

**YS-Frame - Miniature Switch Disconnecter**



1 Pole  
DIN mount



1 Pole  
DIN mount



2 Pole  
DIN mount

**Product Category**

- **POLARISED PRODUCT**  
300 Vdc, 1 Pole & 2 Pole  
600 Vdc, 2 Pole in series  
600 Vdc, 4 Pole (2 Pole in series + 2 Pole in series)
- **UNPOLARISED PRODUCT**  
150 Vdc, 1 Pole & 2 Pole  
300 Vdc, 2 Pole in series

**Applications**

- Solar equipment
- DC circuit isolation
- UPS equipment
- Alternative energy equipment
- Battery & switching

**Features**

- High energy DC switch
- Ultra compact - 13 mm wide module
- **YSD** - DIN mount, 45 mm front escutcheon (**Grey**)
- **YSM** - DIN mount, 57 mm front escutcheon (**Black**)
- ON and OFF indication
- Suitable for electrical isolation
- RoHS compliant
- Box type main terminals



(UL 489B)



(GB 14048.3)



(IEC 60947-3)



*Hydraulic-Magnetic Circuit Breakers 100% rated, unaffected by ambient temperature*

YS-FRAME-DAT  
REV. E  
JUNE 2023  
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Data Sheet  
Page 1 of 6

## YS-Frame - Miniature Switch Disconnecter

### Technical Data

Product Type	Switch Disconnecter YS		
Approvals	UL 489 B, GB 14048.3, IEC 60947-3		
Number of Poles	1	2	4 (2 pole in series + 2 pole in series)
Operating Voltages & Withstand Capacity	150 Vdc @ 1 kA unpolarised 300 Vdc @ 1 kA polarised	150 Vdc @ 1 kA polarised 300 Vdc @ 1 kA unpolarised	600 Vdc @ 1 kA polarised
Current Rating	70 A	70 A	40 A

Verify approvals for specific ratings in accordance with the relevant test certificates.

Product Type	Switch Disconnecter YS
Ambient Operating Temperature	-40°C to +85°C
Mounting Options	Dual (DIN & mini rail) mount, DIN rail mount
Endurance	10000 operations; 1500 with current, 8500 without current (IEC 60947-3 Clause 8.3.4.1)* 1000 operations with current, 1000 operations without current (UL 489B Clause 10)*
Dielectric Strength	1000 - 2000 Vac for one minute (IEC 60947-3 Clause 8.1.3.3)* 1000 Vac plus twice the rated voltage for one minute (UL 489B Clause 15)*
Rated Impulse Withstand Voltage	4 kV (IEC 60947-3 Clause D.7.2.3)*
Weight	110 g per pole
Altitude	Certification tests conducted at altitude ≈ 2000 metres. Will operate at higher altitudes.
Shock	20 G (IEC 60068-2-27)
Vibration	3 G (IEC 60068-2-6) (sinusoidal wave)
Flammability	I3 - Ignition does not persist at 850°C after glow wire is withdrawn with an oxygen index of ≥ 28
Toxicity	F1 - Smoke index of ≤ 20 which determines the fume class
Pollution Degree	PD2 - Normally only non-conductive pollution occurs. Temporary conductivity caused by condensation is to be expected.

\* Refer to the standard for details

Switch Disconnecter	Wire Size (IEC)	Wire Gauge (UL)	Torque (IEC)	Torque (UL)	Comments
Main Terminals	10 mm <sup>2</sup> - 25 mm <sup>2</sup>	8 – 4 AWG	3.5 N.m	30 lbf.in	Pz #2 Combi head

Note:  
All information subject to testing and certification. For the latest information contact CBI.

