

Bulletin 140U D-Frame

Product Selection — 30 A, D-Frame

Standards

- UL 489
- CSA C22.2, No. 5
- IEC / EN 60947-1, -2

Ratings

- Heating, air conditioning and refrigeration (HACR)
- Switching duty (SWD; 15 & 20 A)
- High-intensity-discharge (HID; 0.5...25 A)

2-Pole Thermal-Magnetic, Fixed Thermal-Fixed Magnetic

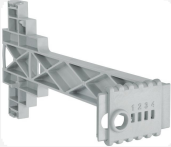
Rated Current <i>I_n</i>	Thermal Trip (Fixed) <i>I_r</i> = <i>I_n</i>	Magnetic Trip <i>I_m</i> =	Breaking Capacity (50 Hz) [kA]								Interrupting Rating (60 Hz) [kA]			Cat. No. ★
			230...240V		400...415V		525V		690V		240V AC ‡	480Y/277V AC ‡	600Y/347V AC	
[A]	[A]	[A]	<i>I_{cu}</i>	<i>I_{cs}</i>	<i>I_{cu}</i>	<i>I_{cs}</i>	<i>I_{cu}</i>	<i>I_{cs}</i>	<i>I_{cu}</i>	<i>I_{cs}</i>				
0.5	0.5	15...20 × <i>I_n</i>	100	100	100	65	65	65	50	50	100	100	50	140U-D6D2-A50
1	1	15...20 × <i>I_n</i>	100	100	100	65	65	65	50	50	100	100	50	140U-D6D2-B10
2	2	15...20 × <i>I_n</i>	100	100	100	65	65	65	18	10	100	100	50	140U-D6D2-B20
3	3	15...20 × <i>I_n</i>	100	100	100	65	65	65	18	10	100	100	50	140U-D6D2-B30
4	4	15...20 × <i>I_n</i>	100	100	100	65	65	65	18	10	100	100	50	140U-D6D2-B40
5	5	15...20 × <i>I_n</i>	100	100	100	65	65	65	18	10	100	100	50	140U-D6D2-B50
6	6	15...20 × <i>I_n</i>	100	100	100	65	65	65	18	10	100	100	50	140U-D6D2-B60
8	8	15...20 × <i>I_n</i>	100	100	100	65	65	65	10	6	100	100	50	140U-D6D2-B80
10	10	15...20 × <i>I_n</i>	100	100	100	65	65	65	10	6	100	100	50	140U-D6D2-C10
12	12	15...20 × <i>I_n</i>	100	100	65	50	65	50	10	6	65	65	25	140U-D6D2-C12
15	15	15...20 × <i>I_n</i>	100	100	65	50	65	50	10	6	65	65	25	140U-D6D2-C15
20	20	15...20 × <i>I_n</i>	100	100	65	50	65	50	10	6	65	65	25	140U-D6D2-C20
25	25	15...20 × <i>I_n</i>	100	100	65	50	65	25	10	6	65	65	25	140U-D6D2-C25
30	30	15...20 × <i>I_n</i>	100	100	65	50	65	25	10	6	65	65	25	140U-D6D2-C30

