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4.0-37kW AC Contactors

Rated 415Vac for AC3 duty (IEC 947-4-1). Long life twin break silver cadmium oxide contacts. DN-KN version pictured left; BN-CN, extreme left.

To select,

1. Choose contactor below
2. Replace "+" in the catalogue number with coil code from page 218.
3. Select additional auxiliary contacts from page 217.

Rating AC3 415V		Number of Standard Contacts		Cat. No.	Stock Code S
kW	Amps	Main AC3 Rated	Auxiliary Ith=10A		
4	9.1	4 N.O.	1 N.O.	CE15BN4+B	92.60
4	9.1	3 N.O.	1 N.C.	CE15BNC3+B	92.60
5.5	12	4 N.O.	1 N.O.	CE15CN4+B	117.50
5.5	12	3 N.O.	1 N.C.	CE15CNC3+B	117.50
7.5	16	3 N.O.	1 N.O.	CE15DNS3+B	154.20
11	23	3 N.O.	1 N.O.	CE15ENS3+B	216.00
15	30	3 N.O.	1 N.O.	CE15FNS3+B	277.00
22	44	3 N.O.	1 N.O.	CE15HNS3+B	347.00
22	44	4 N.O.	1 N.O.	CE15HNS4+B	422.80
22	44	5 N.O.	1 N.O.	CE15HNS5+B	500.80
30	59	3 N.O.	1 N.O. + 1 N.C.	CE15JN3Y6+B	540.40
30	59	4 N.O.	-	CE15JN4Y6+B	693.10
30	59	5 N.O.	-	CE15JN5Y6+B	693.10
37	73	3 N.O.	1 N.O. + 1 N.C.	CE15KN3Y6+B	647.90
37	73	4 N.O.*	-	CE15KN4Y6+B	694.60
37	73	5 N.O.*	-	CE15KN5Y6+B	818.10

*4th and 5th poles may be added to 37kW contactors but are AC1 rated.

- Notes:
- DC coil contactors available on request.
 - Contactors from 5.5-15kW have a rear DIN mounting clip
 - 4 and 5 pole contactors are AC3 rated on all poles.

- Replacement coils available - refer page 218



Auxiliary Contact Blocks for 4.0-37kW Contactors -

Both top-mounting and side-mounting auxiliary contact blocks are available for the 4.0-37kW contactors on the previous page.

Top mounting
Side mounting

maximum 1 per contactor
maximum 2 per contactor
all side mounting L1, R1

Stock Code S

Mounting	Contactors Configuration	Cat. No.	Price \$
top	1 N.O.	C320KGT1	25.20
top	1 N.C.	C320KGT2	25.20
top	1 N.O. 1 N.C.	C320KGT3	29.90
top	2 N.O.	C320KGT4	29.90
top	2 N.C.	C320KGT5	29.90
top	1 N.O. 1 N.C.I.	C320KGT6	29.90
top	1 N.O.E.C. 1 N.C.L.O.	C320KGT7	29.90
top	4 N.O.	C320KGT13	39.40
top	3 N.O. 1 N.C.	C320KGT14	39.40
top	2 N.O. 2 N.C.	C320KGT15	39.40
top	1 N.O. 3 N.C.	C320KGT16	39.40
top	4 N.C.	C320KGT17	39.40
top	3 N.O. 1 N.C.I.	C320KGT18	39.40
top	2 N.O. 1 N.C. - 1 N.C.I.	C320KGT19	39.40
top	2 N.O. 1 N.O.E.C. - 1 N.C.L.O.	C320KGT20	39.40
top	1 N.O. 1 N.C. - 1 N.O.E.C. - 1 N.C.L.O.	C320KGT21	39.40
side	1 N.O.	C320KGS1	15.00
side	1 N.C.	C320KGS2	15.00
side	1 N.O. 1 N.C.	C320KGS3	23.80
side	2 N.O.	C320KGS4	23.80
side	2 N.C.	C320KGS5	23.80
side	1 N.O. 1 N.C.I.	C320KGS6	23.80
side	1 N.O.E.C. 1 N.C.L.O.	C320KGS7	23.80
side	1 N.C.I.	C320KGS8	23.80

All auxiliary contacts I_{th} = 10A

-N.C.I. = normally closed early opening, designed for use in reversing applications

-EC = early opening

-LO = late opening

Accessories for 4.0-37kW Contactors

Stock Code S

Accessory		Cat. No.	Price \$
Pneumatic timer with on or off delay, top mounting			
NO and NC contacts	0.3 - 30 sec. delay	C320TP1	148.50
	10 to 180 sec delay	C320TP2	169.00
Electronic timer with on or off delay, side or DIN mount, 5 functions, cycling, 1 shot, 30 sec. range,			
NO and NC contact.	110V operation	C320TM30A	n/a
	240V operation	C320TM30B	n/a
Contactor mounting bracket		C320BR1	n/a
Mechanical interlock, horizontal		C321KM60B	9.10
Coil surge suppressor to suppress operating coil switch-off surge. Control supply 50-60Hz.			
	for 48V	MC320LRC4	n/a
	for 110V	C320TS1	25.40
	for 240V	C320TS2	25.40
	for 440-480V	C320TS3	25.40
DIN rail 35mm x 1m, slotted, plated for 4-15kW only		MC382MA1	n/a
Reversing connections kit (mechanical interlock and pre-cut, trimmed and formed wire set)			
	for 4-5.5kW only	C321KM60K14B	24.10
	for 7.5-15kW only	C321KM60K13B	24.10
	for 22-37kW only	C321KM60K16B	44.90

Freedom AC* Coil Code Selection Chart

Coil Volts (Hz)	Code	Coil Volts (Hz)	Code	Coil Volts (Hz)	Code
110(50) or 120(60)	A	277(50)	H	64(50)	Q
220(50) or 240(60)	B	208-240(60)	J	24(60)	T
440(50) or 480(60)	C	240(50)	K	24(50)	U
550(50) or 600(60)	D	415(50)	L**	32(50)	V
		415(50)	M**	48(50)	Y
		550(50)	N	NO COIL	Z

*DC coils available as special order

** For 415V coils, contactors CE15B-K use **L**; all others use **M**.



55-160kW AC Contactors

Rated 415V for AC3 duty (IEC 947-4-1) Long life twin break silver cadmium oxide contacts. MN-NN version pictured.

1. Choose contactor below.
2. Replace "+" in catalogue number with coil code from page 218.
3. Select auxiliary/accessory below

Ratings		Number of Standard Contacts		Cat. No.	Stock Code S
kW	Amps	Main	Auxiliary		Price \$
55	106	3 N.O.		CE15MN3Y6+	907.60
75	140	3 N.O.	1 N.O. + 1 N.C.	CE15NN3Y6+	1,022.20
90	170	3 N.O.	1 N.O. + 1 N.C.	CE15PN3+	1,370.30
160	300	1 N.O + 1. N.C.		CE15SN3+	1,659.50

Auxiliary Contact Blocks

Mounting	For Contactor	Configuration	Cat. No.	Price \$	Stock Code S
Base - L1,R1	55-75kW	1 N.O.	C320KGS31	41.00	
Base - L1,R1	55-75kW	1 N.O. 1 N.C.	C320KGS32	48.90	
Base - L1,R1	90-160kW	1 N.O.	C320KGS41	41.00	
Base - L1,R1	90-160kW	1 N.O. 1 N.C.	C320KGS42	44.80	
Add-on L2,L3,R2,R3	55-160kW	1 N.O.	C320KGS20	48.90	
Add-on L2,L3,R2,R3	55-160kW	1 N.C.	C320KGS21	31.60	
Add-on L2,L3,R2,R3	55-160kW	1 N.O. 1 N.C.	C320KGS22	44.00	

Accessory		Cat. No.	Price \$	Stock Code S
Coil surge suppressor	110-240Vac	MC320LRC3	40.60	
Horizontal mechanical interlock	55-75kW	C321KM30	40.60	
	90-160kW	C321KM40	54.10	
Reversing connections kit**	55-75kW	C321KM60K21	63.10	

**Reversing connection kits = mechanical interlock and pre-cut, trimmed and formed wire set



415V AC3 to 710kW; 1000V AC1-4 to 1.4MW Contactors

1. Choose contactor below.
2. Replace "+" in the catalogue number with coil code below.
3. Select auxiliary/accessory below

					Stock Code S
Ratings AC3 kW	415V Amps	No. of Main Poles	Standard Auxiliary Contacts	Cat. No.	Price \$
240	450	3	2 N.O. + 2 N.C.	C10GYAN3+	3,539.30
315	550	3	2 N.O. + 2 N.C.	C10GYBN3+	5,443.80
400	700	3	2 N.O. + 2 N.C.	C10JN3+C	6,270.70
500	860	3	2 N.O. + 2 N.C.	C10KN3+C	11,880.80
710	1200	3	1 N.O. + 2 N.C.	C10LN3+B	19,032.60

Note Contactors C10GYAN to C10KN are rated up to 1000Vac (AC1-4)

Voltage**	110Vac/110Vdc	240Vac/220Vdc	415Vac/380Vdc
Coil Code	A	K	M

				Stock Code S
Accessory	For Contactor	Cat. No.		Price \$
Auxiliary contact block				
adjust early/late 2NO-2NC	C10GYAN-KN	C320KA6		211.50
non adjustable 1NO-1NC	C10LN	C320KA5		193.70
Mechanical interlock kit*				
vertical interlock	C10J	10-6164		603.60
horizontal interlock	C10GYAN-BN	10-5207		270.40
horizontal interlock	C10GYA/B+J	10-5217		330.50
vertical interlock	C10GYA/B+J	10-5218		330.50
horizontal interlock	C10J-KN	C321KM34		395.00

*Prevents simultaneous operation. For reversing or change-over applications

**DC coil ratings listed are not applicable to C10LN contactors



Freedom C316 Thermal Overload

Relays - for direct connection to CE15BN-KN contactors or independent mounting

Contacts 1. N.O. - 1 N. C.
electrically separate

Reset hand, auto or stop-restart

Phase loss protector. Trip indicator

Overload for 4-15kW CE15BN-FN Contactors

Stock Code S

Full Load Amperes	Star Delta Amperes	Overload Code*	Cat. No.	Price \$
0.25 - 0.4	-	FC	C316FNA3C	96.00
0.40 - 0.63	-	FD	C316FNA3D	96.00
0.63 - 1.0	-	FE	C316FNA3E	96.00
1.0 - 1.4	-	FF	C316FNA3F	96.00
1.3 - 1.8	-	FG	C316FNA3G	96.00
1.7 - 2.4	-	FH	C316FNA3H	96.00
2.2 - 3.1	-	FJ	C316FNA3J	96.00
2.8 - 4.0	-	FK	C316FNA3K	96.00
3.5 - 5.0	6 - 8.6	FL	C316FNA3L	96.00
4.5 - 6.5	7.8 - 11	FM	C316FNA3M	96.00
6.0 - 8.5	10 - 14.7	FN	C316FNA3N	112.40
7.5 - 11.0	13 - 19	FP	C316FNA3P	112.40
10.0 - 14.0	17 - 24	FQ	C316FNA3Q	115.30
13.0 - 19.0	22 - 33	FR	C316FNA3R	115.30
18.0 - 24.0	31 - 41	FS	C316FNA3S	115.30
24.0 - 32.0	41.5 - 55	FT	C316FNA3T	173.30
Base (independent, DIN or panel mount) for above			C306TB1	3750

Overload for 7.5-37kW CE15HN-KN Contactors

Stock Code S

Full Load Amperes	Star Delta Amperes	Overload Code*	Cat. No.	Price \$
18 - 25	31 - 43	KA	C316KNA3A	173.30
22 - 32	38 - 55	KB	C316KNA3B	173.30
29 - 42	50 - 72.6	KC	C316KNA3C	211.50
36 - 52	62 - 92	KD	C316KNA3D	264.30
45 - 63	78 - 109	KE	C316KNA3E	282.00
60 - 80	104 - 138	KF	C316KNA3F	334.90
Base (independent or panel mount) for above			C316TB1	63.10

*Code is used only for completion of starter catalogue number.



Freedom C316 Thermal Overload Relays

Relays - for direct connection with CE15MN, -NN, -PN and independent connection with CE15NN, -PN, -RN, -SN contactors

Contacts 1. N.O. - 1 N. C.
electrically separate

Reset hand, auto or stop-restart
Phase loss protector. Trip indicator

Direct to 55-90kW (CE15MN-PN) Contactor or Independent Mounting*

Stock Code S

Full Load Amperes	Star Delta Amperes	Overload Code**	Cat. No.	Price \$
65 - 90	112 - 156	PA	C316PNA3A	481.70
80 - 110	138 - 190	PB	C316PNA3B	500.80
110 - 150	190 - 259	PD	C316PNA3D	580.10
130 - 175	224 - 302	PE	C316PNA3E	586.20
150 - 200	259 - 346	PF	C316PNA3F	597.80
Connecting link set for 55kW and 75kW contactors			C316MCL	43.60
Connecting link set for 90kW contactors			C316PCL	51.00

Current Transformer Operated For Independent Connection with Freedom 75-160kW (CE15NN-SN) and Heavy Duty 240-500kW (C10G-K) Contactors

Stock Code S

Full Load Amperes	Star Delta Amperes	Overload Code**	Cat. No.	Price \$
165 - 235	285 - 406	SB	C316SNA3B	760.80
220 - 310	380 - 546	SC	C316SNA3C	793.20
285 - 400	490 - 690	-	C316SNA3D	1,031.00
355 - 500	612 - 862	-	C316UNA3A	1,031.00
610 - 850	1052 - 1465	-	C316UNA3C	1,171.90

*Must use connecting link set when direct coupling to contactor

**Code is used only for completion of starter catalogue number.



Freedom C306 Heater Pack Thermal Overload Relays

- for use on Freedom contactors.

