

Application

The **MCL2** is a yarn break **capacitive sensor** useful for **assembling, and winding** applications.

MAIN FUNCTION: To control the linear motion of two textile yarns when assembling.

When a yarn breaks or stops, the **MCL2** will inform the user (flashing LED) that a position is defective. It can also activate a **yarn cutter** or stop the position giving a **LOW signal** to an automate.

Any kind of material able to keep electrostatic charge can be checked by the **MCL2**.

PRINCIPLE: The **MCL2** probe will check the tension variations produced by the electrical charges into the yarn in motion. The **MCL2** is insensitive to dust and vibrations.

ELECTRICAL PROTECTION: The **MCL2** is protected against reversed polarity and high level overload on output. It shows a very high level of EMC, electromagnetic compatibility : >4 kV.

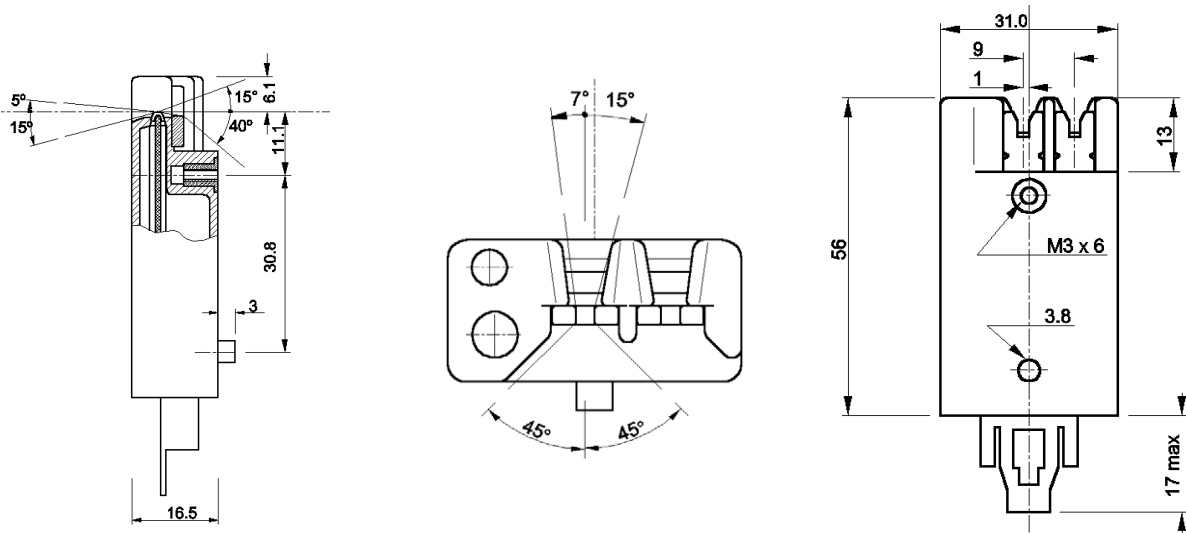


Characteristics :

- Power supply : 18 to 30 V DC
- NPN output
- Inhibition switch
- External programming or inhibition input
- 1 or 2 thread supervising mode can be selected
- Visual alarm (red LED)
- Connection cable, Lumberg 2,5 MSFW 5 connector or any kind of connector on request
- Sensor sensibility can be adapted to operator's requirement

These characteristics are adapted to operator's requirements. (Referenced to the codification board)

Dimensions (mm)



One of these guides can be adapted on the **MCL2** :



CA9-TD011 (Aluminium oxide)
 CA9-TD016 (Titanium oxide)



CA9-TD003 (Aluminium oxide)
 CA9-TD013 (Zirconium aluminium)



CA9-TD014 (Zirconium aluminium)
 CA9-TD015 (Aluminium oxide)

Characteristic codification

MCL2-			X	X	X	X	X
Inhibition / Pilot light / Programming							
Push button	LED	External input					
Without	Without	Without	1				
With	Without	Without	2				
Without	With	Without	3				
With	With	Without	4				
Without	Without	With	5				
With	Without	With	6				
Without	With	With	7				
With	With	With	8				
Guides							
Without guide				0			
CA9-TD011				1			
CA9-TD003				2			
CA9-TD013				3			
CA9-TD014				4			
CA9-TD015				5			
CA9-TD016				6			
Connections							
By cable					1		
By connector					2		
Response time (ms)							
100						3	
200						4	
600						5	
900						6	
Output							
NPN Normally open (NO)							1
NPN Normally close (NC)							3

Example

MCL2-84261

- 8 : with push-button, LED and external inhibition or programming input
- 4 : with guide CA9-TD014
- 2 : with Lumberg 2,5 MSFW 5 connector
- 6 : response time of 900 ms
- 1 : NPN output Normally Open (NO)

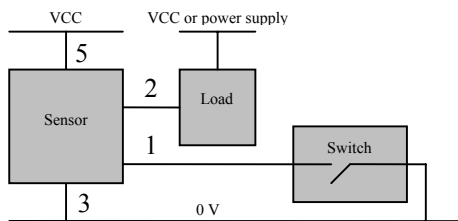
Sensors from the new range can be mounted on the FIL CONTROL standard rail (ref. : 423800), by the mean of bracket (ref. : 423802).

Technical characteristics

Parameters	Conditions	Min	Typ	Max
Power supply voltage (V)		18	24	30
Sensor consumption (mA)	Own current consumption at 24 V DC and at 25°C. Input and output not connected	-	22	25
Indicator light ON			11,5	14,5
Indicator light OFF				
Ripple voltage at 100 Hz	Supply voltage peaks < 30 V	-	-	80%
Delay between detection and move start (s)	On request	-	2	-
Low level output voltage (V)	Output current < 1 A	-	0,5	1,1
Min. current driven by the output (A)	Voltage at the output < 32 V	1	-	-
Max. voltage at the output (V)		-	-	50
Logical level on the configuration input (V)	Supply voltage = 24 V	10,7	-	3,8
High level				
Low level				
Current in the configuration input (mA)	Supply voltage = 24 V	-	-	5,3
Low level				
Immunity to the perturbations (kV)	Positive and negative	4	-	-
Injected				
Inducted				
Radiated				
Temperature range (°C)	For storage For operation	-25	-	85
				0
Relative humidity		-	-	80%

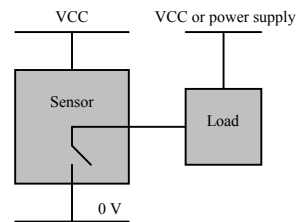
Setting up procedure

Standard connection



- 1 : External programming or inhibition input
 2 : NPN output

Standard configuration Output NPN-NO



Presence of yarn(s)

Global Operations

State	LED	Output	If external control input : Programming
Switch-on	Light-on	Inactive	X
Inhibition	Light-on	Inactive	X
Presence of 1 yarn	Light-off	Inactive	Low level (0V)
Presence of 2 yarns	Light-off	Inactive	High level (24V)
Absence of a yarn(s)	Blinking	Active	X

X : any state.