3-Pole Thermal-Magnetic, Fixed Thermal-Fixed Magnetic

Rated Current I_n	Thermal Trip (Fixed) $I_r = I_n$	Magnetic Trip $I_m =$	Breaking Capacity (50 Hz) [kA]								Interrupting Rating (60 Hz) [kA]			Cat. No. ★
			230...240V		400...415V		525V		690V		240V AC ‡	480Y/277V AC ‡	600Y/347V AC	
[A]	[A]	[A]	I_{cu}	I_{cs}	I_{cu}	I_{cs}	I_{cu}	I_{cs}	I_{cu}	I_{cs}				
0.5	0.5	$15...20 \times I_n$	100	100	100	65	65	65	50	50	100	100	50	140U-D6D3-A50
1	1	$15...20 \times I_n$	100	100	100	65	65	65	50	50	100	100	50	140U-D6D3-B10
2	2	$15...20 \times I_n$	100	100	100	65	65	65	18	10	100	100	50	140U-D6D3-B20
3	3	$15...20 \times I_n$	100	100	100	65	65	65	18	10	100	100	50	140U-D6D3-B30
4	4	$15...20 \times I_n$	100	100	100	65	65	65	18	10	100	100	50	140U-D6D3-B40
5	5	$15...20 \times I_n$	100	100	100	65	65	65	18	10	100	100	50	140U-D6D3-B50
6	6	$15...20 \times I_n$	100	100	100	65	65	65	18	10	100	100	50	140U-D6D3-B60
8	8	$15...20 \times I_n$	100	100	100	65	65	65	10	6	100	100	50	140U-D6D3-B80
10	10	$15...20 \times I_n$	100	100	100	65	65	65	10	6	100	100	50	140U-D6D3-C10
12	12	$15...20 \times I_n$	100	100	65	50	65	50	10	6	65	65	25	140U-D6D3-C12
15	15	$15...20 \times I_n$	100	100	65	50	65	50	10	6	65	65	25	140U-D6D3-C15
20	20	$15...20 \times I_n$	100	100	65	50	65	50	10	6	65	65	25	140U-D6D3-C20
25	25	$15...20 \times I_n$	100	100	65	50	65	25	10	6	65	65	25	140U-D6D3-C25
30	30	$15...20 \times I_n$	100	100	65	50	65	25	10	6	65	65	25	140U-D6D3-C30

★ Current limiting

‡ Suitable for backfeeding at 240V and 480Y/277V.

	Description	For Use With	Cat. No.
	Load terminal cover - For UL489 compliance of front mount auxiliary contacts when installed on 140U-D - Must be ordered in multiples of 10 (10 pcs/pkg)	140M-C-AFA	140M-C-AFC
	Three-Phase Compact Busbar 45 mm spacing - Compliant with UL489 (UL508 Cat. NMTR) and IEC 64 A max. continuous current 45 mm spacing	2 connections 3 connections 4 connections 5 connections	140U-D__3 140U-D-W452 140U-D-W453 140U-D-W454 140U-D-W455
	Feeder Terminal for compact busbar - Compliant with UL489 (UL508 Cat. NMTR) and IEC 64 A max. continuous current	140U-D-W	140U-D-WTE
	Eco Connection Module — 25 A - Eco-loadfeeders mount on single DIN Rail (140U on DIN Rail) - Electrical and mechanical interconnection of 140U and 100-C (with AC coils or 12V and 24V DC electronic coils) contactors	140U-D__3 to 100-C09...-C23	140U-D-PEC23
	Flexible Wire Module — 32 A Contactor and 140U are separately mounted	140U-D__3 to 100-C09...-C43	140U-D-PF
	Extension Shaft Support - Provides consistent alignemmnt of the 140M-C-DS and 140M-C-DSL shafts with the 140M-C-DN66 or 140M-C-DRY66 door coupling handles. - It is recommended for shaft lenghts >200 mm. - Snaps on the right side of the 140M-C, -D, -F or 140U-D and allows for the addition of one side mounted auxiliary contact. Width 9 mm. - For use with screw-mounted or hat rail mounted devices.	140M-C, D, F; 140U-D	140M-C-SHS

Note:See Bulletin 140M Accessories for additonal accessories suitable for Bul. 140U-D molded case circuit breakers.

