Electronic Product and Relays

B - Logical signal conditioners

Summary

Logical signal conditioners

B

Diodes are often used for industrial applications in several combinations with the aim to make multiple logical functions, lamp testing, diode bridge, etc

Diode modules

- Wire size : 2.5 mm²
- Diode 1N4007 - 1 A / 1000 V
- Modularity
- Several arrangement schemes :
  - Pass thru diode
  - Diodes modules with common on anode
  - Diodes modules with common on cathode
- IP20 in sealed housing

Free components modules

- Wire size : 2.5 mm²
- Module equipped with an empty PCB where the user can weld classic electronic components (diodes, resistors, capacitors, etc.).

Module for lamp testing

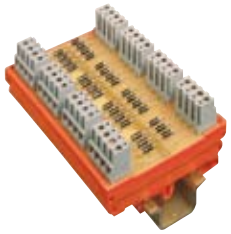
- Wire size : 2.5 mm²
- Module equipped with a diode and assembled solder tabs, where the user can assemble electronic resistors for current adaptation purposes

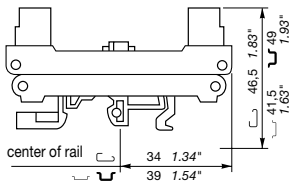
Module diode bridge

- Wire size : 2.5 mm² (4 mm² solid wire)
- Spacing : 18 mm
- Diode bridge having 4 diodes covering a large voltage range from 12 to 240 VAC
- Several arrangement schemes :
  - pass thru diode
  - diode bridged protected against over voltage in both input and output
  - diode bridge with status of voltage presence

Logical signal conditioners

Diode modules ⌙ ⌙ DIN 1-3





Diodes modules serie 20 000

EM 8 DDA ... - Pairs of diodes, serie 20 000
EM 15 DTA ... - Pairs of diodes with common anode and test with common on cathode, ...

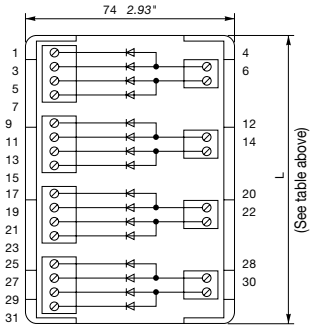
Functions : bussing signals, decoupling of common signals, protection against reverse voltage, relay coil protection

Order P/N

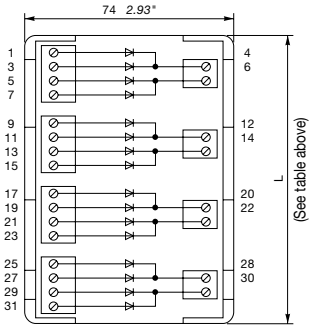
Description	Type	Order P/N	Length L. mm inch.	Packaging	Masse kg
Diodes modules with commnon on anode 8 pairs of diodes	EM 8 DDA	1SNA **020 274** R**05**00	101,6 *4.00"*	1	0,1
Diodes modules with comon on cathode 8 pairs of diodes	EM 8 DDC	1SNA **020 277** R**00**00	101,6 *4.00"*	1	0,1
Pairs of diodes with common anode and test with common on cathode 15 pairs of diodes	EM 15 DTA	1SNA **020 280** R**00**00	101,6 *4.00"*	1	
Pairs of diodes with common cathode and test wiyh common on anode 15 pairs of diodes	EM 15 DTC	1SNA **020 283** R**27**00	101,6 *4.00"*	1	