Auto/manual reset. Visual trip indication.

1. Select basic overload relay from first chart below.
2. Select heater pack kit from second chart below.

Basic Overload Relay					Stock Code S
Maximum Rating	For Contactors	Poles	Cat. No.	Price \$	
32A	CE15B-K	3	C306DN3B	97.20	
75A	CE15H-K	3	C306GN3B	182.00	
144A	CE15M-N	3	C306NN3	455.30	

Heater Pack Kit (set of 3)						Stock Code S
For Use With	Settings				Cat. No.	Price \$
	A	B	C	D		
Overload Relays C306DN3B and C306GN3B	0.254	0.306	0.359	0.411	H2001B-3	40.60
	0.374	0.452	0.53	0.607	H2002B-3	40.60
	0.56	0.676	0.791	0.907	H2003B-3	40.60
	0.814	0.983	1.15	1.32	H2004B-3	40.60
	1.2	1.45	1.71	1.96	H2005B-3	40.60
	1.79	2.16	2.53	2.9	H2006B-3	40.60
	2.15	2.6	3.04	3.49	H2007B-3	40.60
	3.23	3.9	4.56	5.23	H2008B-3	40.60
	4.55	5.5	6.45	7.4	H2009B-3	40.60
	6.75	8.17	9.58	11	H2010B-3	40.60
	9.14	10.8	12.4	14	H2011B-3	40.60
	14	16.9	19.9	22.8	H2012B-3	40.60
	18.7	22.7	26.7	30.7	H2013B-3	40.60
	23.5	28.5	33.5	38.5	H2014B-3	40.60
Overload Relay C306GN3B	29	34	39.1	44.1	H2015B-3	40.60
	39.6	45.5	51.5	57.4	H2016B-3	40.60
	53.9	60.9	67.9	74.9	H2017B-3	40.60
Overload Relay C306NN3B	18	20.2	22.3	24.5	H2018-3	69.10
	24.6	27.6	30.5	33.4	H2019-3	69.10
	33.5	37.5	41.5	45.6	H2020-3	69.10
	45.7	51.2	56.7	62.1	H2021-3	69.10
	62.2	69.7	77.1	84.6	H2022-3	69.10
	84.7	95	105	115	H2023-3	69.10
	106	118	131	144	H2024-3	69.10
DIN rail/panel mount adaptor for 32A overload relay					C306TB1	37.50
DIN rail/panel mount adaptor for 75A overload relay					C306TB2B	46.60

Freedom Replacement AC Operating Coils - Tapewound						Stock Code S
AC Coil Voltage 50Hz	60Hz	For CE15B-C Contactors		For CE15D-F Contactors		
		Cat. No.	Price \$	Cat. No.	Price \$	
24V	-	9-2875-13	32.30	9-2876-36	30.70	
32V	-	9-2823-16	32.30	9-2876-16	30.70	
48V	-	9-2875-9	32.30	9-2876-9	30.70	
110V	120V	9-2875-1	32.30	9-2876-1	30.70	
240V	-	9-2875-11	32.30	9-2876-11	30.70	
415V	-	9-2875-35	32.30	9-2876-6	30.70	



V201



DPCK

Air Break and Vacuum Contactors -

For mining and other heavy-duty uses, both ranges can be applied from 600-1500Vac. Vacuum contactors (pictured left) offer light weight, small size, low maintenance, long life. Contacts bottle enclosed.

Type	Poles	Ampere Rating			Cat. No.	Stock Code S	Price \$
		600V	1000V	1500V			
Vacuum	3	160A	160A	160A	V201KRCJZ1		2,573.40
Vacuum	3	320A	320A	320A	V201KTCJZ1		2,923.20
Vacuum	3	540A	540A	540A	V201KVCJZ1		3,510.50
Air	3	35A	35A	20A	DPCK3035AW		1,622.50
Air	3	100A	100A	20A	DPCK3100AW		1,944.20
Air	3	250A	220A	150A	DPCK3250V		2,965.10
Air	5	35A	35A	20A	DPCK5035VW		2,419.60
Auxiliary contact	1N.O.-1N.C. (for vacuum or air)				J-11		95.20
	2N.O. (for vacuum or air)				J-20		95.20
	2N.C. (for vacuum or air)				J-02		95.20
	1N.O.-1N.C. (delayed break)				J-1C		95.20
Mechanical interlock	160A (vacuum only)				180C113G04		102.90
	320A (vacuum only)				180C113G16		102.90
	540A (vacuum only)				180C113G17		102.90

- 110V AC Coil as standard
- Vacuum Contactor Amp Ratings are AC3.



Freedom Control Relays are multiple control relays with Ith = 10A electrically separate contacts.

1. Determine relay type required. Catalogue number is in first table below.

2. Replace “+” in catalogue number below with coil code from selection chart on page 218.

Freedom Control Relays			Stock Code S
Description	Contacts	Cat. No.	Price \$
Relay with 4 standard poles	4 N.O.	D15CR40+B	94.30
Relay with 4 standard poles	3 N.O. - 1 N.C.	D15CR31+B	94.30
Relay with 4 standard poles	2 N.O. - 2 N.C.	D15CR22+B	94.30
Relay with 4 standard poles	1 N.O. - 3 N.C.	D15CR13+B	94.30
Relay with 4 standard poles	4 N.C.	D15CR04+B	94.30

Auxiliary Contact Blocks			Stock Code S		
Top Mounting (1 per relay)			Side Mounting (1 per relay)		
Contacts	Cat. No.	Price \$	Contacts	Cat. No.	Price \$
1N.O.	C320KGT1	25.20	1N.O.	C320KGS1	15.00
1N.C.	C320KGT2	25.20	1N.C.	C320KGS2	15.00
1N.O.-1N.C.	C320KGT3	29.90	1N.O.-1N.C.	C320KGS3	23.80
2N.O.	C320KGT4	29.90	2N.O.	C320KGS4	23.80
3N.O.-1N.C.	C320KGT14	39.40	2N.C.	C320KGS5	23.80
2N.O.-2N.C.	C320KGT15	39.40	1N.O.-1NCEO	C320KGS6	23.80
1N.O.-3N.C.	C320KGT16	39.40	1NOEC-1NCLO	C320KGS7	23.80
4N.C.	C320KGT17	39.40	1NCEO	C320KGS8	23.80

EC = early closing LO = late opening EO = early opening (for use in reversing applications)

Notes All relays and auxiliaries have low level current and voltage ratings: 20mA at 24Vdc
 All contacts are twin double break
 A maximum of 12 contacts is possible in any combination of N.O. or N.C.



Assembled E22 Pushbuttons are supplied fully assembled with contact block. Assembled pushbuttons come in flush, extended, and various mushroom varieties. Extended illuminated pushbuttons are also available assembled, complete with contact block on request. Assembled pushbuttons have black bezels. All E22 products are designed for 22.5mm hole mounting.

Stock Code S

Pushbuttons -	Colour	N.O. Circuit Cat. No.	Price \$	N.C. Circuit Cat. No.	Price \$
25mm flush	black	E22PB1A	27.70	E22PB1B	27.70
	red	E22PB2A	27.70	E22PB2B	27.70
	green	E22PB3A	27.70	E22PB3B	27.70
25mm extended	black	E22EB1A	28.90	E22EB1B	28.90
	red	E22EB2A	28.90	E22EB2B	28.90
	green	E22EB3A	28.90	E22EB3B	28.90
28mm spring mushrm	black	-	-	-	-
	red	-	-	-	-
40mm spring mushrm	black	-	-	-	-
	red	-	-	E22LB2B	30.50
28mm latch mushrm	black	-	-	-	-
	red	-	-	-	-
40mm latch mushrm	red	-	-	E22LLB2B	39.00



E22 Pushbutton Operators are available as components, both operators and contact blocks, ready to assemble. Operators are available with chrome metal or black plastic bezels. To make a pushbutton,

1. Select operator from this page, page 227 or 228.
2. Select one or more contact blocks from page 229.

Stock Code S

10

Pushbuttons -	Colour	Metal Bezel Cat. No.	Price \$	Plastic Bezel Cat. No.	Price \$
Flush 25mm dia. Button	black	E22P1	13.70	E22PB1	12.10
	red	E22P2	13.70	E22PB2	12.10
	green	E22P3	13.70	E22PB3	12.10
	yellow	E22P4	13.70	E22PB4	12.10
	white	E22P5	13.70	E22PB5	12.10
	blue	E22P6	13.70	E22PB6	12.10
	grey	E22P7	13.70	E22PB7	12.10
Extended face 25mm dia. button	black	E22E1	14.10	E22EB1	12.40
	red	E22E2	14.10	E22EB2	12.40
	green	E22E3	14.10	E22EB3	12.40
	yellow	E22E4	14.10	E22EB4	12.40
	white	E22E5	14.10	E22EB5	12.40
	blue	E22E6	14.10	E22EB6	12.40
	grey	E22E7	14.10	E22EB7	12.40

Enclosures, page 236

Legend plates, page 235



E22 Mushroom Pushbutton Operators

are available as components, both operators and contact blocks, ready to assemble. Operators are available with chrome metal or black plastic bezels. To make a pushbutton,

1. Select operator from this page, page 226 or 228.
2. Select one or more contact blocks from page 229.

Latched Mushroom Operators

Stock Code S

Release	Head	Colour	Metal Bezel Cat. No.	Price \$	Plastic Bezel Cat. No.	Price \$
Twist release	28mm	red	E22ML2	50.00	E22MLB2	46.20
		green	E22ML3	50.00	E22MLB3	46.20
	40mm	red	E22LL2	52.30	E22LLB2	52.30
		green	E22LL3	52.30	E22LLB3	52.30
Pull release	50mm	red-ES*	E22JPL2N8	55.30	E22JPL2BN8	55.30
		red	E22JPL2	55.30	E22JPLB2	55.30
		green	-	-	-	-
		red-AL**	E22JL2	55.30	-	-
Key release	50mm	red	E22G2	92.20	E22GB2	88.40
		green	-	-	-	-

*marked "Emergency Stop"

**aluminium head

Spring Return Mushroom Operators

Stock Code S

Head	Colour	Metal Bezel Cat. No.	Price \$	Plastic Bezel Cat. No.	Price \$
28mm	red	E22M2	24.40	E22MB2	19.80
	green	E22M3	24.40	-	-
	blue	E22M6	24.40	-	-
40mm	red	E22L2	25.90	E22LB2	21.80
	green	E22L3	25.90	E22LB3	21.80
	blue	E22L6	25.90	-	-

Note 3-position push-pull spring return to centre pushbuttons also available. Refer to your nearest Eaton Electric Systems office.

-Enclosures, page 236

-Legend plates, page 235



E22 Illuminated Pushbuttons and Pretest Indicating Light Operators

are available as components, ready to assemble. Operators are available with chrome metal or black plastic bezels.

1. Select operator from first table below
2. Select light unit from second table below
3. If required, select contact block(s) from page 229. (Maximum 2)

				Stock Code S	
Illuminated Operator - Colour		Metal Bezel Cat. No.	Price \$	Plastic Bezel Cat. No.	Price \$
Flush button, 25mm dia.	red	E22N2	23.50	E22NB2	23.50
	green	E22N3	23.50	E22NB3	23.50
	blue	E22N6	23.50	E22NB6	23.50
	amber	E22N9	23.50	E22NB9	23.50
Extended button, 25mm dia.	red	E22T2	23.60	E22TB2	23.60
	green	E22T3	23.60	E22TB3	23.60
	blue	E22T6	23.60	E22TB6	23.60
	amber	E22T9	23.60	E22TB9	23.60
Full shroud button, 25mm dia.	red	E22TX2	49.40	-	-
	green	E22TX3	49.40	-	-
	blue	E22TX6	49.40	-	-
	amber	E22TX9	49.40	-	-

				Stock Code S	
Light Source Units for Illuminated Pushbuttons					
Type	Lamp Voltage	Supply Voltage	Cat. No.	Price \$	
Transformer	6V1.2W	110Vac	E22TL1	69.70	
	6V1.2W	240Vac	E22TL2	69.70	
	6V1.2W	415Vac	E22TL3	69.70	
Resistor	60V	110Vac/dc	E22R2	54.80	
Full voltage	with out bulb	-	E22D	24.40	
Press-test transformer	6V1.2W	110Vac	E22TL1C	88.40	
Press-test full voltage	12V1.2W	12V	E22D12C	51.60	
	24V1.2W	24V	E22D24C	51.60	
	50V1.2W	50V	E22D50C	51.60	

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- Bulbs, page 247
- Enclosures, page 236
- Legend plates, page 235



E22 Contact Blocks are available with screw terminals or push-on terminals.

Pushbuttons accept two contact blocks as standard. An additional contact block may be used on non-illuminated and non-latching pushbuttons by using operator plug E22BA2.

Contact Block Varieties	Screw Terminals Cat. No.	Stock Code S	
			Price \$
1N.C.contact	E22B1		15.80
1N.O.contact	E22B2		15.80
1N.O.-1N.C.contact	E22B11		26.80
2N.O.contacts	E22B20		26.80
1N.O.early make contact	E22B3		15.80
1N.C.late break contact	E22B4		15.80
1N.O.(logic)	E22B1E		17.40
1N.C.(logic)	E22B2E		17.40
Operator plug	E22BA2		1.80

Notes All contacts rated at 10A AC1 at 380V
Operator plug operates centre contact block on pushbuttons and momentary mushroom operators.



Assembled E22 Indicating Lights are available fully assembled, in both standard and press-to-test (Prestest) varieties. For modular components which can be assembled, see page 231.

