

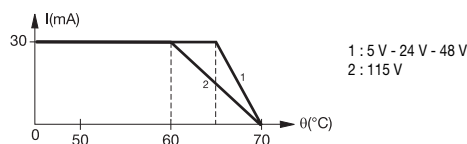


Pluggable optocoupler : 5 to 58 V DC output / 30 mA - 5.08 mm .200" spacing

Characteristics

Opto. characteristics	D 2,5/5-OBIC-0030			
	4.5 V to 5.5 VDC	19.2 V to 27.6 V DC	38.4 V to 55.2 V DC	93.5 V to 140 V DC
INPUT				
Input voltage	4.5 V to 5.5 VDC	19.2 V to 27.6 V DC	38.4 V to 55.2 V DC	93.5 V to 140 V DC
Frequency				
Input current	6 mA	5 mA	4.1 mA	3 mA
Pull-in voltage at Is=100%	3.5 V	12 V	21 V	50 V
Switching time C / O	20 μs / 1.3 ms	20 μs / 1.3 ms	20 μs / 1.3 ms	20 μs / 1.3 ms
Operating frequency	400 Hz	400 Hz	400 Hz	400 Hz
Permissible leakage current		1 mA	0.8 mA	
OUTPUT				
Output voltage	4.5 V to 58 V DC			
Output current min.	0.5 mA			
Output current max.	30 mA			
Output leakage current at Umax.	< 50 μA			
Residual voltage at I max and U rated	typical 2.3 V DC max. 2.7 VDC			
Frequency on inductive load	2500 V RMS			
Isolation Input / Output	2500 V RMS			
TEMPERATURE				
Ambient temperature	storage	- 40°C to + 80°C		
	operating	See derating curve		
Other characteristics				
Body material	grey			
Wire	Solid wire			
Wire size	UL 94 V0			
size	0.2-4 mm ² / 24-12 AWG			
Rated wire size	0.22-2.5 mm ² / 24-12 AWG			
Wire stripping length	2.5 mm ² / 12 AWG			
Recommended screwdriver	10 mm .394"			
Protection	3.5 .137"			
Recommended torque	IP 20 NEMA 1			
Approvals	0.4-0.6 Nm 3.5-5.3 lb.in			
Reference standards	CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (in relevant parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6.			

Derating curve



D 2,5/5-OBIC-0030

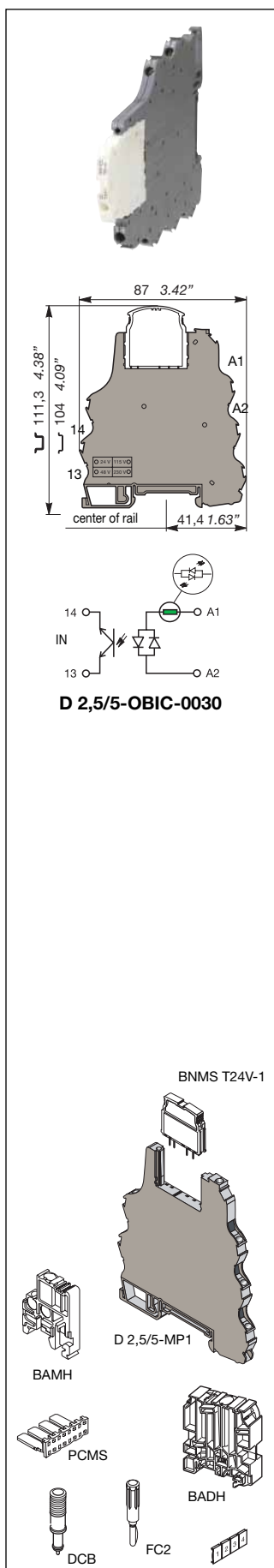
Order codes

Description	Type	Order P/N	Packaging	Weight kg
Optocoupler module 30 mA/DC	D 2,5/5-OBIC-0030-5VDC	1SNA 607 274 R1300	1	0.032
Optocoupler module 30 mA/DC	D 2,5/5-OBIC-0030-24VDC	1SNA 607 210 R1700	1	0.032
Optocoupler module 30 mA/DC	D 2,5/5-OBIC-0030-48VDC	1SNA 607 211 R0400	1	0.032
Optocoupler module 30 mA/DC	D 2,5/5-OBIC-0030-125VDC	1SNA 607 275 R1400	1	0.032

