

Declaration of conformity

Simple apparatus for explosion-proof equipment

Product description: Non illuminated switches

Manufacturer and Address:

IDEC CORPORATION

2-6-64 Nishimiyahara, Yodogawa-Ku, Osaka 532-0004 Japan

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Products covered by this declaration: Details are in the appendix

The products listed in the Appendix have been confirmed to comply with the "Simple apparatus" requirements of the following standards. This product can be used in intrinsically safe circuits in hazardous areas as described in the next section and is classified to temperature classes T6.

IEC 60079-0:2017

IEC 60079-11:2023

EN IEC 60079-0:2018

EN 60079-11:2012

GB/T 3836.1:2021

GB/T 3836.4:2021

FM Class 3600:2022

FM Class 3610:2021

ANSI/UL 60079-0:2020

ANSI/UL 60079-11:2014

UL 60079-0:7th Ed

UL 60079-11:6th Ed

CSA C22.2 No.60079-0:19

CAN/CSA C22.2 No.60079-11:14

Intrinsically safe ratings and parameters:

Ambient temperature : -20 to +60°C

Installation location : Hazardous area (Zone0, Zone1, Zone2)

Ex category and group : Details are in the appendix

Maximum input voltage : $U_i=13.2V$

Maximum input current : $I_i=14.2mA$ (Common wiring parameter : $(14.2 \times n)mA$)

Maximum input power : $P_i=46.9mW$ (Common wiring parameter : $(46.9 \times n)mW$)

Maximum internal capacitance : $C_i=0nF$ (Common wiring parameter : $0nF$)

Maximum internal inductance : $L_i=0\mu H$ (Common wiring parameter : $0\mu H$)

Note. $n = 16$ max.

It has been confirmed that the product is intrinsically safe only when used within the above parameters. Switches must be connected to EB3C Relay Barrier or EB3N Relay Barrier.

Signature:

Yasunori Tsujioka

Manager

R & D Division

Date: 24 October, 2024

Appendix:

