

Technical data

General data

Frame size	GPS1	GPS2
Rated insulation voltage Ui	690V	1000V
Rated operating voltage Ue	690V AC	690V AC
Rated impulse withstand strength Uimp	6kV	8kV
Rated frequency	50/60Hz	50/60Hz
Total power loss P (W)	0.16 to 25A 7W 32A 8.5W	up to 32A 11W 40A to 50A 15W 63A 17W
Utilisation category:		
IEC 947-2 (Circuit breaker)	Cat. A	Cat. A
IEC 947-4-1 (Motor starter)	AC3	AC3
Mechanical operational performance	100,000 (70,000 for 32A)	50,000
Electrical operational performance	100,000 (70,000 for 32A)	25,000
Max. operations per hour (motor start-up)	25	25
Ambient conditions:		
Storage temperature	-40°C to +80°C	-40°C to +80°C
Operation temperature	-25°C to +60°C	-25°C to +60°C
Temperature compensation	-20°C to +60°C	-20°C to +60°C
Ambient temperature compensation	yes	yes
Operational altitude	up to 2000m	up to 2000m
Shock resistance (IEC 68)	30g (width 20ms)	30g (width 20ms)
Vibration resistance	8g (5 to 150Hz)	8g (5 to 150Hz)
Shock -hazard prot. (acc.DIN VDE 0106)	fingerproof	fingerproof
Protection degree (acc.to IEC529)	IP20	IP10 (IP20 with acc GPAPT2A)
Rated current Ie	up to 32A	up to 63A
Overload protection	IEC 947-4-1	IEC 947-4-1
Phase failure protection	yes	yes
Tripping class	10	10
Magnetic release (factory set)	13 x I _{emax}	13 x I _{emax}
Test trip button	yes	yes
Standards & Approvals		
IEC 947-1 / -2 / -4-1	yes	yes
DIN VDE 0660T 100 / 101 / 102	yes	yes
UL508	yes	yes
UL508 type E	Only GPS1_H	yes
CE	yes	yes
cULus	yes	yes
D / S / N / Fi	In process	-
Shipping approvals	yes	yes

Mounting data

Terminal capacity:		
Solid or stranded without end sleeve	1 x 1...10mm ² 2 x 1...6mm ²	1 or 2 x 1...25mm ²
Stranded with end sleeve	1 or 2 x 1...6mm ²	1 x 1...25mm ² / 2 x 1...16mm ²
AWG	1 x 18...8 / 2 x 18...10	1 x 18...2 / 2 x 18...4
Operating mechanism lockable in OFF position diameter (mm)	3.5 to 4.5	3.5 to 4.5
Terminal type	screw	box
Tightening torque	2 Nm / 18Lb.in	5 Nm / 45 Lb.in
Screwdriver	Pz2 / slotted combination	Pz2 / slotted combination
Mounting:		
DIN-rail	yes	yes
Screws	no	yes
Operating position:		
turning to the front	30°	30°
turning to the back	90°	90°
turning to both sides	180°	180°
Handle operation	Rocker level / Rotary	Rotary
Dimensions		
width (mm)	45	55
height (mm)	90	120
depth (mm)	(GPS1_S) 75 / 92.5 (GPS1_H)	107.5

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 Short-circuit proof with an $I_{cu} = 100\text{kA}$ or 50kA

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Back-up fuses are necessary in case of possibility of a short-circuit current higher than 100kA or 50kA at the installation point of the device (on request)

