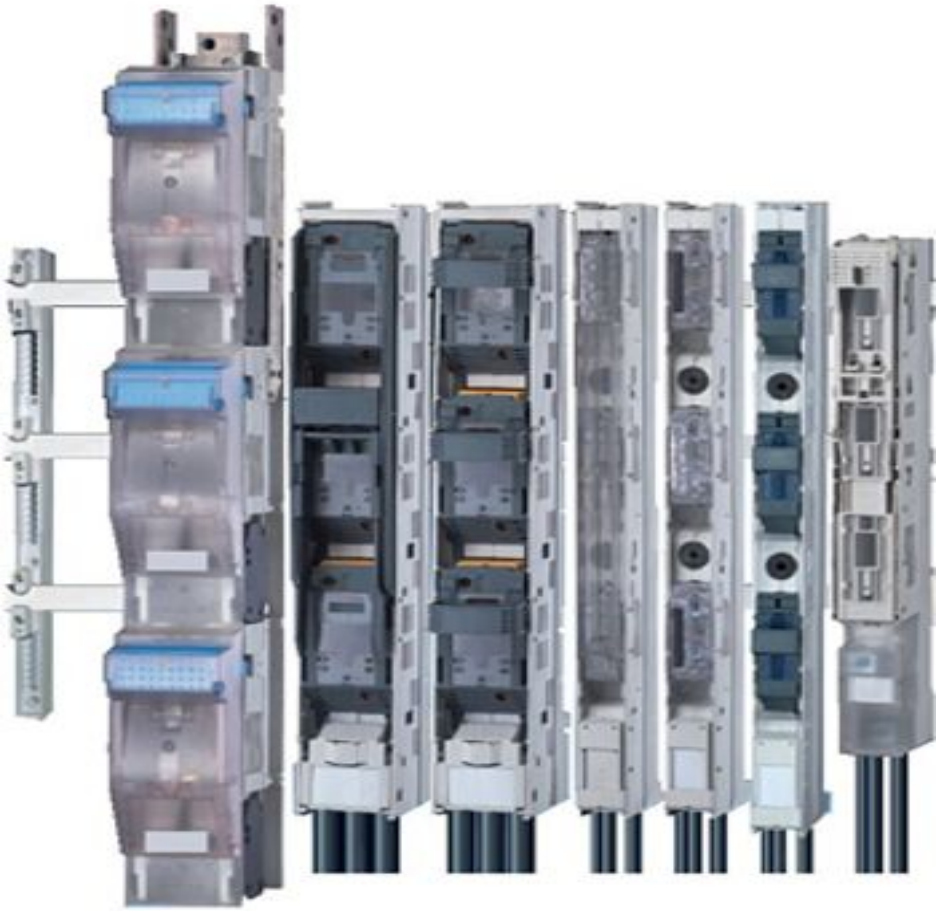
THL Fuse Disconnecting Switch(3P break simultaneously)

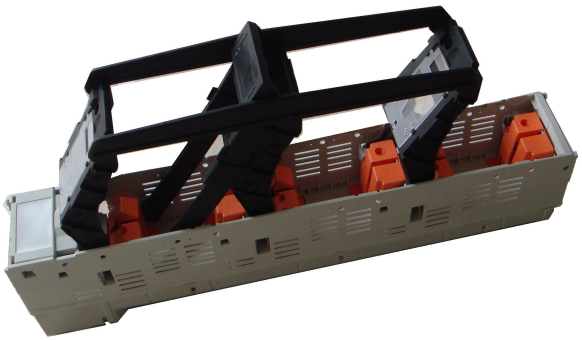
Scope of Application

THL series bar fuse disconnector is used in AC 50(60) Hz distribution unit 100mm or 185mm busbar system with rated voltage up to 690V and rated thermal current up to 1600A, it's mainly made as power supply switch and emergency switch as well as overload and short circuit protection of circuit, it has been widely used for distribution facility such as box transformer and cable branch box etc.
The product complies with standard of GB14048.3, IEC60947.3

Structure Feature

THL series bar fuse switch disconnector is mainly mounted in 100mm or 185mm busbar system, which integrates three single-pole fuse switch disconnectors in end-to-end arrangement. A contact blade seat of each phase is connected with one phase of busbar system, kinds of cable connection terminals are optional for cable outlet.
The holder carrying live part is made of high strength fibre reinforced plastic(FRP). Ag-plated fuse contact blade seat tightly connected with busbar ensures low power loss, low work temperature and high breaking capacity. Standard bolt is used for cable outlet, cable connection terminal can also added.
The shell is fixed by rotation lock, which is easy for dismounting.
THL series bar fuse switch disconnector can be fixed by screw or hook. When it's mounted with hook, the busbar doesn't need punching, which makes the installation easier , more flexible and more reliable.