Characteristics

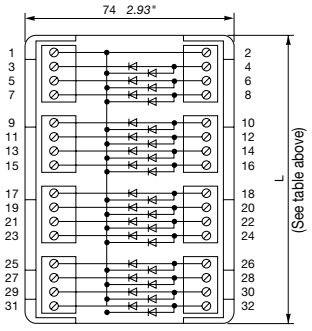
CHARACTERISTICS	EM 8 DDA	EM 8 DDC	EM 15 DTA	EM 15 DTC
Max. current by diode	1 A	1 A	1 A	1 A
Operating voltage	255 V max.	255 V max.	255 V max.	255 V max.
Voltage drop at max.	1 V	1 V	1 V	1 V
Repetitive peak-reverse voltage	1000 V	1000 V	1000 V	1000 V
	30 A / 10 ms	30 A / 10 ms	30 A/ 10 ms	30 A / 10 ms
Peak current	4 A	8 A	16 A	3 A
Max. current per assembly				
Other characteristics				
Body material grey	UL 94 V2			
Connecting Rigide conductor	0 - 4 mm² / 20 - 12 AWG			
capacity Stranded wire	0 - 2.5 mm² / 20 - 12 AWG			
Rated wire size	2.5 mm² / 12 AWG			
Wire stripping length	7 mm .276"			
Recommended screwdriver	3.5 mm .137"			
Protection	IP20 NEMA1-			
Recommended torque	0.4 - 0.6 Nm 3.5 - 5.3 lb.in			



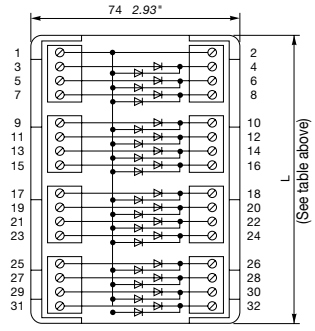
EM 8 DDA
Module delivered without identification
Diodes 1 N 4007



EM 8 DDC
Module delivered without identification
Diodes 1 N 4007



EM 15 DTA
Module delivered without identification
Diodes 1 N 4007



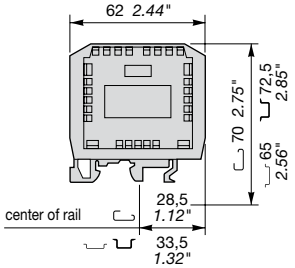
EM 15 DTC
Module delivered without identification
Diodes 1 N 4007

Accessories

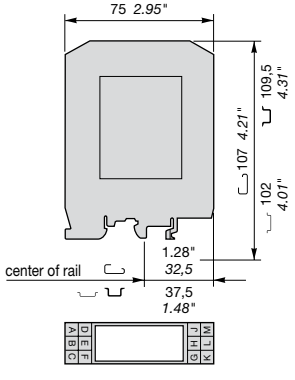
Pivoting marker-holder	PEF	1SNA **020 568** R**04**00
Marking method	RBP5.12W	1SNA **103 754** R**03**00

Logical signal conditioners

Diode modules ⌐¬ ⌐¬ DIN 1-3



Diodes modules serie 10 000



Diodes modules serie 10 000

RLV

EB 4 D... - Diodes modules, serie 10 000 - spacing 18 mm
EB 6 D... - Diodes modules, serie 11 000 - spacing 22.5 mm

Functions : bussing singals, decoupling of common signals, protection againts reverse voltage, relay coil protection.

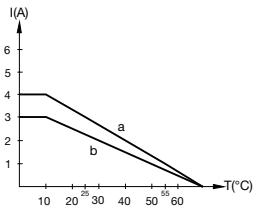
Order P/N

Description	Type	Order P/N	Packaging	Weight kg
Serie 10 000 - spacing 18 mmm				
Diodes modules	EB 4 D	1SNA **010 134** R**17**00	1	
Diodes modules with common on anode	EB 7 DA	1SNA **010 135** R**10**00	1	
Diodes modules with common on cathode	EB 7 DC	1SNA **010 136** R**11**00	1	
Serie 11 000 - spacing 22.5 mmm				
Diodes modules	EB 6 D	1SNA **011 060** R**21**00	1	
Diodes modules with common on anode	EB 10 DA	1SNA **011 056** R**11**00	1	
Diodes modules with common on cathode	EB 10 DC	1SNA **011 057** R**12**00	1	