General Data

Cat. No.		140U-D
Number of Poles		2 and 3
Rated Insulation Voltage U_i		
IEC / EN	[V]	690
UL, CSA	[V]	600
Ratings		HACR
Suitable for continuous operation at 100 percent of rating only if used in cubicle space for		0.5...15 A, cubicle space 250 x 175 x 150 mm (10 x 7 x 6 inches).
Rated Impulse Withstand Voltage U_{imp}		
Pollution degree		3
Main circuits U_{imp} / Overvoltage Category		6 kV/III
Auxiliary circuits U_{imp} / Overvoltage Category		6 kV/III
Safe separation between main and auxiliary circuits		up to 400V
Rated Frequency	[Hz]	50/60
Utilization Category		
IEC 60947-2 (Circuit breaker)		A
Life Span		
Mechanical	[operations]	100 000
Electrical (I_e max.)	[operations]	10 000
Switching Frequency	[operations/h]	max. 25
Ambient Temperature		
Storage	[°C]	-40...+80
Operation	[°C]	-25...+60 (70 with 15 % I_n current reduction)
Climatic resistance		
Moisture change climate (600068-2-30)		23 °C / 83 % relative humidity and 40 °C / 92 % relative humidity, 56 cycles
Dry heat (60086-2-2)		100 °C, relative humidity <50 %, 7 days
Moisture heat (60068-2-3)		40 °C, relative humidity 93 %, 56 days
Site Altitude	[m]	to 2000 N.N.
Protection Class		IP2X, when wired
Resistance to Shock, Transport (60068-2-27)		30 g, 11 ms, all axes
Resistance to Vibration, Opertion (60068-2-6)		18 g
Overload Protection	[°C]	Yes acc. IEC/EN 60947-2, UL489, CSA 22.2, Ambient Temperature Compensation -25...+60
Phase-loss Protection		No phase loss protection
Short circuit protection (Magnetic)		fixed setting 10...20 x I_n
Total Power loss P_v		
@ I_n max.	[W]	7.5
Main Disconnect Switch Application		Yes, with accessories
Application Conditions		For utilization outside North America, Assemblies (of products) shall comply to the IEC61439-1 requirements 140U circuit breakers are intended for use in closed areas without hazardous operating conditions such as dust or explosive or corrosive gases. Enclosures of appropriate manner need to be in place to protect devices in such environments.
Standards		UL489; CSA C22.2 No. 5; IEC / EN 60947-1, -2
Certifiactions		CE; cULus listed Circuit Breaker, File No. E334037 and E33916 (accessories)

Terminal specification 140U-D

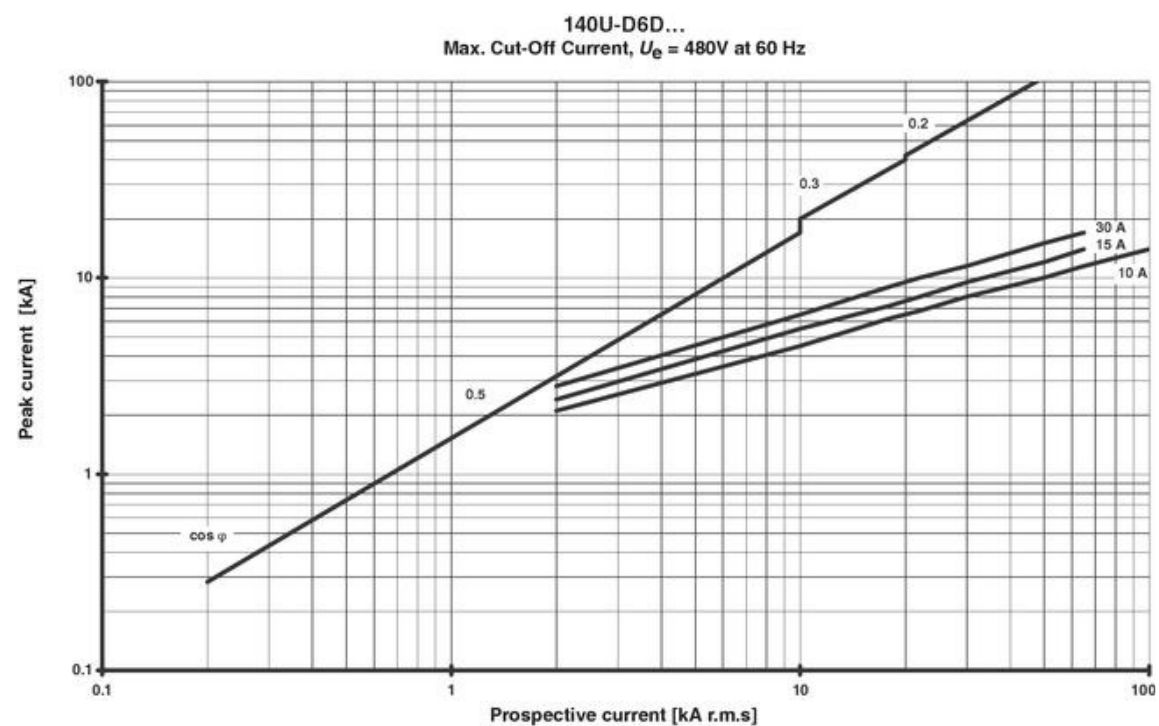
Cat. No.		140U-D...	
Use 75° C Cu wire only			
Terminal Parts Type of terminals			
Screwdriver		Pozidriv No. 2 / Blade No. 3	
	1. conductor 2. conductor	[mm ²]/[AWG] [mm ²]/[AWG]	1...6/— 1...4/—
	1. conductor 2. conductor	[mm ²]/[AWG] [mm ²]/[AWG]	1...6/— 1...6/—
	1. conductor 2. conductor	[mm ²]/[AWG] [mm ²]/[AWG]	—/No. 18...10 —/No. 18...10
	1. conductor 2. conductor	[mm ²]/[AWG] [mm ²]/[AWG]	1...6/No. 18...10 1...6/No. 18...10
Tightening torque		[N•m]/[lb•in]	2...2.5/18...22

