING MATERIAL	PART NUMBER SERIES	MAXIMUM CURRENT	ZONES
WM1-Ex	Stainless Steel 316 and fitted with Stainless Steel Flexible Conduit	9001.....	0.6A	Zone 0 Gas Zone 20 Dust (An area where Gas and Dust are continuously present)
WM2-Ex	Stainless Steel 316	9002.....	2.0A	Zone 1 Gas Zone 21 Dust Zone 2 Gas Zone 22 Dust (An area where Gas and Dust is likely to occur in use)
CM1-Ex	Stainless Steel 316	901.....	2.0A	
CM2-Ex	Stainless Steel 316	902.....	1.0A / 0.6A	
CM3-Ex	Stainless Steel 316	903.....	0.6A	
LM-Ex	Stainless Steel 316	904.....	0.6A	
RM-Ex	Stainless Steel 316	905.....	0.6A	

## TECHNICAL AND SAFETY SPECIFICATIONS:

**Standards:** IEC/EN60079-0 IEC/EN60079-18  
ISO14119 EN60947-5-3 EN60204-1  
ISO13849-1 EN62061

**Safety Classification and Reliability Data:**  
Mechanical Reliability B10d  
ISO13849-1  
Safety Data – Annual Usage  
Contact Release Time  
Initial Contact Resistance  
Minimum Switched Current  
Insulation Resistance  
Recommended Setting Gap

3.3 x 10<sup>6</sup> operations at 100mA load  
Up to PLe depending upon system architecture  
8 cycles per hour/24 hours per day/365 days  
MTTFd 470 years  
<2ms  
<500 milliohm  
10Vdc 1mA  
100 Mohms  
5mm

Switching Distance  
(Target to Time)  
Approach Speed  
Temperature Range  
Enclosure Protection  
Shock Resistance  
Vibration Resistance  
Body Material  
Cable Type  
Mounting Position  
Approval Body

Sao 10mm Close  
Sar 22mm Open  
200mm/m to 1000mm/s  
-20/+80 (or +60C for 2A version)  
IP67  
IEC 68-2-27 11ms 30g  
IEC 68-2-6 10-55Hz 1mm  
Stainless Steel 316  
6mm OD  
Any  
BASEEFA UK

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# Explosion Proof Non Contact Safety Interlock Switches

