

SHORTFORM CATALOGUE

2025 - 2027





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MOTOR PROTECTION & CONTROL



CONTROL & SIGNALLING



CIRCUIT PROTECTION & ISOLATION



AUTOMATION & CONTROL



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synergy

MOTOR PROTECTION & CONTROL

MOTOR PROTECTION CIRCUIT BREAKERS

SM1 SERIES



SM1P Series



SM1R Series

Thermal trip adjustment (A)	Order code push-button	Icu at 400V (kA)	Order code rotary knob	Icu at 400V (kA)
0.1 - 0.16	SM1P 0016	100	SM1R 0016	100
0.16 - 0.25	SM1P 0025	100	SM1R 0025	100
0.25 - 0.4	SM1P 0040	100	SM1R 0040	100
0.4 - 0.63	SM1P 0063	100	SM1R 0063	100
0.63 - 1	SM1P 0100	100	SM1R 0100	100
1 - 1.6	SM1P 0160	100	SM1R 0160	100
1.6 - 2.5	SM1P 0250	100	SM1R 0250	100
2.5 - 4	SM1P 0400	100	SM1R 0400	100
4 - 6.3	SM1P 0650	100	SM1R 0650	100
6.3 - 10	SM1P 1000	100	SM1R 1000	100
9 - 14	SM1P 1400	25	SM1R 1400	100
13 - 18	SM1P 1800	25	SM1R 1800	100
17 - 23	SM1P 2300	15	SM1R 2300	50
20 - 25	SM1P 2500	15	SM1R 2500	50
24 - 32	SM1P 3200	10	SM1R 3200	50
30 - 40	SM1P 4000	10	SM1R 4000	20

SM1 SERIES ACCESSORIES



SM1X11



SM1X12



SM1X14



SM1X16



SM1X18200R



SM1X3

Order code	Description
SM1X11 20	Front mount 2NO
SM1X11 11	Front mount 1NO+1NC
SM1X12 20	Side mount 2NO
SM1X12 11	Side mount 1NO+1NC
SM1X12 02	Side mount 2NC
SM1X13 11	Side mount trip indication 1NO+1NC (thermal and magnetic trip)
SM1X13 11M	Side mount trip indication 1NO+1NC (magnetic trip only)
SM1X14 110	Undervoltage trip 110VAC 50/60Hz
SM1X14 230	Undervoltage trip 230VAC 50/60Hz
SM1X14 400	Undervoltage trip 400VAC 50/60Hz
SM1X16 024	Shunt trip release 24VAC 50/60Hz
SM1X16 110	Shunt trip release 110VAC 50/60Hz
SM1X16 230	Shunt trip release 230VAC 50/60Hz
SM1X16 400	Shunt trip release 400VAC 50/60Hz
SM1X18 200R	Door interlocked operator - Red/yellow handle with 200mm shaft
SM1X18B 200R	Door interlocked operator - Black/grey handle with 200mm shaft
SM1X18 S	Door interlocked operator shaft support > 145mm
SM1X9000R	Phase barriers for Type E as per UL508
SM1X30 40P	Rigid connector for SM1P to BG.. mini-contactors (AC and DC coil)
SM1X31 41P	Rigid connector for SM1P to BF09.. to BF25.. Contactors (AC coil only)
SM1X32 41P	Rigid connector for SM1P to BF26.. to BF38 contactors (AC coil only)
SM1X30 40R	Rigid connector for SM1R to BG... mini-contactors (AC and DC coil)
SM1X31 41R	Rigid connector for SM1R to BF09.. to BF25.. Contactors (AC coil only)
SM1X31 42R	Rigid connector for SM1R to BF09.. to BF25.. Contactors (DC coil only)
SM1X32 41R	Rigid connector for SM1R BF26.. to BF38 contactors (AC coil only)

MOTOR PROTECTION & CONTROL

MOTOR PROTECTION CIRCUIT BREAKERS

SM1 SERIES ACCESSORIES



SM1X9032



SM1X9030



SM1Z1702P



SM1Z1705P

Order code	Description
11SMX90 32	Three phase connection busbar for 2 breakers - 45mm spacing
11SMX90 33	Three phase connection busbar for 3 breakers - 45mm spacing
11SMX90 34	Three phase connection busbar for 4 breakers - 45mm spacing
11SMX90 35	Three phase connection busbar for 5 breakers - 45mm spacing
11SMX90 42	Three phase connection busbar for 2 breakers - 54mm spacing
11SMX90 43	Three phase connection busbar for 3 breakers - 54mm spacing
11SMX90 44	Three phase connection busbar for 4 breakers - 54mm spacing
11SMX90 45	Three phase connection busbar for 5 breakers - 54mm spacing
11SMX90 30	Busbar connection terminal for all busbar types
SM1X90 50	Busbar connection terminal for all busbar types. Type E as per UL508
SM1Z17 01P	IP65 Surface mount enclosure - width 80mm retrofit LMZ replacement
SM1Z17 02P	IP65 Surface mount enclosure - width 80mm with emergency stop
SM1Z17 11P	IP65 Surface mount enclosure - width 100mm standard for SM1P
SM1Z17 12P	IP65 Surface mount enclosure - width 100mm with emergency stop
SM1Z17 05P	Flush mount enclosure with rubber membrane width 87mm
SM1X17 40P	Emergency stop button IP65 for SM1Z..P enclosures
SM1X17 45P	Rubber membrane insert IP65 for SM1Z..P enclosures
SM1X17 46P	Lockable block IP65 for SM1Z..P enclosures
11SMX90 31	Safety cover for unused terminals
SM1X 1812	Trip adjustment sealing kit

SM2 AND SM3 SERIES MOTOR PROTECTION CIRCUIT BREAKERS UP TO 100A

Thermal trip adjustment (A)	Order code rotary type	Icu at 400V (kA)
34 - 50	SM2R 5000	50
45 - 63	SM2R 6300	50
55 - 75	SM3R 7500	50
70 - 90	SM3R 9000	50
80 - 100	SM3R 9900	50



SM2R



SM3R

Order code	Description
SM2X11 20	Front mount auxiliary contact 2NO
SM2X11 11	Front mount auxiliary contact 1NO+1NC
SM2X11 02	Side mount auxiliary contact 2NC
SM2X12 20	Side mount auxiliary contact 2NO
SM2X12 11	Side mount auxiliary contact 1NO+1NC
SM2X12 02	Side mount auxiliary contact 2NC
SM2X13 11	Side mount trip indication aux. 1NO+1NC (thermal and magnetic trip)
SM2X14 230	Undervoltage trip 230VAC 50/60Hz
SM2X14 400	Undervoltage trip 400VAC 50/60Hz
SM2X16 024	Shunt trip release 24VAC 50/60Hz
SM2X16 110	Shunt trip release 110VAC 50/60Hz
SM2X16 230	Shunt trip release 230VAC 50/60Hz
SM2X16 400	Shunt trip release 400VAC 50/60Hz
SM2X18 200R	Door interlocked operator - Red/yellow handle with 200mm shaft
SM2X18B200R	Door interlocked operator - Black/grey handle with 200mm shaft
SM3X90 00R	For Type E as per UL508

CONTACTORS

BG AND
BF SERIES

BG09 – BG12



BF09 – BF25



BF26 – BF38



BF40 – BF94



BF95 – BF150



BF165 – BF230



BF265 – BF400

le (AC3) 400V (A)	Power (AC3) 400V (kW)	IEC current Ith (AC1) (A)	Auxiliary contacts		Coil voltage	Three-pole contactors order code	Four-pole contactor order code excludes aux contacts
			NO	NC			
Complete code with coil voltage e.g. 11BG0910A230 or BF0910D024 / Coil voltage options VAC = 012, 024, 048, 110, 230, 400							VDC = 012, 024, 048, 110, 220
9	4	20	-	1	...VAC	11 BG09 01 A...	11 BG09 T4 A...
			-	1	...VDC	11 BG09 01 D...	
9	4	20	1	-	...VAC	11 BG09 10 A...	11 BG09 T4 D...
			1	-	...VDC	11 BG09 10 D...	
12	5.7	20	-	1	...VAC	11 BG12 01 A...	-
			-	1	...VDC	11 BG12 01 D...	-
12	5.7	20	1	-	...VAC	11 BG12 10 A...	-
			1	-	...VDC	11 BG12 10 D...	-
9	4.2	25	-	1	...VAC	BF09 01 A...	BF09 T4 A...
			-	1	...VDC	BF09 01 D...	BF09 T4 D...
9	4.2	25	1	-	...VAC	BF09 10 A...	
			1	-	...VDC	BF09 10 D...	
12	5.7	28	-	1	...VAC	BF12 01 A...	BF12 T4 A...
			-	1	...VDC	BF12 01 D...	
12	5.7	28	1	-	...VAC	BF12 10 A...	BF12 T4 D...
			1	-	...VDC	BF12 10 D...	
18	7.5	32	-	1	...VAC	BF18 01 A...	BF18 T4 A...
			-	1	...VDC	BF18 01 D...	
18	7.5	32	1	-	...VAC	BF18 10 A...	BF18 T4 D...
			1	-	...VDC	BF18 10 D...	
25	12.5	32	-	1	...VAC	BF25 01 A...	-
			-	1	...VDC	BF25 01 D...	-
26	13	45	-	-	...VAC	BF26 00 A...	BF26 T4 A...
			-	-	...VDC	BF26 00 D...	BF26 T4 D...
32	16	56	-	-	...VAC	BF32 00 A...	-
			-	-	...VDC	BF32 00 D...	-
38	18.5	56*	-	-	...VAC	BF38 00 A...	BF38 T4 A...
			-	-	...VDC	BF38 00 D...	BF38 T4 D...
40	18.5	70	-	-	...VAC	BF40 00 A...	BF40 T4 A...
			-	-	...VAC/DC	BF40 00 E...	BF40 T4 E...
50	22	90	-	-	...VAC	BF50 00 A...	BF50 T4 A...
			-	-	...VAC/DC	BF50 00 E...	BF50 T4 E...
65	30	100	-	-	...VAC	BF65 00 A...	BF65 T4 A...
			-	-	...VAC/DC	BF65 00 E...	BF65 T4 E...
80	45	115	-	-	...VAC	BF80 00 A...	BF80 T4 A...
			-	-	...VAC/DC	BF80 00 E...	BF80 T4 E...
95	55	115	-	-	...VAC	BF94 00 A...	-
			-	-	...VAC/DC	BF94 00 E...	-
95	55	140	-	-	...VAC	BF95 00 A...	BF95 T4 A...
			-	-	...VAC/DC	BF95 00 E...	BF95 T4 E...
115	55	160	-	-	...VAC	BF115 00 A...	BF115 T4 A...
			-	-	...VAC/DC	BF115 00 E...	BF115 T4 E...
150	75	165	-	-	...VAC	BF150 00 A...	BF150 T4 A...
			-	-	...VAC/DC	BF150 00 E...	BF150 T4 E...
165	75	250	-	-	...VAC	BF165 00 A...	BF165 T4 A...
			-	-	...VAC/DC	BF165 00 E...	BF165 T4 E...
195	90	275	-	-	...VAC	BF195 00 A...	BF195 T4 A...
			-	-	...VAC/DC	BF195 00 E...	BF195 T4 E...
230	110	350	-	-	...VAC	BF230 00 A...	BF230 T4 A...
			-	-	...VAC/DC	BF230 00 E...	BF230 T4 E...
265	132	450	-	-	...VAC	BF265 00 A...	BF265 T4 A...
			-	-	...VAC/DC	BF265 00 E...	BF265 T4 E...
330	160	500	-	-	...VAC	BF330 00 A...	BF330 T4 A...
			-	-	...VAC/DC	BF330 00 E...	BF330 T4 E...
400	200	600	-	-	...VAC	BF400 00 A...	BF400 T4 A...
			-	-	...VAC/DC	BF400 00 E...	BF400 T4 E...

MOTOR PROTECTION & CONTROL

CONTACTORS

BFS SERIES SAFETY CONTACTORS



BFS0923A024



BFS3223A024

le (AC3) 400V (A)	Power (AC3) 400V (kW)	IEC current lth (AC1) (A)	Auxiliary contacts NO NC		Coil voltage	Three-pole contactors order code
9	4.2	25	2	3	...VAC	BFS09 23 A...
			2	3	...VDC	BFS09 23 D...
12	5.7	28	2	3	...VAC	BFS12 23 A...
			2	3	...VDC	BFS12 23 D...
25	12.5	32	2	3	...VAC	BFS25 23 A...
			2	3	...VDC	BFS25 23 D...
32	16	56	2	3	...VAC	BFS32 23 A...
			2	3	...VDC	BFS32 23 D...
38	18.5	56	2	3	...VAC	BFS38 23 A...
			2	3	...VDC	BFS38 23 D...

Complete code with coil voltage e.g. 11BG0910A230 or BF0910D024 / Coil voltage options VAC = 012, 024, 048, 110, 230, 400 VDC = 012, 024, 048, 110, 220

B SERIES CONTACTORS & ACCESSORIES



B500 - B630



B1250 - B1600

le (AC3) 400V (A)	Power (AC3) 400V (kW)	IEC current lth (AC1) (A)	Auxiliary contacts NO NC		Coil voltage	Three-pole contactors order code	Four-pole contactor order code excludes aux contacts
520	290	700	-	-	VAC/DC	11 B50000...	11 B500400...
630	335	800	-	-	VAC/DC	11 B63000...	11 B630400...
-		1000	-	-	VAC/DC	11 B6301000 00...	11 B6301000400...
-	Rated for AC1 duty resistive loads only	1250	-	-	VAC (110V & 230V Only)	11 B125024...	11 B1250424...
-		1600	-	-	VAC (110V & 230V Only)	11 B160024...	11 B1600424...

Order code	Description
11 G350	Side mount reversible auxiliary contact for B series maxi contactor B500-B6301000 - 2NO+1NC or 1NO+2NC (B1250 & B1600 already included)
11 G354	Side mount reversible auxiliary contact for B series maxi contactor B500-B6301000 - 1NO+1NC (B1250 & B1600 already included)
11 G355	Mechanical side by side interlock side by side for B series maxi contactor B500-B6301000 (For B1250 and B1600 interlocks please refer to general catalogue)

BG SERIES ACCESSORIES



11BGX1020



11BGX5000

Order code	Description
11 BGX10 02	Top mount auxiliary contact for BG mini-contactors - 2NC
11 BGX10 11	Top mount auxiliary contact for BG mini-contactors - 1NO + 1NC
11 BGX10 20	Top mount auxiliary contact for BG mini-contactors - 2NO
11 BGX10 04	Top mount auxiliary contact for BG mini-contactors - 4NC
11 BGX10 13	Top mount auxiliary contact for BG mini-contactors - 1NO + 3NC
11 BGX10 22	Top mount auxiliary contact for BG mini-contactors - 2NO + 2NC
11 BGX10 31	Top mount auxiliary contact for BG mini-contactors - 3NO + 1NC
11 BGX10 40	Top mount auxiliary contact for BG mini-contactors - 4NO
11 BGX50 00	Top mount mechanical interlock for BG mini-contactors
11 BGX77 048	Surge suppressor for BG mini-contactors ≤48VAC/DC (Varistor)
11 BGX77 125	Surge suppressor for BG mini-contactors 48...125VAC/DC (Varistor)
11 BGX77 240	Surge suppressor for BG mini-contactors 125...240VAC/DC (Varistor)

MOTOR PROTECTION & CONTROL

CONTACTORS

BF SERIES ACCESSORIES



11G485 – 11G486



BFX1011



BFX1022



BFX1211



BFX50 00
BFX53 00
BFX54 00



BFX50 01
BFX53 01
BFX54 01



BFX42



BFX77

Delay ON	Delay OFF	Description
11 G485 3	11 G486 3	3 second delayed auxiliary contacts 1NO + 1NC for BF09-BF150
11 G485 6	11 G486 6	6 second delayed auxiliary contacts 1NO + 1NC for BF09-BF150
11 G485 15	11 G486 15	15 second delayed auxiliary contacts 1NO + 1NC for BF09-BF150
11 G485 30	11 G486 30	30 second delayed auxiliary contacts 1NO + 1NC for BF09-BF150
11 G485 60	11 G486 60	60 second delayed auxiliary contacts 1NO + 1NC for BF09-BF150
11 G485 120	11 G486 120	120 second delayed auxiliary contacts 1NO + 1NC for BF09-BF150

Order code	Description
BFX10 02	Top mount auxiliary contact for BF09-BF150 contactors - 2NC
BFX10 11	Top mount auxiliary contact for BF09-BF150 contactors - 1NO+1NC
BFX10 20	Top mount auxiliary contact for BF09-BF150 contactors - 2NO
BFX10 04	Top mount auxiliary contact for BF09-BF150 contactors - 4NC
BFX10 13	Top mount auxiliary contact for BF09-BF150 contactors - 1NO+3NC
BFX10 22	Top mount auxiliary contact for BF09-BF150 contactors - 2NO+2NC
BFX10 31	Top mount auxiliary contact for BF09-BF150 contactors - 3NO+1NC
BFX10 40	Top mount auxiliary contact for BF09-BF150 contactors - 4NO
BFX12 02	Side mount auxiliary contact for BF09-BF94 contactors only - 2NC
BFX12 11	Side mount auxiliary contact for BF09-BF94 contactors only - 1NO+1NC
BFX12 20	Side mount auxiliary contact for BF09-BF94 contactors only - 2NO
BFX10 C10	Top mount auxiliary contact for BF160-BF400 contactors only - 2NC
BFX10 C01	Top mount auxiliary contact for BF160-BF400 contactors - 1NO+1NC
BFX12 C02	Side mount auxiliary contact for BF160-BF400 contactors - 2NO
BFX12 C11	Side mount auxiliary contact for BF160-BF400 contactors - 4NO+1NC
BFX12 C20	Side mount auxiliary contact for BF160-BF400 contactors - 2NO
BFX50 00	Mechanical interlock - Side mount for BF09-BF38
BFX50 01	Mechanical interlock - Side mount with 2NC contacts for BF09-BF38
BFX50 02	Mechanical interlock - Front mount, low profile for BF09-BF38
BFX53 00	Mechanical interlock - Side mount for BF40-BF94
BFX53 01	Mechanical interlock - Side mount with 2NC contacts for BF40-BF94
BFX53 03	Mechanical interlock - Front mount for BF40-BF94
BFX54 00	Mechanical interlock - Side mount for BF95-BF150
BFX54 01	Mechanical interlock - Side mount with 2NC contacts for BF95-BF150
BFX54 03	Mechanical interlock - Front mount for BF95-BF150
BFX55 00	Mechanical interlock - Side mount for BF160-BF400
BFX55 03	Mechanical interlock - Vertical mount with 305-345mm axis for BF160-BF400
BFX55 04	Mechanical interlock - Vertical mount with 345-385mm axis for BF160-BF400
BFX42	Fourth pole add on - for BF26A-BF38A (AC coil only)
BFX42D	Fourth pole add on - for BF26D-BF38D (DC coil only)
BFX43	Fourth pole add on - for BF40-BF94
BFX44	Fourth pole add on - for BF95-BF150
BFX77 048	Surge suppressor ≤48VAC/DC (Varistor) for BF09-BF150
BFX77 125	Surge suppressor 48...125VAC/DC (Varistor) for BF09-BF150
BFX77 240	Surge suppressor 125...240VAC/DC (Varistor) for BF09-BF150

MOTOR PROTECTION & CONTROL

CONTACTORS

BF SERIES BUSBAR LINKS



11 BA135
11 BA235

11 BA 435



BFX836



BFX31...
BFX32...



BFX34...

Order code	Description
11 BA135	Parallel links for 2 poles for contactors BF09-BF25
11 BA235	Parallel links for 2 poles for contactors BF26-BF38
BFX33 92	Parallel links for 2 poles for contactors BF40-BF94
BFX34 92	Parallel links for 2 poles for contactors BF95-BF150
11BA435	Parallel links for 3 poles for contactors BF95-BF150
BFX33 93	Parallel links for 3 poles for contactors BF40-BF94
11 G231	Terminal enlarger - 1 x 6mm ² for contactors BF09-BF25
11 G232	Terminal enlarger - 1 x 16mm ² for contactors BF26-BF38
BFX833	IP20 Finger protection for terminals - for BFBF40-BF94 (2 per contactor required)
BFX834	IP20 Finger protection for terminals - for BFBF95-BF150 (2 per contactor required)
BFX835	Terminal cover, three pole for BF165-BF230
BFX836	Terminal cover, three pole for BF265-BF400
BFX845	Terminal cover, four pole for BF165-BF230
BFX846	Terminal cover, four pole for BF265-BF400
BFX31 01	Rigid busbar link for DOL reversing assembly (BFX5002 or BFX5003) - for BF09-BF25
BFX31 02	Rigid busbar link for DOL reversing assembly (BFX5000 or BFX5001) - for BF09-BF25
BFX32 01	Rigid busbar link for DOL reversing assembly (any BFX500...) - for BF26-BF38
BFX33 01	Rigid busbar link for DOL reversing assembly (BFX5303) - for BF40-BF94
BFX34 01	Rigid busbar link for DOL reversing assembly (BFX5403) - for BF95-BF140
BFX35 01	Rigid busbar link for DOL reversing assembly side by side - for BF160-BF230
BFX36 01	Rigid busbar link for DOL reversing assembly side by side - for BF265-BF400
BFX31 31	Rigid busbar link for star-delta assembly - for BF09-BF25
BFX32 31	Rigid busbar link for star-delta assembly - for BF26-BF38
BFX32 32	Rigid busbar link for star-delta assembly - for BF26-BF38 (star) and BF09-BF25 (delta)
BFX33 61	Rigid busbar link for three pole changeover - for BF40-BF94 (use BFX5300/BFX5301)
BFX34 61	Rigid busbar link for three pole changeover - for BF95-BF150 (use BFX5400/BFX5401)
BFX33 71	Rigid busbar link for four pole changeover - for BF40-BF94 (use BFX5300/BFX5301)
BFX34 71	Rigid busbar link for four pole changeover - for BF95-BF150 (use BFX5400/BFX5401)
BFX35 61	Rigid busbar link for three pole changeover - for BF160-BF235
BFX36 61	Rigid busbar link for three pole changeover - for BF265-BF400
BFX35 71	Rigid busbar link for four pole changeover - for BF160-BF235
BFX36 71	Rigid busbar link for four pole changeover - for BF265-BF400

EMPTY DOL AND RESET STARTER ENCLOSURES



M1PA...

M1RA...