Accessories

High end stop	BAMH 9,1 mm	1SNA 114 836 R0000	50	
	BAMH V0 9,1 mm	1SNA 194 836 R0100	50	
	BADH 12 mm	1SNA 116 900 R2700	50	
Comb type jumper bar 2 to 22 poles	consult us			
Jumper bar 10 poles	grey	PCMS V0	1SNA 205 523 R2200	8
Input opto base		D 2,5/5-MP1	1SNA 607 223 R0000	10 0.028
Plug OBIC 5 V	white	BNMS T5V-1	1SNA 031 831 R0300	4
Plug OBIC 24 V	white	BNMS T24V-1	1SNA 031 800 R2100	4
Plug OBIC 48 V	white	BNMS T48V-1	1SNA 031 801 R1600	4
Plug OBIC 125 V	white	BNMS T125V-1	1SNA 031 845 R1100	4
Test device	blue	DCB (1)	1SNA 105 028 R2100	10
Test plug	DIA. 2 mm	FC2	1SNA 007 865 R2600	10
Marking method		RC55	see marking	

(1) Only on top decks.



Electronic Interfaces

R500 pluggable optocoupler modules

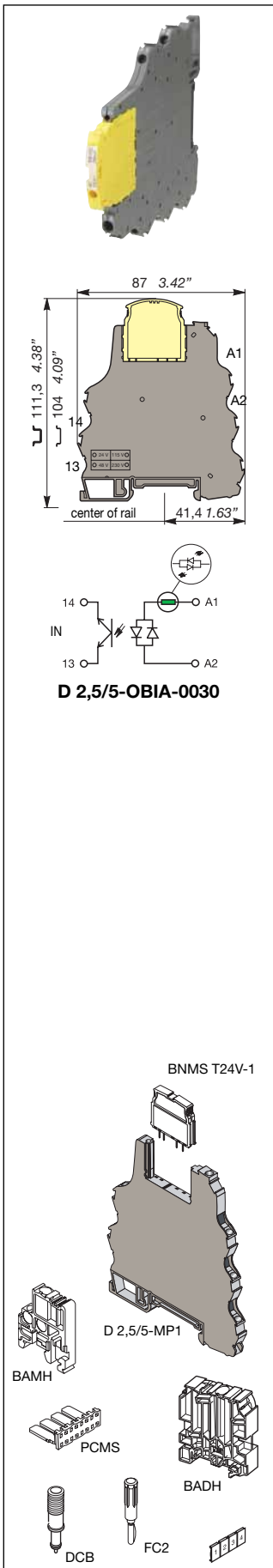


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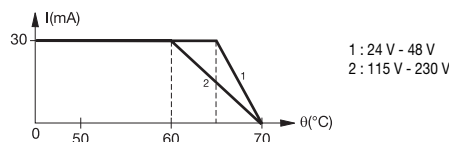
Pluggable optocoupler : 5 to 58 V DC output / 30 mA - 5.08 mm .200" spacing

Characteristics

Opto. characteristics	D 2,5/5-OBIA-0030			
INPUT				
Input voltage	20.4 V to 26.4 V AC	40.8 V to 52.8 V AC	98 V to 126.5 V AC	195.5 V to 253 V AC
Frequency			50 / 60 Hz	50 Hz
Input current	8.5 mA	4.5 mA	8 mA	7 mA
Pull-in voltage at Is=100%	13 V	22 V	50 V	95 V
Switching time C / O	6 ms / 10 ms	6 ms / 10 ms	6 ms / 10 ms	6 ms / 10 ms
Operating frequency	30 Hz	30 Hz	30 Hz	30 Hz
Permissible leakage current	1 mA	1 mA	2 mA	2 mA
OUTPUT	4.5 V to 58 V DC			
Output voltage				
Output current min.	0.5 mA			
Output current max.	30 mA			
Output leakage current at Umax.	< 50 µA			
Residual voltage at I max and U rated	2.3 V DC			
typical				
max.	2.7 VDC			
Frequency on inductive load	2500 V RMS			
Isolation Input / Output				
TEMPERATURE				
Ambient temperature	- 40°C to + 80°C			
storage				
operating	See derating curve			
Other characteristics				
Body material	UL 94 V0			
Wire	Solid wire			
size	0.2-4 mm ² / 24-12 AWG			
Stranded wire	0.22-2.5 mm ² / 24-12 AWG			
Rated wire size	2.5 mm ² / 12 AWG			
Wire stripping length	10 mm .394"			
Recommended screwdriver	3.5 .137"			
Protection	IP 20 NEMA 1			
Recommended torque	0.4-0.6 Nm 3.5-5.3 lb.in			
Approvals	UL us pending, CE			
Reference standards	CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (in relevant parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6.			