Ex category and group : Ex □ ○ T6 ※

□ = Level of protection Ex category and group

○ = Gas group

※ = EPL

1. Non-illuminated Push buttons

Mount Hole	Series	Button Shape	Part No.	Gas group											
				II A			II B			II C					
				Level of protection / EPL											
				ia	ib	ic	ia	ib	ic	ia	ib	ic			
Ga	Gb	Gc	Ga	Gb	Gc	Ga	Gb	Gc							
φ 16	A6	All	AB6□	○	○	○	○	○	○	○	× (※○)	○	○		
	LB	All	LB□B	○	○	○	○	○	○	○	× (※○)	○	○		
φ 22	HW	Flush	HW1B-□1	○	○	○	○	○	○	○	×	○	○		
		Extended	HW1B-□2	○	○	○	○	○	○	○	×	× (※○)	× (※○)		
		φ29mm Mushroom	HW1B-□3	○	○	○	×	(※○)	○	○	×	×	(※○)	×	(※○)
		φ40mm Mushroom	HW1B-□4	○	○	○	×	(※○)	○	○	×	×	(※○)	×	(※○)
		φ60mm Mushroom	HW1B-M5	×	(※○)	○	○	○	×	(※○)	○	○	×	×	×
		Square Flush	HW2B-□1	○	○	○	○	○	○	○	×	×	(※○)	×	(※○)
		Square Extended	HW2B-□2	○	○	○	×	(※○)	○	○	×	×	(※○)	×	(※○)
		Round Flush w/Square Bezel	HW3B-□1	○	○	○	○	○	○	○	×	×	(※○)	×	(※○)
		Round Extended w/Square Bezel	HW3B-□2	○	○	○	×	(※○)	○	○	×	×	(※○)	×	(※○)
		φ29mm Mushroom w/Square Bezel	HW3B-□3	○	○	○	×	(※○)	○	○	×	×	(※○)	×	(※○)
		LW	Round Flush	LW1B-□1	○	○	○	○	○	○	○	×	(※○)	○	○
	Square Flush		LW2B-□1	○	○	○	○	○	○	○	×	(※○)	○	○	
	Round Flush with Square Beze		LW3B-□1	○	○	○	○	○	○	○	×	(※○)	○	○	
	Round Extended		LW1B-□2	○	○	○	○	○	○	○	×	(※○)	○	○	
	Square Extended		LW2B-□2	○	○	○	○	○	○	○	×	○	○	○	
	Round Extended with Square Bezel		LW3B-□2	○	○	○	○	○	○	○	×	○	○	○	
	TW	φ30mm Mushroom	LW1B-□3	○	○	○	○	○	○	○	×	×	(※○)	×	(※○)
		Flush	ABW1 , AOW1	○	○	○	○	○	○	○	×	(※○)	○	○	
		Extended	ABW2 , AOW2	○	○	○	○	○	○	○	×	(※○)	○	○	
		Extended w/Full Shroud	ABFW2 , AOFW2	○	○	○	○	○	○	○	×	(※○)	○	○	
		φ29mm Mushroom	ABW3 , AOW3	○	○	○	○	○	○	○	×	(※○)	○	○	
		φ40mm Mushroom	ABW4 , AOW4	○	○	○	○	○	○	○	×	×	(※○)	×	(※○)
		φ40mm Mushroom w/Full Shroud	ABGW4	○	○	○	○	○	○	○	×	(※○)	○	○	
		φ29mm Mushroom Pushlock Turn Reset	AVW3	○	○	○	○	○	○	○	×	(※○)	○	○	
		φ40mm Mushroom Pushlock Turn Reset	AVW4	○	○	○	○	○	○	○	×	×	(※○)	×	(※○)
		φ40mm Mushroom Push Turn Lock	AJW4	○	○	○	○	○	○	○	×	×	(※○)	×	(※○)
	TW	φ29mm Mushroom Pushlock Key Reset	AXW3	○	○	○	○	○	○	○	×	○	○	○	
φ40mm Mushroom Pushlock Key Reset		AXW4	○	○	○	×	(※○)	○	○	×	×	(※○)	×	(※○)	
φ40mm Mushroom Push Pull		AYW4	○	○	○	×	(※○)	○	○	×	×	(※○)	×	(※○)	
Square Flush		ABQW1 , AOQW1	○	○	○	○	○	○	○	×	×	(※○)	×	(※○)	
Square Extended		ABQW2 , AOQW2	○	○	○	×	(※○)	○	○	×	×	(※○)	×	(※○)	

*Please refer to the catalog for detailed part numbers.

※ : See supplements on the last page.

Mount Hole	Series	Buttun Shape	Part No.	Gas group									
				II A			II B			II C			
				Level of protection / EPL									
				ia	ib	ic	ia	ib	ic	ia	ib	ic	
Ga	Gb	Gc	Ga	Gb	Gc	Ga	Gb	Gc					
φ 22	YW	Flush w/Plastic Bezel	YW1B-□1	○	○	○	○	○	○	×	○	○	
		Extended w/Plastic Bezel	YW1B-□2	○	○	○	○	○	○	×	× (※○)	× (※○)	
		φ40mm Mushroom w/Plastic Bezel	YW1B-□4	○	○	○	×	(※○)	○	○	×	× (※○)	× (※○)
		Flush w/Metal Bezel	YW4B-□1	○	○	○	○	○	○	×	(※○)	○	○
		Extended w/Metal Bezel	YW4B-□2	○	○	○	○	○	○	×	(※○)	○	○
		φ40mm Mushroom w/Metal Bezel	YW4B-□4	○	○	○	○	○	○	×	× (※○)	× (※○)	
φ 30	TWN TWND	Flush	ABN1 , AON1 , ABD1 , AOD1	○	○	○	○	○	○	×	(※○)	○	○
		Extended	ABN2 , AON2 , ABD2 , AOD2	○	○	○	○	○	○	×	(※○)	○	○
		Extended w/Half Shroud	ABN2G , AON2G , ABGD2 , AOGD2	○	○	○	○	○	○	×	(※○)	○	○
		Extended w/Full Shroud	ABN2F , AON2F , ABFD2 , AOFD2	○	○	○	○	○	○	×	(※○)	○	○
		φ40mm Mushroom	ABN3 , AON3 , ABD3 , AOD3	○	○	○	×	(※○)	○	○	×	× (※○)	× (※○)
		φ40mm Mushroom w/Full Shroud	ABN3G , ABGD3 , AOGD3	○	○	○	○	○	○	×	(※○)	○	○
		φ65mm Jumbo Mushroom	ABN4 , ABD4	×	(※○)	○	○	○	○	×	× (※○)	× (※○)	
		φ65mm Jumbo Mushroom w/ Shallow Shroud	ABN4G , ABGD4	×	(※○)	○	○	○	○	×	× (※○)	× (※○)	
		φ65mm Jumbo Mushroom w/ Deep Shroud	ABN4F , ABFD4	○	○	○	×	(※○)	○	○	×	× (※○)	× (※○)
		φ40mm Mushroom Pushlock Turn Reset	AVN3 , AVD3	○	○	○	×	(※○)	○	○	×	× (※○)	× (※○)
		φ40mm Mushroom Push Turn Lock	AJN3 , AJD3	○	○	○	×	(※○)	○	○	×	× (※○)	× (※○)
		φ40mm Mushroom Pull	AZN3 , AZD3	○	○	○	×	(※○)	○	○	×	× (※○)	× (※○)
		φ40mm Mushroom Push-Pull	AYD3	○	○	○	×	(※○)	○	○	×	× (※○)	× (※○)
		Pin Lock	ABD8P	○	○	○	○	○	○	○	×	(※○)	○

