

COMPONENTS FOR EV CHARGING STATIONS



ENERGY AND AUTOMATION

RANGE



SWITCH DISCONNECTORS GA ... SERIES

- versions: 3P from 16A to 160A (AC21A);
- add-on fourth pole available;
- switch disconnectors with direct operating handle and door coupling version.



SWITCH DISCONNECTORS GL...SERIES

- versions: 3P from 160A to 630A (AC21A);
- add-on fourth pole available;
- switch disconnectors with direct operating handle and door coupling version.



SURGE PROTECTION DEVICES TYPE 2 WITH PLUG-IN CARTRIDGE

- versions: 1P+N, 3P+N;
- IEC maximum discharge current I_{max} (8/20 μ s): 50kA or 15kA;
- IEC rated discharge current I_n (8/20 μ s): 20kA or 5kA;
- single module status indicator;
- versions with and without output for remote status indication.



MINIATURE CIRCUIT BREAKERS

- versions: 2P, 4P;
- IEC rated current I_n : 1...63A;
- IEC short-circuit breaking capacity I_{cn} : 10kA;
- trip characteristic curve: Type B, C, D.



RESIDUAL CURRENT OPERATED CIRCUIT BREAKERS (RCCB)

- versions: 2P, 4P;
- IEC rated current I_n : 25, 40 and 63A;
- residual current: 30mA;
- residual current operating characteristic: Type A.



SWITCHING POWER SUPPLIES

- supply voltage: 100...240VAC (single-phase) and 400...500VAC (three-phase);
- output voltage: 12 or 24VDC;
- output power: 10...960W.



MODULAR CONTACTORS

- versions: 2P, 4P;
- IEC rated current I_{th} AC1 (400V): 20A, 25A, 32A, 40A.



CONTACTORS

- versions: 3P, 4P;
- I_{th} (AC1 a $\leq 40^\circ\text{C}$) = 16...800A;
- I_e (AC3 440V) = 6...630A;
- AC, DC and DC low-consumption coils.



ENERGY METERS

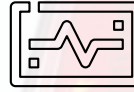
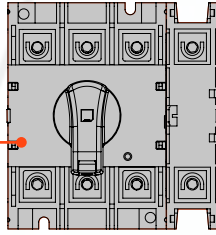
- versions: 1P+N, 3P, 3P+N;
- direct connection or by current transformers;
- MID certified versions even with extended temperature range (-25...+70 $^\circ\text{C}$);
- versions with built-in RS485 or M-Bus communication ports.

COMPONENTS FOR EV CHARGING STATIONS

COMPONENTS

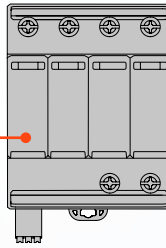
SWITCH DISCONNECTORS

GA... and GL... series for use up to 430kW AC21A



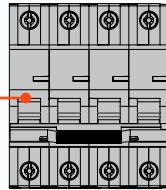
SURGE PROTECTION DEVICES

SG2... series Class 2 for single-phase and three-phase AC use



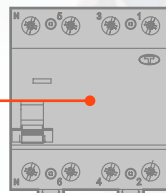
MINIATURE CIRCUIT BREAKERS

P1MB... series C curve for use up to 44kW



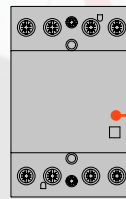
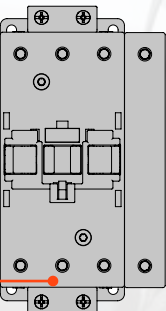
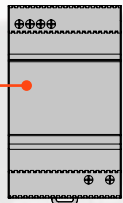
RESIDUAL CURRENT OPERATED CIRCUIT BREAKERS (RCCB)

P1RD ...



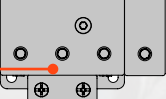
SWITCHING POWER SUPPLIES

PSL... series with maximum power of 480W (single-phase) and 960W (three-phase) at 24VDC