Assembled Lights -	Colour	Standard Cat. No.	Price \$	Stock Code S	
				Prestest* Cat. No.	Price \$
110Vac transformer	red	E22H2X11	65.20	E22T2X27	88.70
	green	E22H3X11	65.20	E22T3X27	88.70
	amber	E22H9X11	65.20	-	-
240Vac transformer	red	E22H2X12	65.20	E22T2X28	88.70
	green	E22H3X12	65.20	-	-
	amber	E22H9X12	65.20	-	-
24Vac/dc fullvoltage	red	E22H2X4	38.30	E22T2X20	56.30
	green	E22H3X4	38.30	E22T3X20	56.30
	amber	E22H9X4	38.30	-	-

*Prestest has N.O.-N.C. circuits



E22 Monoblock Indicating Lights give both front and side visibility. Screw-on and push-on terminals (0.8 x 2.8mm) are available in the same unit.

Panel mounted protection	IP66
Terminal protection	IP20
Temperature range	-20°C to 40°C

Stock Code S

Monoblock Indicating Lights	Lens	Cat. No.	Price \$
6-130V, no resistor (bulb not included)*	no lens	E22HV	17.40
	red	E22HV2	18.70
	green	E22HV3	18.70
	yellow	E22HV4	18.70
	white	E22HV5	18.70
	blue	E22HV6	18.70
	amber	E22HV9	18.70
	clear	E22HV0	18.70
	240V, with resistor (bulb not included)**	no lens	E22HR
red		E22HR2	25.00
green		E22HR3	25.00
yellow		E22HR4	25.00
white		E22HR5	25.00
blue		E22HR6	25.00
amber		E22HR9	25.00
clear		E22HR0	25.00

*Units without resistor use bulb with BA9s base 10mm diameter 2.6W max

**Units with resistor use bulb 28-2225-24, 2.6W maximum filament 110V lamp

- Bulbs, page 247



E22 Indicating Lights are available in a rainbow of colours with standard or print-ready plastic lenses. Illuminated by the light source unit, the printed message is displayed through print-ready lens. For mounting to light source units below.

Stock Code S

Plastic Lens Colour	Cat. No.	Price \$
Red	E22H2	10.90
Green	E22H3	10.90
Yellow	E22H4	10.90
White	E22H5	10.90
Blue	E22H6	10.90
Amber	E22H9	10.90
Clear	E22H0	10.90



E22 Light Source Units are available with transformer, resistor/diode, diode or for direct voltage - all in either screw or push-on terminals - for use with lenses above. To select,

1. Choose one lens and one light source unit
2. If required, select bulb from page 247.

Stock Code S

Type and Lamp Voltage	Supply Volts	Screw Terminal Cat. No.	Price \$
Transformer (6V 1W bulb)	110V	E22TL1	69.70
	240V	E22TL2	69.70
	415V	E22TL3	69.70
	440V	E22TL4	65.80
Resistor/diode (110V bulb)	240V	E22R1	54.80
Resistor unit (60V bulb)	110V	E22R2	54.80
Single diode unit	6-120V	E22D1	21.50
Twin diode unit*	6-120V	E22D2	21.20
Full voltage unit*	-	E22D	20.40

Notes Special screw terminal light source units for use with pilot lights available on special order. Refer to page 228 for Pretest indicating lamp components

* Bulbs not supplied



Assembled E22 Selector Switches are available fully assembled, complete with contact block. Varieties include knob, lever and key selector switches.

All assembled selector switches are black with stay-put action.

Stock Code S

Type	No. of Positions	Contact Blocks	Contact Contact Block #1	Sequence Contact Block #2	Cat. No.	Price \$
Knob	2	1	OX		E22XBF1A	46.80
Knob	2	2	XO	OX	E22XBF1C	61.30
Knob	2	2	OX	OX	E22XBF1D	61.30
Knob	3	2	XOO	OOX	E22XBG1D	61.30
Lever	2	1	OX		E22VBF1A	46.80
Lever	2	2	XO	OX	E22VBF1C	60.90
Lever	3	2	XOO	OOX	E22VBG1D	61.80
Key	2	1	OX		E22KBF1A	62.00
Key	2	2	XO	OX	E22KBF1C	81.80

Switchgear and Control

22.5mm Control Components



Electric

E22 Selector Switches are available separately for easy assembly. Varieties include knob, lever and key, all with chrome metal or black plastic bezels. All selectors are black and do not illuminate.

To assemble a complete switch,

1. Choose switch operator on this page or page 233.
2. Choose contact block on page 234 (maximum 2)

Stock Code S

Knob Selector Switch Varieties	Cam No.*	Chrome Bezel Cat. No.	Price \$	Black Bezel Cat. No.	Price \$
2-position stay-put (positions: 11, 1 o'clock)	2	E22X51	21.50	E22XB51	21.10
2-position spring return (from right to left)	2	E22X61	21.50	E22XB61	21.10
2-position stay-put (positions: 12, 1 o'clock)	2	E22XF1	25.30	E22XBF1	21.00
2-position spring return (from right to centre)	2	E22XE1	25.30		
3-position stay-put (11, 12, 1 o'clock)	1	E22XG1	25.30	E22XBG1	22.10
3-position stay-put (11, 12, 1 o'clock)	2	E22XH1	25.30	E22XBH1	22.10
3-position spring return (from left to centre)	1	E22XJ1	26.80		
3-position spring return (from R&L to centre)	1	E22XL1	26.80	E22XBL1	22.10
3-position spring return (from R&L to centre)	2	E22XM1	26.80		

Stock Code S

Lever Selector Switch Varieties	Cam No.*	Chrome Bezel Cat. No.	Price \$	Black Bezel Cat. No.	Price \$
2-position stay-put (positions: 11, 1 o'clock)	2	E22V51	21.50	E22VB51	21.10
2-position spring return (from right to left)	2	E22V61	21.50		
2-position stay-put (positions: 12, 1 o'clock)	2	E22VF1	21.50	E22VBF1	21.10
2-position spring return (from right to centre)	2	E22VE1	21.50		
3-position stay-put (11, 12, 1 o'clock)	1	E22VG1	25.30	E22VBG1	22.10
3-position stay-put (11, 12, 1 o'clock)	2	E22VH1	25.30	E22VBH1	22.10
3-position spring return (from left to centre)	1	E22VJ1	26.80		
3-position spring return (from left to centre)	2	E22VK1	26.80		
3-position spring return (from R&L to centre)	1	E22VL1	26.80	E22VBL1	22.10
3-position spring return (from R&L to centre)	2	E22VM1	26.80	E22VBM1	22.10

*for Cam and contact block selection chart, see page 234

E22 Selector Switches are available separately for self assembly. Varieties include knob, lever and key, all with chrome metal or black plastic bezels.

To assemble a complete switch,

1. **Choose switch operator on this page or page 232**
2. **Choose contact block on page 234**

Stock Code S

Key Selector Switch Varieties	Key Removal		Cam No.*	Chrome Bezel Cat. No.	Price \$	Black Bezel Cat. No.	Price \$
2-position stay-put	L	R	2	E22K53	44.40	E22KB53	44.40
2-position spring return (R to L)	L		2	E22K62	44.40	E22KB62	44.40
2-position stay-put		C R	2	E22KF5	44.40	E22KBF5	44.40
2-position spring return (R to C)		C	2	E22KE4	44.40	E22KBE4	44.40
3-position stayput	L	C R	1	E22KG7	44.40	E22KBG7	44.40
3-position stayput	L	C R	2	E22KH7	59.40		
3-position spring return (R&L to C)		C	1	E22KL4	59.40	E22KBL4	59.40
3-position spring return (R&L to C)		C	2	E22KM4	59.40		
3-position spring return (R&L to C)	L	C	1	E22KN6	59.40		
3-position spring return (R&L to C)	L	C	2	E22KP6	59.40		

Alternative key removal positions are available for key selector switches. To select an alternative, replace the last digit of the key selector catalogue number above with the code for your selection:

removal position	R-only	Lonly	R&L	C-only	R&C	L&C	R, L & C
code	1	2	3	4	5	6	7

R = right
L = left
C = centre

*For Cam and contact block selection chart, see page 234

Cam and Contact Block Selection

- Determine the "X O" sequence required. (Example: X O O, O O X) X = circuit closed; O = circuit open
- Locate the first desired sequence in the chart below, in column Cam I or Cam II. Then identify which cam and contact is used and in what position it is assembled. (Example: X O O uses Cam I, E22B2, mounting position 1 (left).)
- Repeat for second sequence. Do not mix sequences from Cam I and Cam II. (Example: O O X uses Cam I, E22B2, mounting position 2 (right).)
- Assemble contact block(s) to adaptor in the mounting position selected (2 contact blocks per switch), using the selector switch with the appropriate cam and switch positions. Cam I has one peak ; Cam II has 2 peaks (viewed from rear).

Circuit Configurations*			Contact Block Mount Position**			Contact Arrangement	Contact Block Cat. No.	
2 Position Cam II	3 Position Cam I	3 Position Cam II	Left	Central	Right			
			1	2	3			
O X	X O O	X O X	■	□	□	14	13	E22B2
X O	O X X	O X O	■	□	□	12	11	E22B1
O X	X O O	X O X	■	□	□	14	13	E22B2+
O X	O O X	O O X	□	□	■	14	13	E22B2
X O	O X X	O X O	■	□	□	12	11	E22B1+
X O	X X O	X X O	□	□	■	12	11	E22B1
O X	X O O	X O X				14	13	
X O	O X X	O X O	■	□	□	14A	13A	E22B11+
O X	O O X	O O X	□	□	■	24	23	E22B11
X O	X X O	X X O				22	21	
O X	X O O	X O X	■	□	□	14	13	
O X	X O O	X O X				14A	13A	E22B20
O X	O O X	O O X	□	□	■	24	23	E22B2
X O	X X O	X X O	□	□	■	22	21	E22B1
O X	O O X	O O X	□	□	■	24	23	
X O	X X O	X X O				22	21	E22B11
O X	X O O	X O X				14	13	
O X	X O O	X O X	■	□	□	14A	13A	E22B20+
O X	O O X	O O X	□	□	■	24	23	E22B20
O X	O O X	O O X				24A	23A	
O X	X O O	X O X	■	□	■	14	13	E22B11+
X O	O X O	O X O	■ B1	□	■ B1	12	11	E22B1
						22	21	
O X	X O O	X O X				14	13	E22B11+
X O	O X O	O X O	■	□	■	12	11	E22B11
O X	O O X	O O X	■ B1	□	■ B1	22	21	
						24	23	

*Circuit configurations are viewed from front of panel

**Contact block mount position is viewed from rear of panel

Terminal numbers identify the contact block position and contact function. Eg, in the expression

14 13, the 1 indicates mounting position (left); 3 and 4 indicate the circuit is normally open.



Legend Plates for E22 Operators - two sizes of aluminium legend plates are available for use with E22 operators. A smaller adhesive-backed legend plate is available to fit the E22 enclosure. To order,

1. Select plate style from the chart below. This gives the first 5 digits of the 7- or 8-digit catalogue number.

2. Select the legend text from the chart on the following page. The code gives the last 2 or 3 digits of the catalogue number.

Eg, for enclosure legend plate marked "Jog", order E22NC19.

Stock Code S

Legend Plate Variety	Size (mm)	Cat. No.	Price \$
Aluminium legend plate for operators	30x45	E22NE--	4.00
Aluminium legend plate for operators	40x45	E22NF--	4.00
Adhesive-backed legend plate for enclosure	19x19	E22NC--	3.50

Legend	Code	Legend	Code	Legend	Code
(blank)	36	Jog Rev	21	Power On	80
(blank)(red)	37	Left	10	Raise	28
Auto Off Hand	49	Left Right1	66	Ready	86
Clamp	90	Left Right2	117	Reset	29
Close	11	Loc Rem1	63	Rev	6
Down	12	Loc Rem2	116	Reverse	30
Emerg. Stop (red)	13	Low	22	Right	79
Fast	14	Lower	23	Run	31
For	4	Man Auto1	67	Seq. Test1	62
Forward	15	Man Auto2	118	Seq. Test2	115
For Off Rev	50	Man Off Auto	68	Slow	32
For Rev1	38	Motor Run	81	Slower	88
For Rev2	101	Motor Running	56	Start	33
Hand Auto1	39	Motor Stop	82	Start Inch1	77
Hand Auto2	102	Motor Stopped	57	Start Inch2	119
Hand Off Auto	51	O (red)	64	Start Stop1	47
High	16	O I1	122	Start Stop2	110
High Low1	40	O I 2	120	Stop (red)	34
High Low2	103	Off (red)	24	Stop Reset (red)	58
I	65	Off On1	42	Supply On	61
I O II	121	Off On2	105	Test	83
In	17	On	25	Trip	84
Inch	18	Open	26	Unclamp	91
Inch Forward	76	Open Close1	43	Up Down1	48
Inch Reverse	59	Open Close2	106	Up Down2	111
Inch Run1	60	Open Off Close	53	Up	35
Inch Run2	114	Out	27	Special legend 36x*	36X
Jog	19	Overload Tripped	98	Special 37x* (red)	37X
Jog For	96	Overload Reset	100		

*specify required legend

Notes

All legends not specifically marked "(red)" are black.

Legends marked "1" are for selector switches with left/right switch angle

Legends marked "2" are for selector switches with centre/right switch angle



Enclosures for E22 operators - are available as standard items or fitted out to specific requirements.

Made from polycarbonate material and rated IP65, these enclosures feature double insulation and quick-release stainless steel screws.

Colour light grey unless indicated otherwise.