Characteristics

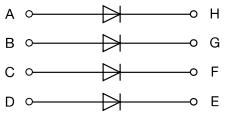
	Serie 10 000			Serie 11 000		
CHARACTERISTICS	**EB 4 D**	**EB 7 DA**	**EB 7 DC**	**EB 6 D**	**EB 10 DA**	**EB 10 DC**
Max. current by diode	1A	1A	1A	1A	1A	1A
Operating voltage	255 V max.	255 V max.	255 V max.	255 V max.	255 V max.	255 V max.
Voltage drop at max.	1 V	1 V	1 V	1 V	1 V	1 V
Repetitive peak-reverse voltage	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V
Peak current	30 A / 10 ms	30 A / 10 ms	30 A/ 10 ms	30 A / 10 ms	30 A / 10 ms	30 A/ 10 ms
Max. current by assembly		See derating curve			See derating curve	
TEMPERATURE						
Ambient temperature						
Storage	- 40°C to + 80°C	- 40°C to + 80°C	- 40°C to + 80°C	- 40°C to + 80°C	- 40°C to + 80°C	- 40°C to + 80°C
Operating temperature	- 20°C to + 40°C	- 20°C to + 40°C	- 20°C to +40°C	- 20°C to + 40°C	- 20°C to + 40°C	- 20°C to + 40°C
Other characteristics						
Body material grey			UL 94 V2			
Connecting capacity Rigide conductor			0 - 4 mm² / 20 - 12 AWG			
Stranded wire			0 - 2.5 mm² / 20 - 12 AWG			
Rated wire size			2.5 mm² / 12 AWG			
Wire stripping length			7 mm .276"			
Recommended screwdriver			3.5 mm .137"			
Protection			IP20 NEMA1-			
Recommended torque			0.4 - 0.6 Nm 3.5 - 5.3 lb.in			

Serie 10 000

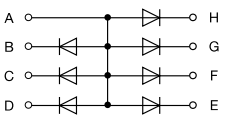


Derating curve

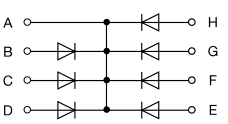
a: Din Rail horizontal position
b: Din Rail vertical position



EB 4 D
Diodes 1 N 4007

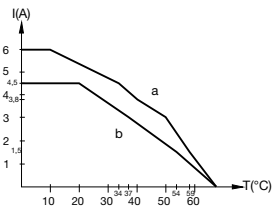


EB 7 DA
Diodes 1 N 4007



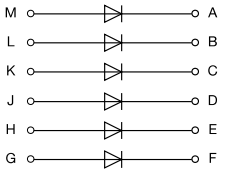
EB 7 DC
Diodes 1 N 4007

Serie 11 000

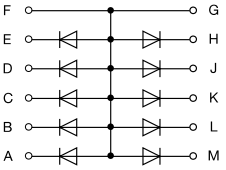


Derating curve

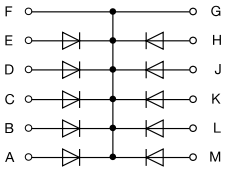
a: Din Rail horizontal position
b: Din Rail vertical position



EB 6 D
Diodes 1 N 4007



EB 10 DA
Diodes 1 N 4007



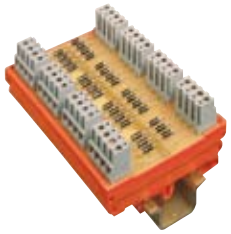
EB 10 DC
Diodes 1 N 4007

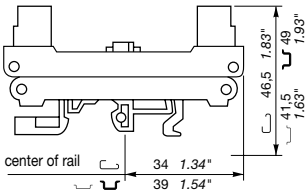
Accessories

Lengthwise marker	RLV	1SNA **103 849** R**03**00	50
Marking method	RBA	see markers	

Logical signal conditioners

Diode modules ⌙ ⌙ DIN 1-3





Diodes modules serie 20 000

EM 4 D... - Diodes modules, serie 20 000

Functions : bussing signals, decoupling of common signals, protection against reverse voltage, relay coil protection.

