



MICRO SWITCH  
Weather-Sealed,  
Explosion-Proof Switches  
**CX Series**



Datasheet

# MICRO SWITCH CX Series

## Weather-Sealed, Explosion-Proof Switches

MICRO SWITCH CX switches are built especially for outdoor use in hazardous atmospheres. These enclosures are constructed to withstand the pressure of an internal explosion. Flame paths cool the exploded gases to a point less than the lowest safe operating temperature of the surrounding gas.

MICRO SWITCH 80CX Series switches have rugged bronze housings that are designed to be resistant to salt water and other corrosive environments. They comply with the NEMA 4X requirement for protection against corrosion, in addition to NEMA enclosure standards met by other CX switches.

The product's o-ring seals make the enclosure rain tight, but are outside of required flame paths so explosion proof requirements are maintained. Unless special ordered, all basic switches operate on clockwise and counterclockwise rotation. The actuating mechanism can be field adjusted for CW or CCW operation only. No tools are required.

### *What makes our switches better?*

- Building block design allows for digital switching outputs
- Weather sealed to NEMA and IP ratings
- UL, CSA, ATEX, IEC Ex, INMETRO certified for hazardous (explosive) environments
- Designed with the end user in mind, these switches help to create user-friendly interfaces with broad application possibilities to help meet the challenges of many different environments
- Available with gold contacts, low-temp seals, and bronze corrosion-resistant housing



COST OPTIMIZATION  
RELIABILITY • GLOBALLY ACCEPTED

# Potential Applications



## INDUSTRIAL

- Seaside grain and fuel loading docks that may require explosion proof and corrosion resistant switches
- Oil and gas wells, refineries, and fuel storage facilities that may require explosion proof and corrosion resistant switches
- Chemical plants with corrosive environments



**Table 1. Specifications**

Characteristic	Parameter
Actuators	side rotary (choice of levers), side rotary (with flat shaft), plunger actuator
Housing material	aluminum with electrostatic epoxy coating or corrosion resistant bronze
Termination	3/4 x 14 NPT, M25 x 1,5 mm conduit
Sealing	NEMA 1, 3, 4, 4X, 6, 6P, and 13; IP66
Hazardous area designations	NEMA 7: Class I, Div.1 & Div. 2, Groups B (14CX, 16CX, 24CX, 26CX, 36CX only), C, and D; NEMA 9: Class II, Div.1 & Div. 2, Groups E, F, and G ATEX/IEC Ex, INMETRO (Gas) II 2 G; Exd IIC T6 ATEX/IEC Ex, INMETRO (Dust) II 2 D; Exd tD A21 T85°C
Operating temperature	-25 °C to 85 °C [-13 °F to 185 °F]
Agency approvals	UL Listed, file #E14274 CSA Certified, file #LR57324 ATEX certificate KEMA 01ATEX2111 X IEC Ex certificate IEC Ex TSA 06.003X INMETRO certificate TUV 14.0553




**Table 2. Electrical Ratings (in amperes)**

Rating Code	Switch Description	UL/CSA
A	BZ basic switch, SPDT	15 A 120/240/480 Vac; 1/8 HP, 120 Vac 1/4 HP, 240 Vac; 0.5 A, 125 Vdc; 0.25 A, 250 Vdc
B	BA basic switch, SPDT	20 A 120/240/480 Vac; 1 HP, 120 Vac; 2 HP, 240 Vac; 0.5 A, 125 Vdc; 0.25 A, 250 Vdc
C	DT basic switch, DPDT	10 A 120/240/480 Vac, 0.3 A 125 Vdc; 0.15 A, 250 Vdc
D	HS basic switch (hermetic sealed), SPDT	1 A, 125 Vac; 5 A, 28 Vdc
F	BZ basic switch (gold contacts) SPDT	1 A, 125 Vac

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**Table 3. Order Guide**

When factory assembled, all basic switches operate on a clockwise and counter clockwise rotation. The actuating mechanism can be field adjusted for CW or CCW operation only. No tools are required. For listings not shown, contact your Honeywell representative.