Order code	Type	Contactor suitability	Overload	Dimensions
M0PA	DOL	BG09, BG12	RF9...	184 x 88 x 119
M1PA	DOL	BF09, BF12, BF18	RF38...	202 x 88 x 134
M2PA	DOL	BF25, BF26, BF32	RF38...	234 x 110 x 148
M25PA	DOL	BF38	RF38...	210 x 175 x 158
M3PA	DOL	BF40, BF50, BF65, BF80, BF94	RF82...	280 x 220 x 170
M0RA	Reset	BG09, BG12	RF9...	184 x 88 x 119
M1RA	Reset	BF09, BF12, BF18	RF38...	202 x 88 x 134
M2RA	Reset	BF25, BF26, BF32	RF38...	234 x 110 x 148
M0N	Empty	BG09, BG12	RF9...	184 x 88 x 119
M1N	Empty	BF09, BF12, BF18	RF38...	202 x 88 x 134
M2N	Empty	BF25, BF26, BF32	RF38...	234 x 110 x 148

MOTOR PROTECTION & CONTROL

MOTOR PROTECTION RELAYS

THERMAL OVERLOAD RELAYS



RF9



RF38



RF82



RF110



RF200



RFE45

Order code	Compatible contactor series	Adjustment range (A)	3Ph Motor at 400V DOL (max kW)	3Ph Motor at 400V Star-Delta (kW)	
Thermal, phase failure and single phase sensitive, manual reset					
11 RF9 1	11BG06... 11BG09... 11BG12...	0.6 - 1	0.37	-	
11 RF9 1V5		0.9 - 1.5	0.55	-	
11 RF9 2V3		1.4 - 2.3	0.75	-	
11 RF9 33		2 - 3.3	1.1	-	
11 RF9 5		3 - 5	1.5	-	
11 RF9 75		4.5 - 7.5	2.2	-	
11 RF9 10		6 - 10	4.0	-	
11 RF9 15		9 - 15	5.5	-	
Thermal, phase failure and single phase sensitive, manual/auto reset					
RF38 0100	BF09... BF12... BF18... BF25... BF26... BF32... BF38...	0.63 - 1	0.25	-	
RF38 0160		1 - 1.6	0.55	-	
RF38 0250		1.6 - 2.5	0.75	-	
RF38 0400		2.5 - 4	1.5	2.2 - 3	
RF38 0650		4 - 6.5	2.2	4	
RF38 1000		6.3 - 10	4	5.5 - 7.5	
RF38 1400		9 - 14	5.5	11	
RF38 1800		13 - 18	7.5	15	
RF38 2300		17 - 23	11	18.5	
RF38 2500		20 - 25	11	22	
RF38 3200		24 - 32	15	30	
RF38 3800		32 - 38	18.5	30	
RFX38 04		Independent mount for screw or din rail fixing			
RF82 3300		BF40...	20 - 33	15	22
RF82 4200	BF50...	28 - 42	18.5	30	
RF82 5000	BF65...	35 - 50	22	45	
RF82 6500	BF80...	46 - 65	30	55	
RF82 8200	BF94...	60 - 82	37	75	
RF110 082	BF95... BF115... BF160...	60 - 82	37	75	
RF110 095		70 - 95	45	-	
RF110 110		90 - 110	55	90	
11G270		Independent mount for screw or din rail fixing			
RF200 100	BF165... BF195... BF230... BF265... BF330... BF400...	60 - 100	51	90	
RF200 125		75 - 125	63	110	
RF200 150		90 - 150	80	132	
RF200 200		12 - 200	100	-	
RF420 250		150 - 250	132	-	
RF420 300		180 - 300	162	-	
RF420 420		250 - 420	198	-	
Electronic, phase failure and single phase sensitive, manual/auto reset					
RFE45 0200	BF09... to BF38...	0.4 - 2	0.12 - 0.75	22	
RFE45 0800		1.6 - 8	0.75 - 3	30	
RFE45 3200		6.4 - 32	3 - 15	45	
RFE45 4500		9 - 45	4 - 22		

For higher ratings, refer to the general catalogue

MOTOR PROTECTION & CONTROL

L-STARTER

COMPACT DIRECT ON-LINE STARTERS

OVERLOAD INCLUDED



DOLC...

Order code	Overload included	Control voltage (VAC)	Motor power at 400V (kW)	Horse power (HP)	Max motor current AC3 (A)	Dimensions H x W x D (mm)
DOLC0.75230	Yes	230	0.75	1	1.9	175 x 88 x 119
DOLC0.75400	Yes	400				
DOLC1.1230	Yes	230	1.1	1.5	2.7	
DOLC1.1400	Yes	400				
DOLC2.2230	Yes	230	2.2	3.0	5	
DOLC2.2400	Yes	400				
DOLC4.0230	Yes	230	4	5.5	8.6	
DOLC4.0400	Yes	400				

STANDARD DIRECT ON-LINE STARTERS

OVERLOAD NOT INCLUDED



DOLC5.5...



DOLS...



DOLSW...

Order code	Overload included	Control voltage (VAC)	Motor power at 400V (kW)	Horse power (HP)	Max motor current AC3 (A)	Dimensions H x W x D (mm)
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Compact direct on-line 3 phase starter - Requires RF9...overload

DOLC5.5230	No	230	5.5	7.5	12	175 x 88 x 119
DOLC5.5400	No	400				

Standard direct on-line 3 phase starter - Requires RF38...overload

DOLS5.5230	No	230	5.5	7.5	12	193 x 88 x 134
DOLS5.5400	No	400				
DOLS7.5230	No	230	7.5	10	18	193 x 88 x 134
DOLS7.5400	No	400				
DOLS11230	No	230	11	15	25	225 x 110 x 148
DOLS11400	No	400				
DOLS15230	No	230	15	20	28.5	
DOLS15400	No	400				

Standard direct on-line 3 phase starter with isolator - Requires RF38...overload

DOLSW5.5230	No	230	5.5	7.5	12	225 x 110 x 148
DOLSW5.5400	No	400				
DOLSW7.5230	No	230	7.5	10	18	
DOLSW7.5400	No	400				
DOLSW11230	No	230	11	15	25	
DOLSW11400	No	400				
DOLSW15230	No	230	15	20	28.5	
DOLSW15400	No	400				

Direct on-line 3 phase reversing starter FWD/STOP/REV - Requires RF38...overload

Direct on line 3 phase reversing starter (VFD) (DOL) (N2) Requires N2 DOL motor code						
DOLR5.5230	No	230	5.5	7.5	12	225 x 110 x 148
DOLR5.5400	No	400				
DOLR7.5230	No	230	7.5	10	18	
DOLR7.5400	No	400				
DOLR11230	No	230	11	15	25	
DOLR11400	No	400				

MOTOR PROTECTION & CONTROL

L-STARTER

STAR-DELTA STARTERS IP65 POLYCARBONATE

OVERLOAD NOT INCLUDED



YD...

Order code	Overload included	Control voltage (VAC)	Motor power at 400V (kW)	Horse power (HP)	Max motor current AC3 (A)	Dimensions H x W x D (mm)
Star delta starter - Requires RF38 - overload relay						
YD7.5 230	No	230	7.5	10	15.2	220 x 280 x 170
YD7.5 400	No	400				
YD11 230	No	230	11	15	22	
YD11 400	No	400				
YD15 230	No	230	15	20	28	
YD15 400	No	400				
YD22 230	No	230	22	30	43	
YD22 400	No	400				
YD30 230	No	230	30	40	60	
YD30 400	No	400				



YDSW...

Star delta starter with isolator - Requires RF38 - overload relay						
YDSW7.5 230	No	230	7.5	10	15.2	220 x 280 x 170
YDSW7.5 400	No	400				
YDSW11 230	No	230	11	15	22	
YDSW11 400	No	400				
YDSW15 230	No	230	15	20	28	
YDSW15 400	No	400				
YDSW22 230	No	230	22	30	43	
YDSW22 400	No	400				
YDSW30 230	No	230	30	40	60	
YDSW30 400	No	400				

STAR-DELTA STARTERS IP65 STEEL ENCLOSED

OVERLOAD & ISOLATOR INCLUDED



SDSI...

Order code	Overload included	Control voltage (VAC)	Motor power at 400V (kW)	Horse power (HP)	Max motor current AC3 (A)	Dimensions H x W x D (mm)
SDSI11 415	Yes	400	11	15	22	300 x 300 x 200
SDSI15 415	Yes	400	15	20	28	
SDSI22 415	Yes	400	22	30	42	
SDSI30 415	Yes	400	30	40	56	
SDSI45 415	Yes	400	45	60	83	500 x 400 x 200
SDSI55 415	Yes	400	55	75	98	
SDSI75 415	Yes	400	75	100	135	

STAR-DELTA DIN RAIL OPEN FRAME



BFA...

Order code	Overload included	Three-phase motor control. Max IEC current ($\leq 440V$) (A)	Motor power at 400V (kW)	Thermal overload relay required
BFA009 70*	No	16	7.5	RF38...
BFA012 70*	No	22	11	RF38...
BFA018 70*	No	28	15	RF38...
BFA025 70*	No	35	18.5	RF38...
BFA026 70*	No	43	22	RF38...
BFA038 70*	No	60	30	RF38...

*Complete with coil voltage 024, 110, 230, 400VAC. Overload relay not included

Larger frame sizes are available. Please refer to the General Catalogue.

MOTOR PROTECTION & CONTROL

L-STARTER

THERMAL OVERLOAD RELAYS FOR DOLC STARTERS



RF9...

THERMAL OVERLOAD RELAYS - For DOLS, DOLSW, DOLR, YD AND YDSW... starters



RF38...

Order code	Adjustment range (A)	Three phase motor at 400V DOL (kW)	Three phase motor at 400V Star Delta (kW)
RF9 1	0.6 - 1	0.37	-
RF9 1V5	0.9 - 1.5	0.55	-
RF9 2V3	1.4 - 2.3	0.75	-
RF9 33	2 - 3.3	1.1	-
RF9 5	3 - 5	1.5	-
RF9 75	4.5 - 7.5	2.2	-
RF9 10	6.3 - 10	4.0	-
RF9 15	9 - 15	5.5	-
RF38 0100	0.63 - 1	0.25	-
RF38 0160	1 - 1.6	0.55	-
RF38 0250	1.6 - 2.5	0.75	-
RF38 0400	2.5 - 4	1.5	2.2 - 3
RF38 0650	4 - 6.5	2.2	4
RF38 1000	6.3 - 10	4	5.5 - 7.5
RF38 1400	9 - 14	5.5	11
RF38 1800	13 - 18	7.5	15
RF38 2300	17 - 23	11	18.5
RF38 3200	24 - 32	15	22
RF38 3800	32 ~ 38A	18.5	30

IMPORTANT

For DOL starters select RF...overload relay above for setting motor at full load current (FLC)
For YD star-delta starters you must select the RF38...overload relay above for setting at 58% of full load current (FLC)

ELECTRONIC MOTOR STARTERS



ME024...

Order code	Function	Rated current le AC-53A	Motor power at 400V (kW)	Adjustment range le
ME024FD024	Direct-on-line	2.4	0.75	0.18-2.4
ME070FD024		7	3	1.5-7
ME024RD024	DOL Reversing	2.4	0.75	0.18-2.4
ME070RD024		7	3	1.5-7
ME024FSD024	DOL Safe Torque Off (STO) Emergency Stop	2.4	0.75	0.18-2.4
ME070FSD024		7	3	1.5-7
ME024RSD024	DOL Reversing STO Emergency Stop	2.4	0.75	0.18-2.4
ME070RSD024		7	3	1.5-7

3 Phase parallel bridging links available to connect up to 10 starters



MOTOR PROTECTION & CONTROL

SOFT STARTERS

ADXN SOFT STARTERS

Built-in bypass relay and 2 relay outputs. 208-600VAC operational voltage.

ADXNB

Basic soft starter with manual setting adjustments



ADXNF

NFC version soft starter with setting adjustments via NFC phone app connectivity



ADXNP

Advanced soft starter with both setting via NFC and manually c/w thermal protection and expandability



IEC rated starter current Ie (A)	Rated motor power (kW)	Order code 100-240VAC Aux supply	Order code 24VAC/DC Aux supply	Order code 100-240VAC Aux supply	Order code 24VAC/DC Aux supply	Order code 100-240VAC Aux supply	Order code 24VAC/DC Aux supply
6	2.2	ADXNB 006	ADXNB 00624	ADXNF 006	ADXNF 00624	ADXNP 006	ADXNP 00624
12	5.5	ADXNB 012	ADXNB 01224	ADXNF 012	ADXNF 01224	ADXNP 012	ADXNP 01224
18	7.5	ADXNB 018	ADXNB 01824	ADXNF 018	ADXNF 01824	ADXNP 018	ADXNP 01824
25	11	ADXNB 025	ADXNB 02524	ADXNF 025	ADXNF 02524	ADXNP 025	ADXNP 02524
30	15	ADXNB 030	ADXNB 03024	ADXNF 030	ADXNF 03024	ADXNP 030	ADXNP 03024
38	18.5	ADXNB 038	ADXNB 03824	ADXNF 038	ADXNF 03824	ADXNP 038	ADXNP 03824
45	22	ADXNB 045	ADXNB 04524	ADXNF 045	ADXNF 04524	ADXNP 045	ADXNP 04524

ADX SOFT STARTERS



ADXL 0030
ADXL 0060



ADXL 0075
ADXL 0115



ADXL 0135
ADXL 0162



ADXL 0195
ADXL 0320

Order code	IEC rated starter current range Ie at 400V (A)	Rated motor power (kW)
For standard and heavy-duty applications. Built-in bypass relay. 100...240VAC auxiliary power supply		
ADXL 0018 600	9 - 18	4.0 - 7.5
ADXL 0030 600	15 - 30	7.5 - 15
ADXL 0045 600	22.5 - 45	11 - 22
ADXL 0060 600	30 - 60	15 - 30
ADXL 0075 600	37.5 - 75	18.5 - 37
ADXL 0085 600	42.5 - 85	22.5 - 45
ADXL 0115 600	57.5 - 115	27.5 - 55
ADXL 0135 600	67.5 - 135	37.5 - 75
ADXL 0162 600	82.5 - 165	45 - 90
ADXL 0195 600	97.5 - 195	55 - 110
ADXL 0250 600	125 - 250	66 - 132
ADXL 0320 600	160 - 320	80 - 160

ADX ACCESSORIES



CX01



EXC 1042

Order code	Description
CX 01	USB connection dongle PC ↔ ADXNP/ADXL
CX 02	Wi-fi connection dongle PC ↔ ADXNP/L
CX 04	RS485 Communication module for ADXNP
SM1X3150R	Rigid connection for ADXN.. To SM1R motor breaker
EXP8007	Fan for ADXN.. exc ADXN..038-045 (already included)
EXC 1042	RS485 communication board for ADXL
EXP80 03	DIN rail mounting kit for ADXL0018...ADXL0115
EXP80 04	Fan for ADXL0030...ADXL0115 (inc. on larger sizes)

MOTOR PROTECTION & CONTROL

VARIABLE SPEED DRIVES

THREE-PHASE VARIABLE SPEED DRIVES



VLB3

Order code	Heavy duty		Standard duty	
	Output current (A)	3-phase motor power at 400VAC (kW)	Output current (A)	3-phase motor power at 400VAC (kW)
Three-phase supply 400...480VAC 50/60Hz. Three-phase motor output 480VAC max. Built-in EMC suppressor. Built-in display and RS485				
VLB3 0004 A480	1.3	0.4	1.5	0.75
VLB3 0007 A480	2.4	0.75	2.7	1.5
VLB3 0015 A480	3.9	1.5	4.5	2.2
VLB3 0022 A480	5.6	2.2	6.4	4
VLB3 0040 A480	9.5	4	10.9	5.5
VLB3 0055 A480	13	5.5	15	7.5
VLB3 0075 A480	17	7.5	19.6	11
VLB3 0110 A480	23.3	11	27.1	15
VLB3 0150 A480	32	15	36.9	18.5
VLB3 0185 A480	40	18.5	46.1	22
VLB3 0220 A480	47	22	54.2	30
VLB3 0300 A480	66	30	76.1	37

Available in sizes up to 90kW (standard duty). Please refer to general catalogue

ACCESSORIES FOR VLB3



VLBX C01



VLBX C02



VLBX L

Order code	Description
VLBX C01	Display and keyboard
VLBX P01	Door-mount installation
VLBX C02	USB communication module
VLBX C03	Wi-fi communication module
VLBX SM	S.T.O (Safe torque off) module
VLBX L01	Logic unit with CanOPEN
VLBX L02	Logic unit with ProfiBUS
VLBX L03	Logic unit with ProfiNET (available upon request)
VLBX L04	Logic unit with Ethercat (available upon request)
VLBX L06	Logic unit with Modbus RTU (available upon request)

SINGLE-PHASE VARIABLE SPEED DRIVES



VLA1

Order code	Output current (A)	3-phase motor power at 240VAC (kW)	3-phase motor power at 240VAC (HP)
Single-phase supply 200...240VAC 50/60Hz. Three-phase motor output 240VAC max. Built-in EMC suppressor, cat. C2			
VLA1 02 A240	1.7	0.25	0.33
VLA1 04 A240	2.4	0.4	0.5
VLA1 07 A240	4.2	0.75	1
VLA1 15 A240	7.0	1.5	2
VLA1 22 A240	9.6	2.2	3

Order code	Description
VLAX C01	Display and keyboard
VLAX C02	USB communication module
VLAX P01	Door mount installation kit for VLAXC01 keypad

MOTOR PROTECTION & CONTROL

SOLID STATE RELAYS

HS SERIES SOLID STATE RELAYS



HS1A...



HS1B...

Order code	Load operating voltage (VAC)	I _e AC051 at 40 °C	Control voltage	Type of load
Miniature, faston terminals				
HS1A2NN025D024	12...280	25	4...30VDC	Resistive
Hockey puck, single-phase, screw terminals				
HS1B2NT025D024	12...280	25	3...32VDC	Resistive
HS1B2NT025E230	12...280	25	18...280VAC/DC	Resistive
HS1B5NV040D024	24...510	40	3.5...32VDC	Resistive or inductive
HS1B5NV040E230	24...510	40	20...265VAC/DC	Resistive or inductive
HS1B6NT040D024	24...600	40	3.5...32VDC	Resistive
HS1B6NT040E230	24...600	40	18...280VAC/DC	Resistive
HS1B6NN050D024	24...600	50	3.5...32VDC	Resistive
HS1B5NV060D024	24...510	60	3.5...32VDC	Resistive or inductive
HS1B5NV060E230	24...510	60	20...265VAC/DC	Resistive or inductive
HS1B6NT060D024	24...600	60	3.5...32VDC	Resistive
HS1B6NT060E230	24...600	60	18...280VAC/DC	Resistive
HS1B6NT090D024	24...600	90	3.5...32VDC	Resistive
HS1B6NT090E230	24...600	90	18...280VAC/DC	Resistive
HS1B5NV130D024	24...510	130	3.5...32VDC	Resistive or inductive
HS1B5NV130E230	24...510	130	20...265VAC/DC	Resistive or inductive



HS1C...



HS3C...

Order code single-phase	Order code three-phase	Load operating voltage (VAC)	I _e AC051 at 40 °C	Control voltage	Type of load
Complete with heatsink, ready to use, screw terminals					
HS1C2HV020D024		12...275	20	3...32VDC	Resistive or inductive
HS1C6HV020D024	HS3C6HV020D024	48...600	20	4...32VDC	Resistive or inductive
HS1C6HV020A230	HS3C6HV020A230	48...600	20	90...280VAC	Resistive or inductive
HS1C2HV025D024		12...275	25	3...32VDC	Resistive or inductive
HS1C6HV025D024	HS3C6HV025D024	48...600	25	4...32VDC	Resistive or inductive
HS1C6HV025A230	HS3C6HV025A230	48...600	25	90...280VAC	Resistive or inductive
HS1C2HV030D024		12...275	30	3...32VDC	Resistive or inductive
HS1C6HV030D024		48...600	30	4...32VDC	Resistive or inductive
HS1C6HV030A230		48...600	30	90...280VAC	Resistive or inductive
HS1C6HV040D024	HS3C6HV040D024	48...600	40	4...32VDC	Resistive or inductive
HS1C6HV040A230	HS3C6HV040A230	48...600	40	90...280VAC	Resistive or inductive
HS1C6HV060D024		48...600	60	4...32VDC	Resistive or inductive
HS1C6HV060A230		48...600	60	90...280VAC	Resistive or inductive



For the full range of solid state relays and accessories including heat sinks, thermal pads and current monitoring modules please refer to the General Catalogue.

CONTROL & SIGNALLING

PUSHBUTTONS & SELECTOR SWITCHES



PLatinum

**PUSHBUTTON
SERIES**



LPXC...

Ø22mm
Chromed Plastic
LPC range...



LPXAUI20



LPC...



LPXC...



LPXAUI20M...

Ø22mm
Metal
LPS range...



LPS...

SPRING RETURN



LPC B103



LPC B206



LPC B1104



LPC B1142

Description	Black order code	Green order code	Red order code	Yellow order code	Blue order code	White order code
Pushbutton actuators (without mounting adaptors) Ø22mm (LPS... metal version in BLUE)						
Flush	LPC B102 LPS B102	LPC B10 LPS B103	LPC B104 LPS B104	LPC B105 LPS B105	LPC B106 LPS B106	LPC B108 LPS B108
Extended	LPC B202 LPS B202	LPC B203 LPS B203	LPC B204 LPS B204	LPC B205 LPS B205	LPC B206 LPS B206	LPC B208 LPS B208
Flush pushbutton actuators with symbols Ø22mm (LPS... metal version in BLUE)						
0	LPC B1102 LPS B1102	-	LPC B1104 LPS B1104	-	-	-
I	-	LPC B1113 LPS B1113	-	-	-	LPC B1118 LPS B1118
II	-	LPC B1123 LPS B1123	-	-	-	LPC B1128 LPS B1128
←	LPC B1142 LPS B1142	-	-	-	-	LPC B1148 LPS B1148
↑	LPC B1152 LPS B1152	-	-	-	-	LPC B1158 LPS B1158
Extended pushbutton actuators with symbols Ø22mm (LPS... metal version in BLUE)						
0	LPC B2102 LPS B2101	-	LPC B2104 LPS B2104	-	-	-

CONTROL & SIGNALLING

PUSHBUTTONS & SELECTOR SWITCHES

MUSHROOM HEAD



LPC B6144



LPC B6744



LPC B6634



LPC B6844

Description	Black order code	Green order code	Red order code
Mushroom head buttons (without mounting adaptors) Ø22mm (LPS... metal version in BLUE)			
Ø40mm Spring return	LPC B6142 LPS B6142	LPC B6143 LPS B6143	LPC B6144 LPS B6144
For normal stopping Ø40mm Latch, pull to release	LPC B6742 LPS B6742	-	-
For emergency stopping ISO 13850 compliant Ø40mm Latch, pull to release	-	-	LPC B6744 LPS B6744
For normal stopping Ø40mm Latch, turn to release	LPC B6342	-	LPC B6344
For emergency stopping ISO 13850 compliant Ø30mm Latch, turn to release	-	-	LPC B6634 LPS B6634
For emergency stopping ISO 13850 compliant Ø40mm Latch, turn to release	-	-	LPC B6644 LPS B6644
For normal stopping Ø40mm Latch, turn key to release, key code 455	LPC B6842 LPS B6842	-	-
For emergency stopping ISO 13850 compliant Ø40mm Latch, turn key to release, key code 455	-	-	LPC B6844 LPS B6844

Other colours, variants and key code types available. Please see the general catalogue

DOUBLE-TOUCH



LPC B7223

Description	Black/Red order code	Green/Red order code	White/Black order code
One extended and one flush pushbutton (without mounting adaptor). Ø22mm. Both spring return (LPS... metal version in BLUE)			
No symbol	LPC B7212 LPS B7212	LPC B7213 LPS B7213	LPC B7214 LPS B7214
I-O	LPC B7222 LPS B7222	LPC B7223 LPS B7223	LPC B7224 LPS B7224
Start/Stop	-	LPC B7233 LPS B7233	-

TRIPLE-TOUCH



LPC B7355



LPC B7375

Description Ø22mm	Black/Red order code	Green/Red order code	White/Black order code
One extended middle button (without mounting adaptor). Spring return Ø22mm (LPS... metal version in BLUE)			
I STOP II	-	LPC B7345 LPS B7345	-
↑ STOP ↓	-	LPC B7355 LPS B7355	-
→ STOP ←	-	LPC B7365 LPS B7365	-
↗ STOP ↖	-	LPC B7375 LPS B7375	-

CONTROL & SIGNALLING

PUSHBUTTONS & SELECTOR SWITCHES

SELECTOR SWITCH ACTUATORS



LPC S1...