Enclosure Variety	Usable Depth	Cat. No.	Stock Code S
			Price \$
Single-way enclosure	56mm	E22CSP1	68.60
Single-way enclosure	86mm	E22CDP1	68.60
Single-way enclosure (grey base, yellow lid)	56mm	E22CSP1Y	75.60
Single-way enclosure (grey base, yellow lid)	86mm	E22CDP1Y	75.60
2-way enclosure - mount matrix 36mm	56mm	E22CSP2	74.00
2-way enclosure - mount matrix 36mm	86mm	E22CDP2	74.00
3-way enclosure - mount matrix 35mm	56mm	E22CSP3	84.20
3-way enclosure - mount matrix 35mm	86mm	E22CDP3	84.20
4-way enclosure - mount matrix 30mm	56mm	E22CSP4	127.00
4-way enclosure - mount matrix 30mm	86mm	E22CDP4	127.00
6-way enclosure - mount matrix 36x47mm	81mm	E22CDP6	137.20
9-way enclosure - mount matrix 36x50mm	86mm	E22CDP9	180.80

Accessories for E22 pushbuttons - include:

Accessory	Cat. No.	Stock Code S	
		Price \$	
Locating rings (pack of 10)	E22LRP	2.70	
Operator plug	E22BA2	1.80	
Spare mounting adaptors (select from chart below)	see below	5.30	
Transparent cover, padlockable, for	-	-	
	flush & extended push buttons	E22PCM	21.20
	extended push buttons*	E22PCPM	21.20
	28mm mushroom/knob/keyswitch	E22BA9	21.20
Mechanical push	E22MRL	11.20	
Protective boot (IP66) for flush and extended buttons only	-	-	
	red	E22BRM	9.20
	green	E22BGM	9.20
	black	E22BBM	9.20
	clear	E22BCM	9.20
Mushroom full shroud	E22MSF	55.60	
Mushroom half shroud	E22MS	39.00	
Holeplug, plastic	E22BHP	4.60	
Holeplug, stainless steel	E22BA8	66.10	
Bulb removal tool	E22BA3	9.90	
Hand tool to cut 22.5mm dia. hole	E22BA5	43.10	
Octagonal box spanner	E22BA6	28.30	
Bulb extender	E22BA4	14.40	

* enable N.C. Circuit to be held open when padlocked

Contact Block Mounting Adaptor Selection Chart

To Mount	3-way	5-way Illuminated	5-way Non-illuminated
Pushbuttons, 2 position push-pull	E22BA1	E22BA11L	E22BA11
Mushroom, all but 3-way twist to release	E22BA1	E22BA11L	E22BA11
Mushroom, 3-way twist to release	E22BA7	-	-
Selector switches	E22BA1	-	-
Selector switches, 2 position cam II	-	E22BA11L	E22BA11
Selector switches, 3 position cam I	-	E22BA12L	E22BA12



T-Range Heavy Duty and E34 Anti-Corrosive Pushbuttons

are available as components, ready to assemble. T-Range operators have chrome bezel; E34 anti-corrosive black bezel. To select,

1. Select operator required. Complete operators are listed below. For bare shaft and separate heads, see page 238. For illuminated operators, see page 238.
2. Select contact block from page 241.

Complete Operators -	Colour	T-Range Cat. No.	Price \$	Stock Code S	
				E34 Range Cat. No.	Price \$
Flush button	black	T101	29.90	E34PB1	29.90
	red	T102	29.90	E34PB2	29.90
	green	T103	29.90	E34PB3	29.90
	yellow	T104	29.90	E34PB4	29.90
	grey	T105	29.90	E34PB7	29.90
	white	T106	29.90	E34PB5	29.90
	brown	T107	29.90	-	-
Extended button	blue	T108	29.90	E34PB6	29.90
	black	T111	29.90	E34EB1	29.90
	red	T112	29.90	E34EB2	29.90
	green	T113	29.90	E34EB3	29.90
	yellow	-	-	E34EB4	29.90
Mushroom button	blue	T118	29.90	E34EB6	29.90
	black	T121	59.70	E34LB1	59.70
	red	T122	59.70	E34LB2	59.70
	green	T123	59.70	E34LB3	59.70
	yellow	T124	59.70	E34LB4	59.70
	blue	T129	59.70	E34LB6	59.70
Zinc alloy palm head button	black	T171	63.10	-	-
	red	T172	63.10	E34JB2	63.10
	red ES*	T17213	63.10	E34JB2N8	63.10
	green	T173	63.10	E34JB3	63.10
	yellow	T174	63.10	E34JB4	63.10

* ES = Emergency Stop



T-Range Heavy Duty Operators are available as separate shaft operators and heads for easy assembly. T-Range operators have chrome bezel. To select,

1. Select operator required. Bare shaft operators and separate operating heads are shown below. Complete operators are on page 237. For illuminated operators, see page below.
2. Select contact block from page 241.

Operator Components		T-Range Cat. No.	Stock Code S	Price \$
Bare shaft operator for mushroom or palm head	momentary	T100		56.70
	auto-latch	T140		64.50
Mushroom operating head (38.1mm diameter)	black	T281		17.50
	red	T282		17.50
	green	T283		17.50
	yellow	T284		17.50
Palm operating head (63.5mm diameter)	black	T291		33.10
	red	T292		33.10
	green	T293		33.10
	yellow	-		-



T-Range Heavy Duty and E34 Anti-Corrosive Illuminated Pushbuttons are available for transformers and for direct voltage. To order complete unit,

1. Select operator below.
2. Select lens below.
3. If using direct voltage unit or transformer unit with non-standard bulb, select bulb from page 247.
4. Select contact block from page 241.

Operator Variety		T-Range Cat. No.	Price \$	E34 Range Cat. No.	Price \$
Transformer	110Vac50Hz	T411	134.80	E34XB120	123.50
Transformer	240Vac50Hz	T412	134.80	E34XB240	123.50
Transformer	415Vac50Hz	T413	134.80	E34XB380	123.50
Transformer	440Vac50Hz	T414	134.80	E34XB480	123.50
Direct Voltage	6-240Vac50Hz	T441	134.80	E34CB	123.50

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Lenses		T-Range Cat. No.	Price \$	E34 Range Cat. No.	Price \$
Plastic	red	E34V2	7.70	E34V2	7.70
	green	E34V3	7.70	E34V3	7.70
	yellow	E34V4	7.70	E34V4	7.70
	amber	E34V9	7.70	E34V9	7.70
	blue	E34V6	7.70	E34V6	7.70
	clear	E34V0	7.70	E34V0	7.70
	white	E34V5	7.70	E34V5	7.70
Glass	red	TC13N	24.80	E34P2	24.80
	green	TC14N	24.80	E34P3	24.80
	amber	TC15N	24.80	E34P9	24.80
	blue	TC16N	24.80	E34P6	24.80
	clear	TC17N	24.80	E34P0	24.80
	white	TC18N	24.80	E34P5	24.80



Illuminated and Non-Illuminated T-Range Heavy Duty

Push-Pull Pushbuttons are available as components, ready to assemble.

To select standard button,

1. Select operator below.
2. Select non-illuminating head on page below.
3. Select contact block from page 241.

Stock Code S

Operators	Cat. No.	Price \$
Momentary push and pull	T4	80.30
Maintained push and pull	T5	67.80
Maintained push and momentary pull	T9	78.30

Stock Code S

Light Modules	Cat. No.	Price \$
Transformer - 110Vac 6V secondary	10250T63	138.70
Transformer - 240Vac 6V secondary	10250T65	138.70
Transformer - 415Vac 6V secondary	10250T66	138.70
Transformer - 440Vac 6V secondary	10250T67	138.70
Direct Voltage - 6V*	10250T69	65.60
Direct Voltage - 12V*	10250T70	65.60
Direct Voltage - 24/28V*	10250T79	65.60
Resistor - 120Vac	10250T80	74.60

*Direct voltage light modules can be used at other than listed voltages by changing lamp.

To select illuminating button,

1. Select operator below.
2. Select light module below.
3. Select illuminating head from page below.
4. Select contact block from page 241.

Stock Code S

Colour	Illuminating Heads			Non-Illuminating Heads Standard plastic
	Standard Plastic	Side Lighted Anodised Ring	Aluminium Clear Centre	
Red	E34M2	10250TC57	10250TC65	E34C2
Red-ES**	E34M2N8	10250TC63	-	E34C2N8
Green	E34M3	10250TC58	10250TC66	E34C3
Black	-	-	-	E34C1
Blue	E34M6	-	10250TC67	-
Amber	E34M9	10250TC64	-	-
Yellow	-	-	-	-
White	E34M5	-	-	-
Clear	-	-	-	-
Price \$	Price \$20.20	Price \$44.50	Price \$54.60	Price \$20.20

**ES = Emergency Stop

Note For heavy duty die cast zinc head pushbuttons, see page 240.



Push-Pull Pushbuttons are available in both T-Range heavy duty and E34 anti-corrosive ranges, both in either non-padlockable or padlockable "Stalock" versions. To select,

1. Select required operator below.
2. Select contact block from page 241.
3. If required, select accessories below. Accessories below are suitable for either T-range or E34.
4. If required, select legend plate from page 248.

		Stock Code S		
Non-Padlockable Operators	T-Range Cat. No.	Price \$	E34 Range Cat. No.	Price \$
38mm red mushroom, plastic	T129S	89.70	E34129S	89.70
38mm red mushroom, diecast zinc	T129M	108.80	E34129M	108.80
63.5mm red palm head, diecast zinc	T176M	127.50	E34176M	127.50

		Stock Code S		
Stalock Padlockable Operators	T-Range Cat. No.	Price \$	E34 Range Cat. No.	Price \$
38mm red mushroom, diecast zinc	T129P	126.20	E34129P	126.20
63.5mm red palm head, diecast zinc	T176P	144.30	E34176P	144.30

		Stock Code S	
Accessories	Cat. No.	Price \$	Price \$
Aluminium legend "Stop Pull to reset"	D2179-53CP		9.40
Plastic legend "Stop Pull to reset"	E34LP179		9.40
Stalock padlock assembly kit (3piece)	6-A474		58.80
Stalock replacement locking tongue	6-A475		12.11
Padlock with chain	52-A1617		77.00



Contact Blocks for Control Components are suitable for use on 30.5mm T-range and E34 anticorrosive products.

I_{th} = 10A

Stock Code S

Circuit		Maximum Number of Stacked Blocks	Standard* Cat. No.	Price \$	Logic Level	Price \$	Base Mount	Price \$
1N.O.	1N.C.	6	T1P	31.60	T1E	63.10	T6	31.60
2N.O.		6	T2P	31.60	T2E	63.10	T7	31.60
2N.C.		6	T3P	31.60	T3E	63.10	T8	31.60
1N.O.		6	T53P	27.00	T53E	56.70	T54	27.00
1N.C.		6	T51P	27.00	T51E	56.70	T52	27.00
2N.O.	2N.C.	4	T44	63.10	-	-	-	-
1E.C.N.O.	1L.O.N.C.	4	T55	31.60	-	-	-	-
1N.O.	1E.C.N.O.	4	T57	31.60	-	-	T58	31.60
1L.O.N.C.		4	T71	31.60	-	-	-	-
2L.O.N.C.		4	T45	31.60	-	-	-	-

N. O. = normally open
 N. C. = normally closed
 E. C. = early closing
 L. O. = late opening

Notes Logic level contact blocks have palladium contacts.
 *Standard contact blocks with catalogue numbers ending in P include finger-proof cover shrouds (IP20 rated).

Finger-proof Cover Shroud may be added to any logic level contact block or to standard contact blocks T55 and T57. Base mounting covers and standard contact block T44 cannot accept cover shrouds.

Stock Code S

Description	Cat. No.	Price \$
Finger-proof clip-in cover shroud (IP20 rated)(10 pack)	10250TA101	12.30



T-Range Heavy Duty or E34 Anti-Corrosive Indicating Lights - are available ready to assemble. Pictured assembled at right. To select,

1. Select a light unit below. (Light unit includes bulb unless otherwise indicated.)
2. If bulb required, select from page 247.
3. Select a lens from page below.

Light Unit + Lens = Indicating Light

Light Unit Variety		T-Range Cat. No.	Price \$	E34 Range Cat. No.	Stock Code S Price \$
Transformer type	110Vac	T181N	110.20	E34TB120	110.20
	240Vac	T182N	110.20	E34TB240	110.20
	415Vac	T183N	110.20	E34TB380	110.20
	440Vac	T184N	110.20	E34TB480	110.20
Resistor type	110Vac	T201N	93.10	E34RB120	93.10
	240Vac	T202N	93.10	E34RB240	93.10
Direct voltage without bulb (BA9S bulb required)		T197N	56.70	E34FB	56.70
Direct voltage without bulb (BA15d bulb required)		T200N	47.40	E34200N	47.40

Lenses		T-Range Cat. No.	Price \$	E34 Range Cat. No.	Stock Code S Price \$
Plastic lens	red	E34H2	8.20	E34H2	8.20
	green	E34H3	8.20	E34H3	8.20
	amber	E34H9	8.20	E34H9	8.20
	blue	E34H6	8.20	E34H6	8.20
	clear	E34H0	8.20	E34H0	8.20
	white	E34H5	8.20	E34H5	8.20
Glass lens	yellow	E34H4	8.20	E34H4	8.20
	red	TC7N	27.00	E34G2	27.00
	green	TC8N	27.00	E34G3	27.00
	amber	TC9N	27.00	E34G9	27.00
	blue	TC10N	27.00	E34G6	27.00
	clear	TC11N	27.00	E34G0	27.00
	white	TC12N	27.00	E34G5	27.00
	yellow	-	-	E34G4	27.00

Note It is recommended that only clear, amber or yellow lenses be used with neon lights.