	Cat. Listing <sup>1</sup>	Housing Material	Cover Size	Switch Action <sup>2</sup>	Basic Switch Type, Quantity, Circuitry	Electrical Rating (Page 4)
	<b>11CX12</b>	Epoxy-coated aluminum	Short	Maintained	BZ (2), SPDT each	A (15 A)
	<b>11CX12E</b>	Epoxy-coated aluminum	Short	Maintained	BZ (2), SPDT each	A (15 A)
	<b>11CX2</b>	Epoxy-coated aluminum	Short	Momentary	BZ (2), SPDT each	A (15 A)
	<b>11CX2E</b>	Epoxy-coated aluminum	Short	Momentary	BZ (2), SPDT each	A (15 A)
	<b>1172CX2</b>	Epoxy-coated aluminum	Short	Momentary	BZ (2), SPDT each	F (1 A)
	<b>11CX5C</b>	Epoxy-coated aluminum	Short	Momentary	BZ (2), SPDT each	A (15 A)
	<b>11CX212</b>	Epoxy-coated aluminum	Short	Maintained	BZ (2), SPDT each	A (15 A)
	<b>12CX12</b>	Epoxy-coated aluminum	Short	Maintained	BA (2), SPDT each	B (20 A)
	<b>12CX12-D01</b>	Epoxy-coated aluminum	Short	Maintained	BA (2), SPDT each	B (20 A)
	<b>12CX15-D01</b>	Epoxy-coated aluminum	Short	Maintained	BA (2), SPDT each	B (20 A)
	<b>12CX2</b>	Epoxy-coated aluminum	Short	Momentary	BA (2), SPDT each	B (20 A)
	<b>12CX2A</b>	Epoxy-coated aluminum	Short	Momentary	BA (2), SPDT each	B (20 A)
	<b>12CX2AE</b>	Epoxy-coated aluminum	Short	Momentary	BA (2), SPDT each	B (20 A)
	<b>12CX5E</b>	Epoxy-coated aluminum	Short	Momentary	BA (2), SPDT each	B (20 A)
	<b>12CX200</b>	Epoxy-coated aluminum	Short	Maintained	BA (2), SPDT each	B (20 A)
<b>14CX1E</b>	Epoxy-coated aluminum	Short	Momentary	DT (1), DPDT	C (10 A)	
<b>16CX1</b>	Epoxy-coated aluminum	Short	Momentary	HS (1), SPDT	D (1 A)	
<b>16CX1E</b>	Epoxy-coated aluminum	Short	Momentary	HS (1), SPDT	D (1 A)	
<b>16CX2</b>	Epoxy-coated aluminum	Short	Momentary	HS (2), SPDT each	D (1 A)	
<b>16CX2C</b>	Epoxy-coated aluminum	Short	Momentary	HS (2), SPDT each	D (1 A)	
<b>16CX12</b>	Epoxy-coated aluminum	Short	Maintained	HS (2), SPDT each	D (1 A)	
	<b>21CX4</b>	Epoxy-coated aluminum	Standard	Momentary	BZ (4), SPDT each	A (15 A)
	<b>21CX12F</b>	Epoxy-coated aluminum	Standard	Maintained	BZ (2), SPDT each	A (15 A)
	<b>21CX14</b>	Epoxy-coated aluminum	Standard	Maintained	BZ (4), SPDT each	A (15 A)
	<b>22CX4</b>	Epoxy-coated aluminum	Standard	Momentary	BA (4), SPDT each	B (20 A)
	<b>24CX2</b>	Epoxy-coated aluminum	Standard	Momentary	DT (2), DPDT each	C (10 A)
	<b>26CX4</b>	Epoxy-coated aluminum	Standard	Momentary	HS (4) SPDT each	D (1 A)
	<b>26CX14</b>	Epoxy-coated aluminum	Standard	Maintained	HS (4) SPDT each	D (1 A)
<b>26CX16</b>	Epoxy-coated aluminum	Standard	Maintained	HS (4) SPDT each	D (1 A)	
	<b>74CX2</b>	Bronze	Standard	Momentary	DT (2) DPDT each	D (10 A)
	<b>81CX2</b>	Bronze	Standard	Momentary	BZ (2) SPDT each	A (15 A)
	<b>82CX2A</b>	Bronze	Standard	Momentary	BA (2) SPDT each	B (20 A)

<sup>1</sup> Basic switches operate nearly simultaneously in multiple switch devices