Derating curve



D 2,5/5-OBIA-0030

Order codes

Description	Type	Order P/N	Packaging	Weight kg
Optocoupler module 30 mA/DC	D 2,5/5-OBIA-0030-24VAC	1SNA 607 212 R0500	1	0.032
Optocoupler module 30 mA/DC	D 2,5/5-OBIA-0030-48VAC	1SNA 607 213 R0600	1	0.032
Optocoupler module 30 mA/DC	D 2,5/5-OBIA-0030-115VAC	1SNA 607 214 R0700	1	0.032
Optocoupler module 30 mA/DC	D 2,5/5-OBIA-0030-230VAC	1SNA 607 215 R0000	1	0.032

Accessories

High end stop	BAMH 9,1 mm	1SNA 114 836 R0000	50	
	BAMH V0 9,1 mm	1SNA 194 836 R0100	50	
	BADH 12 mm	1SNA 116 900 R2700	50	
Comb type jumper bar 2 to 22 poles		consult us		
Jumper bar 10 poles	grey □ PCMS V0	1SNA 205 523 R2200	8	
Input opto base	D 2,5/5-MP1	1SNA 607 223 R0000	10	0.028
Plug OBIA 24 V	yellow ■ BNMS T24V-1	1SNA 031 802 R1700	4	
Plug OBIA 48 V	yellow ■ BNMS T48V-1	1SNA 031 803 R1000	4	
Plug OBIA 115 V	yellow ■ BNMS T115V-1	1SNA 031 804 R1100	4	
Plug OBIA 230 V	yellow ■ BNMS T230V-1	1SNA 031 805 R1200	4	
Test device	blue □ DCB (1)	1SNA 105 028 R2100	10	
Test plug	DIA. 2 mm FC2	1SNA 007 865 R2600	10	
Marking method	RC55	see marking		

(1) Only on top decks.



Pluggable optocoupler : 5 to 58 V DC output / 1 A - 5.08 mm .200" spacing

Characteristics

Opto. characteristics	D 2,5/5-OB0C-1000 5/24 VDC		D 2,5/5-OB0C-1000 24/48 VAC/DC				D2,5/5-OB0C-1000-110/230VAC	
	5 VDC	24 VDC	24 VAC	24 VDC	48 VAC	48 VDC	110 VAC	230 VAC
INPUT								
Input voltage	4.5 to 5.5 VDC	20.4 to 28.8 VDC	24 ± 10%	20.4 to 28.8 VDC	48 ± 10%	40.8 to 57.6 VDC	110 ± 10%	230 ± 10%
Frequency			50 / 60 Hz		50 / 60 Hz		50 / 60 Hz	50 / 60 Hz
Input current	12.3 mA	6.7 mA	10.5 mA	8 mA	6.8 mA	5.8 mA	8.5 mA	7.5 mA
Pull-in voltage at Is=100%	3.5 V DC	10 V DC						
Switching time C / O	20/250 µs	50/350 µs	15/13 ms	5/13 ms	15/15 ms	6/25 ms	15/15 ms	15/15 ms
Operating frequency	2000 Hz	1500 Hz	20 Hz	20 Hz	20 Hz	20 Hz	20 Hz	20 Hz
Permissible leakage current								
OUTPUT								
Output voltage	4.5 to 58 VDC		4.5 to 58 VDC					
Output current min.	1 mA		1 mA					
Output current max.	1 A		1 A					
Output leakage current at Umax.	< 50 µA		< 50 µA					
Residual voltage at I max and U rated	typical 0.1 V max. 0.5 V		0.1 V 0.5 V					
Frequency on inductive load			See Note 1					
Isolation Input / Output			2500 V RMS					
TEMPERATURE								
Ambient temperature storage	-40°C to +80°C							
operating	See derating curve							
Other characteristics								
Body material	grey UL 94 V0							
Wire	Solid wire 0.2-4 mm ² / 24-12 AWG							
size	Stranded wire 0.22-2.5 mm ² / 24-12 AWG							
Rated wire size	2.5 mm ² / 12 AWG							
Wire stripping length	10 mm .394"							
Recommended screwdriver	3.5 mm .137"							
Protection	IP 20 NEMA 1							
Recommended torque	0.4-0.6 Nm 3.5-5.3 lb.in							
Approvals	us pending, CE							
Reference standards	CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (in relevant parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6.							