LPC S2...



LPC S4...

Type of positions	Regular lever order code	Long lever order code	Knob order code
2 position (without mounting adaptors) Ø22mm (LPS... metal version in BLUE)			
	LPC S120 LPS S120	LPC S220 LPS S220	LPC S420 LPS S420
	LPC S121 LPS S121	LPC S221 LPS S221	LPC S421 LPS S421
3 position (without mounting adaptors) Ø22mm (LPS... metal version in BLUE)			
	LPC S130 LPS S130	LPC S230 LPS S230	LPC S430 LPS S430
	LPC S131 LPS S131	LPC S231 LPS S231	LPC S431 LPS S431
	LPC S132 LPS S132	LPC S232 LPS S232	LPC S432 LPS S432
	LPC S133 LPS S133	LPC S233 LPS S233	LPC S433 LPS S433

SELECTOR SWITCH ACTUATORS KEY



LPC S3...

Type of positions	Order code
2 position (without mounting adaptors) Ø22mm (LPS... metal version in BLUE)	
	LPC S320 LPS S320
	LPC S321 LPS S321
	LPC S340 LPS S340
3 position (without mounting adaptors) Ø22mm (LPS... metal version in BLUE)	
	LPC S330 LPS S330
	LPC S331 LPS S331
	LPC S332 LPS S332
	LPC S333 LPS S333
	LPC S350 LPS S350
	LPC S360 LPS S360
	LPC S370 LPS S370
	LPC S380 LPS S380
	LPC S390 LPS S390

Type of positions



Maintained position



Spring return position



Key extraction position

CONTROL & SIGNALLING

PUSHBUTTONS & SELECTOR SWITCHES

ILLUMINATED BUTTON SPRING RETURN



LPC BL103

Description	Green order code	Red order code	Yellow order code	Blue order code	Transparent order code
Pushbutton actuators (without mounting adaptors) Ø22mm (LPS... metal version in BLUE)					
Flush	LPC BL103 LPS BL103	LPC BL104 LPS BL104	LPC BL105 LPS BL105	LPC BL106 LPS BL106	LPC BL107 LPS BL107
Extended	LPC BL203 LPS BL203	LPC BL204 LPS BL204	LPC BL205 LPS BL205	LPC BL206 LPS BL206	LPC BL207 LPS BL207

ILLUMINATED MUSHROOM HEAD



LPC BL6644

Description	Green order code	Red order code	Yellow order code	Blue order code
Illuminated mushroom head buttons (without mounting adaptors) Ø22mm (LPS... metal version in BLUE)				
Ø40mm Spring return	LPC BL6143	LPC BL6144	LPC BL6145	LPC BL6146
For normal stopping Ø40mm Latch, turn to release	LPC BL6643 LPS BL6643	-	LPC BL6645 LPS BL6645	LPC BL6646 LPS BL6646
For emergency stopping ISO13850 compliant Ø40mm Latch, turn to release	-	LPC BL6644 LPS BL6644	-	-

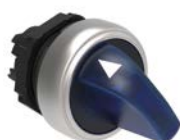
DOUBLE-TOUCH WITH WHITE INDICATOR



LPC BL7223

Description	Black/Red order code	Green/Red order code	White/Black order code
One extended and one flush pushbutton (without mounting adaptor) Ø22mm. Both spring return (LPS... metal version in BLUE)			
No symbol	LPC BL7212 LPS BL7212	LPC BL7213 LPS BL7213	LPC BL7214 LPS BL7214
I-O	LPC BL7222 LPS BL7222	LPC BL7223 LPS BL7223	LPC BL7224 LPS BL7224
Start/Stop	-	LPC BL7233 LPS BL7233	-

ILLUMINATED SELECTOR SWITCH



LPC SL12...



LPC SL13...

Description	Green order code	Red order code	Yellow order code	Blue order code	White order code
2 position (without mounting adaptors) Ø22mm (LPS... metal version in BLUE)					
	LPC SL1203 LPS SL1203	LPC SL1204 LPS SL1204	LPC SL1205 LPS SL1205	LPC SL1206 LPS SL1206	LPC SL1208 LPS SL1208
	LPC SL1213 LPS SL1213	LPC SL1214 LPS SL1214	LPC SL1215 LPS SL1215	LPC SL1216 LPS SL1216	LPC SL1218 LPS SL1218
3 position (without mounting adaptors) Ø22mm (LPS... metal version in BLUE)					
	LPC SL1303 LPS SL1303	LPC SL1304 LPS SL1304	LPC SL1305 LPS SL1305	LPC SL1306 LPS SL1306	LPC SL1308 LPS SL1308
	LPC SL1313 LPS SL1313	LPC SL1314 LPS SL1314	LPC SL1315 LPS SL1315	LPC SL1316 LPS SL1316	LPC SL1318 LPS SL1318
	LPC SL1323 LPS SL1323	LPC SL1324 LPS SL1324	LPC SL1325 LPS SL1325	LPC SL1326 LPS SL1326	LPC SL1328 LPS SL1328
	LPC SL1333 LPS SL1333	LPC SL1334 LPS SL1334	LPC SL1335 LPS SL1335	LPC SL1336 LPS SL1336	LPC SL1338 LPS SL1338

Type of positions



Maintained position



Spring return position

CONTROL & SIGNALLING

PUSHBUTTONS & SELECTOR SWITCHES

PILOT LIGHT HEADS



LPL...

Green order code	Red order code	Yellow order code	Blue order code	Transparent order code	Transparent order code*
LPL 3 LPSL 3	LPL 4 LPSL 4	LPL 5 LPSL 5	LPL 6 LPSL 6	LPL 7 LPSL 7	LPL 1187 LPSL 1187

*With symbol indicating dangerous voltage

LED MONOBLOCK PILOT LIGHTS STEADY LIGHT



LPM...

Supply Voltage	Orange order code	Green order code	Red order code	Yellow order code	Blue order code	Transparent order code
12VAC/DC	LPM LA1	LPM LA3	LPM LA4	LPM LA5	LPM LA6	LPM LA7
24VAC/DC	LPM LB1	LPM LB3	LPM LB4	LPM LB5	LPM LB6	LPM LB7
48VAC/DC	LPM LD1	LPM LD3	LPM LD4	LPM LD5	LPM LD6	LPM LD7
110VAC	LPM LE1	LPM LE3	LPM LE4	LPM LE5	LPM LE6	LPM LE7
230VAC	LPM LM1	LPM LM3	LPM LM4	LPM LM5	LPM LM6	LPM LM7
400VAC	LPM LP1	LPM LP3	LPM LP4	LPM LP5	LPM LP6	LPM LP7
110-125VDC	LPM LF1	LPM LF3	LPM LF4	LPM LF5	LPM LF6	LPM LF7
220VDC	LPM LN1	LPM LN3	LPM LN4	LPM LN5	LPM LN6	LPM LN7

Ø22mm ring fixing

MONOBLOCK POTENTIOMETERS



LPC PA...

Order code	Resistance value
LPC PA001	1kΩ
LPC PA002	2.5kΩ
LPC PA005	5kΩ
LPC PA010	10kΩ
LPC PA050	50kΩ
LPC PA100	100kΩ
LPC PA500	500kΩ

MONOBLOCK BUZZERS



LPC ZS...



LPC ZS...IP

Order code	Voltage (V)	Sound intensity at 2800Hz (dB/10cm)
Continuous or pulse tone, IP40 version Ø22mm		
LPC ZSA	9...15VAC/DC	90
LPC ZSB	18...30VAC/DC	90
LPC ZSE	85...140VAC/DC	90
LPC ZSM	185...265VAC/DC	90
Continuous or pulse tone, IP66, IP67, IP69K Ø22mm		
LPC ZSAIP	9...15VAC/DC	80
LPC ZSBIP	18...30VAC/DC	80
LPC ZSEIP	85...140VAC/DC	80
LPC ZSMIP	185...265VAC/DC	80

Ø22mm ring fixing
For potentiometer drives only, see General Catalogue

USB AND RJ45 INTERFACES



LPC D01...

Order code	Description
LPC D01	USB interface, A/A female type connection
LPC D03	USB interface, A/B female type connection
LPC D05	USB interface, B/A female type connection
LPC D06	RJ45 interface, Ethernet connection type

Ø22mm ring fixing
For versions with cable included, see General Catalogue

CONTROL & SIGNALLING

PUSHBUTTONS & SELECTOR SWITCHES

JOYSTICKS



LPSJ...

Order code no interlock	Order code with interlock	Description
LPS J200	LPS J220	2 Position, 2 NO contacts - spring return to centre
LPS J201	LPS J221	2 Position, 2 NO contacts - stay put
LPS J400	LPS J420	4 Position, 4 NO contacts - spring return to centre
LPS J401	LPS J421	4 Position, 4 NO contacts - stay put
LPX AU101		2-4 directional legend for adhesive legends

PUSHBUTTON ACCESSORIES



LPX AU100



LPX AU158



LPX DIN

Order code	Description
LPX AU100	Label holder for engraved plastic LPX AU109 label
LPX AU109	Engravable silver plastic label to use with LPX AU100 holder
LPX AU105	Label holder for engraved plastic LPX AU108 holder
LPX AU108	Engravable silver plastic label to use with LPX AU105 holder
LPX AU137	Clear rubber boot for flush button LPC B1/BL1/R1...
LPX AU147	Clear rubber boot for buttons LPC B2/3..., LPC BL2... and LPC R2...
LPX AU157	Rubber boot for double and triple-touch buttons, transparent
LPX AU158	Padlockable protection, Ø5-8mm locks or buttons LPC B66/67/68/BL664...; FOR LPC B634...Ø5-6mm locks only
LPX AU159	Shroud for buttons LPC B63..., LPC B66/67/68BL666
LPX DIN	Adaptor for mounting LPC...buttons on DIN rail 35mm wide (2 modules)

LABELS WITH TEXT FOR LPX AU100 LEGEND HOLDER



LPX AGB212

Order code	Description	Order code	Description
General use		For selector switches	
LPX AU206	Blank for writing	LPX AI233	AUTO - MAN
LPX AU207	Sheet with 108 labels for laser printing	LPX AI234	AUTO - O - MAN
LPX AGB211	OPEN	LPX AI242	MAN - O - AUTO
LPX AGB212	STOP	LPX AI235	FWD - O - REV
LPX AGB214	STOP RESET	LPX AI236	ON - OFF
LPX AGB215	FORWARD	LPX AI241	MAN - AUTO
LPX AGB216	CLOSE	LPX AGB232	STOP - START
LPX AGB218	LOWER	LPX AGB236	OFF - ON
LPX AGB221	OFF	For the complete range of labels please see the general catalogue	
LPX AGB222	REVERSE		
LPX AGB223	ON		
LPX AGB225	START		
LPX AGB226	RESET		
LPX AGB227	RAISE		

CONTROL & SIGNALLING

PUSHBUTTONS & SELECTOR SWITCHES

LEGENDS FOR MUSHROOM HEAD PUSHBUTTONS



LPX AU115



LPX AUD115...



LPX AU123



LPX AU110

MOUNTING ADAPTERS



LPX AU120



LPX AU120M

CONTACT ELEMENTS FOR LPC... AND LPS... FRONT MOUNTED



LPX C01



LPX C10



LPX C01M



LPX T100

Order code 'Emergency Stop'	Description
LPX AU115	Emergency stop legend Ø60mm
LPX AU113	Emergency stop legend Ø90mm
LPX AU110	Vertical self-adhesive emergency stop label
LPX DAU115024	Illuminated emergency stop disk Ø60mm 24VAC/DC
LPX DAU115110	Illuminated emergency stop disk Ø60mm 110VAC
LPX DAU115230	Illuminated emergency stop disk Ø60mm 230VAC

Order code IEC60417-5638 Compliant	Description
LPX AU123	Emergency stop legend Ø60mm
LPX AU124	Emergency stop legend Ø90mm
-	Vertical self-adhesive emergency stop label
LPX DAU123024	Illuminated emergency stop disk Ø60mm 24VAC/DC
LPX DAU123110	Illuminated emergency stop disk Ø60mm 110VAC
LPX DAU123024	Illuminated emergency stop disk Ø60mm 230VAC

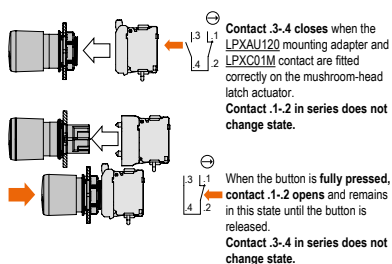
Order code	Description
LPX AU120	Mounting Adapter - Use with LPC... and LPL... codes
LPX AU120M	Mounting Adapter - Use with all LPS... codes

Order code screw term	Order code spring clamp	Description
LPX C10	LPX CS10	Normally open
LPX C10A	-	Normally open - early make
LPX C01	LPX CS01	Normally closed
LPX C01D	-	Normally closed - late break
LPX C20	-	2 x Normally open
LPX C11	-	1 x Normally open + 1 x Normally closed
LPX C02	-	2 x Normally closed
LPX C01M	-	1 x Normally closed auto-monitoring contact for mushroom head buttons
LPX T100	-	Test element - use with LED elements in AC/DC, types LPX LE...(all), LPX LFB..., LPX LPB and LPX LPSB
LPX T101	-	Test element - use with LED elements AT 85-140VAC for types LPX LFE..., LPX LPE... and LPX LPSE...
LPX T102	-	Test element - use with LED elements AT 185-265VAC for types LPX LFM..., LPX LPM...and LPX LPSM...
LPX C01M	-	1 x Normally closed auto-monitoring contact for mushroom head buttons

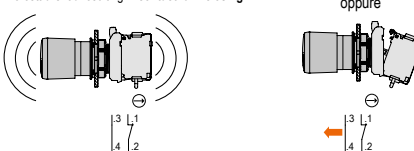
Normal operation of auto-monitor contact mounted on surface or on cover of control stations

In case of detachment of only the contact element and/or of the mounting adapter with contact element

With contact type LPXC01M (1NC)



If the contact LPXC01M detaches from the actuator due to **strong vibrations or shock**, the equipment can be restored to operating state only when proper mounting of the contact with the actuator is re-established resulting in **contact 3-4 closing**.



CONTROL & SIGNALLING

PUSHBUTTONS & SELECTOR SWITCHES

LED ELEMENTS



LPX LP...



LPX LE...



LPX LF...

Description	Green order code	Red order code	Yellow order code	Blue order code	White order code
Steady light, screw termination. Supplied without mounting adapter. Total protection					
12...30VAC/DC	LPX LPB3	LPX LPB4	LPX LPB5	LPX LPB6	LPX LPB8
85...140VAC	LPX LPE3	LPX LPE4	LPX LPE5	LPX LPE6	LPX LPE8
185...265VAC	LPX LPM3	LPX LPM4	LPX LPM5	LPX LPM6	LPX LPM8
Steady light, screw termination. Supplied without mounting adapter. Basic protection					
12...30VAC/DC	LPX LEB3	LPX LEB4	LPX LEB5	LPX LEB6	LPX LEB8
85...140VAC	LPX LEE3	LPX LEE4	LPX LEE5	LPX LEE6	LPX LEE8
185...265VAC	LPX LEM3	LPX LEM4	LPX LEM5	LPX LEM6	LPX LEM8
Flashing light, screw termination. Supplied without mounting adapter. Total protection					
12...30VAC/DC	LPX LFB3	LPX LFB4	LPX LFB5	LPX LFB6	LPX LFB8
85...140VAC	LPX LFE3	LPX LFE4	LPX LFE5	LPX LFE6	LPX LFE8
185...265VAC	LPX LFM3	LPX LFM4	LPX LFM5	LPX LFM6	LPX LFM8

CONTACT ELEMENTS, BASE MOUNT ON LPZP PLASTIC CONTROL STATIONS



LPX CB...



Order Code	Description
Screw termination. Direct snap-on mounting on LPZP...control station base	
LPX CB10	Normally open - use with LPZP... control stations only
LPX CB01	Normally closed - use with LPZP... control stations only

LED ELEMENTS, BASE MOUNT ON LPZP PLASTIC CONTROL STATIONS

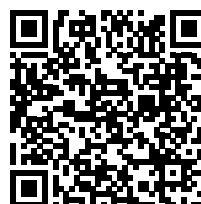


LPX LPB...

Description	Green order code	Red order code	Yellow order code	Blue order code	White order code
Steady light. Screw termination. Direct snap-on mounting on LPZP...control station base					
12...30VAC/DC	LPX LPBB3	LPX LPBB4	LPX LPBB5	LPX LPBB6	LPX LPBB8
85...140VAC	LPX LPBE3	LPX LPBE4	LPX LPBE5	LPX LPBE6	LPX LPBE8
185...265VAC	LPX LPBM3	LPX LPBM4	LPX LPBM5	LPX LPBM6	LPX LPBM8

For use LPZP... Plastic control stations only

NEW LP4 SERIES CONTROL STATIONS FOR 40MM PROFILE RAILS



See general catalogue for more details

CONTROL & SIGNALLING CONTROL STATIONS

ENCLOSED CONTROL STATIONS



LPZP1B8100
1NC



LPZP1B8102
1NC



LPZP1B8300
1NO



LPZP1B8303
2NO



LPZP1B8302
1NO+1NC



LPZP2B8901
1NO+1NC



LPZP2B8902
2NO



LPZP2B8904
1NO+1NC



LPZP3B8903
2NO+1NC



LPZP2B8906
2NO+1NC



LPZP1B5602
1NC
Turn Reset



LPZP1B5601
2NC IEC13850
Turn Reset



LPZP1B5600
1NC IEC13850
Turn Reset



LPZP1B5606
2NC IEC13850
Key Reset



LPZP1B5605
1NC IEC13850
Key Reset



LPZP1B5608
1NC
Pull Reset



LPZP1B5609
2NC IEC13850
Pull Reset



LPZP1BD603
1NO +1NC IEC13850 Turn
Reset Illuminated 24VDC



LPZP1B5611
1NC IEC13850
Key Reset



LPZP1BP603
1NC IEC13850
Key Reset

Many more variants in the General Catalogue. Contact us for metal and stainless steel options.