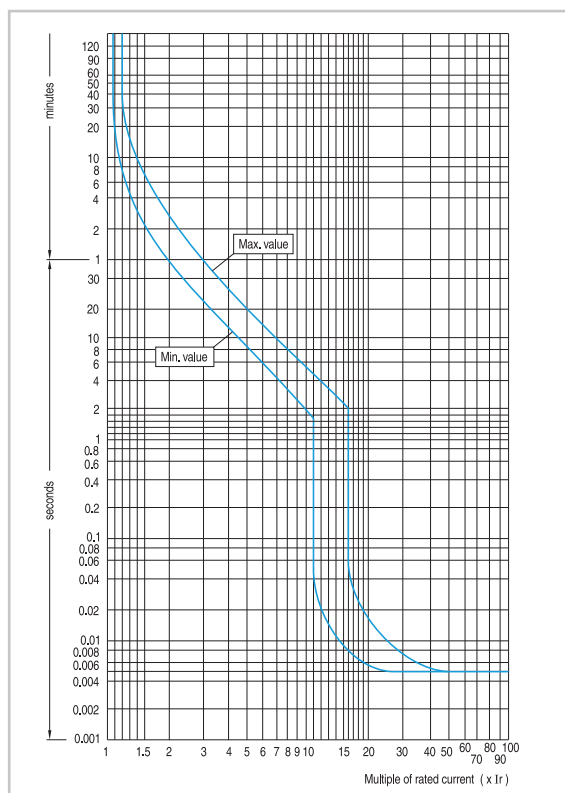


Back-up gl/gG fuses only if $I_{cs} > I_{cu}$ (kA)

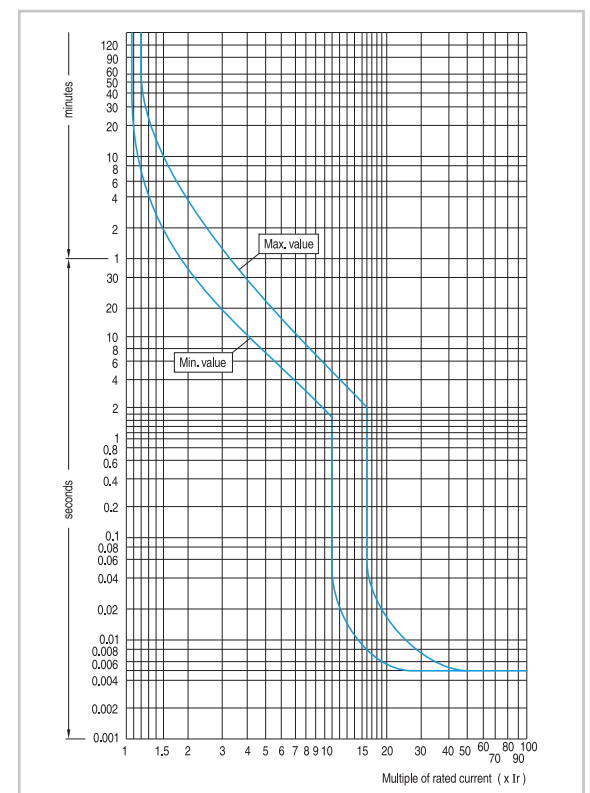
		For ranges GPS1BSA_ / GPS1MSA_																	
		A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U
		1.6	0.25	0.4	0.63	1	1.6	2.5	4	6.3	10	13	16	20	25	32	40	50	63
gl/gG fuses (A)	230V	#	#	#	#	#	#	#	#	#	#	#	#	100	100	100	-	-	-
	400V	#	#	#	#	#	#	#	#	#	#	80	100	100	100	100	-	-	-
	440V	#	#	#	#	#	#	#	#	50	63	63	80	80	80	80	-	-	-
	500V	#	#	#	#	#	#	#	#	50	50	63	63	63	80	80	-	-	-
	600V	#	#	#	#	#	#	20	32	40	50	63	63	63	80	80	-	-	-
	690V	#	#	#	#	#	#	20	32	40	50	50	63	63	63	63	-	-	-
		For ranges GPS1BHA_ / GPS1MHA_																	
		A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U
		1.6	0.25	0.4	0.63	1	1.6	2.5	4	6.3	10	13	16	20	25	32	40	50	63
	230V	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	-	-	-
	400V	#	#	#	#	#	#	#	#	#	#	#	100	125	125	125	-	-	-
	440V	#	#	#	#	#	#	#	#	#	63	63	80	80	100	100	-	-	-
	500V	#	#	#	#	#	#	#	#	#	50	63	80	80	80	80	-	-	-
	600V	#	#	#	#	#	#	25	40	50	50	63	63	63	80	80	-	-	-
	690V	#	#	#	#	#	#	25	40	50	50	63	63	63	63	63	-	-	-
		For ranges GPS2BSA_ / GPS2MSA_																	
		A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U
		1.6	0.25	0.4	0.63	1	1.6	2.5	4	6.3	10	13	16	20	25	32	40	50	63
	230V	-	-	-	-	-	-	-	-	-	#	#	#	125	125	125	125	125	160
	400V	-	-	-	-	-	-	-	-	-	#	80	100	125	125	125	125	125	160
	440V	-	-	-	-	-	-	-	-	-	63	63	80	80	100	100	125	125	125
	500V	-	-	-	-	-	-	-	-	-	63	63	80	80	80	80	100	100	125
	600V	-	-	-	-	-	-	-	-	-	63	63	63	63	80	80	100	100	100
	690V	-	-	-	-	-	-	-	-	-	63	63	63	63	63	63	63	80	100
		For ranges GPS2BHA_ / GPS2MHA_																	
		A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U
		1.6	0.25	0.4	0.63	1	1.6	2.5	4	6.3	10	13	16	20	25	32	40	50	63
	230V	-	-	-	-	-	-	-	-	-	#	#	#	#	#	#	#	#	#
	400V	-	-	-	-	-	-	-	-	-	#	#	100	125	125	125	125	125	160
	440V	-	-	-	-	-	-	-	-	-	63	63	80	80	100	100	125	125	125
	500V	-	-	-	-	-	-	-	-	-	63	63	80	80	80	80	100	100	125
	600V	-	-	-	-	-	-	-	-	-	80	63	63	63	80	80	100	100	100
	690V	-	-	-	-	-	-	-	-	-	80	63	63	63	63	63	63	80	100