CONTACTORS

BF... and B... series for use up to 750kW AC1

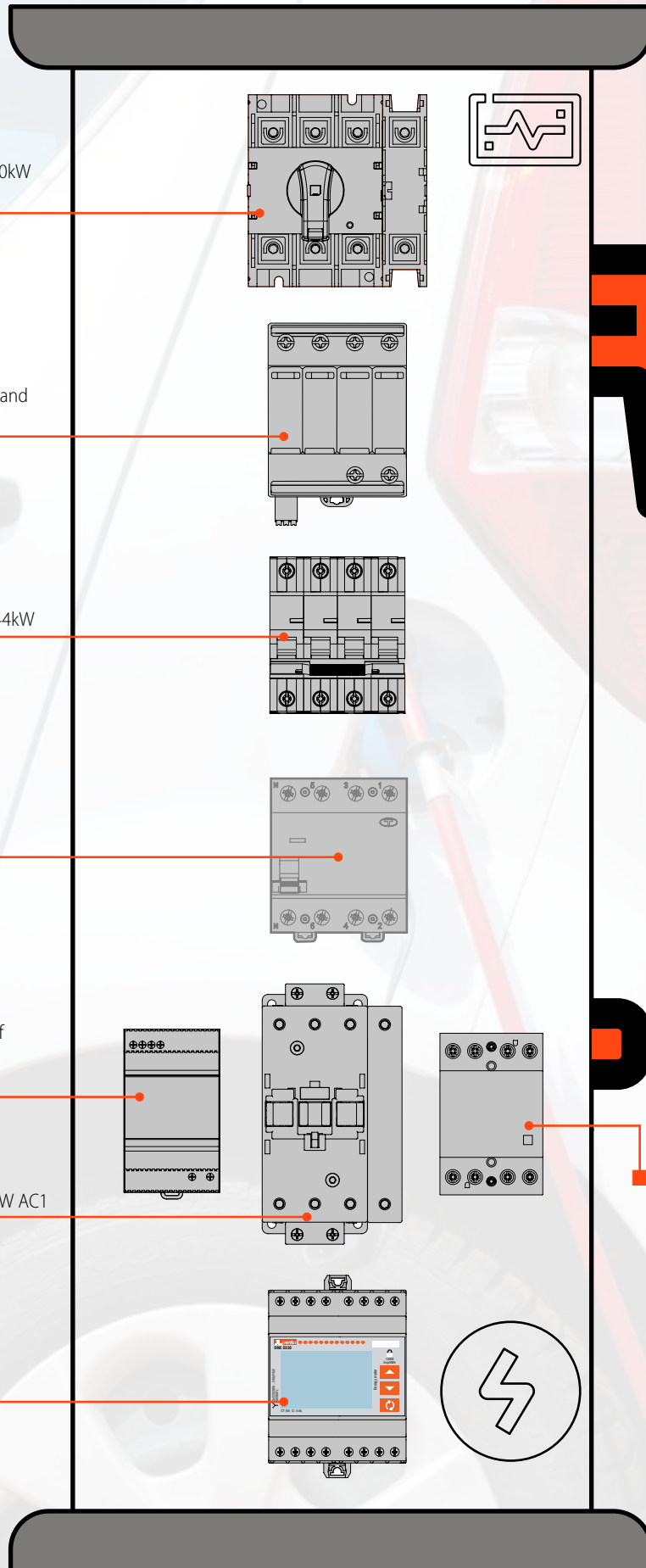
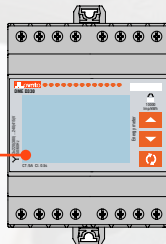


MODULAR CONTACTORS

CN... series for use up to 22kW AC1

ENERGY METERS

DME...series MID certified with extended temperature range (-25...+70°C)



SELECTION GUIDE



STATION POWER	SYSTEM	SWITCH DISCONNECTOR	SURGE PROTECTION DEVICE	MINIATURE CIRCUIT BREAKER ②		RESIDUAL CURRENT OPERATED CIRCUIT BREAKERS (RCCB)	
[KW]		AC21A (690V)	Type 2 ①	Curves available: B, C, D ⑦		Type A 30mA ⑤	
				2P (2 modules)	4P (4 modules)	2P	4P
2,2	1P + N	GA016A	SG21NA300 (R)	P1MB2P...10	—	P1RD2P25A030	—
3,7				P1MB2P...16			
7,4				P1MB2P...32			
11	3P + N	GA016A + GAX42040A	SG23NA300 (R)	—	P1MB4P...16	—	P1RD4P25A030
22		GA032A + GAX42040A			P1MB4P...32		P1RD4P40A030
44		GA080A + GAX42080A			P1MB4P...63		P1RD4P63A030
25	DC	GA063A	SG23PA300 (R)	—	⑧	—	—
50		GA080A					
75		GA125A					
100		GA160A					
150		GL0250C1					
200		GL0315C1					
300		GL0500C1					
350	GL0630C1						
77	Combi 3P + N + DC	GAX025A + GAX42125A	SG23NA300 (R)	—	—	—	—
50	DC	—	—		⑧		
22	AC				P1MB4P...32		