Note 1 :

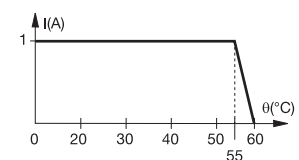
$$F_{max} = (1 - 0,007 \times U_s) / (L \times I_s^2)$$

or

$$F_{max} = (1 - 0,007 \times U_s) / (P \times \frac{L}{R})$$

U_s = Output voltage
 I_s = Output current
 L = Inductance of load
 P = Power of load
 R = Resistance of load

Derating curve



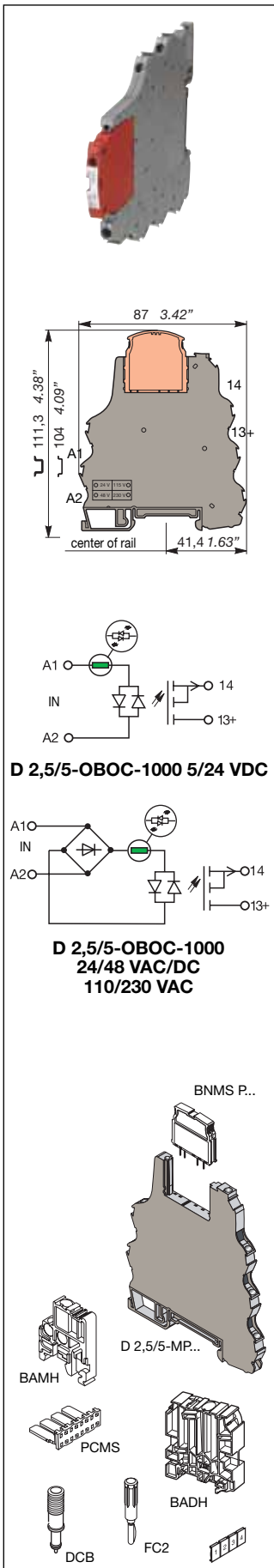
Order codes

Description	Type	Order P/N	Packaging	Weight
Optocoupler module 1 A/DC	D 2,5/5-OB0C-1000-5VDC	1SNA 607 206 R1000	1	0.032
Optocoupler module 1 A/DC	D 2,5/5-OB0C-1000-24VDC	1SNA 607 207 R1100	1	0.032
Optocoupler module 1 A/DC	D 2,5/5-OB0C-1000-24VAC/DC	1SNA 607 250 R2700	1	0.04
Optocoupler module 1 A/DC	D 2,5/5-OB0C-1000-48VAC/DC	1SNA 607 251 R1400	1	0.04
Optocoupler module 1 A/DC	D 2,5/5-OB0C-1000-110VAC	1SNA 607 270 R2300	1	0.04
Optocoupler module 1 A/DC	D 2,5/5-OB0C-1000-230VAC	1SNA 607 271 R1000	1	0.04

Accessories

High end stop	BAMH 9,1 mm	1SNA 114 836 R0000	50
	BAMH V0 9,1 mm	1SNA 194 836 R0100	50
	BADH 12 mm	1SNA 116 900 R2700	50
Comb type jumper bar 2 to 22 poles		consult us	
Jumper bar 10 poles grey	PCMS V0	1SNA 205 523 R2200	8
Relay / Opto base	D 2,5/5-MP	1SNA 607 224 R0100	10 0.028
Relay / Opto base with LED 24 VAC/VDC	D 2,5/5-MP-24VAC/DC	1SNA 607 260 R2100	10 0.036
Relay / Opto base with LED 48 VAC/VDC	D 2,5/5-MP-48VAC/DC	1SNA 607 261 R1600	10 0.036
Relay / Opto base with LED 110 VAC	D 2,5/5-MP-110VAC	1SNA 607 266 R1300	10 0.036
Relay / Opto base with LED 230 VAC	D 2,5/5-MP-230VAC	1SNA 607 267 R1400	10 0.036
Plug (2)	red ■ BNMS P5V-2 5 V/1 A	1SNA 031 818 R1600	4
Plug (3)	red ■ BNMS P24V-2 24 V/1 A	1SNA 031 819 R1700	4
Test device	blue □ DCB (1)	1SNA 105 028 R2100	10
Test plug	DIA. 2 mm FC2	1SNA 007 865 R2600	10
Marking method	RC55	see marking	

- (1) Only on top decks.
- (2) For D 2,5/5-OB0C-2000 5 V DC only.
- (3) For all D 2,5/5-OB0C-2000 except 5 V DC model.