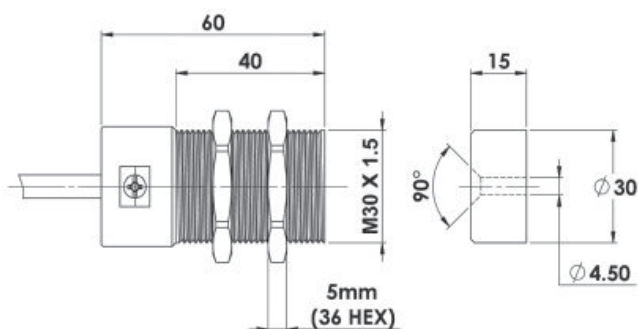


## RM-Ex STAINLESS STEEL 316 M30 x 1.5mm threaded body

**Ex** II 2G Ex mb IIC T6 Gb

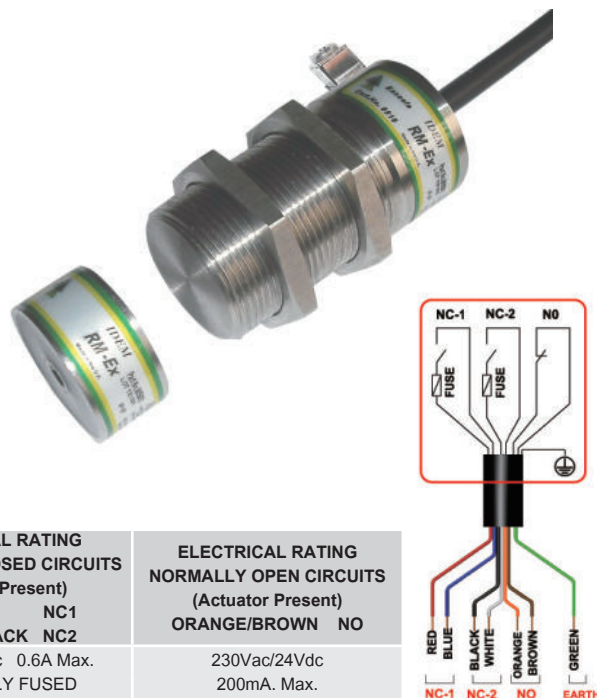
**Ex** II 2D Ex mb IIIC T80 Db IP67\*

Zones 1, 21, 2, 22 Gas and Dust



SWITCH

ACTUATOR



SALES NUMBER	TYPE ZONES 1,21,2,22	BODY HOUSING	CABLE LENGTH 6mm OD	CIRCUITS	ELECTRICAL RATING NORMALLY CLOSED CIRCUITS (Actuator Present)		ELECTRICAL RATING NORMALLY OPEN CIRCUITS (Actuator Present)	
					RED/BLUE WHITE/BLACK	NC1 NC2	ORANGE/BROWN	NO
905101	RM-Ex	S/Steel	5M	2NC 1NO	230Vac/24Vdc	0.6A Max.	230Vac/24Vdc	200mA. Max.
905102	RM-Ex	S/Steel	10M	2NC 1NO	INTERNALLY FUSED			

# Explosion Proof Non Contact Safety Interlock Switches



## SUMMARY SPECIFICATION AND SELECTION GUIDE:

SWITCH TYPE	HOUSING MATERIAL	PART NUMBER SERIES	MAXIMUM CURRENT	ZONES
WM1-Ex	Stainless Steel 316 and fitted with Stainless Steel Flexible Conduit	9001.....	0.6A	Zone 0 Gas Zone 20 Dust  (An area where Gas and Dust are continuously present)
WM2-Ex	Stainless Steel 316	9002.....	2.0A	Zone 1 Gas Zone 21 Dust Zone 2 Gas Zone 22 Dust  (An area where Gas and Dust is likely to occur in use)
CM1-Ex	Stainless Steel 316	901.....	2.0A	
CM2-Ex	Stainless Steel 316	902.....	1.0A / 0.6A	
CM3-Ex	Stainless Steel 316	903.....	0.6A	
LM-Ex	Stainless Steel 316	904.....	0.6A	
RM-Ex	Stainless Steel 316	905.....	0.6A	

## TECHNICAL AND SAFETY SPECIFICATIONS:

**Standards:** IEC/EN60079-0 IEC/EN60079-18  
ISO14119 EN60947-5-3 EN60204-1  
ISO13849-1 EN62061

**Safety Classification and**

**Reliability Data:**

Mechanical Reliability B10d  
ISO13849-1  
Safety Data – Annual Usage  
8 cycles per hour/24 hours per day/365 days  
MTTFd 470 years  
Contact Release Time <2ms  
Initial Contact Resistance <500 milliohm  
Minimum Switched Current 10Vdc 1mA  
Insulation Resistance 100 Mohms  
Recommended Setting Gap 5mm

Switching Distance Sao 10mm Close  
(Target to Time) Sar 22mm Open  
Approach Speed 200mm/m to 1000mm/s  
Temperature Range -20/+80 (or +60C for 2A version)  
Enclosure Protection IP67  
Shock Resistance IEC 68-2-27 11ms 30g  
Vibration Resistance IEC 68-2-6 10-55Hz 1mm  
Body Material Stainless Steel 316  
Cable Type 6mm OD  
Mounting Position Any  
Approval Body BASEEFA UK

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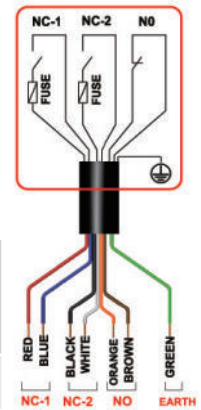
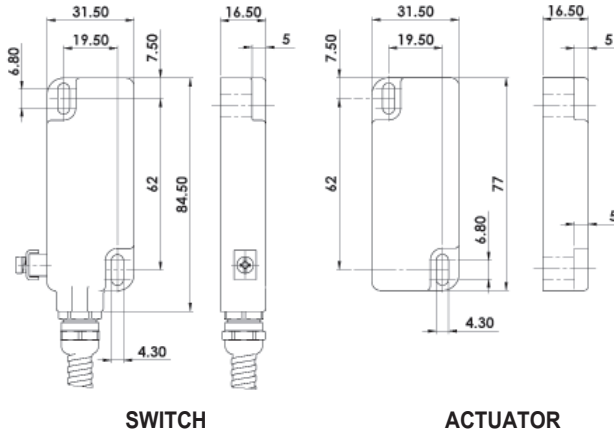