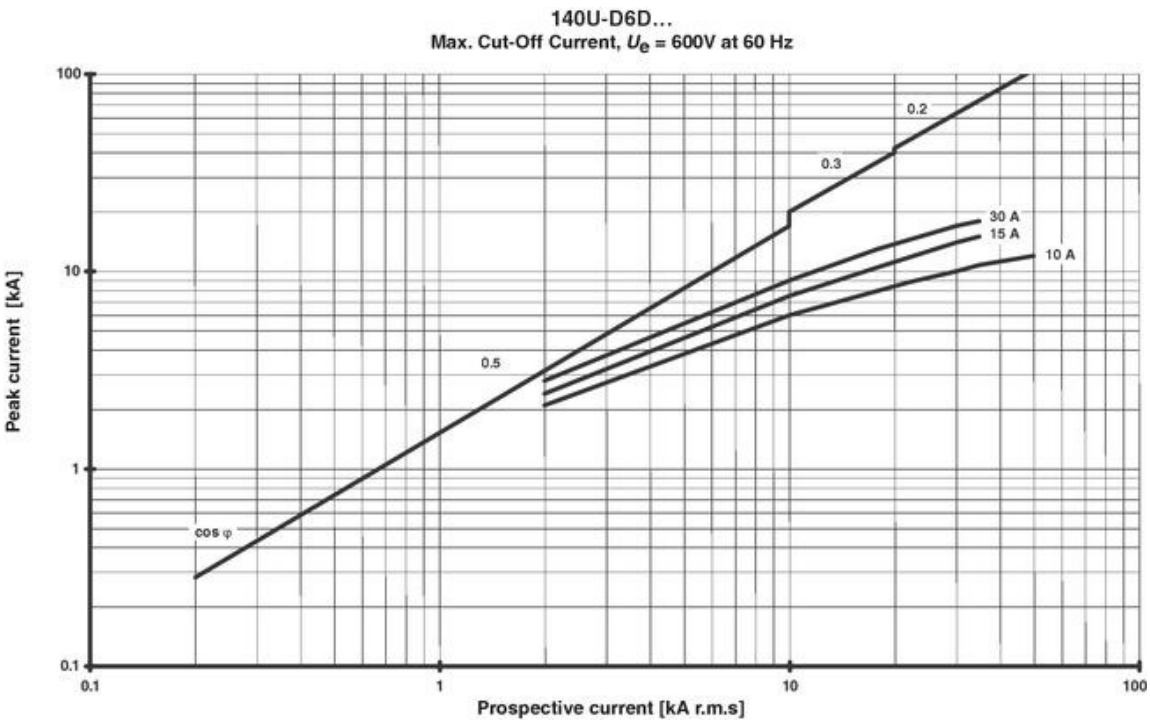
Cat. No.		140U-D-WTE	140U-D-W
Use 75° C Cu wire only			
Rated Thermal Current I_{th}	[A]	64	64
	1. conductor	[mm ²]/[AWG]	2.5...25/14...4 —
	1. conductor	[mm ²]/[AWG]	2.5...25/14...4 —
	1. conductor	[mm ²]/[AWG]	2.5...25/14...4 —
	1. conductor	[mm ²]/[AWG]	2.5...25/14...4 —
Tightening torque	[N•m]/[lb•in]	3...3.5/27...31	—