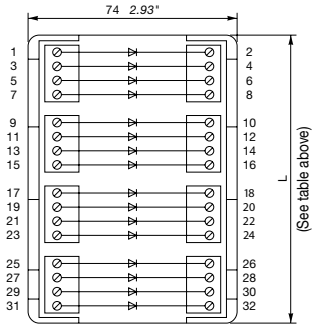
Order P/N

Description	Type	Order P/N	Length L. mm inch.	Packaging	Masse kg
Passing diode					
4 diodes	EM 4 D	1SNA **020 263** R**02**00	25,4 *1.00"*	1	0,03
8 diodes	EM 8 D	1SNA **020 264** R**03**00	50,8 *2.00"*	1	0,05
16 diodes	EM 16 D	1SNA **020 265** R**04**00	101,6 *4.00"*	1	0,10
Diodes modules with common on anode					
6 diodes	EM 6 DA	1SNA **020 266** R**05**00	25,4 *1.00"*	1	0,04
14 diodes	EM 14 DA	1SNA **020 267** R**06**00	50,8 *2.00"*	1	0,06
30 diodes	EM 30 DA	1SNA **020 268** R**17**00	101,6 *4.00"*	1	0,11
Diodes modules with common on cathode					
6 diodes	EM 6 DC	1SNA **020 269** R**10**00	25,4 *1.00"*	1	0,04
14 diodes	EM 14 DC	1SNA **020 270** R**15**00	50,8 *2.00"*	1	0,06
30 diodes	EM 30 DC	1SNA **020 271** R**02**00	101,6 *4.00"*	1	0,11

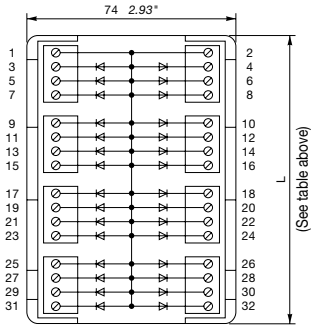
Characteristics

CHARACTERISTICS	EM 4 D	EM 8 D	EM 16 D	EM 6 D...	EM 14 D...	EM 30 D...
Max. current by diode	1 A	1 A	1 A	1 A	1 A	1 A
Operating voltage	255 V max.	255 V max.	255 V max.	255 V max.	255 V max.	255 V max.
Voltage drop at max.	1 V	1 V	1 V	1 V	1 V	1 V
Repetitive peak-reverse voltage	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V
Peak current	30 A / 10 ms	30 A / 10 ms	30 A/ 10 ms	30 A / 10 ms	30 A / 10 ms	30 A/ 10 ms
Max. current by assembly	4 A	8 A	16 A	3 A	7 A	8 A

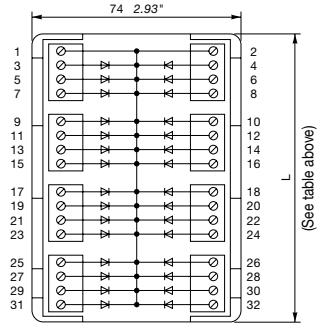
Other characteristics		
Body material	grey	UL 94 V2
Connecting capacity	Rigide conductor	0 - 4 mm² / 20 - 12 AWG
	Stranded wire	0 - 2.5 mm² / 20 - 12 AWG
Rated wire size		2.5 mm² / 12 AWG
Wire stripping length		7 mm .276"
Recommended screwdriver		3.5 mm .137"
Protection		IP20 NEMA1-
Recommended torque		0.4 - 0.6 Nm 3.5 - 5.3 lb.in



EM...D
Module delivered without identification
Diodes 1 N 4007



EM...DA
Module delivered without identification
Diodes 1 N 4007



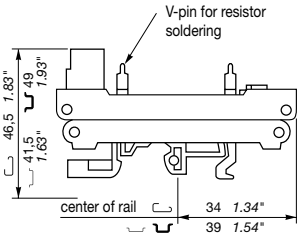
EM...DC
Module delivered without identification
Diodes 1 N 4007

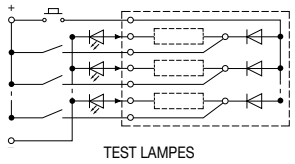
Accessories

Pivoting marker-holder	PEF	1SNA **020 568** R**04**00
Marking method	RBP5.12W	1SNA **103 754** R**03**00

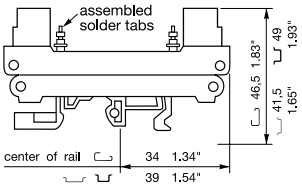
Logical signal conditionners
Empty component

Lamp test modules - Component holder DIN 1-3



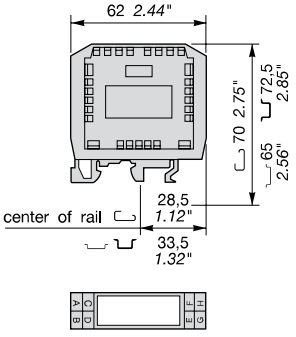


Lamp test modules serie 20 000



Empty component holder modules serie 20 000

Max. length of components : 35 mm



Empty component holder modules serie 10 000

Max. length of components : 12,7 mm

EL 8R - RB 57, serie 20 000 - Application : adaptating supply current light indicators by using resistors. N.B. : Do not use resistors having an operating temperature higher than 180°C (risk of melting solders).