Back-up gl/gG fuses only if $I_{cs} > I_{cu}$ (kA)

Manual motor starter: GPS1...

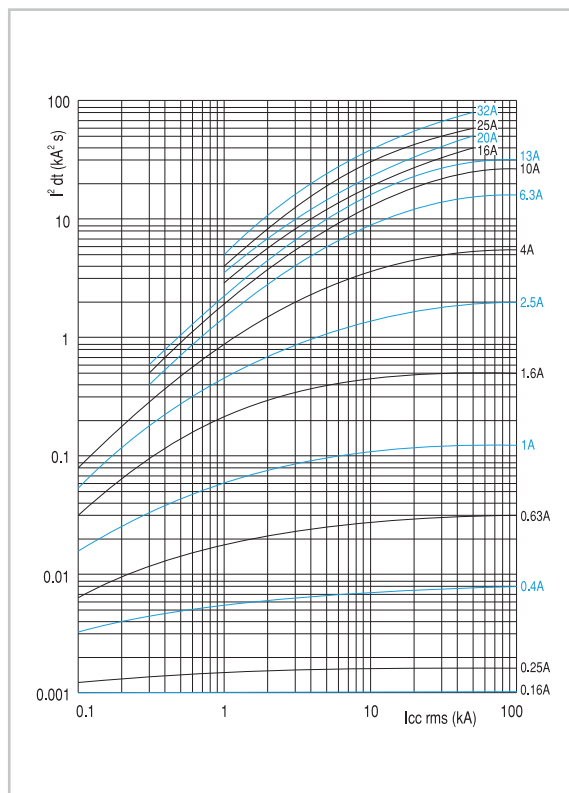


Manual motor starter: GPS2...