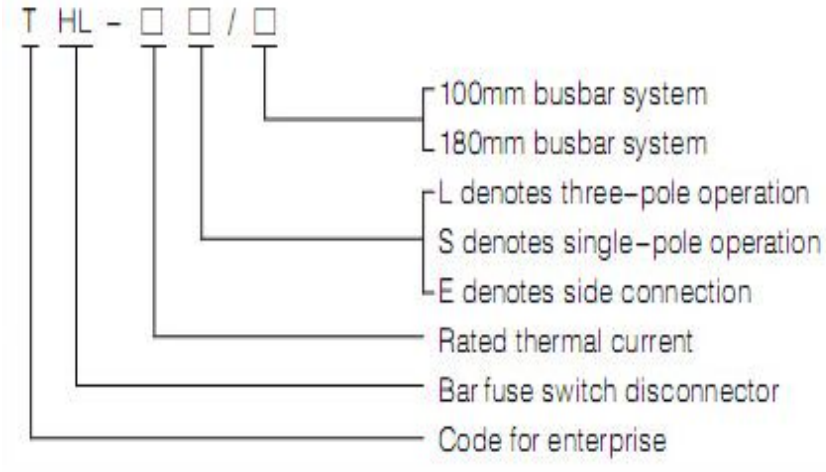


Specification

Production No.	Model and specification	Busbar system(mm)	Equipped fuse link	Note
TL001	THL-160L/100	100 (注)	NH00(RT16-00)	Three-pole break
TL002	THL-160L/185	185	NH00(RT16-00)	Three-pole break
TL003	THL-160S/185	185	NH00(RT16-00)	Single-pole break
TL004	THL-250L/185	185	NH1(RT16-1)	Three-pole break
TL005	THL-250S/185	185	NH1(RT16-1)	Single-pole break
TL006	THL-250LE/185	185	NH1(RT16-1)	Three-pole break, side connection
TL007	THL-250SE/185	185	NH1(RT16-1)	Single-pole break, side connection
TL008	THL-400L/185	185	NH2(RT16-2)	Three-pole break
TL009	THL-400S/185	185	NH2(RT16-2)	Single-pole break
TL010	THL-400LE/185	185	NH2(RT16-2)	Three-pole break, side connection
TL011	THL-400SE/185	185	NH2(RT16-2)	Single-pole break, side connection
TL012	THL-630L/185	185	NH3(RT16-3)	Three-pole break
TL013	THL-630S/185	185	NH3(RT16-3)	Single-pole break
TL014	THL-630LE/185	185	NH3(RT16-3)	Three-pole break, side connection
TL015	THL-630SE/185	185	NH3(RT16-3)	Single-pole break, side connection
TL016	THL-1600/185	185	NH4(RT17)	Single-pole break

Note: through transfer device or 185mm system.