- Bulbs, see page 247



T-Range Heavy Duty or E34 press-to-test (Pretest) Indicating Lights can be assembled from two basic modules. Pictured assembled. To select,

1. Choose light unit from first chart below.
2. Choose lens from second chart below.

Stock Code S

Light Unit	Supply Voltage	T-Range Cat. No.	Price \$	E34 Range Cat. No.	Price \$
Transformer type	110Vac	T221N	141.60	E34TPB120	141.60
with BA9s bulb	240Vac	T222N	141.60	E34TPB240	141.60
	415Vac	T223N	141.60	E34TPB380	141.60
Resistor type	110Vac	T231N	127.30	E34RPB120	127.30
with BA9s bulb	240Vac	T240N	127.30	E34RPB240	127.30
*Direct voltage - no bulb (BA9s bulb required)		T230N	112.40	E34FPB	112.40

Lenses		T-Range Cat. No.	Price \$	E34 Range Cat. No.	Price \$
Plastic lens	red	E34V2	7.70	E34V2	7.70
	green	E34V3	7.70	E34V3	7.70
	amber	E34V9	7.70	E34V9	7.70
	blue	E34V6	7.70	E34V6	7.70
	clear	E34V0	7.70	E34V0	7.70
	white	E34V5	7.70	E34V5	7.70
	yellow	E34V4	7.70	E34V4	7.70
Glass lens	red	TC13N	24.80	E34P2	24.80
	green	TC14N	24.80	E34P3	24.80
	amber	TC15N	24.80	E34P9	24.80
	blue	TC16N	24.80	E34P6	24.80
	clear	TC17N	24.80	E34P0	24.80
	white	TC18N	24.80	E34P5	24.80
	yellow	-	-	E34P4	-

Note It is recommended that only clear, amber or yellow lenses be used with neon lights.



Joystick Operators - are supplied with 4-position gate already fitted and 3 additional gates supplied.

Up to 8 switching positions. Up to 12 circuits, each of which can be chosen as N.O. or N.C., AC or DC. Special legend plates are available.

To select,

1. Select joystick.
2. Select contact block on page 241.
3. If required, select accessories below.

Stock Code S

Joysticks	Cat. No.	Price \$
4-position, spring return only, no latch	T450	180.80
4-position, spring return only, with "off" latch	T460	224.60
4-position spring return, no latch*	T451	195.40
4-position, spring return "off" latch*	T461	255.40
2-position spring return, no latch	T452	171.80

*field adjustable to stayput

Stock Code S

Accessories	Cat. No.	Price \$
Blank legend plate	TJS1	11.20
Preprinted 4-position legend plate	TJS2	11.20
Hole plug	TA700	23.80



Knob and Lever Selector Switches are available in the heavy duty T-range and the corrosion-resistant E34 range. To build complete selector switch,

1. Choose operator shaft below.
2. Choose knob or lever below.
3. Choose required cam.

Stock Code S

Operator Shaft	Cam No.	T-Range Cat. No.	Price \$	E34 Range	Price \$ Cat. No.
2-position stay-put	1	T4011	52.10	E34VFB	52.10
2-position spring return (from R to L)	1	T4081	52.10	E34VEB	52.10
3-position stay-put	2	T4022	52.10	E34VGB	52.10
3-position stay-put	3	T4023	52.10	E34VHB	52.10
3-position stay-put	4	T4024	52.10	-	-
3-position stay-put	6	T4026	52.10	-	-
3-position (spring return from L, stay-put C&R)	2	T4032	55.20	E34VJB	55.20
3-position (spring return from L, stay-put C&R)	3	T4033	55.20	E34VKB	55.20
3-position (spring return from R+L to C)	2	T4042	55.20	E34VLB	55.20
3-position (spring return from R+L to C)	3	T4043	55.20	E34VMB	55.20
3-position (stay-put L and C, spring ret from R)	2	T4052	55.20	E34VNB	55.20
3-position (stay-put L and C, spring ret from R)	3	T4053	55.20	E34VPB	55.20
4-position stay-put	7	T4067	56.70	E34VTB	-

R = right L = left C = centre

Stock Code S

Knobs and Levers	T-Range Cat. No.	Price \$	E34 Range Cat. No.	Price \$
Knob, black (other colours available)	E34K1	13.20	E34K1	13.20
Knob, metal	T341M	45.80	T341M	45.80
Lever, black (other colours available)	E34L1	18.30	E34L1	18.30
Lever, dustproof**	E34A1	22.10	E34A1	22.10
Coin slot lever	TCB	18.30	-	-

**The dustproof lever is rubber sealed and not recommended for use with spring-return operators.

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Cam Selection Chart - To determine the number of the cam you require and the correct contact block, find the desired contact sequence below:

Cat. No. of Contact Block		Contact Block Circuit	Number of Selector Switch Positions					
1-hole mount	base mount		2	3			4	
			Cam 1	Cam 2	Cam 3	Cam 4	Cam 6	Cam 7
T1P	T6	N.C.	XO	O XO	O XX	X OO	X OO	X OOO
		N.O.	OX	O OX	O OX	O XO	O XO	O XOO
T1P	T6	N.O.	OX	XOX	XOO	OXX	O OX	O OXO
		N.C.	XO	XXO	XXO	XOX	O OX	O OOX
T2P	T7	N.O.	OX	XOX	XOO	OXX	O OX	O OXO
		N.O.	OX	O OX	O OX	O XO	O XO	O XOO
T3P	T8	N.C.	XO	O XO	O XX	X OO	X OO	X OOO
		N.C.	XO	XXO	XXO	XOX	O OX	O OOX

X=contacts closed
O=contacts open

Switching angle between each position: 60°

Get more contact combinations by stacking contact blocks in tandem - maximum of 6 blocks/12 circuits.



Key Selector Switches are available in the heavy duty T-range and the anti-corrosive E34 range. Supplied with standard lock and two keys. Standard key removal position is given in main table. To select complete unit,

1. Choose key operator.
2. Choose required cam from page 244.
3. If required, select legend plate from page 248.

Stock Code S

Key Operators	Cam No.	Std. Key Removal	T-Range Heavy Duty Cat. No.	Price \$	E34 Anti-Corrosive Cat. No.	Price \$
2-position stay-put	1	R	T15111	108.80	E34KFB1	108.80
2-position stay-put	1	L	T15112	108.80	E34KFB2	108.80
2-position stay-put	1	R,L	T15113	108.80	E34KFB3	108.80
2-position spring return (from R to L)	1	L	T15712	108.80	E34KEB2	108.80
3-position stay-put	2	L,R,C	T15227	108.80	E34KGB7	108.80
3-position stay-put	3	L,R,C	T15237	108.80	E34KHB7	108.80
3-position stay-put	4	L,R,C	T15247	-	-	-
3-position stay-put	6	L,R,C	T15267	108.80	-	-
3-position stay-put	2	C	T15224	108.80	E34KGB4	108.80
3-position stay-put	3	C	T15234	108.80	E34KHB4	108.80
3-position stay-put	4	C	T15244	108.80	-	-
3-position stay-put	6	C	T15264	108.80	-	-
3-position (spring return from L)	2	R,C	T15325	108.80	E34KJB5	-
3-position (spring return from L)	3	R,C	T15335	108.80	E34KKB5	-
3-position (spring return from R&L to C)	2	C	T15424	116.60	E34KLB4	116.60
3-position (spring return from R&L to C)	3	C	T15434	116.60	E34KMB4	116.60
3-position (spring return from R)	2	L,C	T16526	116.60	E34KNB6	116.60
3-position (spring return from R)	3	L,C	T16536	116.60	E34KPB6	-
4-position stayput	7	All	T16777	116.60	E34KTB7	116.60

R = right L = left C = centre

Alternative Key Removal Positions are available for key selector switches. To select an alternative, replace the last digit of the key selector catalogue number above with a single code number below:

Note Key removal in a spring return position is not available.

removal position	R-only	Lonly	R&L	C-only	R&C	L&C	All
code	1	2	3	4	5	6	7



Push-Pull Stop Stations are available assembled, inside an aluminium alloy enclosure, in standard and padlockable varieties.

Standard varieties are available with plastic mushroom, metal mushroom or metal palm operators.

All padlockable varieties have metal buttons and are available with or without padlock.

Operator Head	Contacts	Illuminated?	Padlockable?	Padlock Included?	Cat. No.	Stock Code S
						Price \$
Plastic mushroom	1LONC				10250T700	201.40
	1ECNO,1LONC				10250T701	204.10
	1ECNO,1LONC	✓			10250T702	317.10
Metal mushroom	1LONC				10250T700M	219.00
	1ECNO,1LONC				10250T701M	233.60
Metal palm	1LONC				10250T700P	235.00
	1ECNO,1LONC				10250T701P	246.90
38mm metal mushrm	1LONC		✓		ESM9/5	236.50
	1LONC		✓	✓	ESM9/5P	298.30
	1ECNO,1LONC		✓		ESM9/6	248.10
	1ECNO,1LONC		✓	✓	ESM9/6P	302.50
63.5mm metal palm	1LONC		✓		ESP6/5	249.70
	1LONC		✓	✓	ESP6/5P	320.10
	1ECNO,1LONC		✓		ESP6/6	270.40
	1ECNO,1LONC		✓	✓	ESP6/6P	330.50

Note A DIP version is also available. Contact your nearest Eaton Electric Systems office for details.

Spare and Replacement Bulbs are available for 30.5mm indicating lights and illuminated pushbuttons, including non-standard alternatives and neon lights. Many are also suitable for use with 22.5mm operators.



Stock Code S

For Use In	Bulb Type	Volts 50/60Hz	Watts	Cat. No.	Price \$
Direct voltage indicating and resistor lights	BA9s filament 9mm bayonet cap	6	3	28-2225-12	6.50
		12	3	28-2225-7	6.50
		24	2.2	28-2225-13	6.50
		50	3	28-2225-14	6.50
		60	1.2	28-2225-32	6.50
		110	2.2	28-2225-24	6.50
Illuminated push buttons, pretest and transformer lights	BA9s filament 9mm bayonet cap	240	3	28-2225-38	6.50
		6 flasher	1	28-2225-26	38.20
		6	1.2	28-2225-33	6.50
		12	1.2	28-2225-29	6.50
		24	1.2	28-2225-30	6.50
		50	1.2	28-2225-31	6.50
		60	1.2	28-2225-32	6.50
		110	2.2	28-2225-24	6.50
Direct voltage indicating lights	BA15d filament 15mm bayonet cap	240 neon	1	28-2225-48	8.50
		240 neon	1	28-2225-49	8.50
		6	5	28-2225-18	11.20
		12	5	28-2225-19	9.90
		24	5	28-2225-20	9.90
		36	5	28-2225-25	9.90
		48	5	28-2225-21	9.90
120	5	28-2225-22	9.90		
240	5	28-2225-23	9.90		

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LEDs

Stock Code S

LED Type	Volts	Red Cat. No.	Green Cat. No.	Yellow Cat. No.	Price \$
BA9s standard AC/DC rated	6	ED986-11	ED986-13	ED986-14	25.50
	12	ED986-15	ED986-17	ED986-16	25.50
	24	ED986-8	ED986-9	ED986-10	25.50
	48	ED986-1	ED986-2	ED986-3	25.50
High illumination	6 & 12	E22LED612RN	E22LED612GN	E22LED612YN	49.50
	24	E22LED024RN	E22LED024GN	E22LED024YN	49.50
	48	E22LED048RN	E22LED048GN	E22LED048YN	49.50
	110	E22LED120RN	E22LED120GN	E22LED120YN	49.50

Note It is recommended that only clear, amber or yellow lenses be used with neon lights.



Legend Plates are available in a wide variety. Aluminium legend plates come in two sizes for T-Range. Two blank stainless steel plates are also available. Plastic universal legend plates (shown far right) are designed for the E34 anti-corrosive range.

Stock Code S

Legend Plates	Cat. No.	Price \$
Aluminium T-Range, large size, black unless marked "red" (range)	select below	7.20
Aluminium T-Range, medium size, black unless marked "red" (range)	select below	4.00
Stainless steel T-Range, medium size, red, blank	TM36S	7.20
Stainless steel T-Range, medium size, black, blank	TM37S	7.20
Plastic E34 range universal size, black unless marked "red" (range)	select below	4.00

Legend	T-Range Large Cat. No.	T-Range Medium Cat. No.	E34 Universal Cat. No.	Legend	T-Range Large Cat. No.	T-Range Medium Cat. No.	E34 Universal Cat. No.
Auto off hand	TJ49	TM49	E34SP49	Off(red)	TJ24	TM24	E34SP24
Blank	TJ36	TM36	E34SP76	Off On	TJ42	TM42	E34SP42
Blank (red)	TJ37	TM37	E34SP77	On	TJ25	TM25	E34SP25
Close	TJ11	TM11	E34SP73	Open	TJ26	TM26	E34SP26
Down	TJ12	TM12	E34SP74	Open Close	TJ43	TM43	E34SP43
Emergency Stop (red)	TJ13	TM13	E34SP13	Open Off Close	TJ53	TM53	E34SP53
Fast	TJ14	TM14	E34SP75	Out	TJ27	TM27	E34SP27
For Off Rev	TJ50	TM50	E34SP50	Power On	TJ80	TM80	E34SP80
For Rev	TJ38	TM38	E34SP38	Raise	TJ28	TM28	E34SP28
Forward	TJ15	TM15	E34SP15	Raise Lower	TJ76	TM76	-
Hand Auto	TJ39	TM39	E34SP39	Ready	TJ78	TM78	E34SP86
Hand Off Auto	TJ51	TM51	E34SP51	Reset	TJ29	TM29	E34SP29
High	TJ16	TM16	E34SP16	Reverse	TJ30	TM30	E34SP30
High Low	TJ40	TM40	E34SP40	Right	TJ79	TM79	-
I	TJ65	TM65	-	Run	TJ31	TM31	E34SP31
In	TJ17	TM17	E34SP17	Run Jog	TJ44	TM44	E34SP44
Inch	TJ18	TM18	E34SP18	Safe Run	TJ45	TM45	E34SP45
Inch For	TJ20	TM20	-	Seq. Test	TJ62	TM62	-
Inch Rev	TJ21	TM21	-	Slow	TJ32	TM32	E34SP32
Inch Run	TJ41	TM41	-	Slow Fast	TJ84	TM84	-
Inch Safe Run	TJ52	TM52	-	Slow Off Fast	TJ85	TM85	-
Jog	TJ19	TM19	E34SP19	Start	TJ33	TM33	E34SP33
Left	TJ73	TM73	-	Start Jog	TJ46	TM46	E34SP46
Left Right	TJ74	TM74	-	Start Stop	TJ47	TM47	E34SP47
Remote	TJ66	TM66	-	Stop(red)	TJ34	TM34	E34SP34
Local Remote	TJ63	TM63	-	Slower	TJ88	TM88	E34SP88
Low	TJ22	TM22	E34SP22	Supply On	TJ61	TM61	-
Lower	TJ23	TM23	E34SP23	Test	TJ83	TM83	E34SP83
Man Auto	TJ67	TM67	E34SP67	Up	TJ35	TM35	-
Man Off Auto	TJ68	TM68	E34SP68	Up Down	TJ48	TM48	E34SP48
Motor Run	TJ81	TM81	E34SP81	Up Off Down	TJ54	TM54	E34SP54
Motor Stop (red)	TM82	E34SP82	-	-	-	-	-

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Switchgear and Control

30.5mm Control Components



Electric



Enclosures are available separately, with cut-outs to take up to 16 operators, for both the heavy-duty T-Range and anti-corrosive E34 range. Rated IP66.