## YS-Frame - Miniature Switch Disconnecter

### Long Code

Example Code: YSD- - -1 -(13)--70A- B03 - - - -

Group	1	2	3	4	5	6	7	8	9	10
Requirement	YSD frame	Auxiliary	Number of poles	Module width	N/A	Current rating	Polarity marking, voltage & construction	Shunt trip	Termination	Customer Specific
Long Code	YSD	-	1	(13)	-	70A	B03	-	-	-

### Ordering Information

Group	Code	Description	Comments
Group 1: Frame Type	YSD	YS - Frame (13 mm switch isolator DIN mounting 45 mm front escutcheon)	Grey shell
	YSM	YS - Frame (13 mm switch isolator DIN mounting 57 mm front escutcheon)	Black shell
	-	Not applicable	
Group 2: Auxiliary	-	Not applicable	
	1	One pole	
	2	Two pole	
Group 3: Number of poles	4	Four pole	
	(13)	13 mm module	
	-	Not applicable	
Group 4: Module Width	-	Not applicable	
	40 A	40 A (4p, (2p series + 2p series))	
	70 A	70 A (1p, 2p, ( 2p series))	
Group 5: N/A	150	150 Vdc Unpolarised	
	300	300 Vdc Unpolarised, Series Connection	
	600	600 Vdc Unpolarised, Series Connection	
	B03	300 Vdc Polarised, Positive Bottom	
	BT3	300 Vdc Polarised, (1 + 1 = 2p) - Positive Bottom / Positive Top	
	BT6	600 Vdc Polarised, Series Connection, (2p) - Positive Bottom / Positive Top	
	BU6	600 Vdc Polarised, Series Connection, (2 + 2 = 4p) - Connection @ Bottom (Bottom Positive, Bottom Negative / Bottom Negative, Bottom Positive)	
	-	Not applicable	
Group 6: Current Rating	-	Not applicable	
	-	Not applicable	
	-	Not applicable	
Group 7: Polarity Marking, Voltage & Construction	-	Not applicable	
	-	Not applicable	
	-	Not applicable	
Group 8: Shunt Trip	-	Not applicable	
	-	Not applicable	
	-	Not applicable	
Group 9: Termination	-	No Busbar supplied – if applicable the Busbar / Cable is to be provided & field fitted by the Customer	Standard
	S	Factory fitted Busbar – incoming circuit CONNECTION @ BOTTOM	
	U	Busbar to be supplied loose in a KIT FORM & to be field fitted by the customer	
Group 10: Customer Specific	-	Not applicable	
	-	Not applicable	

**For options not listed, please contact CBI for assistance**

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## YS-Frame - Miniature Switch Disconnecter

DIN mounting 45 mm front escutcheon			DIN mounting 57 mm front escutcheon	
AMP	BOM No.	Long Code	BOM No.	Long Code
<b>One pole - (300 Vdc) - 13 mm total width</b>				
70 A	YSD1070B03	YSD-1(13)-70A-B03	YSM1070B03	YSM-1(13)-70A-B03
<b>Two pole - (300 Vdc) - 26 mm total width</b>				
70 A	YSD2070BT3	YSD-2(13)-70A-BT3	YSM2070BT3	YSM-2(13)-70A-BT3
<b>Two pole - Series connection - (600 Vdc) - 26 mm total width</b>				
70 A	YSD2070BT6	YSD-2(13)-70A-BT6	YSM2070BT6	YSM-2(13)-70A-BT6
<b>Four pole - (2pole series + 2pole series) connection - (600 Vdc) - 52 mm total width</b>				
40 A	YSD4040BU6	YSD-4(13)-40A-BU6	YSM4040BU6	YSM-4(13)-40A-BU6

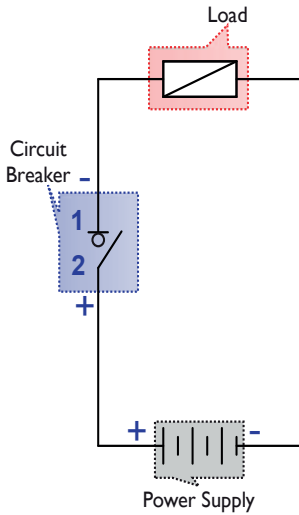
DIN mounting 45 mm front escutcheon			DIN mounting 57 mm front escutcheon	
AMP	BOM No.	Long Code	BOM No.	Long Code
<b>One pole - (150 Vdc) - 13 mm total width</b>				
70 A	YSD1070150	YSD-1(13)-70A-150	YSM1070150	YSM-1(13)-70A-150
<b>Two pole - (150 Vdc) - 26 mm total width</b>				
70 A	YSD2070150	YSD-2(13)-70A-150	YSM2070150	YSM-2(13)-70A-150
<b>Two pole - Series connection - (300 Vdc) - 26 mm total width</b>				
70 A	YSD2070300S	YSD-2(13)-70A-300S	YSM2070300S	YSM-2(13)-70A-300S