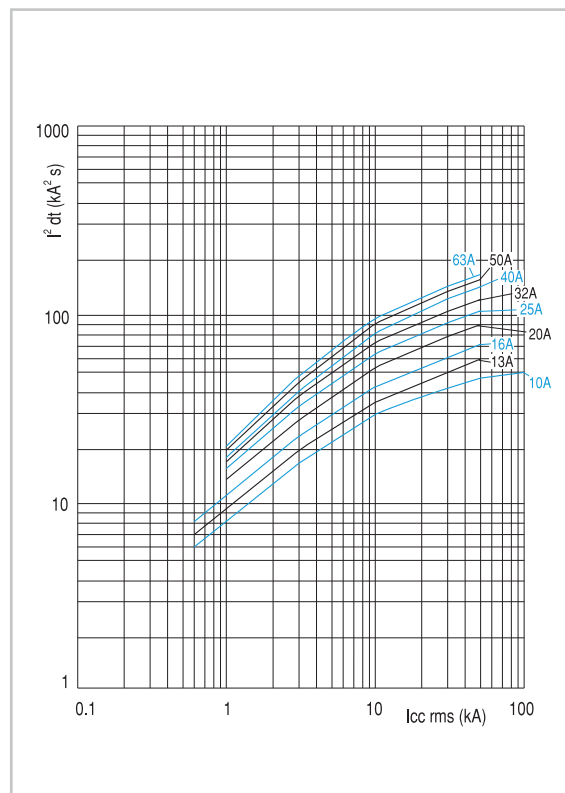


Specific let-through energy at $U_e = 400/415\text{ V}$

Manual motor starter: GPS1...

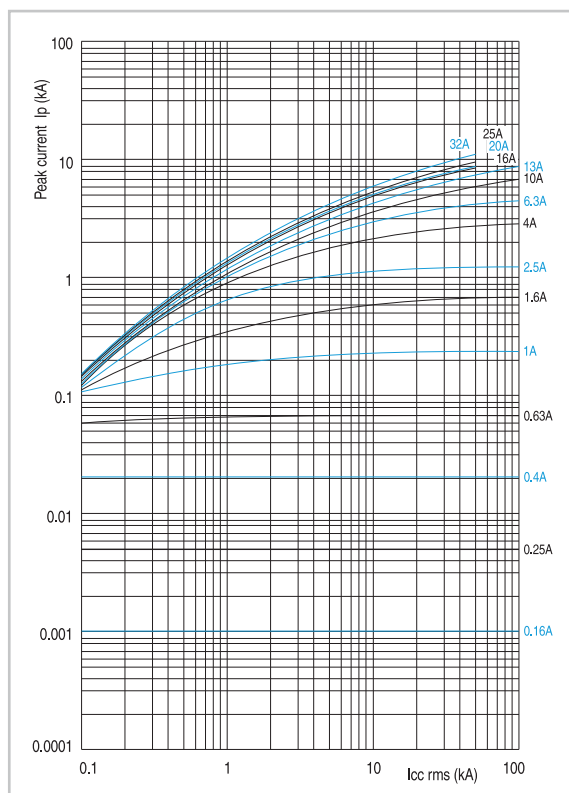


Manual motor starter: GPS2...