Enclosures constructed from aluminium alloy as standard; some cast iron, fibreglass and stainless steel enclosures also available.

Stock Code S

OperatorCapacity	Depth	Construction	T-Range Cat.No.	Price \$	E34Range Cat.No.	Price \$
1	1 contact block	aluminium alloy	TN1	61.60	E34N1	61.60
1	2 contact blocks	aluminium alloy	TN11	67.90	E34N11	67.90
1	3 contact blocks	cast iron	TN31	140.20	-	-
2	1 contact block	aluminium alloy	TN2	100.70	E34N2	100.70
2	2 contact blocks	aluminium alloy	TN12	103.70	E34N12	103.70
3	1 contact block	aluminium alloy	TN3	113.50	E34N3	113.50
3	2 contact blocks	aluminium alloy	TN13	119.50	E34N13	119.50
4	1 contact block	aluminium alloy	TN4	219.00	E34N4	219.00
4	2 contact blocks	aluminium alloy	TN14	242.50	E34N14	242.50
6	2 contact blocks	aluminium alloy	TN15	342.20	-	-
9	2 contact blocks	aluminium alloy	TN16	568.40	-	-
12	3 contact blocks	aluminium alloy	TN17	785.90	-	-
1	2 contact blocks	fibreglass	TFG11	128.00	-	-
2	2 contact blocks	fibreglass	TFG12	152.90	-	-
3	2 contact blocks	fibreglass	TFG13	183.60	-	-
1	2 contact blocks	stainless steel	TAIN11S	307.00	-	-
2	2 contact blocks	stainless steel	TAIN12S	362.70	-	-
3	2 contact blocks	stainless steel	TAIN13S	425.90	-	-
4	2 contact blocks	stainless steel	TAIN14S	498.10	-	-
5	2 contact blocks	stainless steel	TAIN15S	519.90	-	-
6	2 contact blocks	stainless steel	TAIN16S	550.80	-	-
7	2 contact blocks	stainless steel	TAIN17S	583.00	-	-
8	2 contact blocks	stainless steel	TAIN18S	992.80	-	-

Accessories - a wide range is available for T-Range and E34

			Stock Code S
T-Range Accessories		Cat. No.	Price \$
Padlock attachment for stop button		TA2	72.10
Padlock attachment with hinged transparent flap*		TA38	56.70
Protective boot for flush pushbutton operators	-blue	TA46	15.60
	-black	TA47	15.60
	-red	TA48	15.60
	-green	TA49	15.60
	-yellow	TA50	15.60
Protective boot for mushroom and palm operators**black		TA88	39.40
Protective boot for extended pushbuttons	-black	TA3	18.00
	-red	TA4	18.00
	-green	TA10	18.00
	-clear	TA25	18.00
Guard sleeve for flush pushbutton		TA12	20.20
Guard sleeve for mushroom head operator, chrome***		TA6	93.10
Guard sleeve for illuminated pushbutton		TA15	36.30
Double-ended spanner tool (to install units onto panel)		E22CW	22.60
Bulb removal tool for BA9s and BA15d type bulbs		TA65	31.90
Boot tightening tool (to install TA3, TA4, TA10, TA25)		TA96	29.80
Plug used for unused hole in cover		10250TA7	9.90

			Stock Code S
E34 Accessories		Cat. No.	Price \$
Padlock attachment for stop button		E34TA2	79.20
Padlock attachment with hinged transparent flap*		E34TA38	51.90
Protective boot for flush pushbutton operators	-blue	TA46	15.60
	-black	TA47	15.60
	-red	TA48	15.60
	-green	TA49	15.60
	-yellow	TA50	15.60
Protective boot for mushroom and palm operators**black		TA88	39.40
Protective boot for extended pushbuttons	-black	TA3	18.00
	-red	TA4	18.00
	-green	TA10	18.00
	-clear	TA25	18.00
Guard sleeve for flush pushbutton		E34TA12	20.20
Guard sleeve for mushroom head operator, chrome***		E34TA6	93.10
Guard sleeve for illuminated pushbutton		E34TA15	36.30
Double-ended spanner tool (to install units onto panel)		E22CW	22.60
Bulb removal tool for BA9s and BA15d type bulbs		TA65	31.90
Boot tightening tool (to install TA3, TA4, TA10, TA25)		TA96	29.80
Plug used for unused hole in cover		10250TA7	9.90
Stainless steel plug		E30KT5	32.70

*for use with flush and extended pushbuttons and knob-operated selector switches

**Not suitable for use with T178

***Not suitable for use with T140



Thermal and magnetic protection EGPS1B

Technical performances

- Rated current In (A) 0.1-63
- Rated operational current Ie (A) 0.1-63
- Rated power at 400Vac (kW) 0.02-30
- Utilisation category
 - IEC 60947-2 (circuit breaker) A
 - IEC 60947-4-1 (MMS) AC-3
- Tripping class IEC 60947-4-1 10
- Magnetic release Ie max. (A) x13
- Mechanical/electrical endurance 100,000

Available Mid 2004

Characteristics

- Rotary handle operator
- Thermal and magnetic protection
- Standard and high breaking capacity
 - Icu = 100kA G Ics = 100% Icu
 - Icu < 100kA G Ics min. 75% Icu
- Clear identification of the operation state (ON-OFF-tripped)
- Ambient temperature compensation
- Phase failure protection
- Type 2 Coordination IEC947

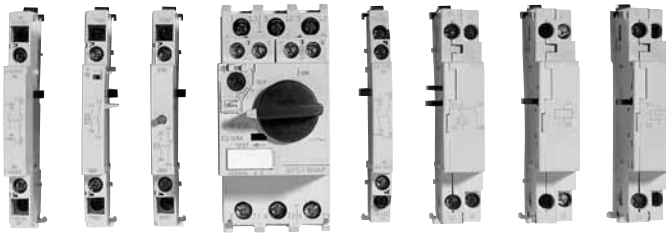
GPS1B - High breaking capacity

Stock Code S

Rated power 3 phase motors at 400Vac Pn (kW)	Rated current In (1) (A)	Thermal current setting range (A)	Rated ultimate short-circuit breaking capacity at 400V Icu (kA)	Rated service short-circuit breaking capacity at 400V Ics (kA)	Cat. no.	List Price
0.02	0.16	0.1 - 0.16	100	100	EGPS1BHAA	171.00
0.06	0.25	0.16 - 0.25	100	100	EGPS1BHAB	171.00
0.09	0.4	0.25 - 0.4	100	100	EGPS1BHAC	171.00
0.12/0.18	0.63	0.4 - 0.63	100	100	EGPS1BHAD	171.00
0.25	1	0.63 - 1	100	100	EGPS1BHAE	183.00
0.37/0.55	1.6	1 - 1.6	100	100	EGPS1BHAF	183.00
0.75	2.5	1.6 - 2.5	100	100	EGPS1BHAG	183.00
1.5	4	2.5 - 4	100	100	EGPS1BHAH	183.00
2.2	6.3	4 - 6.3	100	100	EGPS1BHAI	183.00
3/4	10	6.3 - 10	100	100	EGPS1BHAK	217.00
5.5	13	9 - 13	100	100	EGPS1BHAL	217.00
7.5	16	11 - 16	50	38	EGPS1BHAM	217.00
10	20	14 - 20	50	38	EGPS1BHAN	217.00
11	25	19 - 25	50	38	EGPS1BHAP	262.00
15	32	24 - 32	50	38	EGPS1BHAR	326.00
18.5	40	28 - 40	50	38	EGPS2BHAS	536.00
22	50	35 - 50	50	38	EGPS2BHAT	583.00
30	63	45 - 63	50	38	EGPS2BHAU	630.00

(1) Rated current: highest thermal current setting range value.

Auxiliaries



Available Mid 2004

Product range

- Auxiliary contacts (frontal & lateral)
- Alarm contact block
- Auxiliary and alarm contact block
- Short-circuit alarm contact block
- Shunt trip
- Undervoltage release
- Undervoltage release with 2NO early make contacts
- External handle operator
- Terminal protector
- Busbar system

Technical performances

- All auxiliaries can be mounted and changed easily, without any tools
- Both frames EGPS1 and EGPS2 uses same auxiliaries
- All terminals are capable for 2 cables (0.5mm² - 2.5mm²)
- Side auxiliary contacts are rated to A600, P300 duty
- Frontal auxiliary contacts are rated to B300, Q300 duty
- Minimum operational contact 5mA, 17Vdc
- All terminal screwhead are Pozidriv 2 and slotted combination

Auxiliary contact blocks

Stock Code S

		For use with	Type	Cat. no.	Price \$
Frontal	Maximum 2 auxiliary contact blocks per manual motor starter	EGPS1... and EGPS2...	1 NO	EGPAC10FBA	23.00
		EGPS1... and EGPS2...	1 NC	EGPAC01FBA	23.00
Lateral	Two contacts Side mounting on the left	EGPS1... and EGPS2...	1 NO + 1 NC	EGPAC11LLA	26.80
		EGPS1... and EGPS2...	2 NO	EGPAC20LLA	26.80
		EGPS1... and EGPS2...	2 NC	EGPAC02LLA	26.80
	Two contacts Side mounting on the right	EGPS1... and EGPS2...	1 NO + 1 NC	EGPAC11LRA	26.80
		EGPS1... and EGPS2...	2 NO	EGPAC20LRA	26.80
		EGPS1... and EGPS2...	2 NC	EGPAC02LRA	26.80

Alarm contact block

Stock Code S

Description	For use with	Type	Cat. no.	Price \$
Frontal mounting on the right	EGPS1... and EGPS2...	1 NO	EGPAL10FRA	24.50
Single contact	EGPS1... and EGPS2...	1 NC	EGPAL01FRA	24.50

Auxiliary / alarm contact block

Stock Code S

Description	For use with	Type	Cat. no.	Price \$
Side mounting on the left (front alarm contact block can not be used at the same time)	EGPS1... and EGPS2...	1 NO (Alarm) + 1 NO (Aux.)	EGPAD1010LLA	39.60
	EGPS1... and EGPS2...	1 NO (Alarm) + 1 NC (Aux.)	EGPAD1001LLA	39.60
	EGPS1... and EGPS2...	1 NC (Alarm) + 1 NO (Aux.)	EGPAD0110LLA	39.60
Two contacts	EGPS1... and EGPS2...	1 NC (Alarm) + 1 NC (Aux.)	EGPAD0101LLA	39.60

Auxiliary / alarm contact block

Stock Code S

Description	For use with	Type	Cat. no.	Price \$
Side mounting on the left	EGPS1... and EGPS2... Two contacts NO + NC Mechanical indication marking	1 NO + 1 NC	EGPAE11LLA	50.20



Available Mid 2004

Shunt trip device

Stock Code S

Description	For use with	Coil voltage	Cat. no.	Price \$
Side mounting on the right	EGPS1... and EGPS2...	24V 50/60Hz	EGPASLRAA1	73.60
Cannot be used together with the undervoltage trip device	EGPS1... and EGPS2...	48V 60Hz	EGPASLRAAF	73.60
	EGPS1... and EGPS2...	48V 50Hz / 60V 60Hz	EGPASLRAAG	73.60
	EGPS1... and EGPS2...	110/127V 50Hz / 120V 60Hz	EGPASLRAAJ	73.60
	EGPS1... and EGPS2...	240V 50Hz / 277V 60Hz	EGPASLRAAR	73.60
	EGPS1... and EGPS2...	380/400V 50Hz	EGPASLRAAU	73.60
	EGPS1... and EGPS2...	415/440V 50Hz / 460/480V 60Hz	EGPASLRAAW	73.60
	EGPS1... and EGPS2...	500V 50Hz / 600V 60Hz	EGPASLRAAY	73.60
	EGPS1... and EGPS2...	24 to 60Vdc	EGPASLRADD	80.00
	EGPS1... and EGPS2...	110 to 240Vdc	EGPASLRADJ	80.00

Undervoltage trip device

Stock Code S

Description	For use with	Coil voltage	Cat. no.	Price \$
Side mounting on the right	EGPS1... and EGPS2...	24V 50Hz	EGPAULRAAD	75.00
Cannot be used together with the shunt trip device	EGPS1... and EGPS2...	48V 50Hz	EGPAULRAAG	75.00
	EGPS1... and EGPS2...	110/127V 50Hz / 120V 60Hz	EGPAULRAAJ	75.00
	EGPS1... and EGPS2...	240V 50Hz / 277V 60Hz	EGPAULRAAR	75.00
	EGPS1... and EGPS2...	380/400V 50Hz	EGPAULRAAU	75.00
	EGPS1... and EGPS2...	415/440V 50Hz / 460/480V 60Hz	EGPAULRAAW	75.00