Weights

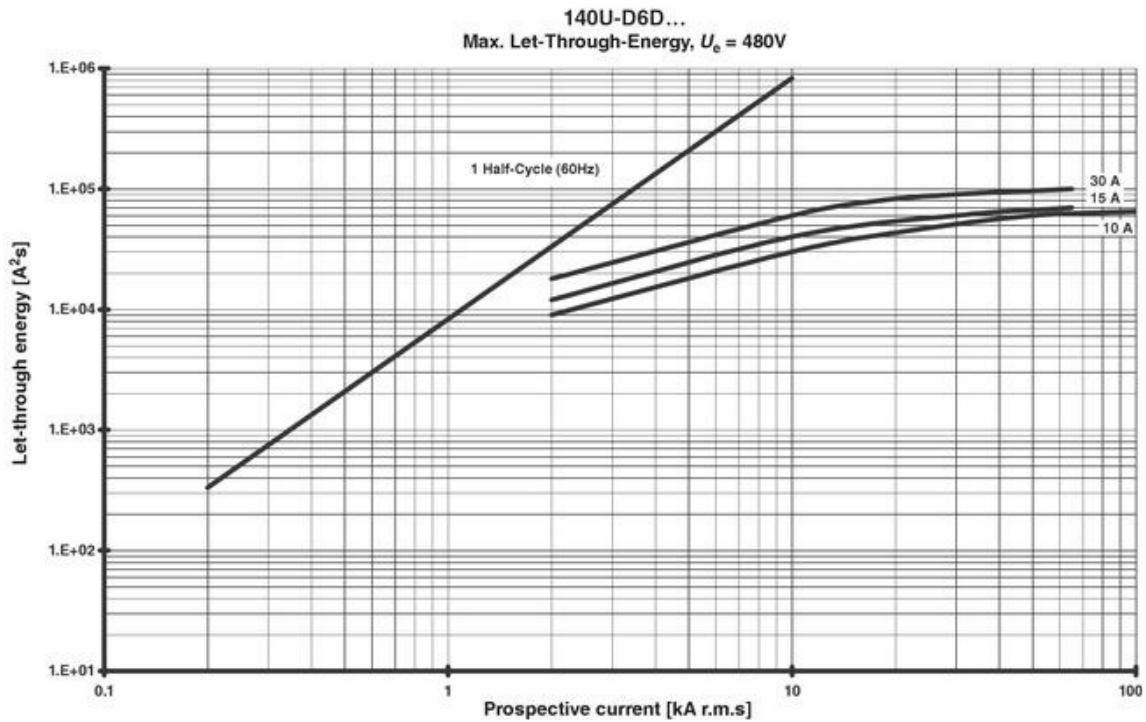
Description	Weight [g]	Cat.No.
Circuit Breakers	395	140U-D...

Bulletin 140U-D Molded Case Circuit Breakers (Maximum Cut-Off Current)