Note:

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# YS-Frame - Miniature Switch Disconnecter

## Possible Connection Diagrams



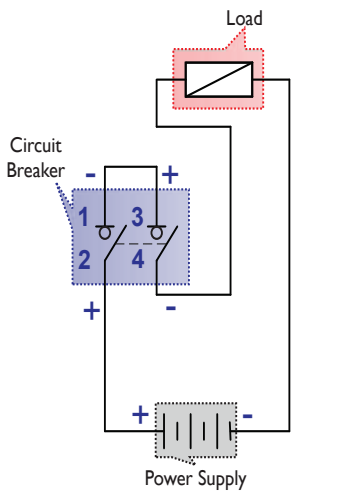
**Figure 1:**  
**Single Pole**  
(150 Vdc Unpolarised, 300 Vdc Polarised)

**Figure 1: Single Pole, Single Break**  
(150 Vdc Unpolarised (150), 300 Vdc Polarised (B03))  
This circuit makes use of a single pole switch connected in series with the load.

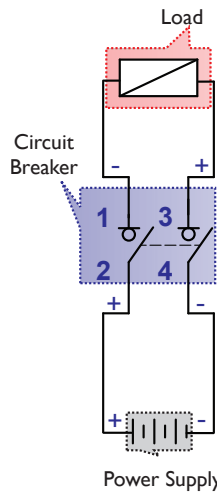
**Figure 2: Double Pole, Single Break**  
(300 Vdc Unpolarised (300), 600 Vdc Polarised (BT6))  
This circuit makes use of a double pole switch connected in series with the load.

**Figure 3: Double Pole, Double Break, Isolates load**  
(150 Vdc Unpolarised (150), 300 Vdc Unpolarised (300), 300 Vdc Polarised (B03), 600 Vdc Polarised (B06))  
This circuit makes use of a double pole switch where the load is between the contacts, providing full isolation to the load.

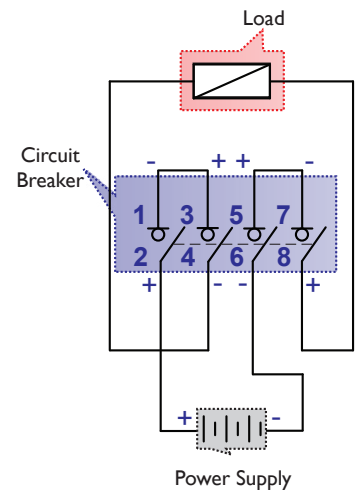
**Figure 4: Four Pole, Double Break, Isolates load**  
(600 Vdc Polarised (BU6))  
This circuit makes use of a four pole switch where the load is between the contacts, providing full isolation to the load.



**Figure 2:**  
**Double Pole**  
(300 Vdc Unpolarised,  
600 Vdc Polarised)



**Figure 3:**  
**Double Pole.**  
**Isolates Load**  
(150 Vdc Unpolarised,  
300 Vdc Polarised / Unpolarised,  
600 Vdc Polarised)