*Please refer to the catalog for detailed part numbers.

※ : See supplements on the last page.

2. Non-illuminated Selector switches

Mount Hole	Series	Buttun Shape	Part No.	Gas group									
				II A			II B			II C			
				Level of protection / EPL									
				ia	ib	ic	ia	ib	ic	ia	ib	ic	
Ga	Gb	Gc	Ga	Gb	Gc	Ga	Gb	Gc					
φ 16	A6	All	AS6□	○	○	○	○	○	○	×	(※○)	○	○
	LB	All	LB□S , LB□K , LB□T	○	○	○	○	○	○	×	(※○)	○	○
φ 22	HW	Knob Operator	HW1S	○	○	○	○	○	○	×	× (※○)	× (※○)	
		Key Operator	HW1K	○	○	○	○	○	○	×	○	○	
	LW	Round	LW1S	○	○	○	○	○	○	×	○	○	
		Round with Square Bezel	LW3S	○	○	○	○	○	○	×	× (※○)	× (※○)	
		Round Key Operator	LW1K	○	○	○	○	○	○	×	○	○	
		Round with Square Bezel Key Operator	LW3K	○	○	○	○	○	○	×	× (※○)	× (※○)	
	TW	Knob Operator	ASW	○	○	○	○	○	○	×	○	○	
		Lever Operator	ASW□L	○	○	○	○	○	○	×	× (※○)	× (※○)	
		Key Operator	ASW□K	○	○	○	○	○	○	×	(※○)	○	○
	YW	Knob Operator w/Plastic Bezel	YW1S	○	○	○	×	(※○)	○	○	×	× (※○)	× (※○)
Knob Operator w/Metal Bezel		YW4S	○	○	○	○	○	○	×	○	○		
φ 30	TWN TWND	Knob Operator	ASN , ASD	○	○	○	○	○	○	×	(※○)	○	○
		Lever Operator	ASN□L , ASD□L	○	○	○	○	○	○	×	× (※○)	× (※○)	
		Key Operator	ASN□K , ASD□K	○	○	○	○	○	○	×	(※○)	○	○

*Please refer to the catalog for detailed part numbers.

※ : See supplements on the last page.