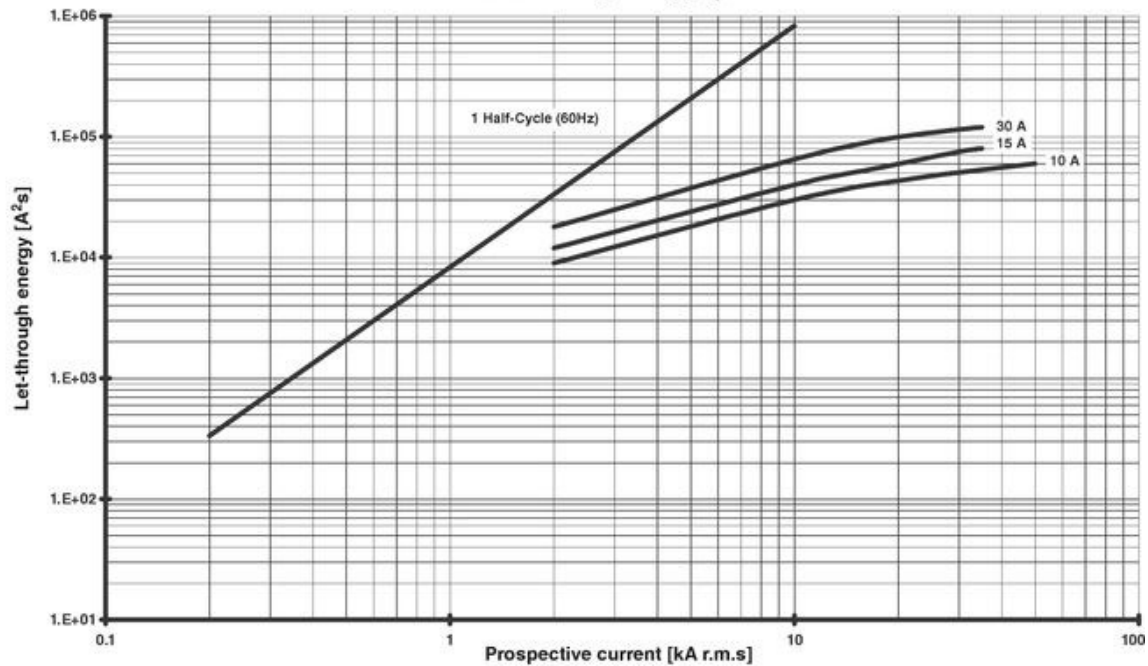




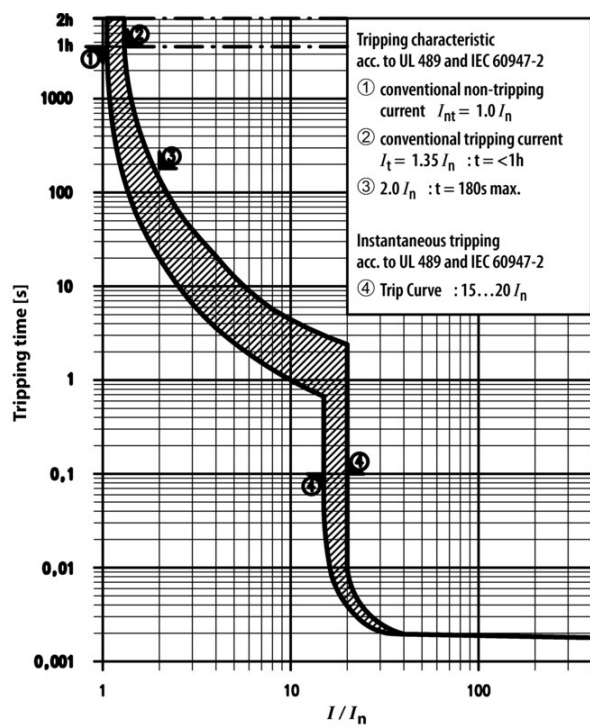
Bulletin 140U-D Molded Case Circuit Breakers (Maximum Let-Through-Energy)