External handle operator

				Stock Code S
Description	For use with	Type	Cat. no.	Price \$
Used for distance mounting on a panel	EGPS1 *H ...	Standard (black)	EGPA1HAB	116.60
	EGPS1 *H ...	Emergency (red/yellow)	EGPA1HAR	107.70
Lockable with 1, 2 or 3 padlocks diameter 4 to 8 mm	EGPS2...	Standard (black)	EGPA2HAB	116.60
	EGPS2 ...	Emergency (red/yellow)	EGPA2HAR	107.70

Two types: standard and emergency applications
ON/OFF/TRIPPING position marking
Protection degree: IP54
Shaft mounting depths:
139.8 - 289.8 mm for EGPA1HAB, EGPA1HAR
161 - 311.1 mm for EGPA2HAB, EGPA2HAR
Package parts and quantities:
1 handle unit
1 shaft
1 shaft guide
1 latch (screws)
4 mounting screws

Busbar System

					Stock Code S	
	Description	For use with	Connection	Cat. no.	Price \$	
3-phase feed-in terminals	Main feeding terminal Upper connection	EGPS1...	Terminal capacity: 25 mm ²	EGPB1FA	31.00	
		EGPS2...	Terminal capacity: 50 mm ²	EGPB2FA	32.60	
Main busbar 63A max.	Modular spacing 45 mm	for 2 EGPS1... + frontal auxiliaries	Pin	EGPB1B02A	25.50	
		for 3 EGPS1... + frontal auxiliaries	Pin	EGPB1B03A	31.00	
		for 4 EGPS1... + frontal auxiliaries	Pin	EGPB1B04A	35.00	
		for 5 EGPS1... + frontal auxiliaries	Pin	EGPB1B05A	37.30	
	Modular spacing 54 mm	for 2 EGPS1... + 9mm lateral auxiliary	Pin	EGPB1B12A	26.00	
		for 3 EGPS1... + 9mm lateral auxiliary	Pin	EGPB1B13A	35.60	
		for 4 EGPS1... + 9mm lateral auxiliary	Pin	EGPB1B14A	42.00	
		for 5 EGPS1... + 9mm lateral auxiliary	Pin	EGPB1B15A	46.20	
	Modular spacing 63 mm	for 2 EGPS1... + 18mm lateral auxiliary	Fork	EGPB1B22A	58.80	
		or 2 x 9mm lateral auxiliary				
		for 4 EGPS1... + 18mm lateral auxiliary	Fork	EGPB1B24A	65.50	
		or 2 x 9mm lateral auxiliary				
125A max.	Modular spacing 55 mm	for 2 EGPS2... + frontal auxiliaries	Pin	EGPB2B02A	49.00	
		for 3 EGPS2... + frontal auxiliaries	Pin	EGPB2B03A	56.60	
		for 4 EGPS2... + frontal auxiliaries	Pin	EGPB2B04A	65.50	
	Modular spacing 64 mm	for 2 EGPS2... + 9mm lateral auxiliary	Pin	EGPB2B12A	73.30	
		for 3 EGPS2... + 9mm lateral auxiliary	Pin	EGPB2B13A	75.50	
		for 4 EGPS2... + 9mm lateral auxiliary	Pin	EGPB2B14A	80.00	
	Modular spacing 73 mm	for 2 EGPS2... + 18mm lateral auxiliary	Pin	EGPB2B22A	56.60	
		or 2 x 9mm lateral auxiliary				
		for 4 EGPS2... + 18mm lateral auxiliary	Pin	EGPB2B24A	75.50	
		or 2 x 9mm lateral auxiliary				
	Busbar cover	Touch guard for non used space	EGPS1...	Pin	EGPB1GA	7.00
			EGPS2...	Pin	EGPB2GA	10.50



Three pole minicontactors 6, 9 and 12A (AC-3) 20A (AC-1)

- Control circuit: Alternating current up to 600V
Direct current up to 440V
- Terminal numbering in accordance with EN 50012
- Fixing by clipping onto 35 mm DIN rail (EN 50022-35) or by screws
- Screws and fast-on terminals protected against accidental contact in accordance with VDE 0106 T.100 and VBG4
- Degree of protection IP20 (EN 60529).
- Maximum number of auxiliary contacts to be added: 6

Available Mid 2004

General

		EMC0...	EMC1...	EMC2...
Maximum number of poles		4	4	4
Rated thermal current (Ith)	(A)	20	20	20
q H 60° (1)				
Rated operational current Ie (2)	(A)	6	9	12
(3x440V, 50/60Hz, AC3)				
Rated insulation current Ui	(V)	750	750	750
Rated operational current Ue	(V)	690	690	690

Standard voltages

To complete the catalogue number, replace the symbol © by the code corresponding to the voltage and frequency of the control circuit (other voltages on request)

Alternating current (V)

©	A	B	C	D	E	F	G	H	J	K	M	N	S	T	U	W	Y
AC 50Hz				24		42	48		110	115 127		220 240	260		380 400	415 440	500
AC 60Hz	6	12	24		32	48	60	110	120		208 220	240		380	440	480	600

Alternating current (V). Bifrequency coil

©	10	1	2	9	3	4	5	6	7	8	12	13
AC 50/60Hz	12	24	42	48	110 115	120	220	230	240	440	380	400

Operating voltages limits with bifrequency coils:

With 60Hz = 0.85 to 1.1 x Us

With 50Hz = 0.8 to 1.1 x Us in continuous service (ED=100%) with a maximum ambient temperature of 40°C

Direct current(V)

©	A	B	C	D	E	F	G	H	I	J	K	L	N	17	R	S	16
DC	6	12	32	24	36	42	48	60	72	110	120	125	220	230	240	250	440

Direct current(V) - Wide voltage range

©	WD	WE	WG	WI	WJ	WN
DC	24	33	48	72	110	220

Mini Contactors



Three Pole Mini Contactors and Four poles Mini Contactors (Available Mid 2004)

Stock Code S

Max.operat.current		Admissible power AC3					Aux. contacts		Control circuit: Alternating current		Control circuit: Direct current	
Non-inductive loads AC-1 (2) A	Motors <440V, 3 ~ 50/60Hz AC-3 (3) A	1-phase		3-phase			-3 -4	-1 -2	Cat. No. (1)	Price \$	Cat. No. (1)	Price \$
		115V	220V	220V 230V	380V 400V	500V						
		kW HP	kW HP	kW HP	kW HP	kW HP						
Terminal: screw												
20	6	0.37	0.75	1.5	2.2	3	1	0	EMC0A310AT ©	77.00		
		0.5	1	2	3	4	0	1	EMC0A301AT ©	77.00		
20	9	0.56	1.12	2.2	4	4	1	0	EMC1A310AT ©	80.00	EMC1C310AT ©	162.00
		0.75	1.5	3	5.5	5.5	0	1	EMC1A301AT ©	80.00	EMC1C301AT ©	162.00
20	12	0.75	2	3	5.5	5.5	1	0	EMC2A310AT ©	87.00	EMC2C310AT ©	178.00
		1	2.6	4	7.3	7.3	0	1	EMC2A301AT ©	87.00	EMC2C301AT ©	178.00

- To complete the catalogue number, replace the symbol © by the code corresponding to the voltage and frequency of the control circuit (other voltages on request)
- Electrical endurance AC-1:
 - EMC0... 0.2 x 106 operations
 - EMC1... 0.3 x 106 operations
 - EMC2... 0.35 x 106 operations
- Electrical endurance AC-3:
 - EMC0... (6A) = 1.2 x 106 operations
 - EMC1... (9A) = 0.85 x 106 operations
 - EMC2... (12A) = 0.6 x 106 operations
- Terminal with wire 1.5 mm²: le = 16A
with wire 1 mm²: le = 10A

Max.operat.current		Admissible power AC3					Poles		Control circuit: Alternating current		Control circuit: Direct current	
Non-inductive loads AC-1 (2) A	Motors <440V, 3 ~ 50/60Hz AC-3 (3) A	1-phase		3-phase			-3 -4	-1 -2	Cat. No. (1)	Price \$	Cat. No. (1)	Price \$
		115V	220V	220V 230V	380V 400V	500V						
		kW HP	kW HP	kW HP	kW HP	kW HP						
Screw terminal												
20	9	AC-1					4	0	EMC1A400AT ©	85.50	EMC1C400AT ©	162.00
		1.8	3.5	6.1	10.5	13.8	2	2	EMC1AB00AT ©	85.50	EMC1CB00AT ©	162.00
		-	-	-	-	-	0	4	EMC1AA00AT ©	85.50		
		AC-3										
		0.56	1.12	2.2	4	4						
		0.75	1.5	3	5.5	5.5						

- To complete the catalogue number, replace the symbol © by the code corresponding to the voltage and frequency of the control circuit
- Electrical endurance AC-1:
 - MC0... 0.2 x 106 operations
 - MC1... 0.3 x 106 operations
 - MC2... 0.35 x 106 operations
- Electrical endurance AC-3:
 - MC0... (6A) = 1.2 x 106 operations
 - MC1... (9A) = 0.85 x 106 operations
 - MC2... (12A) = 0.6 x 106 operations
- Terminal with wire 1.5 mm²: le = 16A
with wire 1 mm²: le = 10A

Terminal with wire 1 mm²: le = 10A

Instantaneous auxiliary contact blocks - Front Mounting

Screw terminal

Stock Code S

Number contacts	Combinations with basic contactor 10E	Contacts in acc. with EN 50012	Contacts in acc. with EN 50005	Aux. contacts		Cat. no.	Price \$
				-3 -4	·1 ·2		
2	21E	11		1	1	EMACN211AT	23.68
2	12E	2		0	2	EMACN202AT	23.68
2			20	2	0	EMARN220AT	23.68
2			11	1	1	EMARN211AT	23.68
2			2	0	2	EMARN202AT	23.68
4	41E	31		3	1	EMACN431AT	39.90
4	32E	22		2	2	EMACN422AT	39.90
4	23E	13		1	3	EMACN413AT	39.90
4			40	4	0	EMARN440AT	39.90
4			31	3	1	EMARN431AT	39.90
4			22	2	2	EMARN422AT	39.90
4			13	1	3	EMARN413AT	39.90
4			4	0	4	EMARN404AT	39.90

Instantaneous auxiliary contact blocks - Lateral Mounting

Screw terminal

Stock Code S

Number contacts	Combinations with basic contactor 10E	Contacts in acc. with EN 50012	Contacts in acc. with EN 50005	Aux. contacts		Cat. no.	Price \$
				-3 -4	·1 ·2		
1	20	10		1	0	MACL110AT	14.00
1	11E	1		0	1	MACL101AT	14.00

1. Terminal with wire 1 mm²; I_e = 10A

Accessories

Voltage suppressor block

Connection and (plug-in) fixing on to the connector

Stock Code S

For use with:	Type	Control	U _e	Cat. no.	Price \$
EMCRA, MC_ ...	R/C	AC	72...250V 50/60Hz	MP0AAE2	31.85
EMCRC, MC_ ...	Diode	DC	6...250V DC	MP0CAE3	31.85

Pole paralleling links

To connect two, three or four phases in parallel

Stock Code S

For use with:	Phases	Terminal capacity	U _e	Cat. no.	Price \$
EMC_ ...	2, 3, 4 (parallel)	Ø4.5mm - 16mm ²		MVP0C	14.95

Mechanical interlock

Mechanical interlock and pole jumpers

Stock Code S

For use with:	Cat. no.	Price \$
EMCR, MC_ ...	MMH0	14.35



Available Mid 2004

Three pole contactors (4 Pole Version available on Request) 9 to 105A (AC-3) 25 to 140A (AC-1)

- Control circuit:
 - Alternating current up to 690V
 - Direct current up to 440V
- Terminal numbering in accordance with EN 50005 and EN 50012
- Fixing by clipping onto 35mm DIN rail EN 50022-35 or by screws
- Screws protected against accidental contact in accordance with VDE 0106 T100, VBG4.
- Three coil terminals
- Mounting possibilities of front/side instantaneous auxiliary contact blocks, timed auxiliary contact blocks, mechanical latch, transient suppressor block and interface modules.
- Degree of protection:
 - IP20 to ECL00 ... ECL02
 - IP10 to ECL25 ... ECL10
- Maximum number of auxiliary contacts:
 - 4 for ECL00 ... ECL25
 - 6 for ECL04 ... ECL45
 - 8 for ECL06 ... ECL10
- Type 2 Coordination IEC947

Standard voltages

To complete the catalogue number, replace the symbol © by the code corresponding to the voltage and frequency of the control circuit.

Alternating current (V)

©	C	D	E	F	G	H	J	K	L	M	N	R	S	T	U	V	W	X	Y	Z
AC 50Hz		24	32	42	48		110	127		230	220	240		400	380		415	440	500	660
AC 60Hz	24			48		110	120		208	220	277		240	380	480	440	460		600	

Alternating current (V). Dual-frequency coil

©	1	2	9	3	4	5	6	7	13	8	15
AC	24	42	48	110	120	220	230	240	400	440	480
50/60Hz				115							

Direct current (V)

For contactors type ECL...D / Operating limits: 0,80 ... 1,10 x Us

©	B	D	E	F	G	H	I	J	K	N	P	R	T	X
Voltage	12	24	36	42	48	60	72	110	120	220	230	240	250	440
									125					

Coil with electronic module for contactors ECL...E (can also be used with alternating current)

©	D	F	H	J	N	Y
Voltage	24	42	60	110	220	440
	28	48	72	125	250	

Direct current (V). Coil with wide voltage range (0,70 ... 1,30 x Us)

For contactors type ECL...D

©	WB	WD	WE	WF	WG	WH	WI	WJ	WK	WN	WP	WR	WT	WX
DC	12	24	33	42	48	60	72	110	125	220	230	240	250	440

Maximum number of add-on auxiliary contact blocks:

ECL00D...ECL02D : 2NO or 1NC
ECL03D...ECL45D : 1NO and 1NC
ECL05D...ECL10D : 4NO or 2NC
ECL05E...ECL10E : 4 cont. aux.