Model and Description



Technical Characteristics

Type					THL–160				THL–250			
Electric parameter	Design operating voltage		Ue	V	AC500	AC690	DC220	DC440	AC500	AC690	DC220	DC440
	Design operating current		Le	A	160	100	160	100	250	200	250	200
	With fuse thermal current conversion		Ith	A	160	100	160	100	250	200	250	200
	With fuse thermal current conversion		Ith	A	210A with TM00				400A with TM2			
	Design frequency		–	Hz	40–60	40–60	–	–	40–60	40–60	–	–
	Design insulation voltage		Ui	V	AC690				AC690			
	Limiting design short circuit current		–	kAeff	50	50	25	25	80	80	25	25
	Design instantaneous current (1s)		Icw	kAeff	–	–	–	–	–	–	–	–
	Usage category			–	AC–22B	AC–22B	DC–21B	DC–21B	AC–22B	AC–22B	DC–21B	DC–21B
	Design closing capacity		–	A	480	300	240	150	1200	600	375	300
	Design breaking capacity		–	A	480	300	240	150	1200	600	375	300
	Design impulse voltage		Uimp	V	8	8	8	8	12	12	8	8
	Electric life (switching times)		–	–	200	300	200	300	200	200	200	200
	Total power loss at Lth (without fuse)		Pv	W	18	7	12	5	23	15	16	11
Fuse	The size complies with GB13539.2, IEC60269.2		–	–	00				1			
	Max design current (gl/gG)		Ln	A	160	100	160	100	250	200	250	200
	Max allowable power loss (1s)		Pv	W	12				32			
Mechanism parameter	Mechanical life (switching times)		–	–	1700				1400			
	Weight 1)		–	kg	100mm=1,4		185mm=2,4		4,9			
	Bus rail space		–	mm	100/185				185			
Cable connection	Flat wire	Bolt diameter	–	–	M8				M10/M12			
		Cable joint coupling(DIN43620)	–	mm^2	1 × 10–95(max.25 width)				1 × 25–150			
		Flat rail	–	mm	20 × 10				30 × 10			
		Starting torque	Ma	Nm	12–15				30–35			
	Jointing clamp type	Jointing clamp section area		mm^2	S00	1,5–70Cu/ribbon6 × 9 × 0.8						
		Starting torque	Ma	Nm		2,6						
	Jointing clamp type	Jointing clamp section area		mm^2	P 00–70	10–70 Al/Cu						
		Starting torque	Ma	Nm		2,6						
	Jointing clamp type	Jointing clamp section area		mm^2	P 00–95	35–95 Al/Cu			KM2G	25–150/185–300		
		Starting torque	Ma	Nm		2,6				40		
	Jointing clamp type	Jointing clamp section area		mm^2	KU 00	10–95			KM2G–F	25–240		
		Starting torque	Ma	Nm		15				40		
Protection method	Front Meter built–in	Work state		–	IP30				IP30			
		The front baffle plate shall be open	–	–	IP10				IP10			
Work condition	Ambient temperature 2)		Tu	℃	–25 to +55				–25 to +55			
	Design work mode		–	–	Continuous work				Continuous work			
	Operation			–	Handle control				Handle control			
	Embedded type			–	Horizontal, vertical				Horizontal, vertical			
	Height		–	M	2000 and below				2000 and below			
	Level of pollution		–	–	3				3			
	Level of over voltage			–	Ⅲ				Ⅳ			

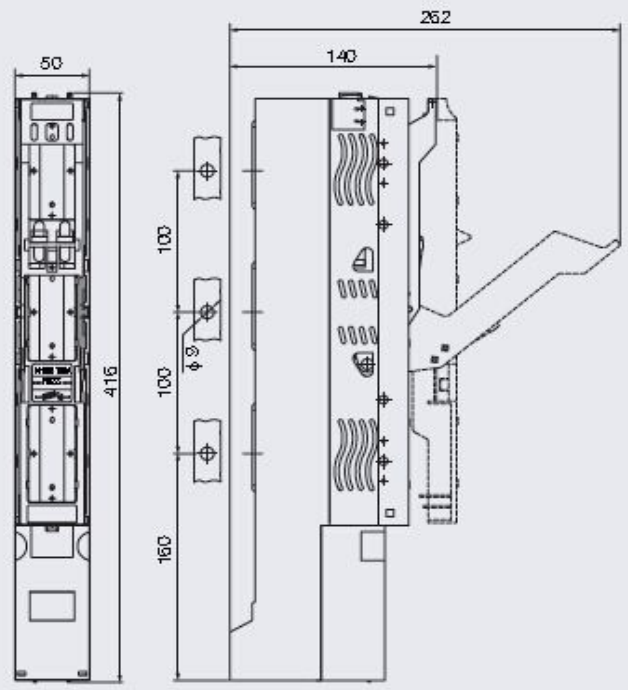
Note: 1) Not containing package
2) Normal temperature is 35℃ ,the operating current shall drop when reaching 55℃ .