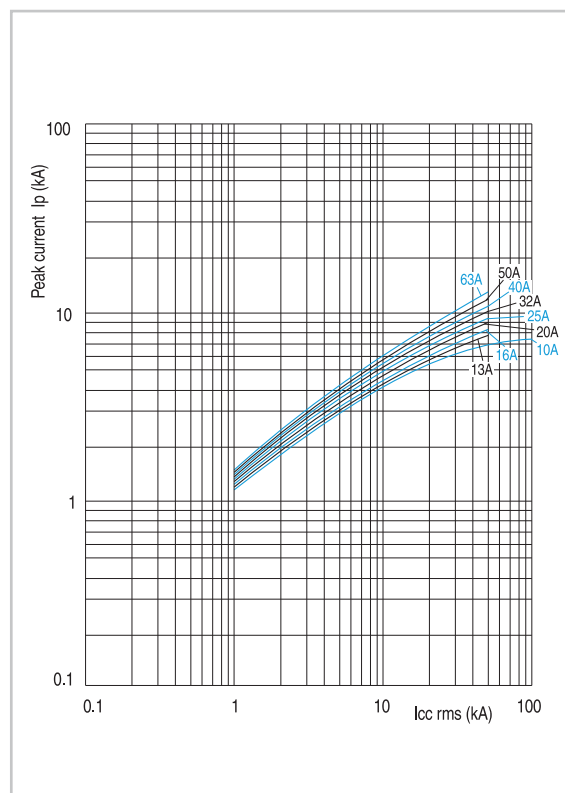


Peak current limitation at $U_e = 400/415\text{ V}$

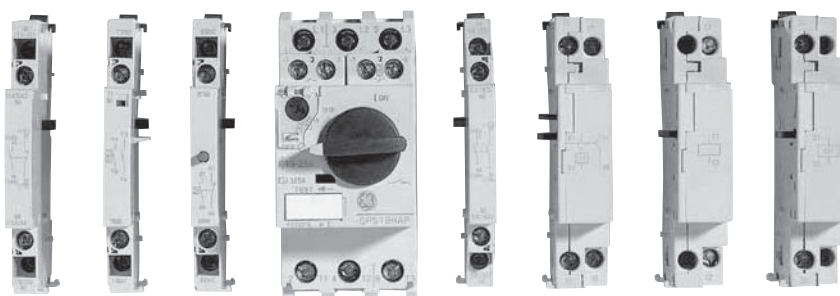
Manual motor starter: GPS1...



Manual motor starter: GPS2...



Mounting possibilities of the auxiliaries



Wiring diagram		Type	Description
Frontal auxiliaries 	Auxiliary contact block	1NO or 1NC	Two <u>frontal</u> auxiliary contact blocks can be installed at the same time maintaining the overall width of the manual motor starter.
	Alarm contact block	1NO or 1NC	Installed on the <u>frontal</u> right side. Can be mounted in combination with the frontal auxiliary block. The overall width of the manual motor starter is maintained.
Lateral auxiliaries 	Auxiliary contact block	2NO 1NO + 1NC 2NC	Different catalogue numbers for <u>left</u> or <u>right</u> mounting. Maximum number of auxiliary contact blocks mounted on each side: 2. Total number of auxiliary contacts in combination frontal and lateral: 8. Width of each lateral auxiliary contact block: 9mm. GPS1 rated at 32A allows maximum 2 auxiliary contact blocks (4 contacts).
	Auxiliary/alarm contact block	1NO (alarm) + 1NO (auxiliary) 1NO (alarm) + 1NC (auxiliary) 1NC (alarm) + 1NO (auxiliary) 1NC (alarm) + 1NC (auxiliary)	Installed on the <u>left</u> side. Maximum number of blocks per manual motor starter: 1. Can be fitted together with one lateral auxiliary contact block or one short-circuit alarm block mounted on the left side. Width of each lateral alarm/auxiliary contact block: 9mm.
	Short-circuit alarm contact block	1NO + 1NC	Installed on the <u>left</u> side. Tripping in case of short-circuit only. Can be fitted together with one lateral auxiliary contact block or one auxiliary/alarm block mounted on the left side. Width of each short-circuit alarm contact block: 9mm.
	Shunt trip		Installed on the <u>right</u> side. Can not be mounted together with the undervoltage release or any lateral block mounted on the same side. Width of each shunt trip: 18mm.
	Undervoltage trip		Installed on the <u>right</u> side. Can not be mounted together with a shunt trip device or any lateral block mounted on the same side. Width of each undervoltage trip: 18mm.
	Undervoltage trip with 2NO early make auxiliary contacts		Installed on the <u>right</u> side. Two different types, one for the GPS1_S.. and another for the GPS1_H.. and GPS2.. Can not be mounted together with a shunt trip device or any lateral block mounted on the same side. Width of each undervoltage trip: 18mm.

