

Application

The MCD-F is a **non-contact** yarn break **capacitive sensor**.

MAIN FUNCTION: To control the presence of yarns (or sleeves) while linear or ballooning motion.

When the yarn (or sleeve) breaks, the **MCD-F** will inform the user (flashing LED) that a position is defective. It can also stop the position giving a **LOH information** to an automate.

Any kind of material that can be electrified can be checked by the **MCD-F**. The ceramic can avoid the contact between the yarn (or sleeve) with the sensor shell.

PRINCIPLE: The **MCD-F** probe will check the tension variations produced by the electrical charges into the yarn in motion. The **MCD-F** is insensitive to machine vibrations.

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

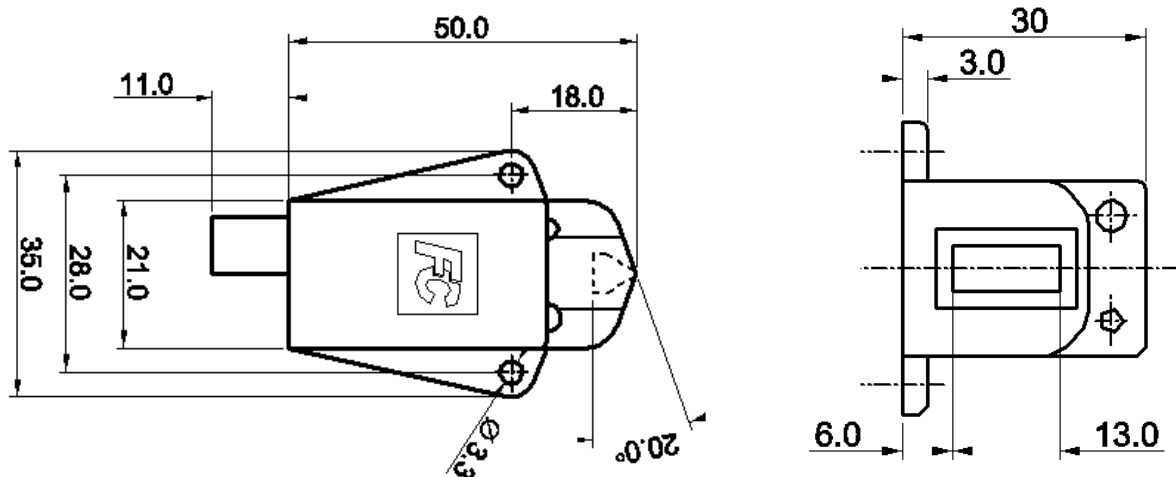


Characteristics:

- Power supply : 18 to 30 V DC
- NPN or PNP output
- Inhibition touch
- External inhibition input
- Visual flashing alarm (red LED)
- Connection through cable, or Lumberg 2,5 MSFW 5 or any kind of connector on demand
- The MCD-F sensitivity is adapted to operator's requirement

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

Dimensions (mm)



Characteristic codification

MCD-F-			X	X	X	X	X	X
Inhibition / Pilot light / Inhibition								
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 yarn guide protection				0				
With yarn guide protection				1				
Connections								
By cable					1			
By connector					2			
Response time (ms)								
100						3		
200						4		
600						5		
900						6		
Output								
NPN Normally open (NO)							1	
PNP Normally open (NO)							2	
NPN Normally close (NC)							3	
PNP Normally close (NC)							4	

Example

MCD-F80261:

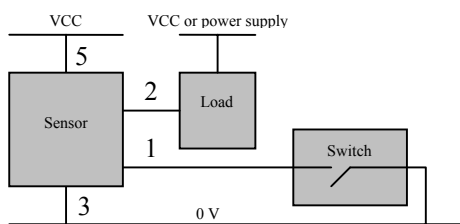
- 8 : with push-button, LED and external inhibition input
- 0 : without yarn guide protection
- 2 : with Lumberg 2,5 MSFW 5 connector
- 6 : response time of 900 ms
- 1 : NPN output Normally Open (NO)

Technical characteristics

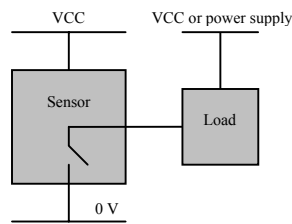
Parameters	Conditions	Min	Typ	Max
Power supply voltage (V)		18	24	30
Sensor consumption (mA)	Own current consumption at 24 V DC and at 25°C. External inhibition and output not connected	-	22	25
Indicator light ON			7,5	10,5
Indicator light OFF				
Ripple voltage at 100 Hz	Supply voltage peaks < 30 V	-	-	80%
Delay between detection and move start (s)	On request	-	3	-
Dropout voltage at the output (V)	NPN	Output current < 1 A		1,1
	PNP	Output current < 0.5 A		2,3
Min. current driven by the output (A)	NPN	1	-	-
	PNP	0,5	0,8	-
Max. voltage at the output (V)		-	-	50
Logical level on the inhibition input (V)	Supply voltage = 24 V		10,7	-
	High level			
Current in the inhibition input (mA)	Supply voltage = 24 V		-	-
	Low level			
Immunity to the perturbations (kV)	Positive and negative		4	-
	Injected			
	Inducted			
	Radiated			
Temperature range (°C)	For storage		-25	-
	For operation		0	-
Relative humidity		-	-	80%

Setting up procedure

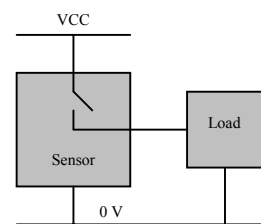
Standard connection



Standard configuration
Output NPN-NO



Other configuration
Output PNP-NO



1 : External inhibition input
 2 : NPN output

Presence of yarn

Presence of yarn

Global Operations

State	LED	Output	External input
Switch-on	Light-on	Inactive	Active level 0 (0V) Inactive level 1 (24V)
Inhibition	Light-on	Inactive	
Presence of yarn	Light-off	Inactive	
Absence of yarn	Blinking	Active	