Type					THL-400				THL-630			
Electric parameter	Design operating voltage		Ue	V	AC500	AC690	DC220	DC440	AC500	AC690	DC220	DC440
	Design operating current		Le	A	400	315	400	315	630	500	630	500
	With fuse thermal current conversion		Ith	A	400	315	400	315	630	500	630	500
	With fuse thermal current conversion		Ith	A	630A with TM3				800A with TM3/1250			
	Design frequency		–	Hz	40-60	40-60	–	–	40-60	40-60	–	–
	Design insulation voltage		Ui	V	AC690				AC690			
	Limiting design short circuit current		–	kAeff	80	80	25	25	80	80	25	25
	Design instantaneous current (1s)		Icw	kAeff	–	–	–	–	–	–	–	–
	Usage category			–	AC-22B	AC-22B	DC-21B	DC-21B	AC-22B	AC-22B	DC-21B	DC-21B
	Design closing capacity		–	A	1890	945	600	475	2400	1500	945	750
	Design breaking capacity		–	A	1890	945	600	475	2400	1500	945	750
	Design impulse voltage		Uimp	V	12	12	8	8	12	12	8	8
	Electric life (switching times)		–	–	200	200	200	200	200	200	200	200
	Total power loss at Lth (without fuse)		Pv	W	49	30	33	21	110	70	74	47
Fuse	The size complies with GB13539.2, IEC60269.2		–	–	2				3			
	Max design current (gl/gG)		Ln	A	400	315	400	315	630	500	630	500
	Max allowable power loss (1s)		Pv	W	45				48			
Mechanism parameter	Mechanical life (switching times)		–	–	1400				1000			
	Weight 1)		–	kg	4, 9				5, 6			
	Bus rail space		–	mm	185				185			
Cable connection	Flat wire	Bolt diameter	–	–	M12				M12			
		Cable joint coupling(DIN43620)	–	mm2	1 x 25-240				1 x 25-300(max.43 widht)			
		Flat rail	–	mm	20 x 10				30 x 10			
		Starting torque	Ma	Nm	35-40				35-40			
	Jointing clamp type	Jointing clamp section area	–	mm2	KM2G	25-150/185-300			KM2G	25-150/185-300		
		Starting torque	Ma	Nm		40				40		
	Jointing clamp type	Jointing clamp section area	–	mm2	KM2G -F	25-240			KM2G -F	25-240		
		Starting torque	Ma	Nm		40				40		
Protection method	Front Meter built-in	Work state		–	IP30				IP30			
		The front baffle plate shall be open	–	–	IP10				IP10			
Work condition	Ambient temperature 2)		Tu	℃	-25 to +55				-25 to +55			
	Design work mode		–	–	Continuous work				Continuous work			
	Operation		–	–	Handle control				Handle control			
	Embedded type		–	–	Horizontal, vertical				Horizontal, vertical			
	Height		–	M	2000 and below				2000 and below			
	Level of pollution		–	–	3				3			
	Level of over voltage			–	IV				IV			

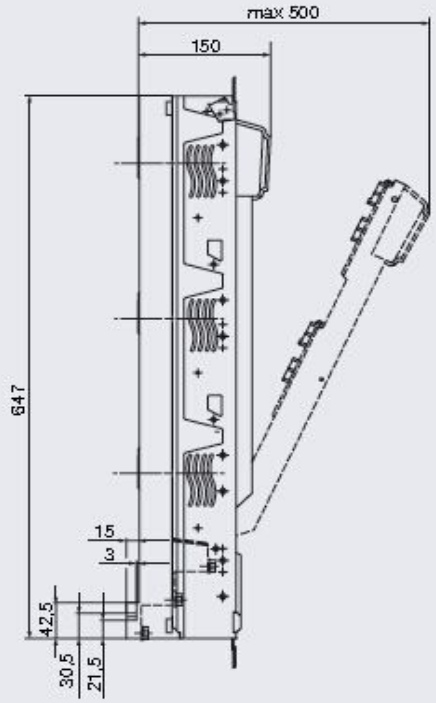
Note: 1) Not containing package
2) Normal temperature is 35℃ ,the operating current shall drop when reaching 55℃ .

Outline Dimension

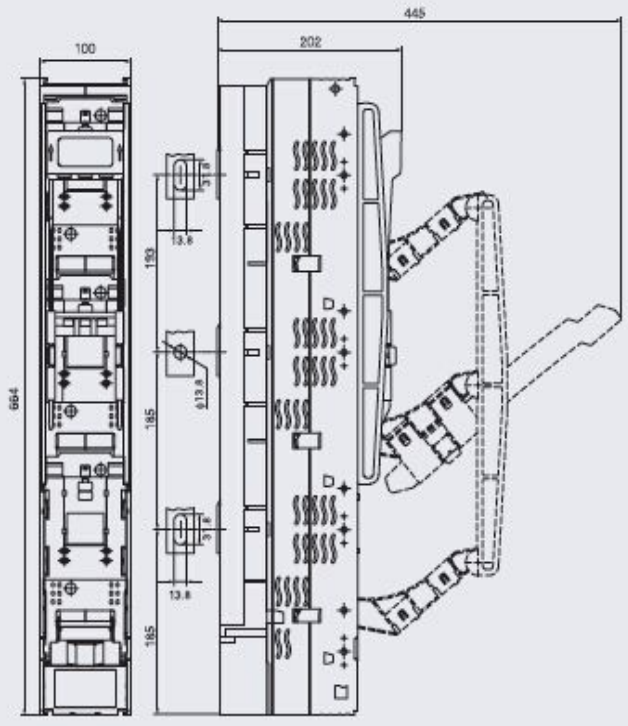
THL(J)-160/100mm



THL(J)-160L/185mm



THL(J)-250L/185mm
THL(J)-400L/185mm
THL(J)-630L/185mm



THL-1600/185mm