**Figure 4:**  
**Four Pole.**  
**Isolates Load**  
(600 Vdc Polarised)

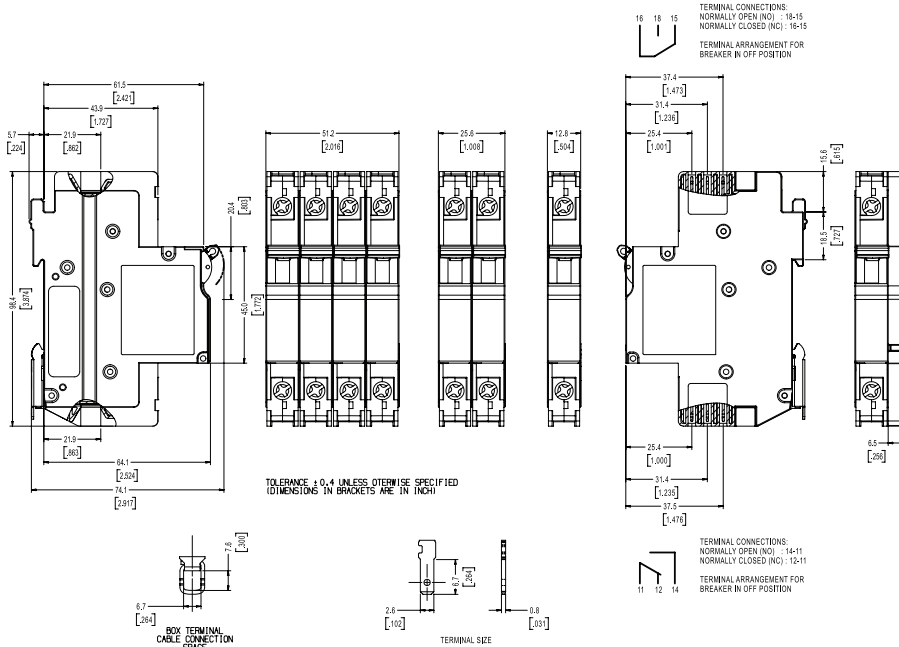
**Notes:**

1. Unpolarised: Products are rated at 150 Vdc per pole and will function at voltages below rated voltage
2. Polarised: Products are rated at 300 Vdc per pole and will function at voltages below rated voltage
3. Other types of connections are possible
4. Verify for the specific application and ensure compliance

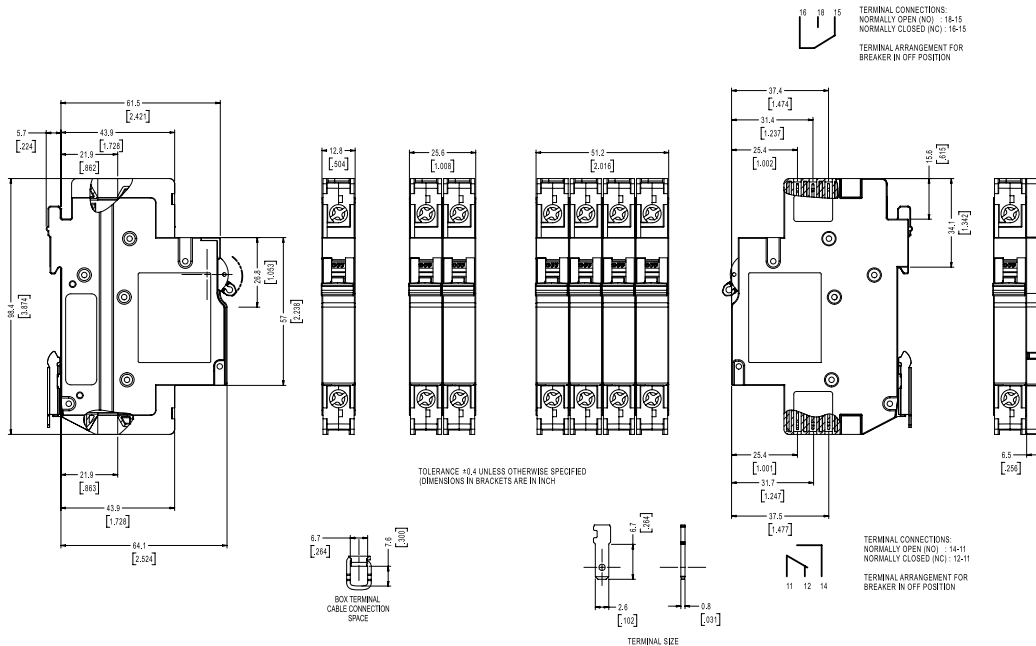
Note:  
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**YS-Frame - Miniature Switch Disconnecter**

**Outline Dimensions: DIN Mount 45 mm (YSD) Front Escutcheon (Grey)**



**Outline Dimensions: DIN Mount 57 mm (YSM) Front Escutcheon (Black)**



Note:  
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