PALM SWITCHES



LP9 S11R	Momentary, 90mm red mushroom actuator 1NO+1NC
LP9 S11B	Momentary, 90mm black mushroom actuator 1NO+1NC
LP9 P11R	Emergency latching 90mm red mushroom actuator, pull to release 1NO+1NC
LP9 P02R	Emergency latching 90mm red mushroom actuator, pull to release 2NO
LP9X C10	Normally open auxiliary contact to fit LP9... switches only
LP9X C01	Normally closed auxiliary contact to fit LP9... switches only

CONTROL & SIGNALLING

CONTROL STATIONS & ENCLOSURES

PLASTIC CONTROL STATIONS



LPZ P1 A5



LPZ P2 A8

Description	Yellow order code	Grey order code	Dimensions (mm)
For 1 actuator	LPZ P1 A5	LPZ P1 A8	72 x 72 x 56
For 2 actuators	LPZ P2 A5	LPZ P2 A8	117 x 72 x 56
For 3 actuators	-	LPZ P3 A8	151 x 72 x 56
For 4 actuators	-	LPZ P4 A8	186 x 72 x 56
For 5 actuators	-	LPZ P5 A8	220 x 72 x 56
For 6 actuators	-	LPZ P6 A8	252 x 72 x 56

Use LPXCB...and LPXLPB...base mount elements

METAL CONTROL STATIONS



LPZ M1 A5P



LPZ M1 A8



LPZ M4C A8



LPZ M12C A8

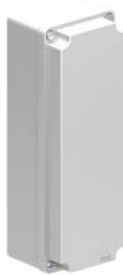
Description	Yellow order code	Grey order code	Dimensions (mm)
For 1 actuator	LPZ M1 A5	LPZ M1 A8	80 x 80 x 73
For 1 actuator with shroud	LPZ M1 A5P	-	80 x 80 x 108
For 2 actuators	LPZ M2 A5	LPZ M2 A8	80 x 130 x 73
For 3 actuators	-	LPZ M3 A8	80 x 170 x 73
For 4 actuators	-	LPZ M4 A8	80 x 170 x 73
For 4 actuators	-	LPZ M4C A8	80 x 130 x 73
For 5 actuators	-	LPZ M5 A8	80 x 230 x 73
For 6 actuators	-	LPZ M6 A8	80 x 230 x 73
For 6 actuators	-	LPZ M6C A8	80 x 170 x 73
For 8 actuators	-	LPZ M8C A8	80 x 230 x 73
For 12 actuators	-	LPZ M12C A8	170 x 190 x 90
For 16 actuators	-	LPZ M16C A8	190 x 250 x 90

Use LPXAU120 front mounted contact and LED elements

METAL ENCLOSURES



LPZ M1 E5



LPZ M4 E8

Description	Yellow order code	Grey order code	Dimensions (mm)
For 1 actuator	LPZ M1 E5	LPZ M1 E8	80 x 80 x 73
For 2 actuators	-	LPZ M2 E8	80 x 130 x 73
For 4 actuators	-	LPZ M3 E8	80 x 170 x 73
For 6 actuators	-	LPZ M4 E8	80 x 230 x 73
For 8 actuators	-	LPZ M5 E8	160 x 160 x 90
For 12 actuators	-	LPZ M6 E8	170 x 190 x 90
For 16 actuators	-	LPZ M7 E8	190 x 250 x 90

EMPTY ENCLOSURES



M0N



M3N

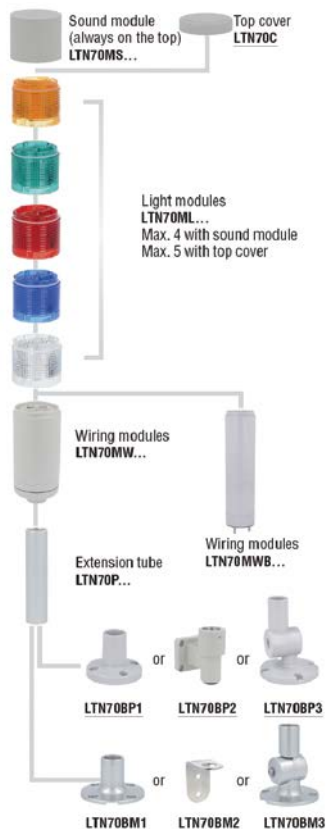
Order code	Internal mountng	Dimensions (mm)
M0N	Moulded din rail	184 x 88 x 119.5
M1N	Moulded din rail	202 x 88 x 134.5
M2N	Moulded din rail	234 x 110 x 148.5
M24N	Steel mounting plate (inc.)	210 x 175 x 98.5
M25N	Steel mounting plate (inc.)	210 x 175 x 158.5
M3N	Steel mounting plate	280 x 220 x 170
For 16 actuators	-	190 x 250 x 90

Metal mounting plate for M3N enclosure

CONTROL & SIGNALLING

SIGNAL TOWERS & BEACONS

SIGNAL TOWERS Ø50MM AND Ø70MM



Order code 50mm diameter	Order code 70mm diameter	Description
LTN50ML1	LTN70ML1	Orange blinking or steady light module. Integrated LED
LTN50ML3	LTN70ML3	Green blinking or steady light module. Integrated LED
LTN50ML4	LTN70ML4	Red blinking or steady light module. Integrated LED
LTN50ML6	LTN70ML6	Blue blinking or steady light module. Integrated LED
LTN50ML8	LTN70ML8	White blinking or steady light module. Integrated LED
LTN50MSL	LTN70MSL	Sound module. Continuous, 85dB, IP65
LTN50MSH	LTN70MSH	Sound module. Continuous, 100dB, IP20
LTN50MW024	LTN70MW024	Wiring module 12-24VDC
LTN50MW230	LTN70MW230	Wiring module 110-230VAC
LTN50C	LTN70C	Top cover - use only if no sound module
LTN50BP1	LTN70BP1	Horizontal surface fixing base, black plastic
LTN50BP3	LTN70BP3	Horizontal or wall fixing base, black plastic
LTN50BM1	LTN70BM1	Horizontal surface fixing base, metal
LTN50BM3	LTN70BM3	Horizontal or wall fixing base, metal
LTN50P100T	LTN70P100T	Metal extension tube, threaded end, 100mm
LTN50P250T	LTN70P250T	Metal extension tube, threaded end, 250mm
LTN50P400T	LTN70P400T	Metal extension tube, threaded end, 400mm

SIGNAL BEACONS Ø62MM



Order code	Dimensions (mm)
Steady light modules. BA15d fitting. Bulb (8 LT7 ALB... & 8 LT7 ALL...) not included	
8LB6EL1	Orange steady light module. BA15d lamp not included
8LB6EL3	Green steady light module. BA15d lamp not included
8LB6EL4	Red steady light module. BA15d lamp not included
8LB6EL5	Yellow steady light module. BA15d lamp not included
8LB6EL6	Blue steady light module. BA15d lamp not included
8LB6EL8	White steady light module. BA15d lamp not included
8LB6BP03	For horizontal mount, plastic, black
8LB6BP05	For Ø22mm hole mounting, plastic, black

LED bulbs, BA15d fitting for beacons 8LB6...

Description	Green order code	Red order code	Yellow/Orange order code	Blue order code	White order code
24VAC/DC	8LT7ALLB3	8LT7ALLB4	8LT7ALLB5	8LT7ALLB6	8LT7ALLB8
110...120VAC	8LT7ALLE3	8LT7ALLE4	8LT7ALLE5	8LT7ALLE6	8LT7ALLE8
230...240VAC	8LT7ALLM3	8LT7ALLM4	8LT7ALLM5	8LT7ALLM6	8LT7ALLM8

CONTROL & SIGNALLING

LIMIT, MICRO & FOOT SWITCHES

LIMIT SWITCHES



KX CB S11
KX CM S11



KX CC S11
KX CN S11



KX A A1



KX A B2



KX A C1



KX A D2



KX A E1



KX A E3



KX A F2



KX A H1



KX A L1



KX A M1
KX A M2

Order code	Description
Limit switch body	
KX CB S11	Plastic body complete with 1NO+1NC snap action auxiliary contacts. One bottom cable entry
KX CM S11	Metal body complete with 1NO+1NC snap action auxiliary contacts. One bottom cable entry
KX CC S11	Plastic body complete with 1NO+1NC snap action auxiliary contacts. Two side cable entries
KX CN S11	Metal body complete with 1NO+1NC snap action auxiliary contacts. Two side cable entries

Operating heads to fit KX...Limit switch bodies

KX A A1	Metal Top push rod plunger
KX A B1	Plastic top roller push plunger
KX A B2	Metal top roller push plunger
KX A C1	Plastic roller centre push lever
KX A C2	Metal roller centre push lever
KX A D1	Plastic roller side push lever
KX A D2	Metal roller side push lever
KX A E1	Plastic roller lever plunger
KX A E2	Metal roller lever plunger
KX A E3	Rubber Ø50x10mm roller lever plunger
KX A F1	Adjustable plastic roller lever Ø19x5mm
KX A F2	Adjustable metal roller lever Ø19x5mm
KX A F3	Adjustable rubber Ø50x10mm roller
KX A F4	Adjustable offset rubber Ø50x10mm roller
KX A H1	Ceramic rod lever
KX A L1	Adjustable plastic rod lever
KX A L2	Adjustable stainless steel rod lever
KX A M1	Flexible wobble stick
KX A M2	Semi-rigid wobble stick

FOOT SWITCHES



KG1 00 S11



KG1 00 S11



KG1 00 S11

Order code	Description
Plastic body foot switch M20 cable entry	
KG1 00 S11	Open style with 1NO+1NC snap action auxiliary contacts
KG2 00 S11	1NO+1NC snap action auxiliary contacts with cover
KG1 10 S11	Open style with 1NO+1NC snap action auxiliary contacts with safety lever
KG2 10 S11	With 1NO+1NC snap action auxiliary contacts with cover and safety lever
KG1 20 S11	Open style with 1NO+1NC snap action auxiliary contacts with pedal actuator lock
KG2 20 S11	With 1NO+1NC snap action auxiliary contacts with cover and pedal actuator lock
Metal body foot switch M20 cable entry	
KR1 00 S11	Open with 1NO+1NC snap action auxiliary contacts
KR2 00 S11	1NO+1NC snap action auxiliary contacts. With cover
KR1 10 S11	Open with 1NO+1NC snap action auxiliary contacts. With safety lever
KR2 10 S11	With 1NO+1NC snap action auxiliary contacts. With cover and safety lever
KR1 20 S11	Open with 1NO+1NC snap action auxiliary contacts. With pedal actuator lock
KR2 20 S11	With 1NO+1NC snap action auxiliary contacts. With cover and pedal actuator lock

CONTROL & SIGNALLING SAFETY DEVICES

SR SAFETY RELAYS



SRBES...



SRAMF21



SRPMFA164

Order code	Aux supply voltage	Type of output contact	Function
Single function, screw terminals			
SRCES20	24V AC/DC	2NO	Emergency stop
SRCES31	24V AC/DC	3NO+1NC	Emergency stop
Single function, spring-clamp terminals (push-in)			
SRCES20S	24V AC/DC	2NO	Emergency stop
SRCES31S	24V AC/DC	3NO+1NC	Emergency stop
Single function, expandable, screw terminals			
SRBES20	24V AC/DC	2NO	Emergency stop
SRBES31	24V AC/DC	3NO+1NC	Emergency stop
SRBEM41	24V AC/DC	4NO+1NC	Expansion module
Single function and multifunction, screw terminals			
SRATH21	24VDC	2NO+1PNP	Two-hand control devices
SRALC21	24VDC	2NO+1PNP	OSSD Devices
SRASM20	24VDC	2NO	OSSD Devices
SRAMF21	24VDC	2NO+1PNP	Multifunction

Order code	Inputs	Outputs	Function
Programmable multifunction, screw terminals, 24VDC auxiliary supply voltage			
SRPMFA164	16 Digital inputs and 4 restart/EDM inputs	4 OSSD outputs, 4 output status 4 output test	Multifunction

SSF SERIES RFID SENSORS



SSF...M



SSF...P

Order code	Auxiliary supply voltage	Connector type	Coding type
5 Pin version allowing operation with automatic reset only			
SSF5GM	24VDC	M12 Connector	Generic
SSF5GP	24VDC	M12 Pigtail connector 15cm	Generic
8 Pin version allowing operation with automatic reset, manual reset, contactor feedback control (EDM) and connection of up to 16 SSF... RFID safety sensors in series			
SSF8GM	24VDC	M12 Connector	Generic
SSF8GP	24VDC	M12 Pigtail connector 15cm	Generic
SSF8TM	24VDC	M12 Connector	Teach-in
SSF8TP	24VDC	M12 Pigtail connector 15cm	Teach-in
Accessories			
SSFXC55		5-5 Pin RFID sensor connector	
SSFXC58		5-8 Pin RFID sensor connector	
SSFY01		Fixing bracket to adapt to 78mm interaxis	

For safety contactors see page 5.

For other safety related products including solenoid guard switches, safety limits switches, emergency stop stations and indication please see our General Catalogue.



CONTROL & SIGNALLING

ROTARY CAM SWITCHES

GX SERIES ON/OFF SWITCHES



ON/OFF GX

Order code	IEC current AC1 (A)	Front plate (mm)	Switch positions
One-pole - 1 wafer - scheme 90. Front mount			
GX16 90 U	16	48	 
GX20 90 U	20	48	
GX32 90 U	32	65	
GX40 90 U	40	65	
Two-pole - 1 wafer - scheme 91. Front mount			
GX16 91 U	16	48	 
GX20 91 U	20	48	
GX32 91 U	32	65	
GX40 91 U	40	65	
Three-pole - 2 wafers - scheme 10. Front mount			
GX16 10 U	16	48	 
GX20 10 U	20	48	
GX32 10 U	32	65	
GX40 10 U	40	65	
Four-pole - 2 wafers - scheme 92. Front mount			
GX16 92 U	16	48	 
GX20 92 U	20	48	
GX32 92 U	32	65	
GX40 92 U	40	65	

GX SERIES CHANGEOVER SWITCHES WITH 0 POSITION



CHANGEOVER GX

Order code	IEC current AC1 (A)	Front plate (mm)	Switch positions
Two-pole - 2 wafers - scheme 52. Front mount			
GX16 52 U	16	48	 
GX20 52 U	20	48	
GX32 52 U	32	65	
GX40 52 U	40	65	
Three-pole - 3 wafers - scheme 53. Front mount			
GX16 53 U	16	48	 
GX20 53 U	20	48	
GX32 53 U	32	65	
GX40 53 U	40	65	
Four-pole - 4 wafers - scheme 75. Front mount			
GX16 75 U	16	48	 
GX20 75 U	20	48	
GX32 75 U	32	65	
GX40 75 U	40	65	

GX... SERIES VOLTMETER/ AMMETER SWITCHES



AMMETER GX

Order code	IEC current AC1 (A)	Front plate (mm)	Switch positions
Voltmeter switch - For 1 phase voltage and 3 phase to phase voltage readings 3 wafers - scheme 60. Front mount			
GX16 60 U	16	48	
For L1-L2-L3 readings via 3 CTs - 4 wafers - scheme 98. Front mount			
GX16 98 U	16	48	

CIRCUIT PROTECTION & ISOLATION

MOULDED CASE CIRCUIT BREAKERS

MOULDED CASE CIRCUIT BREAKERS



P5ME3P...



P5ME4P...



P5ME4P



P5X1011



P5X16E...



P5X192E...

Order code three pole	Order code four pole	Overload range (A)	Short circuit trip range (A)	Short circuit breaking capacity (A)	
				Icu	Ics

Moulded case circuit breakers available in 3 or 4 pole versions

P5ME3PS0100	P5ME4PS0100	40...100	60...1000	50	50
P5ME3PS0160	P5ME4PS0160	64...160	96...1600	50	50
P5ME3PS0250	P5ME4PS0250	100...250	150...2500	50	50
P5ME3PS0400	P5ME4PS0400	160...400	240...4000	65	65
P5ME3PS0630	P5ME4PS0630	252...630	378...6300	65	65
P5ME3PS0800	P5ME4PS0800	320...800	480...8000	65	65

Order code red/yellow handle	Order code black handle	Description
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Handle operators, red/yellow or black versions, door interlocked complete with 469mm shaft

P5X18471	P5X18471B	For P5ME...0100, P5ME...0160 and P5ME...0250
P5X18472	P5X18472B	For P5ME...0400, P5ME...0630
P5X18473	P5X18473B	For P5ME...0800

Order code short cover	Order code long cover	Description
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Terminal covers available in short or long versions

P5X831S	P5X831L	For P5ME3P0100, P5ME3P0160 and P5ME3P0250
P5X832S	P5X832L	For P5ME3P0400, P5ME3P0630
P5X833S	P5X833L	For P5ME3P0800
P5X841S	P5X841L	For P5ME4P0100, P5ME4P0160 and P5ME4P0250
P5X842S	P5X842L	For P5ME4P0400, P5ME4P0630
P5X843S	P5X843L	For P5ME4P0800

Order code short cover	Description
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*Complete the code with operating voltage: options VAC/DC = 024, 048, 110, 230. VAC only = 400

P5X14E...*	Undervoltage trip release for all devices
P5X16E...*	Shunt trip release for all devices
P5X1011	Auxiliary contact, one changeover contact
P5X1311	Trip indication changeover contact for overload and short circuit and shunt or undervoltage release
P5X1311E	Trip indication changeover contact for overload and short circuit and shunt or undervoltage release - wired
P5X191D024	24VDC motor operator for P5ME...0100, P5ME...0160, P5ME...0250
P5X191E110	110VAC/DC motor operator for P5ME...0100, P5ME...0160, P5ME...0250
P5X191E230	230VAC/220VDC motor operator for P5ME...0100, P5ME...0160, P5ME...0250
P5X192D024	24VDC motor operator for P5ME...0400, P5ME...0630
P5X192E110	110VAC/DC motor operator for P5ME...0400, P5ME...0630
P5X192E230	230VAC/220VDC motor operator for P5ME...0400, P5ME...0630
P5X193D024	24VDC motor operator for P5ME...0800
P5X193E110	110VAC/DC motor operator for P5ME...0800
P5X193E230	230VAC/220VDC motor operator for P5ME...0800

CIRCUIT PROTECTION & ISOLATION

SWITCH DISCONNECTOR - PANEL 16A - 160A

THREE-POLE SWITCH DISCONNECTORS - REAR MOUNT



GA016 A...GA040 A
GA063 SA
36mm width



GA063 A...GA160 A
70mm width

Order code rear mount switch only	Order code switch kit c/w GAX61 handle, 200mm shaft & shroud	IEC conventional thermal current Ith AC21A (≤690V) (A)	IEC rated operational current Ie AC23A (≤415V) (A)
Direct operating version, complete with black handle. For door coupling version, separately purchase the handle and shaft extension			
GA016 A	GAKIT16	16	16
GA025 A	GAKIT25	25	25
GA032 A	GAKIT32	32	32
GA040 A	GAKIT40	40	40
GA063 SA	GAKIT63SA	63	45
GA063 A	GAKIT63	63	63
GA080 A	GAKIT80	80	80
GA100 A	GAKIT100	100	100
GA125 A	GAKIT125	125	125
GA160 A	GAKIT160	160	125

FOURTH POLE ADD-ON FOR GA...A



GAX42...A, GAX41...A
GAX42 063SA, GAX41 063SA

Order code	IEC conventional free air thermal current Ith AC21A (≤690V) (A)	IEC rated operational current Ie AC22A (≤690V) AC23A (≤415V) (A)	Compatible switch disconnecter
Simultaneous closing operation as switch disconnecter poles. For GA...A			
GAX42 040A	40	40	GA016A...GA040A
GAX42 063SA	63	45	GA063 SA
GAX42 063A	63	63	GA063 A
GAX42 080A	80	80	GA080 A
GAX42 100A	100	100	GA100 A
GAX42 125A	125	125	GA125 A
GAX42 160A	160	125	GA160 A
Early make closing operation with respect to switch disconnecter poles. For GA...A version			
GAX41 040A	40		40
GAX41 063SA	63		45
GAX41 125A	125		63

ADD-ON BLOCKS FOR GA...A



GAX10 11A



GAX11 10EA
GAX12 10EA



GAX3...A

Order code	Description
Auxiliary contacts, simultaneous closing as poles of switch disconnectors	
GAX10 11A	1NO + 1NC for GA...A, GA063 SA and GA040 D
GAX10 20A	2NO for GA...A, GA063 SA and GA040 D
Auxiliary contacts, early-break operation in respect to poles of switch disconnecter	
GAX11 10EA	1EB (NO) for GA016 A...GA040 A, GA063 SA and GA040 D
GAX12 10EA	1EB (NO) for GA063 A...GA160 A
Neutral terminal	
GAX31 A	For GA016 A...GA040 A, GA063 SA and GA040 D
GAX32 A	For GA063 A...GA160 A
Earth/ground terminal	
GAX33 A	For GA016 A...GA040 A, GA063 SA and GA...D
GAX34 A	For GA063 A...GA160 A

CIRCUIT PROTECTION & ISOLATION

SWITCH DISCONNECTOR - PANEL 16A - 160A

MECHANICAL COUPLING



GAX50... GAX60...

Order code	Description
Mechanical interlock for creation of line changeover (I-O-II) versions	
GAX50 00	For GA016 A...GA040 A, GA063 SA, GA040 D and GAX67 B; □5mm
GAX50 01	For GA063 A...GA160 A and GAX67 B; □5mm
Mechanical coupling system for 6-8 pole switch disconnectors	
GAX60 00	For GA016 A...GA040 A, GA063 SA, GA040 D; □5mm
GAX60 01	For GA063 A...GA125 A, □7mm

THREE-POLE SWITCH DISCONNECTORS - DOOR MOUNT VERSION



GA016 C...
GA040 C



GA063 C...
GA125 C

Order code	IEC conventional free air thermal current I _{th} AC21A (≤690V) (A)	IEC rated operational current I _e AC22A (≤690V) AC23A (≤415V) (A)
Door mount version, complete with shaft extension		
GA016 C	16	16
GA025 C	25	25
GA032 C	32	32
GA040 C	40	40
GA063 C	63	45
GA080 C	80	80
GA100 C	100	100
GA125 C	125	125

FOURTH POLE ADD-ON FOR GA...C



GAX42 040C
GAX41 040C

Order code	IEC conventional free air thermal current I _{th} AC21A (≤690V) (A)	IEC rated operational current I _e AC22A (≤690V) AC23A (≤415V) (A)	Compatible switch disconnector
Simultaneous closing operation as switch disconnector poles. For GA...C			
GAX42 040C	40	40	GA016C...GA040C
GAX42 063C	63	45	GA063 C
GAX42 080C	80	80	GA080 C
GAX42 100C	100	100	GA100 C
GAX42 125C	125	125	GA125 C
Early make closing operation with respect to switch disconnector poles. For GA...C			
GAX41 040C	40		40
GAX41 125C	125		125

FOURTH POLE ADD-ON FOR GA...C



GAX10 11A



GAX3...C

Order code	Description
Auxiliary contacts, simultaneous closing as poles of switch disconnectors	
GAX10 11C	1NO + 1NC for GA...C
Neutral terminal	
GAX31 C	For GA016 C...GA040 C
GAX32 C	For GA063 C...GA125 C
Earth/ground terminal	
GAX33 C	For GA016 C...GA040 C
GAX34 C	For GA063 C...GA125 C

CIRCUIT PROTECTION & ISOLATION

SWITCH DISCONNECTOR - PANEL 16A - 160A

HANDLES



GAX61



GAX66N



GAX63 B



GAX60 B

Door coupling version padlockable, IP65		Description
Red/Yellow order code	Black order code	
GAX61	GAX61B	For GA...A, GA063SA, GA...C, GA040D and GD...Screw fixing. Handle with selector flush-mounted □5mm
GAX62	GAX62B	For GA...A, GA063SA, GA...C, GA040D and GD...Screw fixing. Handle protruding □5mm
GAX63	GAX63B	For GA...A, GA063SA, GA016C, GA040C, GA040D and GD...Ring fixing. Handle with 22mm selector protruding □5mm
GAX63K	GAX63BK	For GA...A, GA063SA, GA016C, GA040C, GA040D and GD...Ring fixing. Handle with 22mm selector protruding □5mm IP69K
GAX632	GAX632	For GA...A, GA063SA, GA016C, GA040C, GA040 D and GD...Ring fixing. Handle with 22mm selector protruding □5mm Low profile
GAX64	GAX64B	For GA...A, GA063SA, GA040D and GD... Ring fixing. Handle with selector protruding-defeatable (req. UL508A) □5mm
GAX66N	GAX66NB	For GA063 A...GA160A and GAX6001. Screw fixing. Pistol handle - defeatable (req. UL508A) □7mm
*Use with GAX60 B adapter		
GAX60B		Adapter □7mm per GA063A...GA160A Must be used with GAX66... handles
-	GAX67B	For mechanical interlock GAX50...(I-O-II) □5mm
GAX68	GAX68B	For GA016 A...GA063SA, GA040D, ga016c... ga040c and GD...Screw fixing. Handle with selector lowered. □5mm

ACCESSORIES



GAX7...



GAX7...AN



GAX8...