## WM1-Ex STAINLESS STEEL 316 (supplied fitted with Stainless Steel Flexible Conduit)

**Ex** II 1G Ex ma IIC T6 Ga

**Ex** II ID Ex ma IIIC T80 Da IP67\*

Zones 0, 20, 1, 21, 2, 22 Gas and Dust



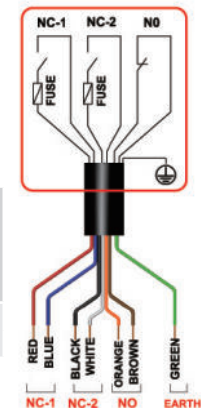
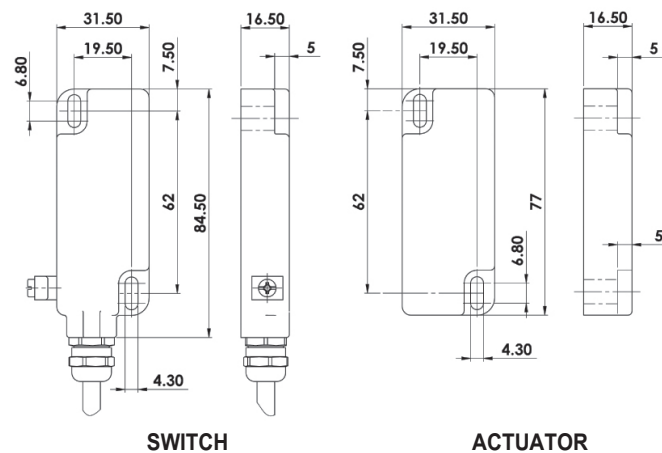
SALES NUMBER	TYPE ZONES	BODY HOUSING	CABLE/ CONDUIT LENGTH	CIRCUITS	ELECTRICAL RATING	
					NORMALLY CLOSED CIRCUITS (Actuator Present)	NORMALLY OPEN CIRCUIT (Actuator Present)
900101	WM1-Ex	S/Steel	5M	2NC 1NO	RED/BLUE NC1 WHITE/BLACK NC2	230Vac/24Vdc 0.6A Max.
900102	WM1-Ex	S/Steel	10M	2NC 1NO	INTERNALLY FUSED	230Vac/24Vdc 200mA. Max.

## WM2-Ex STAINLESS STEEL 316

**Ex** II 2G Ex mb IIC T6 Gb

**Ex** II 2D Ex mb IIIC T80 Db IP67\*

Zones 1, 21, 2, 22 Gas and Dust



SALES NUMBER	TYPE ZONES	BODY HOUSING	CABLE LENGTH	CIRCUITS	ELECTRICAL RATING	
					NORMALLY CLOSED CIRCUITS (Actuator Present)	NORMALLY OPEN CIRCUITS (Actuator Present)
900201	WM2-Ex	S/Steel	5M	2NC 1NO	RED/BLUE NC1 WHITE/BLACK NC2	230Vac/24Vdc 2A Max.
900202	WM2-Ex	S/Steel	10M	2NC 1NO	INTERNALLY FUSED	230Vac/24Vdc 200mA. Max.

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**Safety Classification and Reliability Data:**  
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Safety Data – Annual Usage  
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Initial Contact Resistance  
Minimum Switched Current  
Insulation Resistance  
Recommended Setting Gap

3.3 x 10<sup>6</sup> operations at 100mA load  
Up to PLe depending upon system architecture  
8 cycles per hour/24 hours per day/365 days  
MTTFd 470 years  
<2ms  
<500 milliohm  
10Vdc 1mA  
100 Mohms  
5mm

Switching Distance (Target to Time)  
Approach Speed  
Temperature Range  
Enclosure Protection  
Shock Resistance  
Vibration Resistance  
Body Material  
Cable Type  
Mounting Position  
Approval Body

Sao 10mm Close  
Sar 22mm Open  
200mm/m to 1000mm/s  
-20/+80 (or +60C for 2A version)  
IP67  
IEC 68-2-27 11ms 30g  
IEC 68-2-6 10-55Hz 1mm  
Stainless Steel 316  
6mm OD  
Any  
BASEEFA UK

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