EM 4 PC, EM 8 PC, EM 16 PC, serie 20 000 - These modules are supplied with a printed circuit board with solder tabs, for circuit packaging.

EBPC, serie 10 000 - These modules are assembled with a printed circuit board (supplied separately) for circuit packaging. The modules are delivered with their end plates. These determine the spacing and the internal volume.

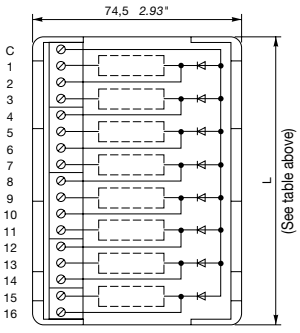
Order P/N

Description	Type	Order P/N	Length L. mm	Length L. inch.	Packaging	Masse kg
Lamp test modules and component holder	EL 8R - RB 57	1SNA **020 285** R**21**00	88,9	*3.50"*	1	
Lamp test modules and component holder						
4 component	EM 4 PC	1SNA **020 260** R**13**00	25,4	*1.00"*	1	
8 component	EM 8 PC	1SNA **020 261** R**00**00	50,8	*2.00"*	1	
16 component	EM 16 PC	1SNA **020 262** R**01**00	101,6	*4.00"*	1	
Empty block for components equipped with 8 wire clamps	EBPC	1SNA **010 133** R**16**00			1	

Characteristics

CHARACTERISTICS	EL 8R - RB 57	EBPC	EM 4 PC	EM 8 PC	EM 16 PC
Max. current by channel	1 A	5 A	2 A	2 A	2 A
Operating voltage	255 V max.	255 V max.	255 V max.	255 V max.	255 V max.
Max. dissipation by channel	1 W	2 W	1 W	1 W	1 W
Repetitive peak-reverse voltage	1000 V				
Peak current	30 A / 10 ms				
Max. current by assembly	8 A				

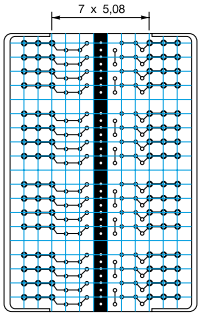
Other characteristics	
Body material grey	UL 94 V2
Connecting Rigide conductor	0 - 4 mm² / 20 - 12 AWG
capacity Stranded wire	0 - 2.5 mm² / 20 - 12 AWG
Rated wire size	2.5 mm² / 12 AWG
Wire stripping length	7 mm .276"
Recommended screwdriver	3.5 mm .137"
Protection	IP20 NEMA1-
Recommended torque	0.4 - 0.6 Nm 3.5 - 5.3 lb.in



EL 8R - RB 57

Module delivered without identification
8 channels per module - For RB 57 resistors max. dimensions 7.5 x 32 mm .30" x 1.26".

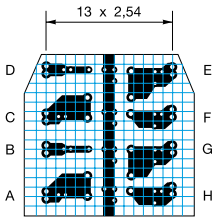
PCB shown copper face side



EM... PC

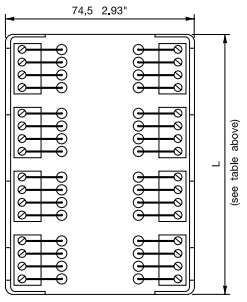
PCB spacing 5.08 mm .20"
Max. length of components : 35 mm

PCB shown copper face side



EBPC

Empty block for components equipped with 8 wire-clamps
PCB pin spacing 2.54 mm (.10")
Max. length of components : 12,7 mm

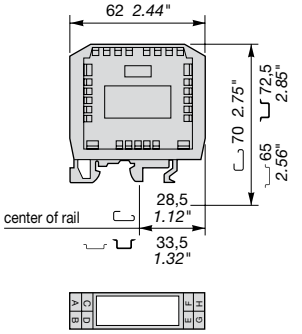


Accessories

Pivoting marker-holder	PEF	1SNA **020 568** R**04**00
Marking method	RBP5.12W	1SNA **103 754** R**03**00

Logical signal conditionners
Empty component

Rectifiers bridge ⌙⌙ DIN 1-3



Supply serie 10 000

EBR 1... - Supply - Rectifiers bridge, serie 10 000 - spacing 18 mm²

- Full wave rectification 230 V AC, 400 V AC, 24 V AC.
- Input and output protected againts overvoltage by varistor.
- Output voltage presence indicated by LED.