GAX39 1

Order code	Description
Shaft extension for door coupling handles GAX61...GAX64, GAX68, GAX61 B, GAX67 B, GAX68 B and mechanical interlock type GAX50 00, GAX50 01 and mechanical coupling GAX60 00	
GAX7150	150mm long □5mm
GAX7200	200mm long □5mm
GAX7300	300mm long □5mm
GAX7400	400mm long □5mm
GAX7500	500mm long □5mm
Shaft extension for door coupling handles GAX66N, GAX66NB and mechanical coupling system GAX60 01	
GAX7150AN	150mm long □7mm
GAX7200AN	200mm long □7mm
GAX7300AN	300mm long □7mm
GAX7400AN	400mm long □7mm
GAX7500AN	500mm long □7mm
Set of 2 one-pole terminal covers for fourth pole add-on	
GAX81	For GAX42 040A, GAX42 063SA, GAX42 040C, GAX42 040D, GAX41 040A, GAX41 063A and GAX41 040C
GAX 82	For GAX42 063A...GAX42 160A
Set of 2 three-pole terminal covers	
GAX 83	For GA016 A...GA040 A, GA063 SA, GA016 C...GA040 C and GA040 D
GAX 84	For GA063 A...GA160 A, GA063 C...GA125 C
Fuse holder for switch disconnectors 10 x 38mm fuses	
GAX39 1	For GA016 A...GA032 A. Suitable for 10.3 x 38 fuses

CIRCUIT PROTECTION & ISOLATION

SWITCH DISCONNECTOR - PANEL 160A - 1000A

THREE-POLE SWITCH DISCONNECTORS



GL0250C1

FOURTH-POLE ADD-ON



GLX42 0315

Order code three pole switch	Order code fourth pole add-on	IEC conventional free air thermal current Ith AC21A (≤690V) (A)	C rated operational current Ie AC22A (≤690V) AC23A (≤415V) (A)
Supplied without handle. Select shaft extension and handle for door coupling version or handle for direct operating version			
GL0160C1	GLX420315	160	160
GL0200C1	GLX420315	200	200
GL0250C1	GLX420315	250	250
GL0315C1	GLX420315	315	250
GL0320C1	GLX420320	320	320
GL0400C1	GLX420400	400	400
GL0500C1	GLX420500	500	500
GL0630C1	GLX420630	630	500
GL0631C1	GLX420631	630	630
GL0800C1	GLX420800	800	800
GL1000C1	GLX421000	1000	800

THREE AND FOUR POLE CHANGEOVER SWITCHES



GLC...T4C1

Order code three pole changeover	Order code four pole changeover	IEC conventional free air thermal current Ith AC21A (≤690V) (A)	IEC rated operational current Ie AC33b (≤690V) (A)
Supplied without handle. Select shaft extension and handle for door coupling version or handle for direct operating version			
GLC0160 C1	GLC0160T4C1	160	160
GLC0200 C1	GLC0200T4C1	200	200
GLC0250 C1	GLC0250T4C1	250	250
GLC0315 C1	GLC0315T4C1	315	250
GLC0320C1	GLC0320T4C1	320	320
GLC0400C1	GLC0400T4C1	400	400
GLC0500C1	GLC0500T4C1	500	500
GLC0630C1	GLC0630T4C1	630	500
GLC0631C1	GLC0631T4C1	630	630
GLC0800C1	GLC0800T4C1	800	800
GLC1000C1	GLC1000T4C1	1000	800

THREE AND FOUR POLE MOTORISED CHANGEOVER SWITCHES



GLCMB0250T4A230

Order code three pole motorised changeover	Order code four pole motorised changeover	IEC conventional free air thermal current Ith AC21A (≤690V) (A)	IEC rated operational current Ie AC33b (≤690V) (A)
Motorised changeover switches. Add operating voltage to complete code: ...D024 = 24VDC, ...E110 = 110-125VAC/DC, ...E230 = 230VAC			
GLCMB0125...	GLCMB0125T4...	125	125
GLCMB0160...	GLCMB0160T4...	160	160
GLCMB0200...	GLCMB0200T4...	200	200
GLCMB0250...	GLCMB0250T4...	250	250
GLCMB0315...	GLCMB0315T4...	315	250

CIRCUIT PROTECTION & ISOLATION

SWITCH DISCONNECTOR - PANEL 160A - 1000A

HANDLES & SHAFTS



GLX61 D



GLX61

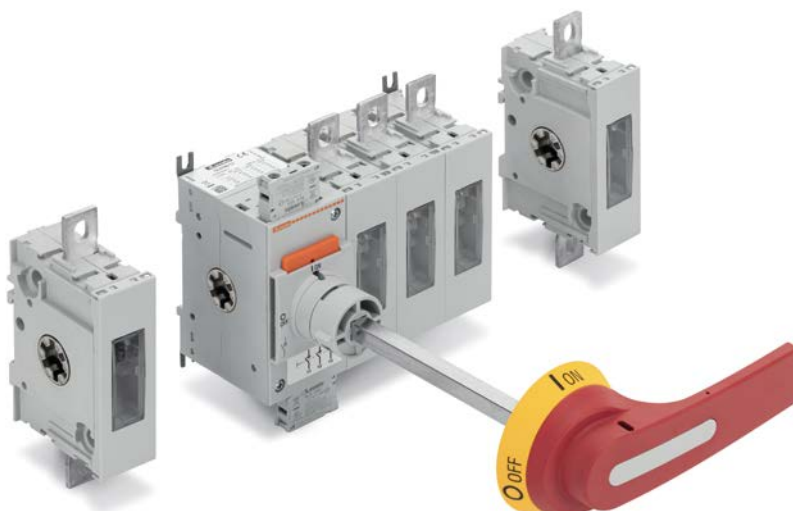


GLX00



GLX7...S10

Order code red/yellow	Order code black	Description
Direct switch mounted operating handles		
GLX61D	GLX61DB	For GL0160...GL0315 and GLC0160...GLC0315
GLX62D	GLX62DB	For GL0320...GL0630 and GLC0320...GLC0630
GLX63D	GLX63DB	For GL0631...GL1000 and GLC0631...GLC1000
Door coupling operating handles, use with GLX7...S.. shafts		
GLX61	GLX61B	For GL0160...GL0315
GLX62	GLX62B	For GL0320...GL0630
GLX63	GLX63B	For GL0631...GL1000
Door coupling operating handles for changeover switches, use with GLX7...S.. shafts		
-	GLX61CB	For GLC0160...GLC0315
-	GLX62CB	For GLC0320...GLC0630
-	GLX63CB	For GLC0631...GLC1000
Accessories for door coupling handles		
GLX00		Shaft alignment ring
Shaft extensions, 10mm for door coupling handles GLX61, GLX61B, GLX62 and GLX62B		
GLX7 150 S10		150mm long. □10mm
GLX7 200 S10		200mm long. □10mm
GLX7 300 S10		300mm long. □10mm
GLX7 400 S10		400mm long. □10mm
GLX7 500 S10		500mm long. □10mm
Shaft extensions, 12mm for door coupling handles GLX63 and GLX63B only		
GLX7 150 S12		150mm long. □12mm
GLX7 200 S12		200mm long. □12mm
GLX7 300 S12		300mm long. □12mm
GLX7 400 S12		400mm long. □12mm
GLX7 500 S12		500mm long. □12mm



CIRCUIT PROTECTION & ISOLATION

SWITCH DISCONNECTOR - PANEL 160A - 1000A

ADD-ON BLOCKS AND ACCESSORIES GL SERIES



GLX3 00



GLX8 00



GLX5 00



GLX2 01

Order code	Description
Auxiliary contacts	
GLX1010EA	1EB with screw terminals
GLX1001	1NC with screw terminals

Neutral terminal	
GLX300	For GL0160...GL0315
GLX302	For GL0320...GL0630
GLX304	For GL0631...GL0800
GLX306	For GL1000

Earth/ground terminal	
GLX301	For GL0160...GL0315
GLX303	For GL0320...GL0630
GLX305	For GL0631...GL0800
GLX307	For GL1000

Terminal covers	
GLX800	3 single terminal covers (1 per pole) for GL, GLC and GLCMB 0160...0315
GLX801	4 single terminal covers (1 per pole) for GL, GLC and GLCMB 0160...0315
GLX802	3 single terminal covers (1 per pole) for GL, GLC 0320...0630
GLX803	4 single terminal covers (1 per pole) for GL, GLC 0320...0630
GLX804	3 single terminal covers (1 per pole) for GL, GLC 0631...1000
GLX805	4 single terminal covers (1 per pole) for GL, GLC 0631...1000

Terminal clamp sets for rigid and flexible cables	
GLX500	1 terminal connection for GL, GLC and GLCMB 0160...0315
GLX501	3 terminal connections for GL, GLC and GLCMB 0160...0315
GLX502	1 terminal connection for GL, GLC 0320...0630
GLX503	3 terminal connections for GL, GLC 0320...0630

See general catalogue for 1000A and multiple cable connection clamp sets

One-pole bridging bars for changeover parallel connection. GLC0160...GLC1000 and GLCMB0125...GLCMB0315	
GLX201	3 piece set of bridging bars for GLC and GLCMB 0160...0315
GLX202	4 piece set of bridging bars for GLC and GLCMB 0160...0315
GLX206	3 piece set of bridging bars for GLC0320...0630
GLX207	4 piece set of bridging bars for GLC0160...0315
GLX208	3 piece set of bridging bars for GLC0631...1000
GLX209	4 piece set of bridging bars for GLC0631...1000

CIRCUIT PROTECTION & ISOLATION

SWITCH DISCONNECTOR - ENCLOSED

ENCLOSED SWITCH DISCONNECTORS



GAZ016...GAZ040...



GAZ063...100C



GAZ125...GAZ160...



GAZM016...GAZM100



GAZM125...GAZM160



GLZM0160 ...GLZM0315



GAZS016...GAZS125

Three-pole with red/yellow handle order code	Four-pole with red/yellow handle order code	IEC conventional free air thermal current Ith AC21A (≤690V) (A)	Dimensions H x W x D (including handle) (mm)
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IP65 plastic enclosures, add suffix "B" to end of code for black handle

GAZ016	GAZ016T4	16	159 x 100 x 120
GAZ025	GAZ025T4	25	
GAZ032	GAZ032T4	32	
GAZ040	GAZ040T4	40	
GAZ063SA	GAZ063SAT4	63	210 x 175 x 121
GAZ063C	GAZ063CT4	63	
GAZ080C	GAZ080CT4	80	
GAZ100C	GAZ100CT4	100	
GAZ125	GAZ125T4	125	280 x 220 x 193
GAZ160	GAZ160T4	160	

IP65 Metallic enclosures, add suffix "B" to end of code for black handle

GAZM016	GAZM016T4	16	200 x 150 x 143
GAZM025	GAZM025T4	25	
GAZM032	GAZM032T4	32	
GAZM040	GAZM040T4	40	
GAZM063SA	GAZM063SAT4	63	300 x 200 x 143
GAZM063C	GAZM063CT4	63	
GAZM080C	GAZM080CT4	80	
GAZM100C	GAZM100CT4	100	
GAZM125	GAZM125T4	125	400 x 300 x 296
GAZM160	GAZM160T4	160	
GLZM0160	GLZM0160T4	160	400 x 300 x 296
GLZM0200	GLZM0200T4	200	
GLZM0250	GLZM0250T4	250	
GLZM0315	GLZM0315T4	315	

Stainless steel enclosure, add suffix "B" to end of code for black handle

GAZS016	GAZS016T4	16	200 x 150 x 143
GAZS025	GAZS025T4	25	
GAZS032	GAZS032T4	32	
GAZS040	GAZS040T4	40	
GAZS063	GAZS063T4	63	200 x 150 x 143
GAZS080	GAZS080T4	80	
GAZS100	GAZS100T4	100	

CIRCUIT PROTECTION & ISOLATION

SWITCH DISCONNECTOR - ENCLOSED

ENCLOSED CHANGEOVER SWITCHES



GAZ025 E...
GAZ063SA E...



GAZ025 E...
GAZ063SA E...

Order code 3 pole changeover	Order code 4 pole changeover	IEC current Ith AC21A (≤690V) (A)	IEC current Ie		Dimensions H x W x D (inc handle) (mm)
			AC23B (≤400V) (A)	AC23B (≤500V) (A)	
IP65 Plastic enclosure line changeover switches I-O-II					
GAZ040ET6	GAZ040ET8	40	40	25	210 x 175 x 183
GAZ063SAET6	GAZ063SAET8	63	45	25	
GAZ080ET6	GAZ080ET8	80	80	63	
GAZ125ET6	GAZ125ET8	125	125	100	220 x 280 x 208
GAZ160ET6	GAZ160ET8	160	125	100	
IP65 Metallic enclosure line changeover switches I-O-II					
GAZM040ET6	GAZM040ET8	40	40	25	200 x 150 x 155
GAZM063SAET6	GAZM063SAET8	63	45	25	
GAZM080ET6	GAZM080ET8	80	80	63	
GAZM125ET6	GAZM125ET8	125	125	100	200 x 300 x 155
GAZM160ET6	GAZM160ET8	160	125	100	
GLZM0160ET6	GLZM0160ET8	160	125	100	400 x 300 x 296
GLZM0200ET6	GLZM0200ET8	160	125	100	
GLZM0250ET6	GLZM0250ET8	160	125	100	
GLZM0315ET6	GLZM0315ET8	160	125	100	

SWITCHFUSE



GAZ...F

Order code	Current rating (A)	Dimensions H x W x D (including handle) (mm)
GAZ020F	20	234 x 110 x 97
GAZ032F	32	

IP65 switchfuse isolator supplied with 10 x 38mm gG fuses

SOLUTIONS FOR PHOTOVOLTAIC APPLICATIONS

Fuse holders for photovoltaic applications UL Listed/CSA certified up to 1000VDC

Order code	Pole arrangement	Status indicator	DIN size
			n°

For 10x38mm fuses.
IEC 32A rated current at 1000VDC.

FB01D1P	1P	—	1
FB01D1PL	1P	YES	1
FB01D2P	2P	—	2
FB01D2PL	2P	YES	2

Fuses for photovoltaic applications up to 1000VDC

Order code	Rated current In
	(A)

For 10x38mm fuses.
IEC 30kA breaking capacity at 1000VDC.

FE01D0...	2...20
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Fuse holders for photovoltaic applications up to 1500VDC

Order code	Pole arrangement	Status indicator	DIN size
			n°

For 10x85mm and 14x85mm fuses.
IEC 32A rated current at 1500VDC.

FB04D1P	1P	—	1
FB04D1PL	1P	YES	1

Fuses for photovoltaic applications up to 1500VDC

Order code	Rated current In
	(A)

For 10x38mm fuses.
IEC 10kA breaking capacity at 1500VDC.

FE04D0...	6...20
------------------	--------

For 14x85mm fuses.
IEC 10kA breaking capacity at 1500VDC.

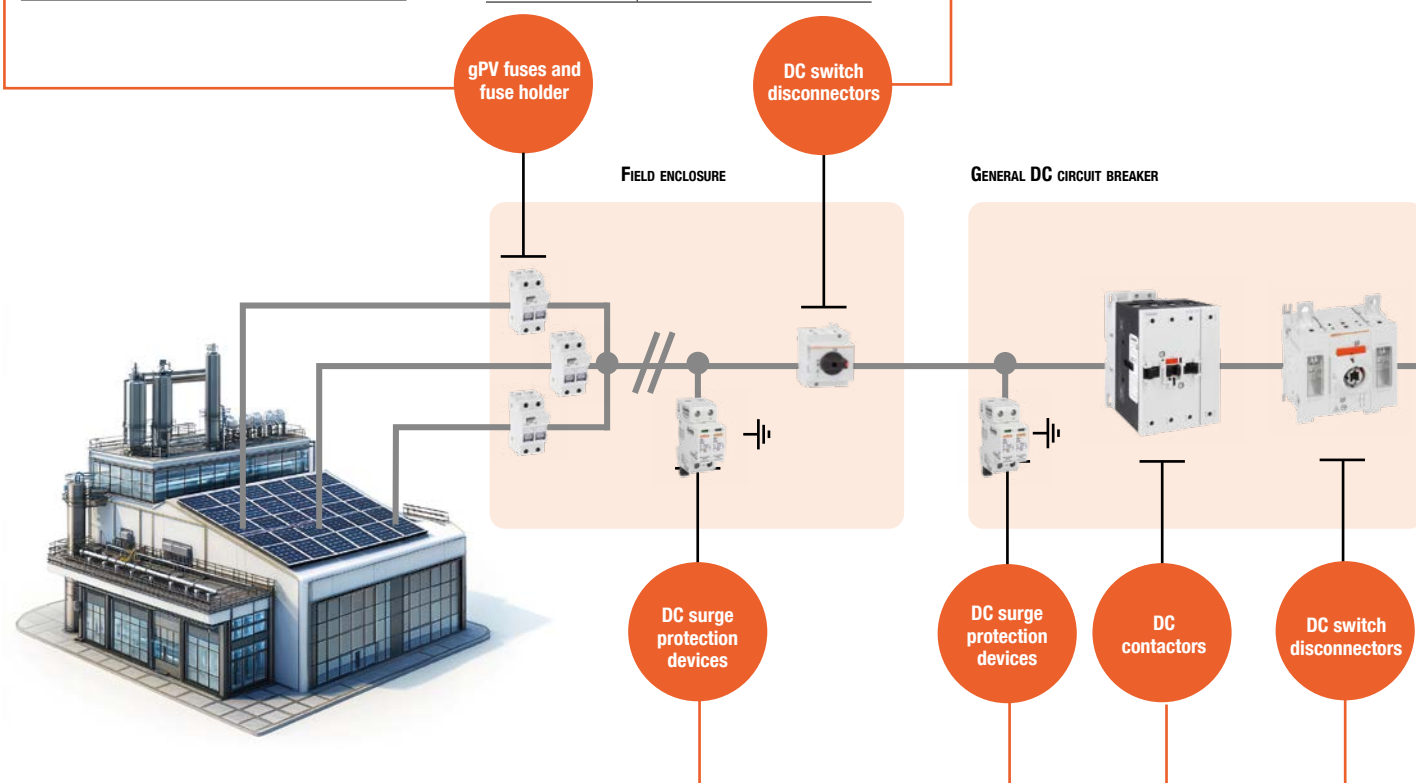
FE05D0...	20...32
------------------	---------

Switch disconnectors GD series

Order code	IEC conventional free air thermal current Ith	IEC rated operational current Ie DC21B	≤800V	1000V	1200V	1500V
	(A)	(A)	(A)	(A)	(A)	(A)

Switch disconnector complete with black handle.

GD025AT2	25	25	16	—	—	—
GD025AT3	25	25	25	—	—	—
GD032AT3	32	32	32	—	—	—
GD032AT4	32	32	32	25	20	—
GD040AT3	40	40	32	—	—	—
GD040AT4	40	40	40	32	25	—



Surge protection devices

type 1-2 - DC with plug-in cartridge

EN rated voltage Un 1100VDC.				
SG2EDGK10M3R	+, -, PE	SI	3	
EN rated voltage Un 1500VDC.				
SG2EDGK50M3R	+, -, PE	SI	3	

type 2 - DC with plug-in cartridge

Order code	Pole arrangement	Relay output	Number of DIN module
		(SPDT)	n°
EN rated voltage Un 600VDC.			
SE2DG600M2	+, -, PE	NO	2
SE2DG600M2R	+, -, PE	YES	2
EN rated voltage Un 1000VDC.			
SE2DGK00M3	+, -, PE	NO	3
SE2DGK00M3R	+, -, PE	YES	3
EN rated voltage Un 1500VDC.			
SE2DGK50M3	+, -, PE	NO	3

Contactors to connect in series BF series

Order code	Poles in series	Operational voltage Ue	IEC max current Ie in DC1 with L/R ≤1ms
		400V 600V 800V 1000V	(A) (A) (A) (A)
BFD6500A...	3	100	75 45 35
BFD8000A...	3	100	80 65 60
BFD80T4A...	4	115	100 76 80
BFD80T4E...	4	115	100 76 80
BFD150T4E...	4	165	165 125 100

Switch disconnectors GLD series 1

Order code	IEC conventional free air thermal current Ith	IEC rated operational current Ie DCPV1	800V	1000V	1500V
	(A)	(A)	(A)	(A)	(A)

Direct operating and door coupling versions.
Separately purchase the handle and shaft extension.

GLD0100T4C3	100	100	100	100	
GLD0160T4C3	160	160	160	160	
GLD0200T4C3	200	200	200	200	
GLD0250T4C3	250	250	250	250	
GLD0315T4C3	315	315	315	315	

SOLUTIONS FOR PHOTOVOLTAIC APPLICATIONS

Interface protection system units for low, medium and high voltage system

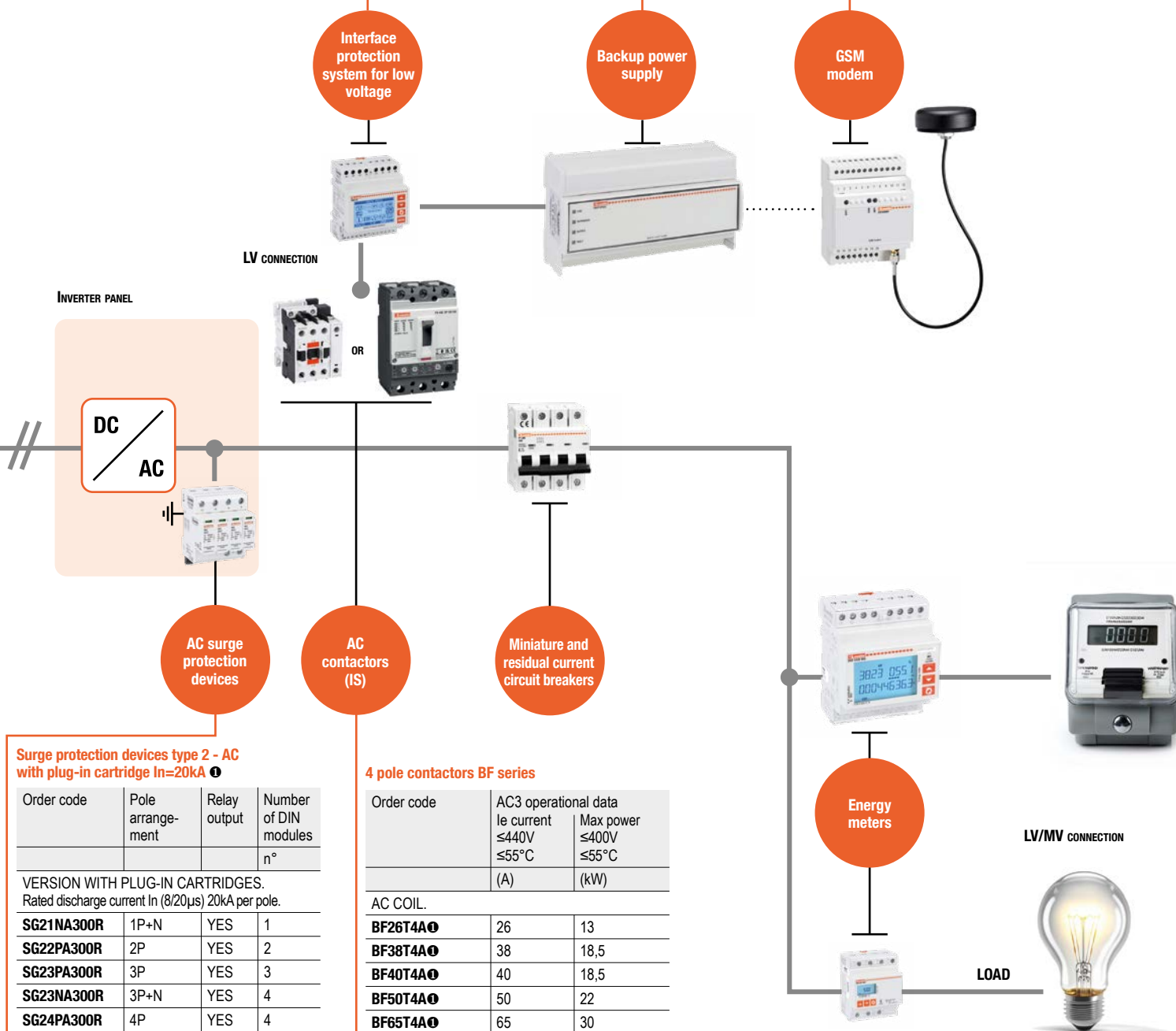
Order code	Compliant with standards
Low, medium, high voltage system.	
PMVF52	CEI 0-21
PMVF60	DEWA DRRG and SEC (Saudi Electricity Company)
PMVF70	ENA G59-3/G99
PMVF81	VDE-AR-N 4105, 4110, 4120 and VDE V 0126-1-1
PMVF90	For systems requiring 3 maximum voltage thresholds

Backup power supply for interface protection system units

Order code	Description
Backup power supply for interface protection system units PMVF...	
PMVFUPS02	Input 230VAC. Output 230VAC with stored energy 800Ws and power 650VA

Remote control and monitoring GSM modem via SMS

Order code	Description
GSM modem (modular - 4U). IP69K outside aerial with 2.5m cable. RJ45-USB programming cable (included).	
EXCGSM01	100...240VAC, 1 digital input, 1 analogic input (0...10V, 0...20mA, NTC), 1 relay output, SMS send/receive for remote control and alarm signals



Surge protection devices type 2 - AC with plug-in cartridge $I_n=20kA$ ①

Order code	Pole arrangement	Relay output	Number of DIN modules
			n°
VERSION WITH PLUG-IN CARTRIDGES. Rated discharge current I_n (8/20 μs) 20kA per pole.			
SG21NA300R	1P+N	YES	1
SG22PA300R	2P	YES	2
SG23PA300R	3P	YES	3
SG23NA300R	3P+N	YES	4
SG24PA300R	4P	YES	4

4 pole contactors BF series

Order code	AC3 operational data le current $\leq 440V$ $\leq 55^\circ C$	Max power $\leq 400V$ $\leq 55^\circ C$
	(A)	(kW)
AC COIL.		
BF26T4A ①	26	13
BF38T4A ①	38	18,5
BF40T4A ①	40	18,5
BF50T4A ①	50	22
BF65T4A ①	65	30
BF80T4A ①	80	45
BF95T4A ①	95	55
BF115T4A ①	115	55
BF150T4A ①	150	75

AC/DC ELECTRONIC COIL.

