

Application

The **MOS-C** is a **non-contact** yarn break **opto-electronic sensor**.

MAIN FUNCTION: To control the presence of yarns while to-and-fro or ballooning motion.

When the yarn breaks or stops, the sensor will indicate a default situation and give the information to the machine or to the operator by the means of a LED. It can activate a yarn cutter or stop the position.

PRINCIPLE: As the thread passes through an infra red beam, the variations are processed by the electronic circuits of the **MOS-C**.

ELECTRICAL PROTECTION: **MOS-C** protection against reversed polarity and high level overload on output. It shows a very high level of electromagnetic compatibility (EMC).

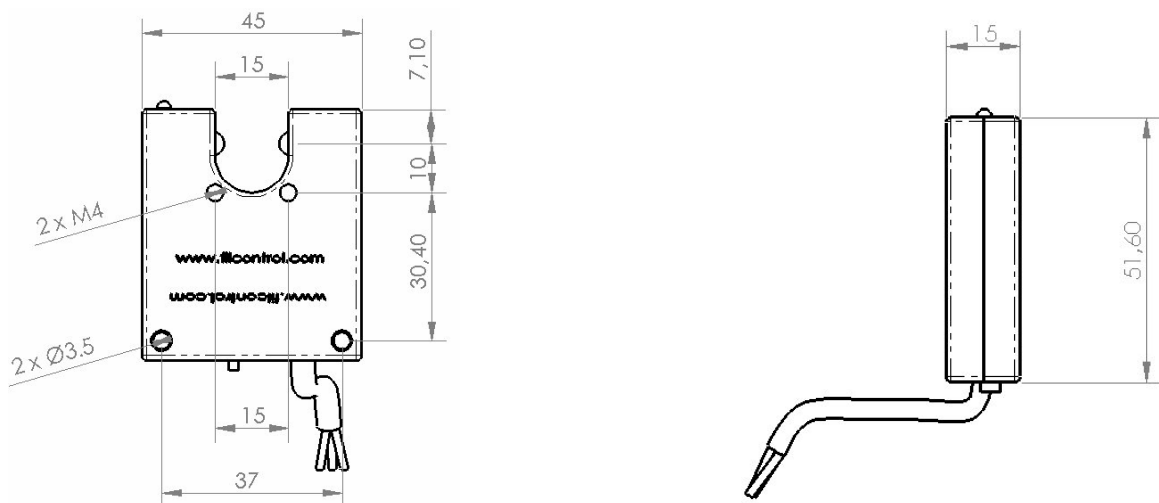


Characteristics:

- ❑ Power supply : 18 to 30 V DC
- ❑ 1 NPN or PNP power output with short circuit and polarity reversal protection
- ❑ A power on/off switch
- ❑ Bicolour visual alarm (LED)
- ❑ Connection by cable with connector option
- ❑ Aluminium alloy shell.
- ❑ High excess gain (Optical protection against dust)

These characteristics can be adapted to operator's requirements (see the codification board).

Dimensions (mm)



Codification board

MOS-C		X	X	X	X	X
Inhibition / Pilot light / Inhibition						
Switch	LED					
Without	With	3				
With	With	4				
Guides						
Without guide			0			
Connections						
By cable				1		
Response time (ms)						
50					2	
100					3	
200					4	
500					5	
700					6	
1500					7	
2000					8	
Output						
NPN Normally open (NO)						1
PNP Normally open (NO)						2

Example

MOS-C 40141-LLLL-C:

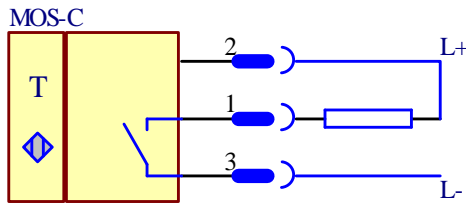
- 4 : with switch, LED
- 0 : without guide
- 1 : with cable
- 4 : response time of 200 ms
- 1 : NPN output Normally open (NO)
- LLLL : length of the cable in mm
- C : Type of connector

Technical characteristics

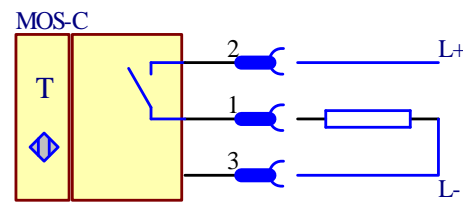
Parameters	Conditions	Min	Typ	Max
Power supply voltage (V)		18	24	30
Sensor consumption (mA)				
Absence of yarn	Own current consumption at 24 V DC and at 25°C, output not connected	9.4	13.1	16.8
Presence of yarn		9.8	12.8	15.8
Optical totally dirty		25.9	27.8	29.7
Delay between detection and move start (s)		Response time x 2		
Delay after power on (s)		0.209	-	-
Rated insulation voltage (V)	With maximum current driven	-	-	0.3
Current driven by the output (A)		-	-	0.7
Max. voltage at the output (V)		-	-	50
Immunity to the perturbations (kV)	Positive and negative			
Electrostatic discharges		-	-	4
Electrical fast transients/bursts		-	-	4
Temperature range (°C)				
For storage		-20	-	70
For operation		10	-	50
Relative humidity		-	-	80%
Yarn diameter to check (mm)	Nylon yarn	0,1	-	-
Yarn count to check (Ne)	Cotton yarn	170	-	-
Rotation speed (Rpm)	Sensor response time : 100ms	780	-	20000

Setting up procedure

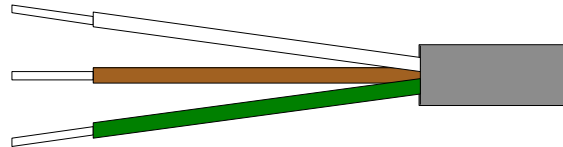
Standard configuration
Output NPN-NO



Standard configuration
Output PNP-NO



- White wire : Output 1
- Brown wire : + Power supply 2
- Green wire : - Power supply 3



Global Operations

State	LED	Main Output
Inhibition mode	Light Off	Inactive = Open (sensor power off)
Presence of yarn	Green LED Light On	Inactive= Open
Absence of yarn	Red LED Light On	Active = Close