Order P/N

Description		Type	Order P/N	Packaging	Weight kg
Rectifier bridge	12 to 230 V AC	EBR 1 - 220 V	1SNA **010 019** R**27**00	1	
Rectifier bridge	12 to 400 V AC	EBR 2 - 380 V AC	1SNA **010 047** R**23**00	1	
Rectifier bridge with protected overvoltage	12 to 230 V AC	EBR 3 - 220 V	1SNA **010 020** R**24**00	1	
	12 to 24 V AC	EBR 4 - 24 V	1SNA **010 021** R**11**00	1	

Characteristics

	EBR 1	EBR 2	EBR 3	EBR 4
INPUT				
Input voltage	12 to 230 V AC	12 to 400 V AC	12 to 230 V AC	12 to 24 V AC
Input current	1 A rms	1 A rms	1 A rms	1 A rms
OUTPUT				
Output voltage at max. input voltage	315 V DC to 0.7 A 220 µF	550 V DC to 0.7 A 220 µF	315 V DC to 0.7 A 220 µF	30 V DC to 0.7 A 2200 µF
Capacitive load	220 µF max.	220 µF max.	500 µF max.	2200 µF max.
Max. output current	0.9 A	0.9 A	0.9 A	0.9 A
Peak current	2 V max.	2 V max.	2 V max.	2 V max.
Voltage drop				
TEMPERATURE				
Ambient temperature Storage	- 40°C to + 80°C	- 40°C to + 80°C	- 40°C to + 80°C	- 40°C to + 80°C
Operating	- 20°C to + 70°C	- 20°C to + 70°C	- 20°C to + 70°C	- 20°C to + 70°C
Other characteristics				
Body material	grey			
Connecting capacity Rigide conductor	0 - 4 mm² / 20 - 12 AWG			
Stranded wire	0 - 2.5 mm² / 20 - 12 AWG			
Rated wire size	2.5 mm² / 12 AWG			
Wire stripping length	7 mm .276"			
Recommended screwdriver	3.5 mm .137"			
Protection	IP20 NEMA1-			
Recommended torque	0.4 - 0.6 Nm 3.5 - 5.3 lb.in			

EBR 1 - EBR 2

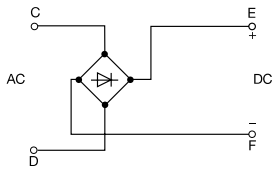
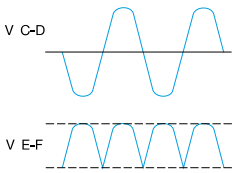
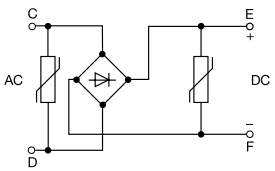
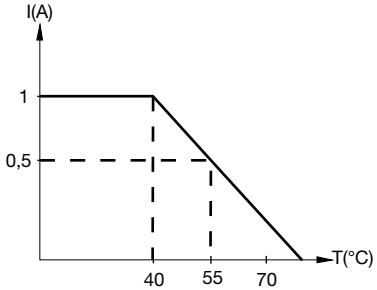


Diagramme de phases:



EBR 3





EBR 4

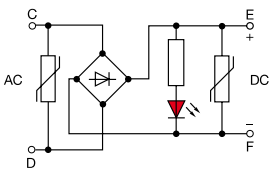
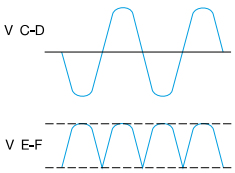


Diagramme de phases:



RLV

Accessories

Lengthwise marker	RLV	1SNA **399 903** R**02**00	50
Marking method	RC55	see markers	

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