Coil with electronic module for contactors ECL...E

©	WD	WE	WF	WH	WJ	WN
Voltage	24	33	48	72	110	220

Different auxiliary contact configurations, contact us.

Max.operat.current		Admissible power AC3				Electrical endurance	Aux. contacts		Control circuit: Alternating current		Control circuit: Direct current		
Non-inductive loads AC-1 A	Motors <440V, 3 ~ 50/60Hz AC-3 A	220V 230V kW HP	380V 400V kW HP	415V 440V kW HP	500V kW HP		Cat. AC-3 Operations	-3 -1 -4 -2	Cat. No. (1)	Price \$	Cat. No. (1)	Price \$	
25	9	2.2	4	4	5.5	2x10 ⁶	0 0						
		3	5.5	5.5	7.5		1 0	ECL00A310T©	90.50	ECL00D310T©	221.00		
							0 1	ECL00A301T©	90.50	ECL00D301T©	221.00		
25	12	3	5.25	5.5	7.5	2x10 ⁶	0 0						
		4	7.5	7.5	10		1 0	ECL01A310T©	111.00	ECL01D310T©	248.00		
							0 1	ECL01A301T©	111.00	ECL01D301T©	248.00		
32	18	4	7.5	7.5	10	1.7x10 ⁶	0 0						
		5.5	10	10	13.5		1 0	ECL02A310T©	143.00	ECL02D310T©	292.00		
							0 1	ECL02A301T©	143.00	ECL02D301T©	292.00		
45	25	7.5	12	12	15	2x10 ⁶	0 0						
		10	16	16	20		1 0	ECL03A310M©	221.00	ECL03D310M©	382.00		
							0 1	ECL03A301M©	221.00	ECL03D301M©	382.00		
60	32	9	16	16	18.5	2x10 ⁶	0 0						
		12	22	22	25		1 0	ECL04A310M©	270.00	ECL04D310M©	455.00		
							0 1	ECL04A301M©	270.00	ECL04D301M©	455.00		
60	40	11	18.5	22	25	2x10 ⁶	0 0	ECL45A300M©	333.00	ECL45D300M©	580.00		
		15	25	30	34		1 1	ECL45A311M©	333.00				
90	50	15	22	25	30	1.8x10 ⁶	0 0	ECL06A300M©	372.00	ECL06D300M©	610.00		
		20	30	34	40		1 1	ECL06A311M©	372.00				
110	65	18.5	30	37	40	1.7x10 ⁶	0 0	ECL07A300M©	568.00	ECL07D300M©	872.00		
		25	40	50	55		1 1	ECL07A311M©	568.00				
110	80	22	37	45	45	1.5x10 ⁶	0 0	ECL08A300M©	790.00	ECL08D300M©	960.00		
		30	50	60	60		1 1	ECL08A311M©	790.00				
140	95	25	45	50	55	1.7x10 ⁶	0 0	ECL09A300M©	870.00	ECL09D300M©	1,056.00		
		34	60	68	75		1 1	ECL09A311M©	870.00				
140	105	30	55	55	65	1.5x10 ⁶	0 0	ECL10A300M©	1,030.00	ECL10D300M©	1,121.00		
		40	75	75	88		1 1	ECL10A311M©	1,030.00				
Spare coils		ECL03 - ECL45						LB1A ©		94.50	ELB1D ©		111.00
		ECL06 - ECL10						LB3A ©		94.50	ELB3D ©		111.00
		ECL06E - ECL10E						LB4A ©		169.00	ELB4D ©		201.00

1. To complete the catalogue number, replace the symbol © by the code corresponding to the voltage and frequency of the control circuit.
2. Equipped with one block BCLF
3. Equipped with two blocks BCLF

Auxiliary contact blocks

Instantaneous

		Terminal: screw				Stock Code S	
Frontal mounting	Number of contacts	Contacts				Cat. no.	Price \$
	1	1	0	0	0	EBCLF10	12.48
	1	0	1	0	0	EBCLF01	12.48
	1	0	0	1	0	EBCLF10G	15.63
	1	0	0	0	1	EBCLF01G	15.63
Side mounting	2	2	0	0	0	EBCLL20	35.80
	2	1	1	0	0	EBCLL11	35.80
	For combinations of more than 4 front-mounted and 2 side-mounted auxiliary contact blocks						
	2	2	0	0	0	EBRLL20	36.10
	2	1	1	0	0	EBRLL11	36.10

Pneumatic timer

		Terminal: screw				Stock Code S			
Front mounting	Number of contacts	Contacts				Type	Time	Cat. no.	Price \$
	2	0	0	1	1	Delay ON	0.1 - 30 sec.	EBTLF30C	151.00
	2	0	0	1	1	Delay ON	1 - 60 sec.	EBTLF60C	151.00
	2	0	0	1	1	Delay OFF	0.1 - 30 sec.	EBTLF30D	151.00
	2	0	0	1	1	Delay OFF	1 - 60 sec.	EBTLF60D	151.00

Accessories

		Terminal: screw				Stock Code S		
Interlock	Number of contacts	Contacts				For use with:	Cat. no. (1)	Price \$
Mechanical								
	-	-	-	-	-	ECL00 ... ECL10	BELA	32.60
Mech./ electrical								
	2	0	2	-	-	ECL00 ... ECL10	BELA02	46.00
Mechanical latch blocks								
Frontal mounted to the contactor						ECL00 ... ECL10	ERMLF ©	115.50

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©	D	G	HC	J	N	U	Y
AC 50Hz	24, 32	42, 48		110, 115, 120, 127	220, 230, 240	380, 400, 415, 440, 480	500, 660/690
AC 60Hz	24, 32	48, 60		110, 115, 120, 127	208, 220, 240, 277	380, 400, 415, 440, 480	600
DC	24, 32, 36	42, 48	60, 72	110, 120, 125	220, 230, 240, 250	440	

1) To complete the catalogue number, replace the symbol © by the code corresponding to the voltage and frequency of the control circuit.

Accessories

Transient voltage suppressor block

Fixation to the coil terminals, that allows simultaneous use with the auxiliary contact blocks.

Stock Code S

For use with:	Type	Control circuit	Ue	Cat. no.	Price \$
ECL00 ... ECL45	R/C	AC	12V ... 48V	BSLR2G	87.80
ECL00 ... ECL45	R/C	AC	50V ... 127V	BSLR2K	87.80
ECL00 ... ECL45	R/C	AC	130V ... 250V	BSLR2R	87.80
ECL05A ... ECL10A	R/C	AC	50V ... 127V	BSLR3K	87.80
ECL05A ... ECL10A	R/C	AC	130V ... 250V	BSLR3R	87.80
ECL_ _ D	Diode	DC	12V ... 600V	BSLDZ	87.80
ECL00 ... ECL10	Varistor	AC / DC	24V ... 48V	BSLV3G	87.80
ECL00 ... ECL10	Varistor	AC / DC	50V ... 127V	BSLV3K	87.80
ECL00 ... ECL10	Varistor	AC / DC	130V ... 250V	BSLV3R	87.80

Electronic timer module

Fixation to the coil terminals, that allows simultaneous use with the auxiliary contact blocks.

Stock Code S

For use with:	Type	Control circuit	Ue	Cat. no.	Price \$
ELTCL00 ... ELTCL10	24-250V AC/DC	delay ON	0.1 - 2 sec.	BETL02C	174.00
ELTCL00 ... ELTCL10	24-250V AC/DC	delay ON	1.5 - 45 sec.	BETL45C	174.00

Interface module

Fixation to the coil terminals, that allows simultaneous use with the auxiliary contact blocks.

Stock Code S

For use with:	Type	Control circuit	Ue	Cat. no.	Price \$
ECL00 ... ECL10	24-250V AC	Relay	24V	IMRD	69.00

Spares Replacement Contact Kits Available On Request

Thermal Overload Relays

Thermal overload relays for minicontactors from 0.11 to 14A



Available Mid 2004

- Control circuit up to 690V
- Power circuit up to 690V
- Three-pole differential (phase unbalance protection)
- Automatic ambient temperature compensation between -25 °C and +60 °C
- Choice of manual or automatic reset
- Direct connection to contactor or independent mounting using accessories.
- Screw and Ring terminal versions
- Terminals protected against accidental contact in accordance with VDE 0106 T.100 and VBG4.
- Terminal numbering in accordance with EN 50005
- Degree of protection IP20 (EN 60529)
- Additional auxiliary contact block 1NO+1NC (w/ manual reset only)

General characteristics

- Thermal protection against balanced overload.
- Three-pole differential (phase unbalance protection).
- Automatic ambient temperature compensation.
- Front mounted selector for choosing utilisation current.
- Reset button, 2 positions : Manual(H) and Automatic(A) by turning the blue selector.
- Stop push button, independent of reset (red).
- Manual trip lever (tripping test).
- Tripping indicator (0-1).
- To facilitate wiring arrangements terminal 96 fits directly onto coil terminal (A2) and terminal 14/22 fits directly onto the feedback auxiliary contact.

Thermal overload relays for minicontactors

Stock Code S

For use with:	Setting range (regulation)		Fuse				Cat. No.	Price \$
			aM		gL			
	min. A	max. A	Type 2 A	Type 1 A	Type 2 A	Type 1 A		
EMC0...	0.11	0.17	0.5	0.5	0.5	0.5	EMT03A	85.50
EMC1...	0.17	0.26	0.85	1	1	1	EMT03B	85.50
EMC2...	0.26	0.43	1	2	2	4	EMT03C	85.50
	0.43	0.65	1	4	2	8	EMT03D	85.50
	0.65	1	2	6	4	12	EMT03E	85.50
	0.85	1,3	2	6	4	12	EMT03F	85.50
	1.1	1.6	2	10	4	16	EMT03G	85.50
	1.35	2	4	10	6	16	EMT03H	85.50
	1.7	2.4	4	16	6	25	EMT03I	85.50
	2.2	3.2	4	20	6	32	EMT03J	85.50
	2.5	4	4	20	6	32	EMT03R	85.50
	3	4.7	6	20	10	32	EMT03K	85.50
	4	6.3	10	32	16	50	EMT03L	85.50
	5.5	8	12	50	20	63	EMT03M	85.50
	7.5	10.5	16	50	25	80	EMT03N	85.50
	10	14	20	32	32	100	EMT03P	85.50

Accessories

Stock Code S

	Terminal	Cat. no.	Price \$
Input Terminal	Screw	MVE0T	18.80
Base	For separate mounting onto standard EN 50022-35 profile	MVB0T	9.50

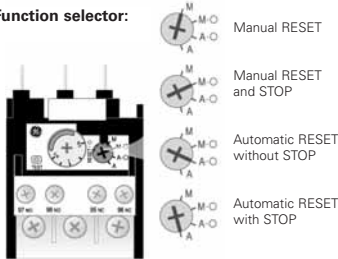


Available Mid 2004

Thermal Overload Relays for Standard Contactors from 0.16 to 110A

- Control circuit up to 690V AC
- Power circuit:
 - RT1, RT12: up to 690V
 - RT2, RT22, RT3, RT32, RT4/4L, RT5/5L & RT6/6L: up to 1000V
- Thermal protection against normal overloads.
- Three pole differential (phase unbalance protection).
- Protection against long starting times.
- Automatic ambient temperature compensation between -25°C / +60°C.
- Front mounted test button.
- Trip indication.
- Independent auxiliary contacts with double rupture (1NO + 1NC).

Function selector:



Stock Code S

	For use with:	Setting range (regulation)		Fuse (1)		Cat. No.	Price \$
		min. A	max. A	aM A	gL - gG A		
Class 10A	ECL00	0.16	0.26	2	2	ERT1B	117.40
	ECL01	0.25	0.41	2	2	ERT1C	117.40
	ECL02	0.4	0.65	2	2	ERT1D	117.40
	ECL25	0.65	1.1	2	4	ERT1F	117.40
	ECL03	1	1.5	4	6	ERT1G	117.40
	ECL04	1.3	1.9	4	6	ERT1H	117.40
	ECL45	1.8	2.7	6	10	ERT1J	117.40
		2.5	4	8	16	ERT1K	117.40
		4	6.3	12	20	ERT1L	117.40
		5.5	8.5	16	20	ERT1M	117.40
		8	12	20	25	ERT1N	117.40
		10	16	25	35	ERT1P	117.40
		14.5	18	32	50	ERT1S	128.80
		17.5	22	40	50	ERT1T	128.80
	21	26	40	63	ERT1U	152.00	
	25	32	50	80	ERT1V	152.00	
	30	40	63	100	ERT1W	234.00	
Class 10	ECL05	11.5	15	32	35	ERT2A	365.00
	ECL06	14.5	19	40	50	ERT2B	365.00
	ECL07	18.5	25	50	63	ERT2C	365.00
	ECL08	24	32	63	100	ERT2D	365.00
	ECL09	30	43	80	125	ERT2E	365.00
	ECL10	42	55	100	160	ERT2G	365.00
		54	65	125	160	ERT2H	396.00
		64	82	125	200	ERT2J	477.00
		78	97	125	200	ERT2L	477.00
		90	110	160	250	ERT2M	477.00

(1) Most suitable fuse in accordance with IEC 60947-4-1.

Other switch and Control Gear Products available from Eaton:

- Cutler-Hammer IT Electro-Mechanical 24DC contactors and starters (Devicenet communications capable).
- Cutler-Hammer NEMA rated contactors and starters.
- Cutler-Hammer E26 Series stacklights.
- Vintage Cutler-Hammer and Westinghouse contactor renewal parts.

Please Contact your Local Eaton Electric Systems sales office for assistance.

(Please see the back cover for contact information)