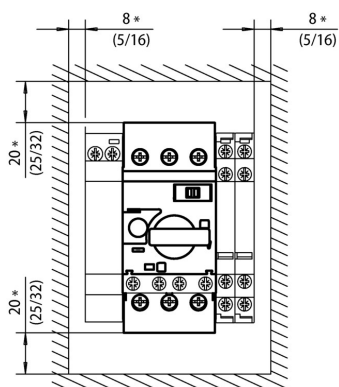
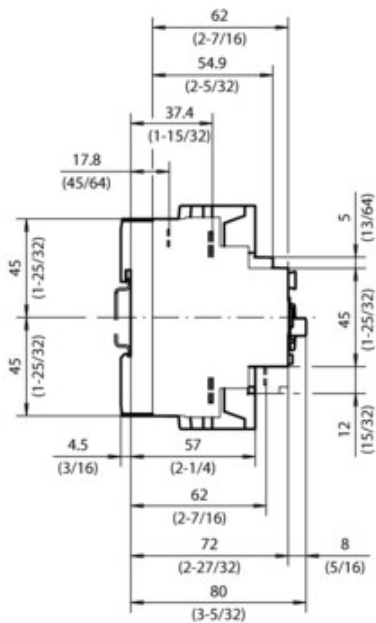
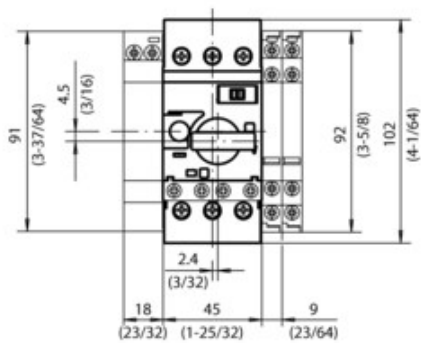
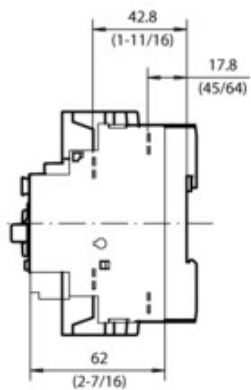
140U-D6D...
Max. Let-Through-Energy, $U_e = 600V$



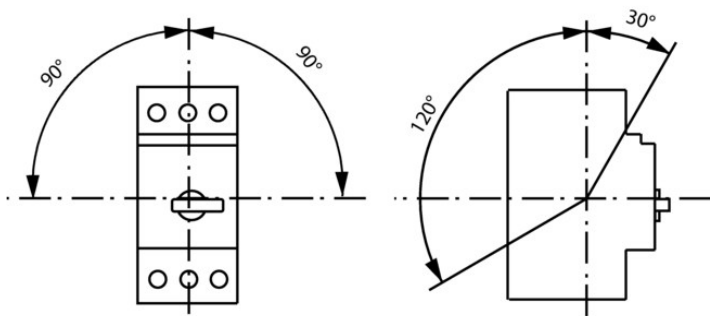
Time-Current Characteristic



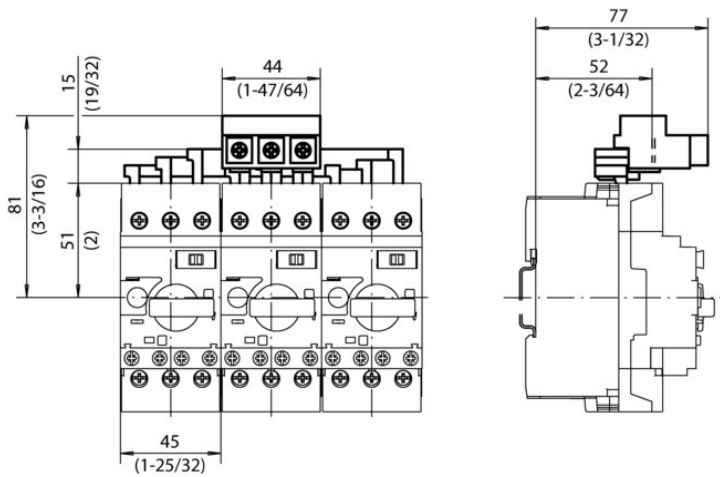
Dimensions are shown in millimeters (inches). Dimensions are not intended to be used for manufacturing purposes.



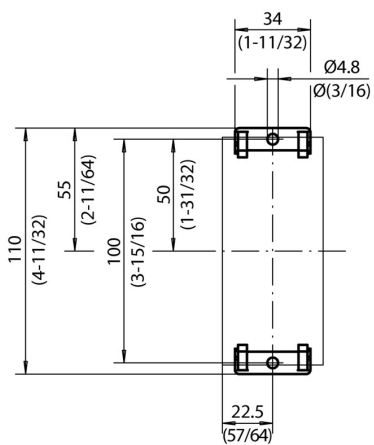
* Minimum distance to grounded parts or walls



Mounting position



Cat. No. 140U-D with Busbar



Screw Adapter 140M-C-N45 for 140U-D