<sup>2</sup> Shafts of devices without spring return can be rotated through 360°

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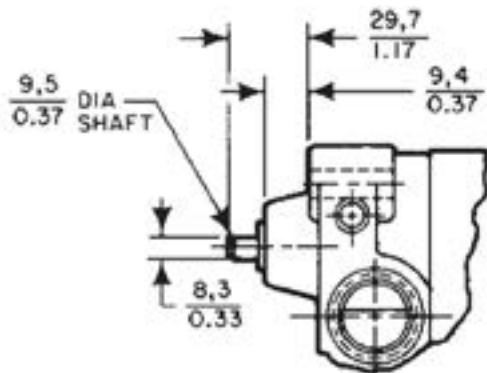
## ASSEMBLY MODIFICATIONS

### MODIFIED SHAFT ENABLES DIRECT COUPLING

CX switches are available with a 3/8 inch diameter by 3/4 inch long flatted shaft which conforms to standard NEMA motor shaft specifications. It accepts commercially available shaft couplers, permitting easy, direct coupling to most equipment actuators.

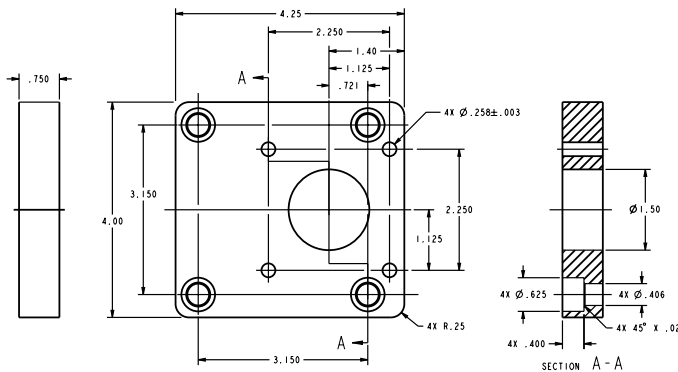
To specify a “direct-couple” CX switch: Add **DO1** to catalog listings shown in the order guides, i.e. 11CX12-**DO1**.

**Flatted Shaft Version**



### MOUNTING BRACKETS

15PA500-CX adapter bracket for mounting CX products to NAMUR footprint is available upon request.



### Mounting Holes

Add the letter **A** to listings with side mounting holes tapped 5/16-18(8). Example: 11CX2**A**

Add the letter **B** to listings with thru mounting holes tapped 3/8-24(4). Example: 11CX2**B**.

### CX Series Replacement Basic Switch Assemblies

These assemblies are factory-adjusted to the same operating characteristics as a new CX switch. They include components subject to mechanical or electrical wear: basic switches, cams, cam followers, and springs.

To order, change the first number in the complete switch catalog listing to **9** for **rotary switches**. For example:

Rotary switch 11CX2 Replacement = **9**1CX2

Note: Basic switch assemblies for rotary actuated switches, with or without spring return, will be the same.

For example: 11CX2 and 11CX12 use **9**1CX2.






### Low Temperature Switches







Add the letter **C** to listings for low temperature versions

For example: 21CX14**C** = -40 °F [-40 °C] Rotary

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Table 5. Rotary Levers Order Guide

