

Application

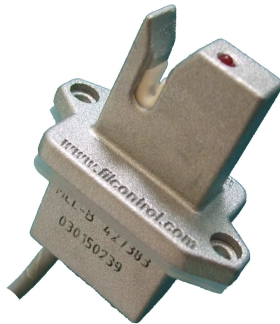
MCL-B is a yarn break **capacitive sensor**, very versatile, used in winding, doubling, twisting and texturing process.

MAIN FUNCTION: Control the linear motion of manmade fibres.

When the yarn breaks or when scrolling stops, **MCL-B** 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 / HIGH signal** to an automate.

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

ELECTRICAL PROTECTION: MCL-B is protected against reversed polarity and high level overload on output. It shows a high level of EMC, electromagnetic compatibility:>2 kV.

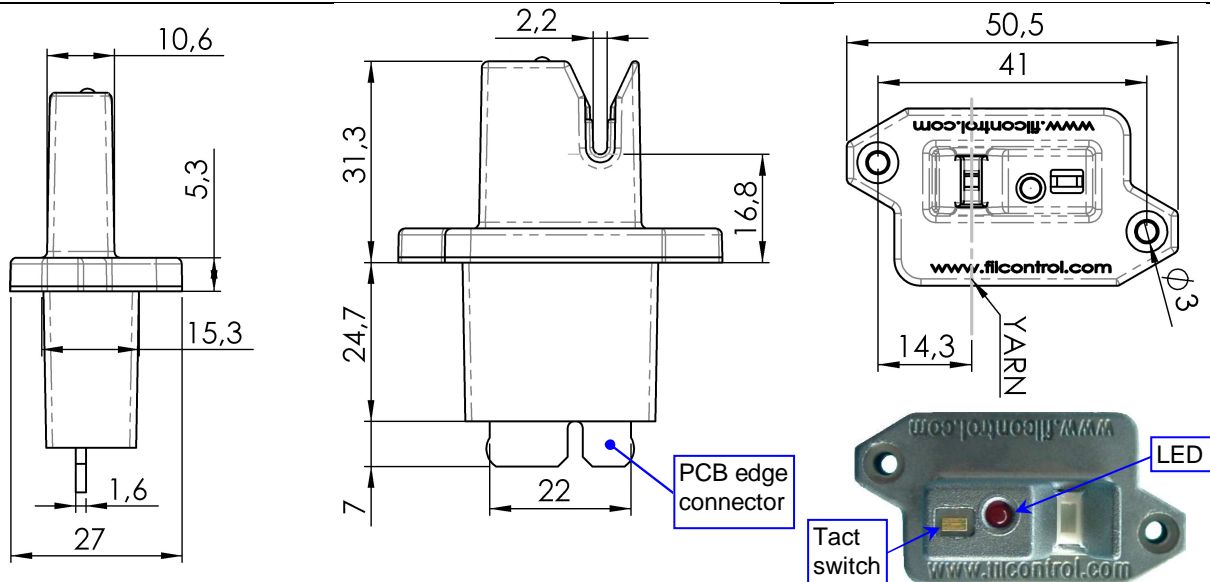


Characteristics :

- Power supply : 18 to 30 V DC
- NPN or PNP Output
- 12V data output (optional)
- Tact ON/OFF switch
- Visual alarm (red LED)
- External control input
- Connection: through cable with or without connector (different type available on request) or PCB edge connector
- Sealing joint on mounting flange to protect sensor's connection against oil dripping

These characteristics are adaptable to customer's requirements.

Dimensions (mm)



One of these OPTION can be adapted on the **MCL-B** :

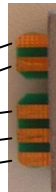


Molex 1625 type connector

Blue : 0V
Yellow : +24V
White : Output

PCB Edge connector

- 1 : External Input
- 2 : NPN/PNP Power Output
- 3 : 0V
- 4 : 12V Data Output
- 5 : +24V



Characteristic codification

MCL-B			X	X	X	X	X
ON-OFF / Pilot light / Inhibition							
Tact Switch	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			
Connections							
By cable (only)					1		
By PCB edge connector					3		
By cable with 1625 connector					4		
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
NPN NO Out + 12V Data Output							A
PNP NO Out + 12V Data Output							B
NPN NC Out + 12V Data Output							C
PNP NC Out + 12V Data Output							D

Example

MCL-B 4016A :

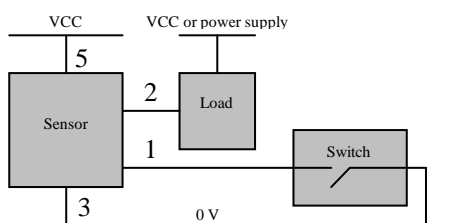
- 4 : with push-button and LED
- 0 : without guide
- 1 : with cable
- 6 : response time of 900 ms
- A : NPN output Normally Open (NO) and 12V Data Output

Technical characteristics

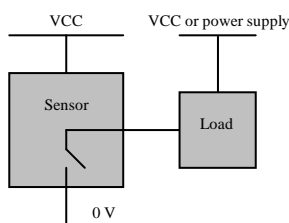
Parameters	Conditions	Min	Typ	Max
Power supply voltage (V)		18	24	30
Sensor consumption (mA)	Own current consumption at 24 V DC and at 25°C. External inhibition and output not connected	-	22	25
	Indicator light ON		7,5	10,5
	Indicator light OFF			
Ripple voltage at 100 Hz	Supply voltage peaks < 30 V	-	-	80%
Delay between detection and move start (s)	On request	-	3	-
Dropout voltage at the output (V)	Output current < 1 A	-	1,2	1,6
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 inhibition input (V)	Supply voltage = 24 V			
	High level	10,7	-	
	Low level			3,8
Current in the inhibition input (mA)	Supply voltage = 24 V			
	Low level	-	-	5,3
Immunity to the perturbations (kV)	Positive and negative			
	Injected	2	-	-
	Inducted	4	-	-
	Radiated	4	-	-
Temperature range (°C)				
	For storage	-25	-	85
	For operation	0	-	50
Relative humidity		-	-	80%

Setting up procedure

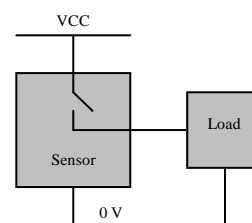
Standard connection



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	