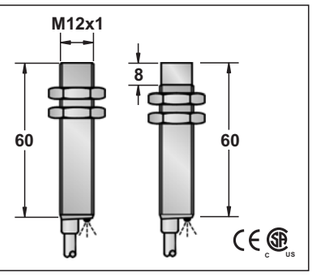
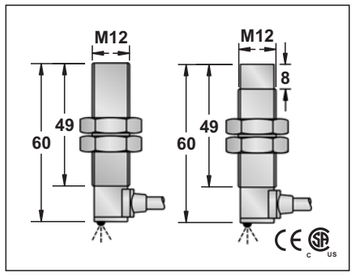
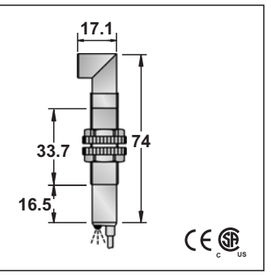
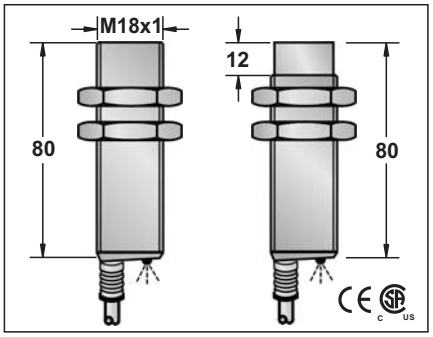
PART E-01 ~ E-13

AC/DC INDUCTIVE PROXIMITY SWITCH

Diameter	M 12		M 12		M 12	
● Shielded ○ non-Shielded	●	○	●	○	●	○
Switching Distance Sn mm	2 mm	4 mm	2 mm	4 mm	2 mm	4 mm
Housing Material	stainless steel or nickel plated brass		stainless steel or nickel plated brass		stainless steel or nickel plated brass	
● With LED ○ Without LED	●		●		●	
Dimensions (unit: mm)						
Operating Voltage	20-250 VAC, 50-60 Hz; 20-250 VDC		20-250 VAC, 50-60 Hz; 20-250 VDC		20-250 VAC, 50-60 Hz; 20-250 VDC	
Ripple	DC RIPPLE <10%		DC RIPPLE <10%		DC RIPPLE <10%	
No Load Current	<2.5mA		<2.5mA		<2.5mA	
Max. Load Current	100mA		100mA		100mA	
Leakge Current	<2.5mA		<2.5mA		<2.5mA	
Surge Current	2.2A for 20ms		2.2A for 20ms		2.2A for 20ms	
Min. Load Current	5mA		5mA		5mA	
Voltage Drop	<=10 VAC :<=8 VDC		<=10 VAC :<=8 VDC		<=10 VAC :<=8 VDC	
Switching Frequency	25HZ AC; 40 Hz DC		25HZ AC; 40 Hz DC		25HZ AC; 40 Hz DC	
Response Time	10ms/10ms		10ms/10ms		10ms/10ms	
Switching Hysteresis	<15%(Sr)		<15%(Sr)		<15%(Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)		<10% (Sr)	
Short Circuit Protection	YES (DC 20~30V only)		YES (DC 20~30V only)		YES (DC 20~30V only)	
Overload Trip Point	-		-		-	
Time Delay Before Availability	-		-		-	
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)		RFI>3V/m / EFT>1KV / ESD>4KV (contact)		RFI>3V/m / EFT>1KV / ESD>4KV (contact)	
Shock / Vibration	IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2		IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2		IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2	
Material Active Face	PBT		PBT		PBT	
DC 3 wire 10-30V NPN N.O.						
DC 3 wire 10-30V NPN N.C.						
DC 3 wire 10-30V PNP N.O.						
DC 3 wire 10-30V PNP N.C.						
DC 4 wire 10-30V Changeover PNP (N.O. & N.C.)						
DC 4 wire 10-30V Changeover NPN (N.O. & N.C.)						
DC 2 wire 10-60V N.O.						
DC 2 wire 10-60V N.C.						
DC 3 wire 10-55v NPN N.O. or NAMUR						
DC 3 wire 10-55v NPN N.C.						
DC 3 wire 10-55v PNP N.O.						
DC 3 wire 10-55v PNP N.C.						
AC 2 wire 20-250V N.O.						
AC 2 wire 20-250V N.C.						
AC 2 wire 20-250V N.O. or N.C. Changeable						
AC/DC 2 wire 20-250V N.O.	FCM1-1202U-A3L2	11 FCM2-1204U-A3L2	FCM1-1202U-A3L2Y	11 FCM2-1204U-A3L2Y	FCM1-1202U-A3L2Z	11 FCM2-1204U-A3L2Z
AC/DC 2 wire 20-250V N.C.	FCM1-1202U-B3L2	12 FCM2-1204U-B3L2	FCM1-1202U-B3L2Y	12 FCM2-1204U-B3L2Y	FCM1-1202U-B3L2Z	12 FCM2-1204U-B3L2Z
AC/DC 2 wire 20-250V N.O. or N.C. Changeable						
Remark						
Cable 2M (PVC)	4φ3x0.34		4φ3x0.34		4φ3x0.34	
Weight	Approx.77 g	Approx.76 g	Approx.77 g	Approx.76 g	Approx.77 g	Approx.76 g