TYPICAL ACCESSORIES

—	—	GAX1011A Auxiliary contact, simultaneous operation 1NO+1NC for GA... switch disconnectors	—	P1X1011 Auxiliary contact, 1 changeover contact
		GLX1001 Auxiliary contact 1NC for GL... switch disconnectors		P1X1311 Indicator contact for thermal-magnetic trip, 1 changeover contact
				P1X16230 Shunt trip release, 110...415V 50/60HZ

① Surge protection devices Type 1+2 also available.

② Temperature derating available on request.

③ Mirror Contact as per EN60947-4-1: referred between auxiliary and main contacts. NC auxiliary contact does not close if main contacts are open. Feature included in all Lovato Electric contactor series.

Mechanically linked contact as per EN60947-5-1: referred between auxiliary contacts only. NC auxiliary contact does not open if NO auxiliary contacts are open. Feature included for BFX10... and BFX12... up to BF38 contactors and for BF40...150 with electronic coil.

④ Energy meters Eichrecht compliant available.



CONTACTOR ⑤				MODULAR CONTACTOR ②	ENERGY METER ④		
Coil voltage supply: 230VAC ⑥					MID (+55°C)	MID (+70°C)	STANDARD
AC1 (<40°C)	AC1 (<55°C)	AC1 (<70°C)	AC3 (<55°C)	AC1 (<40°C)			
BF0901A230	BF0901A230	BF0901A230	BF1201A230	CN2020220	DMED111MID	DMED111MID7	DMED111
			BF1801A230				
BF2600A230	BF2600A230	BF2600A230	BF3200A230	CN4001220			
BF09T4A230	BF09T4A230	BF09T4A230	BF18T4A230	CN2510220	DMED301MID	DMED301MID7	DMED301
BF26T4A230	BF26T4A230	BF26T4A230	BF32T4A230	CN4010220			
BF40T4A230	BF50T4A230	BF50T4A230	BF65T4A230	—			
BF4000A230	BF5000A230	BF5000A230	BF6500A230	CN6310220	DMED301MID	DMED301MID7	DMED301
BF5000A230		BF8000A230	BF8000A230				
BF8000A230	BF9500A230	BF15000A230	BF15000A230	—	DMED330MID	—	DMED330
BF11500A230	BF15000A230						
BF16000E230	BF19500E230	BF23000E230	BF23000E230	—	DMED330MID	—	DMED330
BF23000E230	11B25000220	11B31000220	11B31000220				
11B40000220	11B50000220	11B50000220	11B50000220				
		11B63000220	11B63000220				
BF80T4A230	BF95T4A230	BF115T4A230	BF115T4A230	—	—	—	—
—	—	—	—		DMED330MID		DMED330
BF26T4A230	BF26T4A230	BF26T4A230	BF32T4A230	CN4010220	DMED301MID	DMED301MID7	DMED301
BFX1011 - BFX1211 Auxiliary contact 1NO+1NC for BF... contactors 11G354 Auxiliary contact 1NO+1NC for 11B... contactors				CNH11 Auxiliary contact, 1NO+1NC	FB01B1P Fuse holder, for 10x38mm fuses. Rated current 32A (690VAC), 1P. 1 module		
				CNH20 Auxiliary contact, 2NO	FB01B3P Fuse holder, for 10x38mm fuses. Rated current 32A (690VAC), 3P. 3 modules		
				—	—	—	—

⑤ RCD Type A is allowed by the standard IEC 61851-1 together with an appropriate equipment that ensures the disconnection of the supply in case of DC fault current above 6mA (discharge leakage).

RCD Type B with IEC rated current 40A, 63A, and 80A with rated residual current of 30mA or 300mA are available in the LOVATO Electric product range.

⑥ Other coil voltage supplies available.

⑦ Complete order code with curve characteristic (e.g. P1MB2PC10 for curve C).

⑧ To be sized according to AC/DC conversion stack power.

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www.LovatoElectric.com

LOVATO ELECTRIC S.P. A.

Via Don E. Mazza, 12
24020 Gorle (Bergamo), Italy

tel. +39 035 4282111
info@LovatoElectric.com

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