	Catalog Listing	Material	Roller Dia. mm [in]	Roller Width mm [in]	Roller Mounting
	<b>Fixed – 38,1 [1.5] inch radius</b>				
	LSZ51	Rollerless	n/a	n/a	n/a
	LSZ51A	Nylon	19 [0.75]	6,35 [0.25]	Front
	LSZ51C	Nylon	19 [0.75]	6,35 [0.25]	Back
	LSZ51F	Nylon	25,4 [1.0]	12,7 [0.50]	Front
	LSZ51G	Nylon	38,1 [1.5]	6,35 [0.25]	Front
	LSZ51J	Nylon	25,4 [1.0]	12,7 [0.50]	Back
	LSZ51M	Nylon	19 [0.75]	31,7 [1.25]	Back
	LSZ51P	Nylon	19 [0.75]	12,7 [0.50]	Front
	LSZ251A (sst)	Nylon	19 [0.75]	6,35 [0.25]	Front
	LSZ251C (sst)	Nylon	19 [0.75]	6,35 [0.25]	Back
	LSZ251E (sst)	Copper alloy	19 [0.75]	6,35 [0.25]	Front
	LSZ251F (sst)	Copper alloy	19 [0.75]	6,35 [0.25]	Back
	<b>Adjustable – 38,1 [1.5] in to 3.5 in radius</b>				
	LSZ52	Rollerless	n/a	n/a	n/a
	LSZ52A	Nylon	19 [0.75]	6,35 [0.25]	Back
	LSZ52C	Nylon	19 [0.75]	6,35 [0.25]	Front
	LSZ52E	Nylon	19 [0.75]	33,0 [1.30]	Front
	LSZ52J	Nylon	25,4 [1.0]	12,7 [0.50]	Front
	LSZ52K	Nylon	38,1 [1.5]	6,35 [0.25]	Front
	LSZ52M	Nylon	50,8 [2.0]	6,35 [0.25]	Front
	LSZ52N	Nylon	19 [0.75]	12,7 [0.50]	Front
	LSZ252A (sst)	Nylon	19 [0.75]	6,35 [0.25]	Front
	LSZ252C (sst)	Nylon	19 [0.75]	6,35 [0.25]	Back
	LSZ252E (sst)	Copper alloy	19 [0.75]	6,35 [0.25]	Front
	LSZ252F (sst)	Copper alloy	19 [0.75]	6,35 [0.25]	Back
	<b>Yoke – 38,1 [1.5] in radius</b>				
	LSZ53A	Nylon	19 [0.75]	6,35 [0.25]	Front/Back
	LSZ53E	Nylon	19 [0.75]	6,35 [0.25]	Back/Front
	LSZ53M	Nylon	19 [0.75]	31,7 [1.25]	Back/Front
	LSZ53S	Nylon	19 [0.75]	6,35 [0.25]	Back/Back
	<b>Rod</b>				
	LSZ54	Hub only	n/a	n/a	n/a
	LSZ54M	Alum., 140 mm [5.5 in]	Ø 3,2 [Ø 0.125]	n/a	n/a
	LSZ54N	Stainless, 330 mm [13 in]	Ø 3,2 [Ø 0.125]	n/a	n/a
	LSZ54P	Plastic rod, 305 mm [12 in]	Ø6,85 [Ø 0.27]	n/a	n/a
LSZ54W	Plastic rod, 183 mm [7.2 in]	Ø6,85 [Ø 0.27]	n/a	n/a	
	<b>Offset – 38,1 [1.5] in radius</b>				
	LSZ55	Rollerless	n/a	n/a	n/a
	LSZ55A	Nylon	19 [0.75]	6,35 [0.25]	Back
	LSZ55C	Nylon	19 [0.75]	6,35 [0.25]	Front
	LSZ55E	Nylon	19 [0.75]	12,7 [0.50]	Front
	LSZ55K	Nylon	38,1 [1.5]	6,35 [0.25]	Front

	Catalog Listing	Material	Roller Dia. mm [in]	Roller Width mm [in]	Roller Mounting
	<b>Short fixed – 1.3 in radius</b>				
	LSZ59A	Nylon	19 [0.75]	6,35 [0.25]	Front
	LSZ59C	Nylon	19 [0.75]	6,35 [0.25]	Back
	<b>One-way roller lever</b>				
	LSZ60A	Nylon	19 [0.75]	6,35 [0.25]	Front
	<b>Flexible loop</b>				
	LSZ61	Ø 4,8 [Ø 0.19] Nylatron	152 mm [6 in] flexible loop		
	LSZ618	Ø 4,8 [Ø 0.19] Nylatron	241 mm [9.5 in] flexible loop		
	LSZ54	Hub only	n/a	n/a	n/a
	<b>Spring rod</b>				
	LSZ68	Delrin rod, 305 mm [12 in]	Ø 6,35 [0.25]	n/a	n/a
	LSZ617	Delrin rod, 406 mm [16 in]	Ø 6,35 [0.25]	n/a	n/a
	LSZ686	Delrin rod, 152 mm [6 in]	Ø 6,35 [0.25]	n/a	n/a
	<b>Rubber roller levers</b>				
	LSZ51Y	Rubber	50 [2.0]	12,7 [0.5]	front
	LSZ55Y	Rubber	50 [2.0]	12,7 [0.5]	front
	LSZ52Y	Rubber	50 [2.0]	12,7 [0.5]	front
	<b>Plastic roller levers</b>				
	LSZ67AA (conveyor)*	Plastic	38,1 [1.5]	96,5 [3.8]	n/a

\* May require orientation of switch and lever to enable gravity to help restore switch to free position.

# CX Series

## ATEX COVER CLAMP ASSEMBLY FOR EUROPEAN COMPLIANCE

To specify a CX switch with ATEX, IEC Ex, or INMETRO certifications, add the letter "E" to the end of the catalog listing: 11CX2E.