BF160T4E ②	160	75
BF195T4E ②	195	90
BF230T4E ②	230	110

① The order code must be completed with the winding voltage number (50/60Hz) and the winding voltage number followed by 60 if a 60Hz unit.

The following standard voltages are available:

– AC 50-60Hz 024 - 048 - 110 - 230 - 400V

– AC 60Hz 024 60 - 048 60 - 120 60 - 220 60 - 230 60 - 460 60 - 575 60 (V).

② The contactor winding is electronically controlled; it can be either AC or DC powered and has a wide operational range.

The order code must be completed with the winding voltage number.

The following standard voltages are available:

– AC/DC 024 = 24...60VAC/20...60VDC; 110 = 60...130VAC/DC; 230 = 100...250VAC/DC; 400 = 250...500V.

CIRCUIT PROTECTION AND ISOLATION

DISTRIBUTION BLOCKS

ACB SERIES DISTRIBUTION BLOCKS



ACB1



ACB2



ACB4

Order code	Number of terminals	Rated Current (A)	Max wire section mm ²
Single pole. IEC Rated voltage 1000v, cURus rated voltage 600V			
ACB1P085A07	7	85	16
ACB1P150A08	8	150	35
ACB1P200A08	8	200	70
ACB1P255A12	12	255	120
ACB1P335A12	12	335	185
ACB1P520A12	12	520	25 x 9.5mm bar

Order code two pole	Order code four pole	Number of terminals	Rated current (A)	Max wire section mm ²
Two and four pole. IEC Rated voltage 500v (Non-UL)				
ACB2P100G07	ACB4P100G07	7	100	25
-	ACB4P100G11	11	100	25
ACB2P100G15	ACB4P100G15	15	100	25
-	ACB4P125G11	11	125	35
ACB2P125G15	ACB4P125G15	15	125	35
-	ACB4P160D12	12	160	50

EARTH LEAKAGE RELAYS



RM1DA230



31RM415

Order code	Aux supply voltage	Description
Earth leakage relays		
RM1DA230	230VAC	LCD display, configurable, 1 operation threshold, ext. CT - Type A
RM2DA230	230VAC	LCD display, configurable, 2 operation thresholds, ext. CT - Type A
RM2DB230	230VAC	LCD display, configurable, 2 operation thresholds, ext. CT - Type B
RM415	110-400VAC	Fixed trip point, 1 operation threshold, ext. CT
31RM48	24-48V AC/DC	Configurable, 1 operation threshold, ext. CT
31RM415	110-400VAC	Configurable, 1 operation threshold, ext. CT
31RMT415	110-400VAC	Configurable, fail safe, 1 operation threshold, ext. CT
31RC48	24-48V AC/DC	Configurable, 1 operation threshold, internal CT
31RC415	110-400VAC	Configurable, 1 operation threshold, internal CT



31RMT415



31RC48



31RT35

Current transformers for use with earth leakage relays

Order code	Aux supply voltage	Description
31RT35	35mm	Solid core current transformer - Type A
31RT60	60mm	Solid core current transformer - Type A
31RT110	110mm	Solid core current transformer - Type A
31RT210	210mm	Solid core current transformer - Type A
31RTA110	110mm	Split core current transformer - Type A
31RTA210	210mm	Split core current transformer - Type A
RTB035	35mm	Solid core current transformer - Type B
RTB060	60mm	Solid core current transformer - Type B
RTB080	80mm	Solid core current transformer - Type B
RTB110	110mm	Solid core current transformer - Type B
RTB210	210mm	Solid core current transformer - Type B

CIRCUIT PROTECTION AND ISOLATION

FUSE HOLDERS

FUSE HOLDERS



FB01F...



FB01 B...



FB02 A...



FB03 A...



FB01 G...



FB01 D...

Order code plain	Order code with indicator	Pole arrangement	cURus or UL	DIN module size
For 10 x 38mm fuses. IEC 32A rated current at 690VAC				
FB01F1P	FB01F1PL	1P	Yes	1
FB01F1M	-	1P + N	No	1
FB01F1N	-	1P + N	Yes	2
FB01F2P	FB01F2PL	2P	Yes	2
FB01F3P	FB01F3PL	3P	Yes	3
FB01F3N	-	3P + N	Yes	4
FB01B1P	FB01B1PL	1P	No	1
FB01B1N	-	1P	No	2
FB01B2P	-	1P + N	No	2
FB01B3P	-	2P	No	3
FB01B3N	-	3P	No	4
For 14 x 51mm fuses. IEC 50A rated current at 690VAC				
FB02A1P	FB02A1PL	1P	Yes	1.5
FB01A1N	-	1P + N	Yes	3
FB02A2P	-	2P	Yes	3
FB02A3P	-	3P	Yes	4.5
FB02A3N	-	3P + N	Yes	6
For 22 x 58mm fuses. IEC 100A rated current at 690VAC				
FB03A1P	FB03A1PL	1P	Yes	2
FB03A1N	-	1P + N	Yes	4
FB03A2P	-	2P	Yes	4
FB03A3P	-	3P	Yes	6
FB03A3N	-	3P + N	Yes	8
For 10 x 38mm Class CC fuses. IEC 30A rated current at 600VAC				
FB01G1P	FB01G1PL	1P	Yes	1
FB01G2P	FB01G2PL	2P	Yes	2
FB01G3P	FB01G3PL	3P	Yes	3
For 10 x 38mm fuses. IEC 32A rated current at 1000VDC				
FB01D1P	FB01D1PL	1P	Yes	1
FB01D2P	FB01D2PL	2P	Yes	2

For fuses for photovoltaic applications at 1000VDC and fuse holders and fuses for 1500VDC please refer to General Catalogue.

ACCESSORIES



FBX 00



FBX 01
FBX 03

Order code	Description
FBX 00	Coupling clip for 10x38, 14x51 and 22x58mm sizes
FBX 01	Coupling pin for 10x38mm size type FB01 A1M, FB01 B1P and FB01 B1PL only
FBX 02	Coupling pin for 14x51 and 22x58mm sizes
FBX 03	Coupling pin for 10x38mm size types FB01 F, FB01 G, FB01 D only

For busbars and connectivity please see codes PIX... on page 44 or refer to General Catalogue.

CIRCUIT PROTECTION AND ISOLATION

MCB AND RCD DEVICES

MINIATURE CIRCUIT BREAKERS 1A>125A

10kA Thermal
& Magnetic Trip



P1 MB 1P...



P1 MB 2P...



P1 MB 3P...



P1 MB 4P...



P2 MB 3P...

IEC In (A)	One-pole order code	Two-pole order code	Three-pole order code	Four-pole order code	One-pole + neutral order code
B-curve					
1	P1 MB 1P B01	P1 MB 2P B01	P1 MB 3P B01	P1 MB 4P B01	-
2	P1 MB 1P B02	P1 MB 2P B02	P1 MB 3P B02	P1 MB 4P B02	-
3	P1 MB 1P B03	P1 MB 2P B03	P1 MB 3P B03	P1 MB 4P B03	-
4	P1 MB 1P B04	P1 MB 2P B04	P1 MB 3P B04	P1 MB 4P B04	-
6	P1 MB 1P B06	P1 MB 2P B06	P1 MB 3P B06	P1 MB 4P B06	P1 MB 1M B06
10	P1 MB 1P B10	P1 MB 2P B10	P1 MB 3P B10	P1 MB 4P B10	P1 MB 1M B10
13	P1 MB 1P B13	P1 MB 2P B13	P1 MB 3P B13	P1 MB 4P B13	-
16	P1 MB 1P B16	P1 MB 2P B16	P1 MB 3P B16	P1 MB 4P B16	P1 MB 1M B16
20	P1 MB 1P B20	P1 MB 2P B20	P1 MB 3P B20	P1 MB 4P B20	P1 MB 1M B20
25	P1 MB 1P B25	P1 MB 2P B25	P1 MB 3P B25	P1 MB 4P B25	P1 MB 1M B25
32	P1 MB 1P B32	P1 MB 2P B32	P1 MB 3P B32	P1 MB 4P B32	P1 MB 1M B32
40	P1 MB 1P B40	P1 MB 2P B40	P1 MB 3P B40	P1 MB 4P B40	-
50	P1 MB 1P B50	P1 MB 2P B50	P1 MB 3P B50	P1 MB 4P B50	-
63	P1 MB 1P B63	P1 MB 2P B63	P1 MB 3P B63	P1 MB 4P B63	-

C-curve					
1	P1 MB 1P C01	P1 MB 2P C01	P1 MB 3P C01	P1 MB 4P C01	P1 MB 1M C02
2	P1 MB 1P C02	P1 MB 2P C02	P1 MB 3P C02	P1 MB 4P C02	-
3	P1 MB 1P C03	P1 MB 2P C03	P1 MB 3P C03	P1 MB 4P C03	-
4	P1 MB 1P C04	P1 MB 2P C04	P1 MB 3P C04	P1 MB 4P C04	P1 MB 1M C04
6	P1 MB 1P C06	P1 MB 2P C06	P1 MB 3P C06	P1 MB 4P C06	P1 MB 1M C06
10	P1 MB 1P C10	P1 MB 2P C10	P1 MB 3P C10	P1 MB 4P C10	P1 MB 1M C10
13	P1 MB 1P C13	P1 MB 2P C13	P1 MB 3P C13	P1 MB 4P C13	P1 MB 1M C13
16	P1 MB 1P C16	P1 MB 2P C16	P1 MB 3P C16	P1 MB 4P C16	P1 MB 1M C16
20	P1 MB 1P C20	P1 MB 2P C20	P1 MB 3P C20	P1 MB 4P C20	P1 MB 1M C20
25	P1 MB 1P C25	P1 MB 2P C25	P1 MB 3P C25	P1 MB 4P C25	P1 MB 1M C25
32	P1 MB 1P C32	P1 MB 2P C32	P1 MB 3P C32	P1 MB 4P C32	P1 MB 1M C32
40	P1 MB 1P C40	P1 MB 2P C40	P1 MB 3P C40	P1 MB 4P C40	P1 MB 1M C40
50	P1 MB 1P C50	P1 MB 2P C50	P1 MB 3P C50	P1 MB 4P C50	-
63	P1 MB 1P C63	P1 MB 2P C63	P1 MB 3P C63	P1 MB 4P C63	-
80	P2 MB 1P C080	P2 MB 2P C080	P2 MB 3P C080	P2 MB 4P C080	-
100	P2 MB 1P C100	P2 MB 2P C100	P2 MB 3P C100	P2 MB 4P C100	-
125	P2 MB 1P C125	P2 MB 2P C125	P2 MB 3P C125	P2 MB 4P C125	-

D-curve					
1	P1 MB 1P D01	P1 MB 2P D01	P1 MB 3P D01	P1 MB 4P D01	-
2	P1 MB 1P D02	P1 MB 2P D02	P1 MB 3P D02	P1 MB 4P D02	-
3	P1 MB 1P D03	P1 MB 2P D03	P1 MB 3P D03	P1 MB 4P D03	-
4	P1 MB 1P D04	P1 MB 2P D04	P1 MB 3P D04	P1 MB 4P D04	-
6	P1 MB 1P D06	P1 MB 2P D06	P1 MB 3P D06	P1 MB 4P D06	-
10	P1 MB 1P D10	P1 MB 2P D10	P1 MB 3P D10	P1 MB 4P D10	-
13	P1 MB 1P D13	P1 MB 2P D13	P1 MB 3P D13	P1 MB 4P D13	-
16	P1 MB 1P D16	P1 MB 2P D16	P1 MB 3P D16	P1 MB 4P D16	-
20	P1 MB 1P D20	P1 MB 2P D20	P1 MB 3P D20	P1 MB 4P D20	-
25	P1 MB 1P D25	P1 MB 2P D25	P1 MB 3P D25	P1 MB 4P D25	-
32	P1 MB 1P D32	P1 MB 2P D32	P1 MB 3P D32	P1 MB 4P D32	-
40	P1 MB 1P D40	P1 MB 2P D40	P1 MB 3P D40	P1 MB 4P D40	-
50	P1 MB 1P D50	P1 MB 2P D50	P1 MB 3P D50	P1 MB 4P D50	-
63	P1 MB 1P D63	P1 MB 2P D63	P1 MB 3P D63	P1 MB 4P D63	-
80	-	-	P2 MB 3P D080	P2 MB 4P D080	-
100	-	-	P2 MB 3P D100	P2 MB 4P D100	-
125	-	-	P2 MB 3P D125	P2 MB 4P D125	-

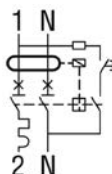
CIRCUIT PROTECTION AND ISOLATION

MCB AND RCD DEVICES

RESIDUAL CURRENT OPERATED CIRCUIT BREAKERS WITH OVERCURRENT PROTECTION (RCBO)



P1 RE 1N...



Order code IEC I Δ n 30mA trip	Order code IEC I Δ n 300mA trip	IEC In (A)
C-curve, Single-pole + neutral RCBO type AC, 10kA, 2 Module		
P1 RE 1N C06 AC030	P1 RE 1N C06 AC300	6
P1 RE 1N C10 AC030	P1 RE 1N C10 AC300	10
P1 RE 1N C13 AC030	P1 RE 1N C13 AC300	13
P1 RE 1N C16 AC030	P1 RE 1N C16 AC300	16
P1 RE 1N C20 AC030	P1 RE 1N C20 AC300	20
P1 RE 1N C25 AC030	P1 RE 1N C25 AC300	25
P1 RE 1N C32 AC030	P1 RE 1N C32 AC300	32
P1 RE 1N C40 AC030	P1 RE 1N C40 AC300	40

Type A also available - replace 'AC' with 'A'. Please see the general catalogue

RESIDUAL CURRENT OPERATED CIRCUIT BREAKERS (RCD)



P1 RD 2P...

Order code IEC I Δ n 30mA trip	Order code IEC I Δ n 300mA trip	IEC In (A)
Two-pole RCCB type AC		
P1 RD 2P 25 AC030	P1 RD 2P 25 AC300	25
P1 RD 2P 40 AC030	P1 RD 2P 40 AC300	40
P1 RD 2P 63 AC030	P1 RD 2P 63 AC300	63
Four-pole RCCB type AC		
P1 RD 4P 25 AC030	P1 RD 4P 25 AC300	25
P1 RD 4P 40 AC030	P1 RD 4P 40 AC300	40
P1 RD 4P 63 AC030	P1 RD 4P 63 AC300	63

Type A, type B and selective delayed tripping versions also available. Please see the general catalogue

RESIDUAL CURRENT OPERATED ADD-ON BLOCKS



P1 RA 2P...

Order code IEC I Δ n 30mA trip	Order code IEC I Δ n 300mA trip	IEC In (A)
Two-pole residual block - type A		
P1 RA 2P 40 A030	P1 RA 2P 40 A300	40
P1 RA 2P 63 A030	P1 RA 2P 63 A300	63
Three-pole residual block - type A		
P1 RA 4P 40 A030	P1 RA 4P 40 A300	40
P1 RA 4P 63 A030	P1 RA 4P 63 A300	63
Four-pole residual block - type A		
P1 RA 4P 40 A030	P1 RA 4P 40 A300	40
P1 RA 4P 63 A030	P1 RA 4P 63 A300	63

MODULAR SWITCH DISCONNECTORS



P1MS...

IEC In (A)	One-pole order code	Two-pole order code	Three-pole order code	Four-pole order code
32	P1MS1P032	P1MS2P032	P1MS3P032	P1MS4P032
40	P1MS1P040	P1MS2P040	P1MS3P040	P1MS4P040
63	P1MS1P063	P1MS2P063	P1MS3P063	P1MS4P063
100	P1MS1P100	P1MS2P100	P1MS3P100	P1MS4P100
125	P1MS1P125	P1MS2P125	P1MS3P125	P1MS4P125

Order code	Description
Accessories	
P1X1011S	1 changeover auxiliary contact for P1MS... devices
P1X1810	Padlockable attachment for P1MS... devices

CIRCUIT PROTECTION AND ISOLATION

MCB AND RCD ACCESSORIES

ACCESSORIES FOR P1MB, P1RD AND P1RE DEVICES



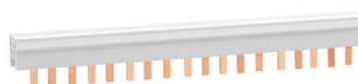
P1X1011

P1X16230

P2X 1311

Order code	Description
Direct switch mounted operating handles	
P1X1011	Auxiliary contact, 1 changeover contact, suitable for fitting to P1MB.., P1RD.. and P1RE devices
P1X1311	Trip indicating auxiliary contact, 1 changeover contact, suitable for fitting to P1MB.., P1RD.. and P1RE devices
P1X14230	Undervoltage trip release 230V 50/60Hz suitable for fitting to P1MB.., P1RD.. and P1RE devices
P1X16230	Shunt trip release 110V...415V 50/60Hz suitable for fitting to P1MB.., P1RD.. and P1RE devices
P1X16024	Shunt trip release 12...24V 50/60Hz +DC suitable for fitting to P1MB.., P1RD.. and P1RE devices
P1X1810	Padlockable attachment for switch lever suitable for fitting to P1MB.., P1RD.. and P1RE devices
P2X1011	Auxiliary contact, 1 changeover contact, suitable for fitting to P2MB.. devices
P2X1311	Trip indicating auxiliary contact, 1 changeover contact, suitable for fitting to P2MB devices
P2X16230	Shunt trip release 110V...415V 50/60Hz suitable for fitting to P2MB devices

BUSBAR CONNECTIVITY FOR MINIATURE CIRCUIT BREAKERS



P1X 90 33



P1X 91 33



P1X 92 10



P1X 92 02

Order code	Description
Direct switch mounted operating handles	
P1X9031	Single-pole supply busbar, 57 modules 1000mm length
P1X9032	Two-pole supply busbar, 57 modules 1000mm length
P1X9033	Three-pole supply busbar, 57 modules 1000mm length
P1X9034	Four-pole supply busbar, 57 modules 1000mm length
P1X9130	Kit of 5 isolating covers for unused busbar terminals
P1X9131	End cap for P1X9031
P1X9132	End cap for P1X9032
P1X9133	End cap for P1X9033
P1X9134	End cap for P1X9034
P1X9201	Single-pole terminal for busbar connection; conductor cross section 25mm ² max, straight entry
P1X9210	Single pole terminal for busbar connection; conductor cross section 25mm ² max.; left entry
P1X9202	Single-pole terminal for busbar connection; conductor cross section 50mm ² max, straight entry

Do you require UL489 versions of our MCB?

The wide range of UL489 devices is available either in our General Catalogue or by following the QR code link below.



CIRCUIT PROTECTION AND ISOLATION

SURGE PROTECTION DEVICES

SURGE PROTECTION DEVICES



SA03NA320R



SA03PA320R



SG22PA300R



SG22PA300R

Order code	Type	Pole arrangement	Plug-in cartridge or monoblock	Relay output	Number of DIN modules
Surge protection devices for most UK & Ireland application requirements					
SA03NA320R	1 and 2	3P + N	Plug-in	Yes	4
SA03PA320R	1 and 2	3P	Plug-in	Yes	3
SA04PA320R	1 and 2	4P	Plug-in	Yes	4
SA1B3NA320R	1 and 2	3P + N	Monoblock	Yes	8
SA1B3PA320R	1 and 2	3P	Monoblock	Yes	6
SA1B4PA320R	1 and 2	4P	Monoblock	Yes	8
SG21NA300R	2 and 3	1P + N	Plug-in	Yes	2
SG22PA300R	2 and 3	2P	Plug-in	Yes	2
SG23NA300R	2 and 3	3P + N	Plug-in	Yes	4
SG23PA300R	2 and 3	3P	Plug-in	Yes	3
SG24PA300R	2 and 3	4P	Plug-in	Yes	4

LOVATO Surge Protection devices can be used as they are compliant with the IEC/EN 61643-11 guidelines. Applying surge protection devices to electrical installations ensures compliance of BS7671 wiring regulations.

Class 1 & Class 2 (Type 1, Type 2) devices for lightning and surge protection can be installed in all systems conforming with IEC 61643-12 and BS EN 62305-4.

Class 1 Three Phase.

Suitable for external lightning protection systems levels 1, 2 & 3/4 - 25kA (Suitable for all eventualities). To be fitted at main distributions boards / main point common coupling.

Suitable LOVATO devices:

3P SA1B3PA320R
3P+N SA1B3NA320R
4P SA1B4PA320R



SA1B3PA320R

Class 1 Three Phase.

Suitable for external lightning protection systems level 3/4 - 12.5kA. To be fitted at main distribution boards / main point common coupling.