AC/DC INDUCTIVE PROXIMITY SWITCH

M 18	
●	○
5 mm	8 mm
stainless steel or nickel plated brass	
●	

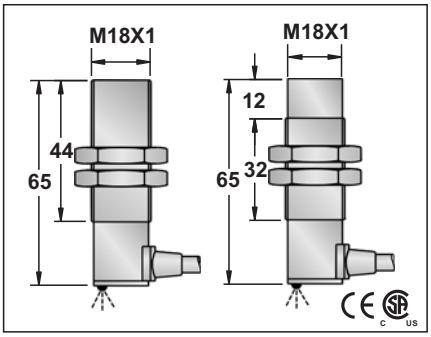


20-250 VAC, 50-60 Hz; 20-250 VDC
DC RIPPLE <10%
<2.5mA
200mA
<2.5mA
2.2A for 20ms
5mA
<=10 VAC :<=8 VDC
25HZ AC; 40 Hz DC
10ms/10ms
<15%(Sr)
<1.0% (Sr)
IP67
-25°C - +70°C
<10% (Sr)
YES
-
-
RFI>3V/m / EFT>1KV / ESD>4KV (contact)
IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2
PBT

FCM1-1805U-A3L2	11	FCM2-1808U-A3L2
FCM1-1805U-B3L2	12	FCM2-1808U-B3L2

5.0φ44x0.1	
Approx.161 g	Approx.160 g

M 18	
●	○
5 mm	8 mm
stainless steel or nickel plated brass	
●	



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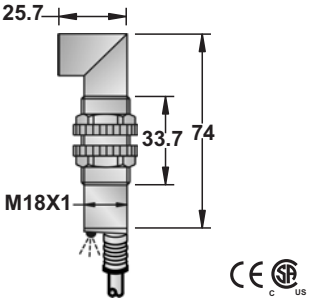
DC RIPPLE <10%
<2.5mA
200mA
<2.5mA
2.2A for 20ms
5mA
<=10 VAC :<=8 VDC
25HZ AC; 40 Hz DC
10ms/10ms
<15%(Sr)
<1.0% (Sr)
IP67
-25°C - +70°C
<10% (Sr)
YES
-
-
RFI>3V/m / EFT>1KV / ESD>4KV (contact)
IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2
PBT

FCM1-1805U-A3L2Y	11	FCM2-1808U-A3L2Y
FCM1-1805U-B3L2Y	12	FCM2-1808U-B3L2Y

5.0φ44x0.1	
Approx.161 g	Approx.160 g

M 18	
●	○
5 mm	8 mm
stainless steel or nickel plated brass	
●	



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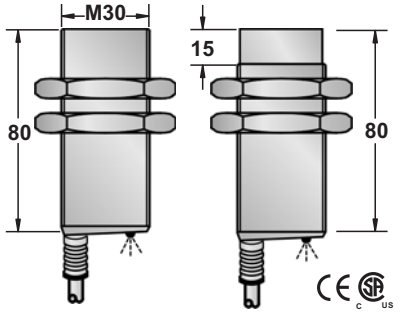
2.2A for 20ms
5mA
<=10 VAC :<=8 VDC
25HZ AC; 40 Hz DC
10ms/10ms
<15%(Sr)
<1.0% (Sr)
IP67
-25°C - +70°C
<10% (Sr)
YES
-
-
RFI>3V/m / EFT>1KV / ESD>4KV (contact)
IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2
PBT

FCM1-1805U-A3L2Z	11	FCM2-1808U-A3L2Z
FCM1-1805U-B3L2Z	12	FCM2-1808U-B3L2Z

5.0φ44x0.1	
Approx.161 g	Approx.160 g

AC/DC INDUCTIVE PROXIMITY SWITCH

M 30	
●	○
10 mm	15 mm
stainless steel or nickel plated brass	
●	



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DC RIPPLE <10%
<2.5mA
200mA
<2.5mA
2.2A for 20ms
5mA
<=10 VAC :<=8 VDC
25HZ AC; 40 Hz DC
10ms/10ms
<15% (Sr)
<1.0% (Sr)
IP67
-25°C - +70°C
<10% (Sr)
YES
-
-
RFI>3V/m / EFT>1KV / ESD>4KV (contact)
IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2
PBT

FCM1-3010U-A3L2	11	FCM2-3015U-A3L2
FCM1-3010U-B3L2	12	FCM2-3015U-B3L2

5.8φ3x0.5(6.8φ5x0.5)	
Approx.247 g	Approx.237 g