3. Non-illuminated Emergency stop switches

Mount Hole	Series	Buttun Shape	Part No.	Gas group								
				II A			II B			II C		
				Level of protection / EPL								
				ia	ib	ic	ia	ib	ic	ia	ib	ic
Ga	Gb	Gc	Ga	Gb	Gc	Ga	Gb	Gc				
φ 16	X6	φ30mm Mushroom	AB6E-3	○	○	○	× (※○)	○	○	×	× (※○)	× (※○)
		φ40mm Mushroom	AB6E-4	○	○	○	× (※○)	○	○	×	× (※○)	× (※○)
	XA	φ29mm Mushroom	XA1E-BV3	○	○	○	× (※○)	○	○	×	× (※○)	× (※○)
		φ30mm Mushroom	XA1E-BV3									
		φ40mm Mushroom	XA1E-BV4	○	○	○	× (※○)	○	○	×	× (※○)	× (※○)
φ 22	XW	φ38 Mushroom with Mechanical indicator	XW1E-BV4	× (※○)	○	○	× (※○)	○	○	×	× (※○)	× (※○)
		φ40mm Mushroom	XW1E-BV4	× (※○)	○	○	× (※○)	○	○	×	× (※○)	× (※○)
		φ60mm Mushroom	XW1E-BV5	× (※○)	○	○	× (※○)	○	○	×	×	×
	YW	φ40mm Mushroom	YW1B	× (※○)	○	○	× (※○)	○	○	×	× (※○)	× (※○)
φ 30	XN	φ40mm Mushroom	XN1E-BV4	× (※○)	○	○	× (※○)	○	○	×	× (※○)	× (※○)
		φ44mm Mushroom	XN4E-BL4	× (※○)	○	○	× (※○)	○	○	×	× (※○)	× (※○)
		φ60mm Mushroom	XN1E-BV5	× (※○)	○	○	× (※○)	○	○	×	×	×

*Please refer to the catalog for detailed part numbers.

※ : See supplements on the last page.

4. Enabling Switches

Series	Gas group								
	II A			II B			II C		
	Level of protection / EPL								
	ia	ib	ic	ia	ib	ic	ia	ib	ic
Ga	Gb	Gc	Ga	Gb	Gc	Ga	Gb	Gc	
HE2B	○	○	○	× (※○)	○	○	×	× (※○)	× (※○)
HE3B	○	○	○	× (※○)	○	○	×	× (※○)	× (※○)
HE5B	○	○	○	○	○	○	× (※○)	○	○
HE6B	○	○	○	× (※○)	○	○	×	× (※○)	× (※○)
HE1B	○	○	○	○	○	○	×	× (※○)	× (※○)

*Please refer to the catalog for detailed part numbers.

※ : See supplements on the last page.

5. Safety Interlock

Series	Gas group								
	II A			II B			II C		
	Level of protection / EPL								
	ia	ib	ic	ia	ib	ic	ia	ib	ic
Ga	Gb	Gc	Ga	Gb	Gc	Ga	Gb	Gc	
HS6B	× (※○)	○	○	× (※○)	○	○	×	× (※○)	× (※○)
HS5L	×	× (※○)	× (※○)	×	× (※○)	× (※○)	×	×	×
HS5L-K	×	× (※○)	× (※○)	×	× (※○)	× (※○)	×	×	×
HS5L-K(*2)	○	○	○	○	○	○	×	○	○
HS5D	× (※○)	× (※○)	× (※○)	×	× (※○)	× (※○)	×	×	×
HS5E-K	×	× (※○)	× (※○)	×	× (※○)	× (※○)	×	×	×
HS5E-K(*3)	○	○	○	○	○	○	×	○	○

*1 Please refer to the catalog for detailed part numbers.

※ : See supplements on the last page.

*2 When using an explosion-proof cover (HS9Z-BC51)

*3 When using an explosion-proof cover (HS9Z-BC53)

6. Proximity

	Gas group								
	II A			II B			II C		
	Level of protection / EPL								
	ia	ib	ic	ia	ib	ic	ia	ib	ic
Series	Ga	Gb	Gc	Ga	Gb	Gc	Ga	Gb	Gc
DPRI	○	○	○	○	○	○	×	× (※○)	× (※○)

*Please refer to the catalog for detailed part numbers.

※ : See supplements on the last page.

※○ can be used if the following conditions are met.

- Material of container is metal enclosure.
- Metal enclosures must be grounded.
- For EPL Ga
10 % in total of aluminium, magnesium, titanium and zirconium, with no more than 7,5 % in total of magnesium, titanium and zirconium.
- For EPL Gb
7.5 % in total of magnesium, titanium and zirconium.
- Case of not fulfill above condition, need below showing.
“Warning : Do not shock or scrape metal parts. There is a risk of fire hazard.”