Suitable LOVATO devices:

3P SA03PA320R
3P+N SA03NA320R
4P SA04PA320R



SA03NA320R

Class 2 Three phase.

To be fitted at each sub distribution board / machine control panel, directly connected to the main distribution board if lightning protection is fitted to the structure.

Suitable LOVATO devices:

3P SG23PA300R
3P+N SG23NA300R
4P SG24PA300R



SG23PA300R

Class 2 Single phase.

To be fitted at each sub distribution board / machine control panel, directly connected to the main distribution board if lightning protection is fitted to the structure.

Suitable LOVATO devices:

1P+N SG21NA300R
2P SG22PA300R



SG22PA300R

If external lightning protection is not present, additional devices can be added to the electrical installation if there are concerns of internally or externally induced surges.

CIRCUIT PROTECTION AND ISOLATION

MODULAR CONTACTORS

MODULAR CONTACTORS



CN20...



CN25...



CN40...



CN63...



CNM20...CNM32 20...



CNB32 20...

Coil operating voltage 24VAC/DC 220-230VAC		Current Ith (A)	Number of Poles	Contact configuration	Module width
Standard modular contactors					
CN2011024	CN2011220	20	2	1NO + 1NC	1
CN2020024	CN2020220	20	2	2NO	1
CN2002024	CN2002220	20	2	2NC	1
CN3211024	CN3211220	32	2	1NO + 1NC	1
CN3220024	CN3220220	32	2	2NO	1
-	CN3202220	32	2	2NC	1
CN2510024	CN2510220	25	4	4NO	2
CN2501024	CN2501220	25	4	3NC + 1NO	2
-	CN2522220	25	4	2NO + 2NC	2
CN3210024	CN3210220	32	4	4NO	2
CN3201024	CN3201220	32	4	3NC + 1NO	2
CN4010024	CN4010220	40	4	4NO	3
CN4001024	CN4001220	40	4	3NC + 1NO	3
-	CN4022220	40	4	2NO + 2NC	3
CN6310024	CN6310220	63	4	4NO	3
CN6301024	CN6301220	63	4	3NC + 1NO	3
-	CN6322220	63	4	2NO + 2NC	3

Modular contactors with manual override function

CNM2011024	CNM2011220	20	2	1NO + 1NC	1
CNM2020024	CNM2020220	20	2	2NO	1
CNM3220024	CNM3220220	32	2	2NO	1
CNM3210024	CNM3210220	32	4	4NO	2

Modular contactors with latching function

CNB2011024	CNB2011220	20	2	1NO + 1NC	1
CNB2020024	CNB2020220	20	2	2NO	1
CNB3220024	CNB3220220	32	2	2NO	1
CNB3210024	CNB3210220	32	4	4NO	2

ACCESSORIES



CNH...

Order code	Characteristics	Max. qty per contactor
Auxiliary contacts		
CNH 11	1 NO + 1NC	1
CNH 20	2NO	1
CNH... aux contacts not for use with CN20..., CN321..., CN3220..., CNM20..., CNM32... and CNB... devices		
Spacer		
CNX 80	1/2 mod. wide	1

AUTOMATION & CONTROL

TIME RELAYS



NFC



Set-up of timers has never been easier

TMM1 NFC Multifunction Timer is now available with wireless NFC programming via the free “LOVATO NFC” android app - even without power!

No front controls makes time settings 100% accurate, secure and may even be password protected and made tamperproof!

40 FUNCTIONS now available due to the removal of mechanical adjustments.

Functions also include counter and hour run time - never before available on a standard multifunction timer.

Settings can be stored and shared across multiple devices for rapid programming or file sharing via free LOVATO NFC app or email.

MODULAR TIME RELAYS



TM P



TM D



TM M1



TM M2



TM ST



TM LS

Order code	Time of scale range	Rated auxiliary supply voltage (V)
On delay time relay. Multiscale. Multivoltage		
TMP	0.1...1s, 1...10s, 6...60s, 1...10min, 6min...1hr, 1...10hr, 0.1...1 day, 1...10 days ON only, OFF only	24...48VDC 24...240VAC
TMPA440	0.1...1s, 1...10s, 6...60s, 1...10min	380...440VAC
Off delay time relay. Multiscale. Multivoltage		
TMD	0.06...0.6s, 0.6...6s, 6...60s, 18...180s	24...240VAC/DC
Multifunction time relay. Multiscale. Multivoltage. 1 changeover relay output. 10 functions incl. on delay, off delay, flasher, pulse generator, latch		
TMM1	0.1...1s, 1...10s, 6...60s, 1...10min, 6min...1hr, 1...10hr, 0.1...1 day, 1...10 days ON only, OFF only	24...48VDC 24...240VAC
TMM1NFC	40 Functions NFC Programming	380...440VAC
Multifunction time relay. Multiscale. Multivoltage. 1 changeover relay output + 1 N/O contact. 10 functions incl. on delay, off delay, flasher, pulse generator, latch		
TMM2	0.1...1s, 1...10s, 6...60s, 1...10min, 6min...1hr, 1...10hr, 0.1...1 day, 1...10 days ON only, OFF only	12...240VAC/DC
Recycle time relay, independent timings. Multiscale. Multivoltage output		
TMPL	0.1...1s, 1...10s, 6...60s, 1...10min, 6min...1hr, 1...10hr, 0.1...1 day, 1...10 days, 3...30 days, 10...100 days	12...240VAC/DC
Time relay for starting (star delta starters). Multiscale. Multivoltage output		
TMST	0.1...1s, 1...10s, 6...60s, 1...10min	24...48VDC 24...240VAC
TMSTA440	0.1...1s, 1...10s, 6...60s, 1...10min	380...440VAC
Time relay for staircase lighting, zero crossing for LED lamps		
TMLSL	0.5...20min	220...240VAC

AUTOMATION & CONTROL

MONITORING RELAYS

VOLTAGE MONITORING RELAYS FOR THREE PHASE SYSTEMS WITHOUT NEUTRAL



Description	PMV10 A440	PMV20 A240 PMV20 A575	PMV30 A240 PMV30 A575	PMV40 A240 PMV40 A575	PMV50 A240 PMV50 A575	PMV70 A240 PMV70 A575
Minimum AC voltage			•		•	•
Maximum AC voltage					•	•
Phase loss	•	•	•	•	•	•
Incorrect phase sequence	•	•	•	•	•	•
Asymmetry				•		•

VOLTAGE MONITORING RELAYS FOR THREE PHASE SYSTEMS WITH OR WITHOUT NEUTRAL



Description	PMV50N A240 PMV50N A440	PMV70N A240 PMV70N A440	PMV80N A240 PMV80N A440	PMV95N A240 PMV95N A575
Minimum AC voltage	•	•	•	•
Maximum AC voltage	•	•	•	•
Phase loss	•	•	•	•
Neutral loss	•	•	•	•
Incorrect phase sequence	•	•	•	•
Asymmetry		•		•
Minimum frequency			•	•
Maximum frequency			•	•



VOLTAGE MONITORING RELAYS FOR SINGLE PHASE SYSTEMS



Description	PMV55 A240 PMV55 A440
Minimum AC voltage	•
Maximum AC voltage	•

AUTOMATION & CONTROL

MONITORING RELAYS

Multifunction voltage and frequency monitoring relays for three-phase systems with or without neutral, with NFC technology and APP.



Order code	Rated voltage Ue (V) 50/60Hz
PMV95NA240NFC	208...240VAC
PMV95NA575NFC	380...575VAC

Three-phase system, with or without neutral. Minimum and maximum AC voltage, minimum and maximum frequency and asymmetry. Delayed trip. Phase loss, neutral loss and phase sequence. Instantaneous trip. Programmable via smartphone or tablet with NFC technology and App.

8 protection functions in a single product, with possibility to enable or disable individually the functions of interest. – maximum voltage – minimum voltage – maximum frequency – minimum frequency – asymmetry – phase loss – neutral loss – incorrect phase sequence.

Simple and intuitive programming thanks to the graphic interface of the LOVATO NFC App that shows on the display of the smartphone the functions and parameters without need to consult the technical manual. Saving of parameters enables easy sharing, repeat programming and protection protection.

CURRENT MONITORING RELAYS



PMA20/30...



PMA40...

Order code	Rated current Ie (A)	Auxiliary supply voltage (V)
Single-phase system. AC/DC maximum current control. Auxiliary AC/DC power supply. Automatic or manual reset.		
PMA20 240	5 or 16A	24...240VAC/DC
Single and three-phase system. AC/DC minimum or maximum current control. Delayed trip. Auxiliary AC/DC power supply. Automatic or manual reset.		
PMA30 240	5 or 16A	24...240VAC/DC
Single and three-phase system. AC/DC minimum and maximum current control. Delayed trip. Auxiliary AC/DC power supply. Automatic or manual reset.		
PMA40 240	0.02-0.05-0.25-1-5-16A	24...240VAC/DC

PUMP PROTECTION RELAYS



PMA50...

Order code	Rated current Ie (A)	Auxiliary supply voltage (V)
Single and three-phase systems. Dry running, underload, overcurrent protection. Maximum AC current and minimum cosφ. Delayed trip. Phase loss and incorrect phase sequence. Instantaneous trip. Auxiliary AC power supply. Automatic or manual reset.		
PMA50 A240	5 or 16A	220...240VAC
PMA50 A415		380...415VAC

FREQUENCY MONITORING RELAYS



PMF20...

Order code	Rated voltage Ue (A) 50/60 Hz
Single and three-phase systems. Minimum and maximum frequency. Delayed trip. Automatic reset.	
PMF20 A240	220...240VAC
PMF20 A415	380...415VAC

AUTOMATION & CONTROL

LEVEL CONTROLS

LEVEL CONTROL RELAYS



Description	LVM20 A240*	LVM25 240 24...240VAC/DC	LVM30 A240*	LVM40 A240*
Modular version	• (2U)	• (1U)	• (3U)	• (3U)
3 detecting electrodes (MIN, MAX and COM)	•	•	•	
5 detecting electrodes (MIN1, MAX1, MIN2, MAX2 and COM)				•
Sensitivity adjustment (kΩ) see General Catalogue	•	•	•	•
Emptying function	•	•	•	•
Filling function		•	•	•

PROBES AND ELECTRODE HOLDERS



11 SN1



31 SCM...



31 CGL125...



31 PS31



31 PS3S

Order code	Probe included	Probe length (mm)
Single pole electrodes		
11 SN1	YES	100
31 SCM 04	YES	43
31 SCM 50	YES	500
31 SCM 100	YES	1000
31 CGL125 3	YES	327
31 CGL125 5	YES	500
31 CGL125 7	YES	700
31 CGL125 10	YES	1000
Three pole electrodes		
31 PS31	YES	300/11.8
Electrode holder (for 3 rod probes)		
31 PS31	YES	300/11.8

ELECTRODES



31 ASTA...

Order code	Description
31 ASTA 460 MM4	Electrode for SCM probes 460mm
31 ASTA 960 MM4	Electrode for SCM probes 960mm
31 ASTA 460 MM6	Electrode for PS3S holder 460mm
31 ASTA 960 MM6	Electrode for PS3S holder 960mm

For guidance on probe selection refer to general catalogue

AUTOMATION & CONTROL

LEVEL CONTROLS

PRIORITY CHANGE RELAYS



LVMP05...



LVMP10...



LVMP30...



PMA50...

Order code	Description
LVMP05	Priority change relay 2NO with same common 24/48VDC and 24...230VAC
LVMP10A024	Priority change relay 2NO(SPST) for 2 motors 24VAC
LVMP10A127	Priority change relay 2NO(SPST) for 2 motors 110VAC
LVMP10A240	Priority change relay 2NO(SPST) for 2 motors 230VAC
LVMP10A415	Priority change relay 2NO(SPST) for 2 motors 415VAC
LVMP30A024	Priority change relay, 4 outputs for 3 or 4 motors 24VAC supply voltage
LVMP30A240	Priority change relay, 4 outputs for 3 or 4 motors 100...240VAC supply voltage
PMA50A240*	Pump protection relay (see below spec) 230VAC
PMA50A415*	Pump protection relay (see below spec) 400VAC

*PMA50... For single and three-phase systems. Dry running, underload and overcurrent protection. Maximum AC current and minimum cos ϕ . Delayed tripping and phase loss and incorrect phase sequence detection.

FLOAT SWITCHES FOR DRINKING WATER



LVFSA1D...

Order code	Cable material	Cable length (mm)	Counter-weight included
LVFSA1D03	PVC ACS+AD8	3	Yes
LVFSA1D05	PVC ACS+AD8	5	Yes
LVFSA1D10	PVC ACS+AD8	10	Yes
LVFSA1D15	PVC ACS+AD8	15	Yes
LVFSA1D20	PVC ACS+AD8	20	Yes

Drinking Water: Suitable for drinking water and foodstuffs applications such as fountains, drinks, aquariums, swimming pools etc...

FLOAT SWITCHES FOR GREY WATER



LVFS...W...

Order code	Cable material	Cable length (mm)	Counter-weight included
LVFS P1 W 03	PVC	3	YES
LVFS P1 W 05	PVC	5	YES
LVFS P1 W 10	PVC	10	YES
LVFS P1 W 15	PVC	15	YES
LVFS N1 W 05	Neoprene	5	YES
LVFS N1 W 10	Neoprene	10	YES
LVFS N1 W 15	Neoprene	15	YES
LVFS N1 W 20	Neoprene	20	YES

Grey Water: These float switches are designed for use in grey water applications such as rainwater, groundwater, domestic waste water and industrial cooling water.

FLOAT SWITCHES FOR DIRTY WATER



LVFS N1 B...

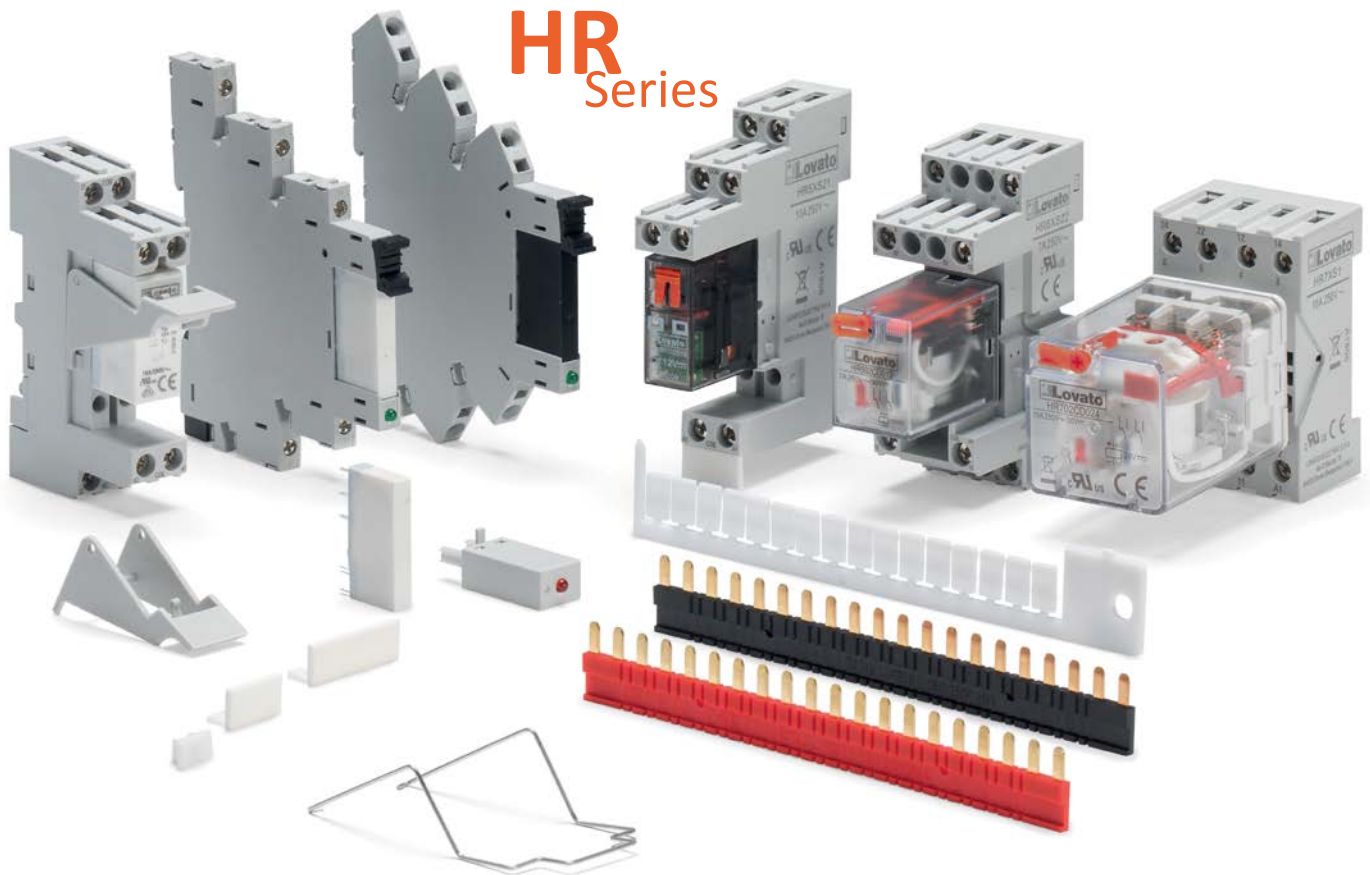
Order code	Cable material	Cable length (mm)	Counter-weight included
LVFS N1 B 05	Neoprene	5	INTERNAL
LVFS N1 B 10	Neoprene	10	INTERNAL
LVFS N1 B 15	Neoprene	15	INTERNAL
LVFS N1 B 20	Neoprene	20	INTERNAL

Dirty Water: These float switches are designed for use in dirty water applications, often referred to as black water applications, such as sewage or industrial waste water.

AUTOMATION & CONTROL

GENERAL PURPOSE RELAYS

HR Series



HR80 versions with ATEX approval now available - refer to General Catalogue

HR10 SERIES SLIM RELAYS



HR1XS..

HR10IC..



HR 10 Series
assembled
slim relay with
spring terminal

Contact type	1 Solid State Relay		1 Standard changeover		
Current	2A AC	4A DC	6A		
12VAC/DC			HR101CE012		
24VAC/DC			HR101CE024		
24VDC	HR201AS024	HR201DS024			
110VAC/DC				HR101CE060	
230VAC/DC					HR101CE060

Socket bases

Screw Terminal	HR1XS024	HR1XS110	HR1XS230
Spring Terminal	HR1XS024S	HR1XS110S	HR1XS230S

Accessories

Retaining Clips	Included in the socket		
Marker Tag Single	HR1X30		
Marker Tag (16 Strip)	HR1X3016		
20 Pole Busbar Black	HR1X9020		
20 Pole Busbar Red	HR1X9120		

Contact sales for large volume enquiries or fully assembled relays

AUTOMATION & CONTROL

GENERAL PURPOSE RELAYS

HR30 SERIES HR50 SERIES MINIATURE RELAYS



HR501C..

HR5XS22



HR301C..

HR5XS21

Contact type	1 Changeover	2 Changeover	2 Changeover mech actuator + LED	2 Changeover mech actuator + LED
Current	16A	8A	8A	16A
12VDC	HR301CD012	HR302CD012	HR501CD012	HR502CD012
24VDC	HR301CD024	HR302CD024	HR501CD024	HR502CD024
24VAC	HR301CA024	HR302CA024	HR501CA024	HR502CA024
110VAC	HR301CA110	HR302CA110	HR501CA110	HR502CA110
230VAC	HR301CA230	HR302CA230	HR501CA230	HR502CA230

Socket bases

Screw terminal - Top Contacts	HR5XS21
Screw terminal - Top/bottom contacts	HR5XS22
Spring terminal	HR5XS21S

Accessories

Retaining Clips	HR3X88	HR5X87
Marker Tag Single	HR5X30	
8 Pole busbar black	HR5X9008	
Surge suppressor RC 6-24VAC/DC	HR6X77024	
Surge suppressor RC110-230VAC/DC	HR6X77230	
Diode & LED 6-24VDC	HR6X78024	

***All relays require bases**

Contact sales for large volume enquiries or fully assembled relays

HR60 SERIES HR70 SERIES INDUSTRIAL RELAYS



HR60
Assembled



HR70
Assembled

Contact type	2 Changeover	4 Changeover	2 Changeover 8 Pin	3 Changeover 11 Pin
Current	7A	5A	10A	10A
12VDC	HR602CD012	HR604CD012	HR702CD012	HR703CD012
24VDC	HR602CD024	HR604CD024	HR702CD024	HR703CD024
24VAC	HR602CA024	HR604CA024	HR702CA024	HR703CA024
110VAC	HR602CA110	HR604CA110	HR702CA110	HR703CA110
230VAC	HR602CA230	HR604CA230	HR702CA230	HR703CA230

Socket bases*

Screw terminal - Top Contacts	HR6XS21	HR6XS40	8 Pin Screw Terminal HR7XS1	11 Pin Screw Terminal HR7XS2
Screw terminal - Top/bottom contacts	HR6XS22	HR6XS42		
Spring terminal	HR6XS21S	HR6XS41S		

Accessories

Retaining Clips	HR6X88	HR7X87
Marker Tag Single	HR6X30	HR7X87
	HR5X30 (only spring terminal bases)	
Surge suppressor RC 6-24VAC/DC	HR6X77024	
Surge suppressor RC110-230VAC/DC	HR6X77230	
Diode & LED 6-24VDC	HR6X78024	

***All relays require bases**

Contact sales for large volume enquiries or fully assembled relays

AUTOMATION & CONTROL

MICRO PLC AND HMI

BASE MODULES



EXPANSION MODULES AND ACCESSORIES

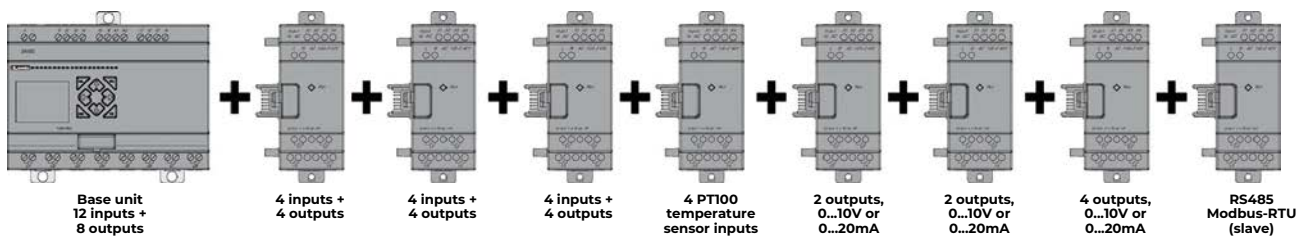


Order code	Auxiliary supply voltage	Inputs/outputs
Socket bases		
LRK10RA240	100...240VAC	6/4 relay + ethernet
LRK12RD024	12/24VDC	8/4 relay + ethernet
LRK12RD024B	12/24VDC	8/4 relay + ethernet (no display)
LRK2 0RD024RS	12/24VDC	8/4 relay + ethernet + RS485
LRD12R D024	24VDC	8/4 relay
LRD12T D024	24VDC	8/4 transistor
LRD20R D024	24VDC	12/8 relay
LRD12R A024	24VAC	8/4 relay
LRD20R A024	24VAC	12/8 relay
LRD10R A240	100...240VAC	6/4 relay
LRD20R A240	100...240VAC	12/8 relay
LRD20R D012	12VDC	12/8 relay
LRD20R D024 P1	24VDC	12/8 Relay +RS485

Expansion and communication modules		
LRE02AD024	24VDC	2 analog outputs
LRE04AD024	24VDC	4 analog outputs
LRE04PD024	24VDC	4 PT100 temp. sensor inputs
LRE08RD024	24VDC	4/4 relay
LRE08TD024	24VDC	4/4 transistor
LRE08RA024	24VAC	4/4 relay
LRE08RA240	100...240VAC	4/4 relay
LREP00	Modbus-RTU protocol communication unit	

Order code	Description
LRXC03	PC (USB) -LRD programming cable and LRX P01 (RS232)-LRD direct connection
LRX1V3D024	Power supply unit, 100...240VAC/24VDC, 1.3A
LRXC02	PC-LRX P01 programming cable
LRXSWP01	LRX P01 editor software (CD-ROM)

Maximum combinations



HMI TOUCHSCREENS



Order code	Description
LRHA04	4.3" TFT LCD Display
LRHA07	7" TFT LCD Display
LRHA10	10" TFT LCD Display
LRHSW01	User Licence For LRH SW software
EXCCAB02	RS485 Connection cable 3m

AUTOMATION & CONTROL

SWITCHING POWER SUPPLIES

MODULAR



PSL1M 010...