Shunt trip, undervoltage trip and undervoltage with 2NO contacts can be mounted together with any frontal block or left lateral block with above mentioned restrictions

Auxiliaries

Catalogue reference	GPAC_F..			GPAC_L..					GPAL..			GPAD..					GPAE..							
	Aux. frontal block			Aux. lateral block					Alarm frontal block			Alarm/aux. lateral block					Short-circuit alarm block							
Cont. cap. contacts class (UL508)	B300 / Q300			A600 / P300					B300 / Q300			A600 / P300					A600 / P300							
Back-up fuses gG, gI	6A			10A					6A			10A					10A							
	Utilization category AC-15																							
Rated operating voltage Ue (V AC)	48	125	230	48	125	230	400	500	690	48	125	230	48	125	230	400	500	690	48	125	230	400	500	690
Rated operational current (A)	5	3	1.5	6	4	4	2.2	1.5	0.6	5	3	1.5	6	4	4	2.2	1.5	0.6	6	4	4	2.2	1.5	0.6
	Utilization category DC-13																							
Rated operating voltage Ue (V DC)	48	110	220	48	110			220	48	110	220	48	110			220	48	110	220	48	110			220
Rated operational current (A)	1.38	0.55	0.27	5	1.3			0.5	1.38	0.55	0.27	5	1.3			0.5	5	1.3	0.5	5	1.3			0.5
	Mounting data																							
Mounting side	Front			Left or right					Frontal right			Left					Left							
Terminals capacity:																								
Solid or stranded without end sleeve	2x0.5...2.5mm²			2x0.5...2.5mm²					2x0.5...2.5mm²			2x0.5...2.5mm²					2x0.5...2.5mm²							
AWG	2x18...14			2x18...14					2x18...14			2x18...14					2x18...14							
Terminal type	screw			screw					screw			screw					screw							
Tightening torque	0.8Nm			0.8Nm					0.8Nm			0.8Nm					0.8Nm							
Screwdriver	Pz2/Slotted			Pz2/Slotted					Pz2/Slotted			Pz2/Slotted					Pz2/Slotted							
Dimensions width (mm)	Maintain same width			Increase width 9mm					Maintain same width			Increase width 9mm					Increase width 9mm							
Catalogue reference	GPAU										GPAS													
	Undervoltage trip										Shunt trip													
Power consumption:																								
Pick-up (VA/W)	21/12										21/12													
Hold (VA/W)	8/1.2										-													
Operating voltage																								
Tripping (V)	0.35Ve-0.7Ve										0.7Ve-1.1Ve													
Pick-up (V)	0.85Ve-1.1Ve										-													
Max. operation supply (ms)	-										5(DC)													
Rated operating voltage Ue																								
	24V 50Hz										24V 50/60Hz													
	24V 60Hz										48V 60Hz													
	48V 50Hz										48V 50Hz / 60V 60Hz													
	48V 60Hz										110/127V 50Hz / 120V 60Hz													
	110/127V 50Hz / 120V 60Hz										208V 60Hz													
	208V 60Hz										220/230V 50Hz / 240/260V 60Hz													
	220/230V 50Hz / 240/260V 60Hz										240V 50Hz / 277V 60Hz													
	240V 50Hz / 277V 60Hz										380/400V 50Hz													
	380/400V 50Hz										415/440V 50Hz / 460/480V 60Hz													
	415/440V 50Hz / 460/480V 60Hz										500V 50Hz / 600V 60Hz													
	500V 50Hz / 600V 60Hz										24 to 60V DC													
											110 to 240V DC													
Contacts class (UL508)	-										-													
Back-up fuses (gG,gI)	10A										10A													
	Mounting data																							
Mounting side	Right																							
Terminals capacity:																								
Solid or stranded without end sleeve	2x0.5...2.5mm²																							
AWG	2x18...14																							
Terminal type	Screw																							
Tightening torque	0.8Nm																							
Screwdriver	Pz2/Slotted																							
Dimensions width (mm)	Increase width 18mm																							

Detailed dimensions see page C.19