PSL1M 033 12
PSL1M 036 24

Order code	Rated output voltage (V)	Rated output current (A)	Output power (W)
Single phase. Input voltage 100...240VAC			
PSL1M 024 12	12VDC	2	24
PSL1M 033 12		2.75	33
PSL1M 054 12		4.5	54
PSL1M 072 12		6	72
PSL1M 010 24	24VDC	0.42	10
PSL1M 024 24		1	24
PSL1M 036 24		1.5	36
PSL1M 060 24		2.5	60

DIN RAIL MOUNT



PSE105024



PSE110024



PSL1 005 24
PSL1 010 24
PSL1 018 24



PSL1 030...
PSL1 060...



PSL1 100...
PSL1 120...



PSL1 240...
PSL1 300...



PSL3 960...

Order code	Parallel operation	Rated output voltage (V)	Rated output current (A)	Output power (W)
Basic functionality. Single phase. Input voltage 100...240VAC				
PSE103024		24VDC	1.25	30
PSE105024			2.1	50
PSE107224			3	72
PSE110024			4.2	100
PSE112024			5	120
Superior function and protection. Single phase. Input voltage 100...240VAC				
PSL1 005 24	●	24VDC	0.21	5
PSL1 010 24			0.42	10
PSL1 018 24			0.75	18
PSL1 030 24			1.25	30
PSL1 060 24			2.5	60
PSL1 100 24			4.2	100
PSL1 120 24			5	120
PSL1 240 24			10	240
PSL1 300 24			12.5	300
PSL1 480 24			20	480
PSL1 030 48	●	48VDC	0.625	30
PSL1 060 48			1.25	60
PSL1 100 48			2.1	100
PSL1 120 48			2.5	120
PSL1 240 48			5	240
PSL1 300 48			6.25	300
PSL1 480 48			10	480
Two phase. Input voltage 400...500VAC				
PSL2 100 24	●	24VDC	4.2	100
PSL2 100 48		48VDC	2.1	100
Three phase. Input voltage 400...500VAC (Two-phase connection is admissible with a 25% output power derating)				
PSL3 120 24	●	24VDC	5	120
PSL3 240 24			40	240
PSL3 480 24			20	480
PSL3 960 24			40	960
PSL3 240 48	●	48VDC	5	240
PSL3 480 48	●		10	480
PSL3 960 48	●		20	960

REDUNDANCY MODULES



PSLRM1024

Order code	Rated output voltage (V)	Rated output current (A)
PSLRM 10 24	12...24VDC	10
PSLR 20 24	24VDC	20

ENERGY MANAGEMENT

ENERGY METERS AND POWER ANALYZERS

ENERGY METERS



DMED110T1



DMED120T1MID



DMED330



DMG100/DMG110



DMG600/DMG610



DMG611R...

Order code standard	Order code MID version	Description	Connection	DIN modules
Single phase energy meters				
DMED100T1	DMED100T1MID	40A 1 pulse output 230VAC	Direct	1
DMED110T1	DMED110T1MID	40A 1 program. static output, multi-measurements 230VAC	Direct	1
DMED111	DMED111MID	40A RS485 multi-measurements 110...230VAC	Direct	1
DMED112	DMED112MID	40A M-Bus, multi-measurements 110...230VAC	Direct	1
DMED115T1	DMED115T1	40A 1 program. static output, multi-measurements 230VAC. Backlit	Direct	2
DMED120T1	DMED120T1MID	63A 1 program. static output, multi-measurements 230VAC. Backlit	Direct	2
DMED121	DMED121MID	63A RS485, multi-measurements 230VAC. Backlit	Direct	2
DMED122	DMED122MID	40A M-Bus, multi-measurements 110...230VAC. Backlit	Direct	2
DMECD		Data concentrator with 8 programmable digital inputs, expandable, pulse count, RS485 port		

Three phase energy meters, with or without neutral

DMED300T2	DMED300T2MID	2 program. static outputs, multi-measurements	Direct	4
DMED311	-	RS485, multi-measurements	Direct	4
DMED302	DMED302MID	M-Bus, multi-measurements	Direct	4
DMED305T2	DMED305T2MID	2 Program. static outputs, multi-measurements	CT/5A	4
DMED330	DMED330MID	RS485 interface, multi-measurements	CT/5A	4
DMED332	DMED332MID	M-Bus, multi-measurements	CT/5A	4
DMED310T2	-	2 Program. static outputs, multi-measurements, expandable	CT/5A	4

For expansion modules see page 58

Order code standard	Description
LCD multimeters, CT connection, 100...240VAC (up to 400VAC on DMG6..) and 110...250VDC aux supply	
DMG100	Icon display, multifunction, multilanguage, 4 module din mount
DMG110	Icon display, multifunction, multilanguage, RS485, 4 module din mount
DMG200	Graphic display, multifunction, multilanguage, 4 module din mount
DMG210	Graphic display, multifunction, multilanguage, RS485, 4 module din mount
DMG300	Graphic display, multifunction inc harmonic analysis, multilanguage, 4 module din mount, expandable
DMG600	Icon display, front optical communication port, multifunction inc harmonic analysis, expandable, backlit display, flush mount 96x96mm
DMG610	Icon display, front optical communication port, RS485 port, multifunction inc harmonic analysis, expandable, backlit display, flush mount 96x96mm
DMG611R0100	Spec. as per DMG610, current reading via 3 x Rogowski coils included. Max 100A
DMG611R0500	Spec. as per DMG610, current reading via 3 x Rogowski coils included. Max 500A
DMG611R3000	Spec. as per DMG610, current reading via 3 x Rogowski coils included. Max 3000A
DMG611R6300	Spec. as per DMG610, current reading via 3 x Rogowski coils included. Max 6300A
DMG615	Icon display, front optical communication port, RS485 port, multifunction inc harmonic analysis, expandable, backlit display, flush mount 96x96mm. Class 0.5s
DMG620	Icon display, front optical communication port, ethernet, multifunction inc harmonic analysis, expandable, backlit display, flush mount 96x96mm. Class 0.5s.

For expansion modules see page 58

ENERGY MANAGEMENT

POWER ANALYZERS AND EASY BRANCH

POWER ANALYZERS



DMG8000

Order code	Description
Power analyzers with widescreen colour LCD screen. 100-240VAC aux supply (exc DMG9000D048)	
DMG7000	Base unit expandable with up to 3 EXP... modules
DMG7500	Expandable with up to 3 EXP... modules, built in RS485. Compatible with Easy Branch power monitoring system
DMG8000	Expandable with up to 3 EXP... modules, built in ethernet port. Compatible with Easy Branch power monitoring system. Integrated web server.
DMG9000	Expandable with up to 3 EXP... modules, built in ethernet port and RS485. Compatible with Easy Branch power monitoring system. Integrated web server.
DMG9000D048	Expandable with up to 3 EXP... modules, built in ethernet port and RS485. Compatible with Easy Branch power monitoring system. Integrated web server. 12-48VDC supply

For expansion modules see page 58

EASY BRANCH



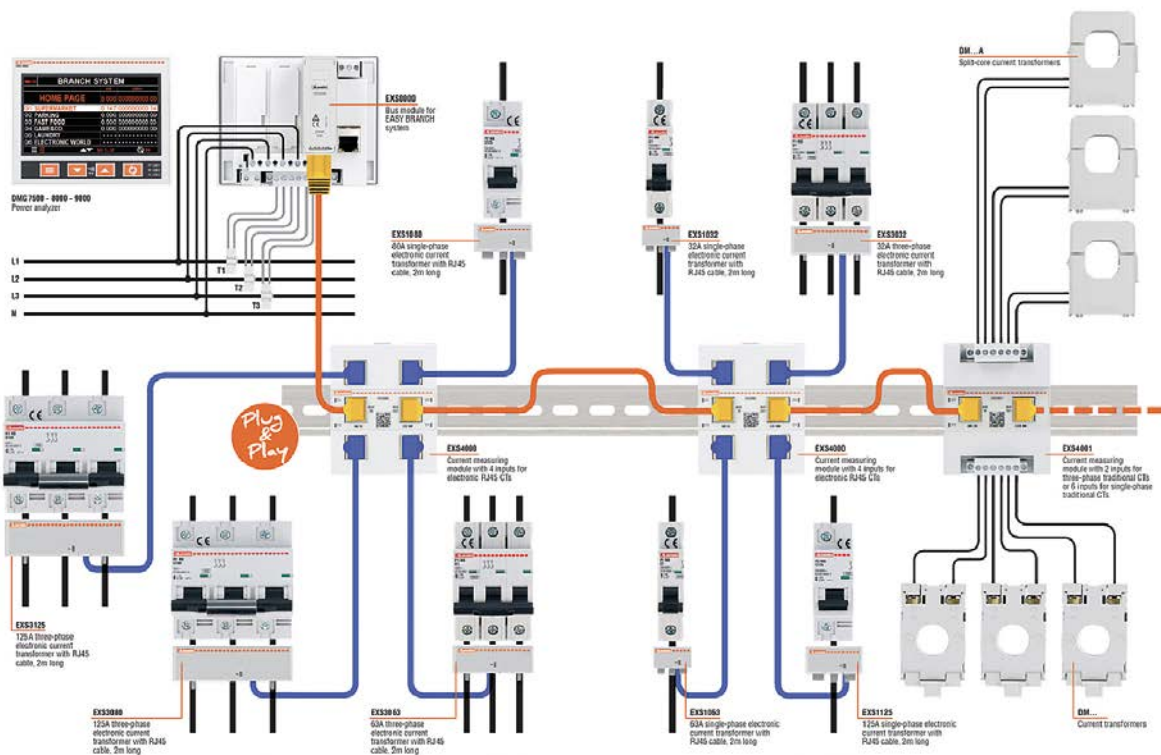
EXS4000

Order code	Description
Modules for Easy Branch system	
EXS0000	Bus module for Easy Branch power monitoring system
EXS4000	Current measuring module with 4 inputs for electronic CTs with RJ45 connection
EXS4001	Current measuring module with 2 inputs for traditional 3 phase CT's or 6 inputs for 1 phase CT's



EXS1032

Order code single phase	Order code three phase	Description
Electronic current sensing modules for Easy Branch system		
EXS1032	EXS3032	32A electronic current transformer with 2m RJ45 cable
EXS1063	EXS3063	63A electronic current transformer with 2m RJ45 cable
EXS1080	EXS3080	80A electronic current transformer with 2m RJ45 cable
EXS1125	EXS3125	125A electronic current transformer with 2m RJ45 cable



ENERGY MANAGEMENT

CURRENT TRANSFORMERS AND EXPANSIONS

CURRENT TRANSFORMERS



Primary current I _{pn} /5 (A)	Order code Ø22mm cable	Order code Ø23mm cable	Order code Ø30mm cable	Order code compact split core	Order code standard split core
50	DM0T 0050	-	-	-	-
60	DM0T 0060	-	-	-	-
80	DM0T 0080	-	-	-	-
100	DM0T 0100	DM2T 0100	-	DM1TMA 0100	DM0TA0100
150	DM0T 0150	DM2T 0150	-	DM1TMA 0150	DM0TA0150
200	-	DM2T 0200	DM3T 0200	DM1TMA 0200	DM0TA0200
250	-	DM2T 0250	DM3T 0250	DM2TMA 0250	DM1TA0250
300	-	DM2T 0300	DM3T 0300	DM2TMA 0300	DM1TA0300
400	-	DM2T 0400	DM3T 0400	DM2TMA 0400	DM1TA0400
500	-	-	DM3T 0500	DM2TMA 0500	DM1TA0500
600	-	-	DM3T 0600	-	DM1TA0600
800	-	-	DM3T 0800	-	DM1TA0800

Solid and split core current transformers available up to 4000A

EXPANSION MODULES



Order code for DMED310T2	Order code for DMG...	Description
Expansion modules for DME and DMG devices		
-	EXP1000	4 Opto-isolated digital inputs
-	EXP1001	4 Opto-isolated static outputs
EXM1000	EXP1002	2 Digital inputs, 2 static outputs, opto-isolated
-	EXP1003	2 Relay outputs rated 5A 250VAC
-	EXP1004	2 Analog inputs, opto-isolated, 0/4...20mA or PT100 or 0...5V
-	EXP1005	2 Analog outputs, opto-isolated, 0/4...20mA or 0...5V
EXM1001	EXP1008	2 Opto-isolated digital inputs, 2 relay outputs rated 5A 250VAC
EXM1002	-	4 Opto-isolated digital inputs, 2 relay outputs 5A 250VAC
EXM1010	EXP1010	Opto-isolated USB interface
EXM1011	EXP1011	Opto-isolated RS232 interface
EXM1012	EXP1012	Opto-isolated RS485 interface
EXM1013	EXP1013	Opto-isolated ethernet interface
	EXP1014	Opto-isolated Profibus-DP interface
	CX01	USB/optical device connecting cable for programming/diagnostics
	CX02	Wifi module device for programming/diagnostics
EXM1020	-	Opto-isolated RS485 interface, 2 relays outputs rated 5A 250V
EXM1030	-	Data storage, real time clock with back up reserve for datalogging

GATEWAY DATALOGGERS



Order code	Description
EXCGLB01	Gateway data logger, 1 RS485 port, 1 Ethernet port, Wi-Fi connection
EXCGLB02	Gateway data logger, 1 RS485 port, 1 Ethernet port, LTE connection, GNSS (GPS)
EXCGLB03	Gateway data logger, 1 RS485 port, 2 Ethernet ports, 4G (LTE) connection

ENERGY MANAGEMENT

AUTOMATIC POWER FACTOR CONTROLLERS

AUTO POWER FACTOR CONTROLLERS



DCRL 8



DCRG 8

Order code	Description
Single and three-phase low and medium-voltage systems	
DCRL 3	3 steps, expandable up to 6 steps, 100...440VAC
DCRL 5	5 steps, expandable up to 8 steps, 100...440VAC
DCRL 8	8 steps, expandable up to 14 steps, 100...440VAC
DCRG 8	8 steps, expandable up to 24 steps, 100...440VAC
DCRG 8IND	8 steps, expandable up to 24 steps, 100...440VAC, for captive reactive power factor correction
DCRG 8F	Automatic dynamic power factor controller, 8 static steps, expandable up to 24 steps 110...415VAC
EXP 1006	2 relay outputs to increase number of PFC steps
EXP 1007	3 relay outputs to increase number of PFC steps
EXP 1001	4 opto-isolated static outputs to increase static steps
EXP 1012	Opto-isolated RS485 interface
EXP 1013	Opto-isolated ethernet interface, web server function

THYRISTOR MODULES DCTL



DCTL...

Order code	Description
DCTL 400 0075	Solid state thyristor module for 7.5kvar step, 400VAC
DCTL 400 0150	Solid state thyristor module for 15kvar step, 400VAC
DCTL 400 0300	Solid state thyristor module for 30kvar step, 400VAC
DCTL 400 0500	Solid state thyristor module for 50kvar step, 400VAC
DCTL 400 1000	Solid state thyristor module for 100kvar step, 400VAC

DCTL... Thyristor modules available in 480VAC and 690VAC versions

CAPACITOR SWITCHING CONTACTORS



BFK...

Order code	Maximum IEC operational power (kvar)				N.O. Aux
	240V	400V	440V	690V	
BFK09 10A230	4,5	7,5	9	10	1
BFK12 10A230	7	12,5	14	16	1
BFK18 10A230	9	15	17	20	1
BFK26 00A230	11	20	22	25	-
BFK32 00A230	14	25	27,5	30	-
BFK38 00A230	17	30	33	36	-
BFK50 00A230	22	40	41	46	-
BFK65 00A230	26	45	50	56	-
BFK80 00A230	30	50	56	65	-
BFK94 00A230	34	60	75	80	-
BFK95 00A230	34	60	75	80	-
BFK115 00A230	45	75	85	135	-
BFK150 00A230	50	100	115	150	-

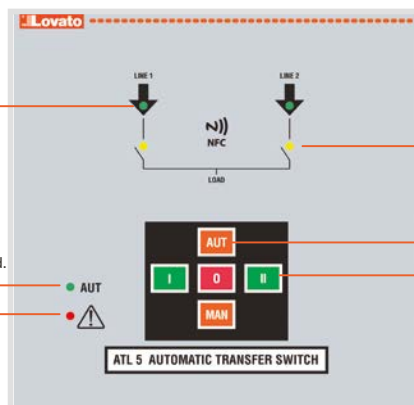
ENERGY MANAGEMENT

AUTOMATIC TRANSFER SWITCH CONTROLLERS

LINE 1 and LINE 2 status
ON = line ok
OFF = line not present
FLASHING = line out of limits

Operating mode active
ON = automatic mode
OFF = manual mode or device not powered.

Alarm
Flashing in case of active alarm.
The number of the flashes identifies the type of alarm.



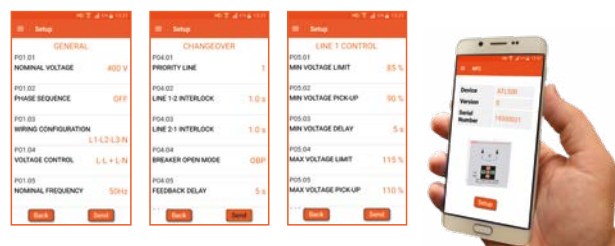
LINE 1 and LINE 2 changeover devices status.

Steady indicates the status of the changeover device (off=opened / on=closed), flashing during the transitions.

Operating mode selection
AUT = automatic mode
MAN = manual mode

Manual changeover commands
I = switch to LINE 1
0 = neutral position
II = switch to LINE 2

ATL 500



AUTOMATIC TRANSFER SWITCH CONTROLLERS



ATL 600



ATL 800



ATL 900

Order code	Description
ATL 100	Automatic transfer switch controller for 2 power sources with single phase control, modular housing, 110...230VAC supply. Din rail mount
ATL 500	Automatic transfer switch controller with optical port for 2 power sources using 3 phase control, power source status displayed with LEDs 144x144mm, power supply 110-440VAC. Flush mount
ATL 600	Automatic transfer switch controller with optical port for 2 power sources with 3 phase control, graphic display showing measurements and status LEDs.144x144mm, power supply 110-440VAC. Flush mount
ATL 601	Automatic transfer switch controller with optical port for 2 power sources with 3 phase control, graphic display showing measurements and status LEDs.144x144mm, power supply 12-24VDC. Flush mount
ATL 610	Automatic transfer switch controller with optical port for 2 power sources with 3 phase control, graphic display showing measurements and status LEDs. 144x144mm, power supply 110-440VAC and 12/24VDC, expandable with EXP...expansion modules. Flush mount
ATL 800	Automatic transfer switch controller with optical port for 2 power sources with 3 phase control, graphic display showing measurements and status LEDs. Tie breaker management, closed transition, customizable changeover device layout, transfer strategy and PLC and NFC technology. 180x240mm, power supply 110-440 VAC and 12/24/48VDC, expandable with EXP... expansion modules, built-in RS485. Flush mount
ATL 900	Automatic transfer switch controller with optical port for 3 power sources, 3 changeover devices and 2 tie breakers. Suitable for LV and MV systems, graphic display showing measurements and status LEDs. Transfer strategy and PLC and NFC technology. 180x240mm, power supply 110-440 VAC and 12/24/48VDC, expandable with EXP expansion modules, built-in RS48. Flush mount
EXP8001	IP65 Seal for ATL500, ATL600, ATL610

For expansion modules see page 58

ATL DPS1



ATL DPS1 is capable of measuring and controlling 2 auxiliary supply voltages at its inputs designating the most ideal to connect to the output. It reduces the number of components and improves installation safety.

Order code	Description
ATL DPS1	For measurement and control of voltages present at supply inputs to power motorised circuit breakers/ changeover switches, power supply 110/230VAC configurable. Din rail mount

DID YOU KNOW...?



Synergy offers a complete solution for the management of energy consumption. With products capable of not only monitoring the network, but also providing state-of-the-art management of the loads and consumption of installations, reporting can become automated and thereby saving valuable time and resource for your business.

Synergy is fully compliant with EN ISO 50001 “Energy Management systems” and also allows checks on all environmental and process information (operating status, alarms, etc.)

Quickly and easily create customisable pages with widgets for charts, data tables, measure indicators and alarm conditions with functionality to automate data reports, saving valuable time and effort.

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electric**

ENERGY AND AUTOMATION

FULL LOAD CURRENT VALUES OF THREE PHASE ELECTRIC MOTORS

kW	0.37	0.55	0.75	1.1	1.5	2.2	4	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	200	250	315	355
(A) at 400v	1.1	1.5	1.9	2.7	3.6	4.9	8.5	11.5	15.5	22	29	35	41	55	66	80	97	132	160	195	230	280	350	430	540	610

For other ratings and values refer to General Catalogue

Caution: There many types of standard and non-standard motors. For accurate and reliable motor protection, motor nameplate current should be used to obtain actual motor full load current. This information is given for indication and reference purposes only.



For the full range of products and technical information, please see the general catalogue.

Available from lovato.co.uk



01384 899700 | lovato.co.uk | sales@lovato.co.uk

LOVATO Electric Ltd., Lovato House, Providence Drive, Stourbridge, DY9 8HQ

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