Pluggable optocoupler : 5 to 30 V DC output / 2 A - 5.08 mm .200" spacing

Characteristics

Opto. characteristics	D 2,5/5-OBOC-2000 5/24 VDC		D 2,5/5-OBOC-2000 24/48 VAC/DC				D 2,5/5-OBOC-2000 110/230VAC	
	5 VDC	24 VDC	24 VAC	24 VDC	48 VAC	48 VDC	110 VAC	230 VAC
INPUT								
Input voltage	4.5 to 5.5 VDC	20.4 to 28.8 VDC	24 ±10%	20.4 to 28.8 VDC	48 ±10%	40.8 to 57.6 VDC	110 ±10%	230 ±10%
Frequency			50 / 60 Hz		50 / 60 Hz		50 / 60 Hz	50 / 60 Hz
Input current	12.3 mA	6.7 mA	10.5 mA	8 mA	6.8 mA	5.8 mA	8.5 mA	7.5 mA
Pull-in voltage at Is=100%	3.5 V DC	10 V DC						
Switching time C / O	20/250 µs	50/350 µs	15/13 ms	5/13 ms	15/15 ms	6/25 ms	15/15 ms	15/15 ms
Operating frequency	2000 Hz	1500 Hz	20 Hz	20 Hz	20 Hz	20 Hz	20 Hz	20 Hz
Permissible leakage current								

OUTPUT

Output voltage	4.5 to 30 VDC	4.5 to 30 VDC
Output current min.	1 mA	1 mA
Output current max.	2 A	2 A
Output leakage current at Umax.	< 50 µA	< 50 µA
Residual voltage at I max and U rated	typical 0.1 V	0.1 V
	max. 0.5 V	0.5 V
Frequency on inductive load		See Note 1
Isolation Input / Output		2500 V RMS

TEMPERATURE

Ambient temperature storage	-40°C to +80°C
operating	See derating curve

Other characteristics

Body material	grey	UL 94 V0
Wire	Solid wire	0.2-4 mm ² / 24-12 AWG
size	Stranded wire	0.22-2.5 mm ² / 24-12 AWG
Rated wire size		2.5 mm ² / 12 AWG
Wire stripping length		10 mm .394"
Recommended screwdriver		3.5 mm .137"
Protection		IP 20 NEMA 1
Recommended torque		0.4-0.6 Nm 3.5-5.3 lb.in
Approvals		UL, CE, etc.
Reference standards	CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (in relevant parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6.	

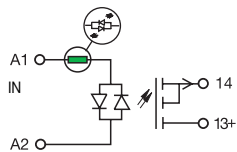
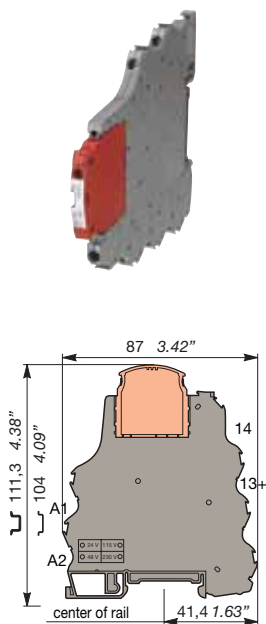
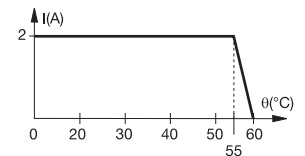
Note 1 :

$$F_{max} = (1 - 0.012 \times U_s) / (L \times I_s^2)$$

$$F_{max} = (1 - 0.012 \times U_s) / (P \times \frac{L}{R})$$

Us = Output voltage
Is = Output current
L = Inductance of load
P = Power of load
R = Resistance of load

Derating curve



D 2,5/5-OBOC-2000

Order codes

Description	Type	Order P/N	Packaging	Weight kg
Optocoupler module 2 A/DC	D 2,5/5-OBOC-2000-5VDC	1SNA 607 208 R2200	1	0.032
Optocoupler module 2 A/DC	D 2,5/5-OBOC-2000-24VDC	1SNA 607 209 R2300	1	0.032
Optocoupler module 2 A/DC	D 2,5/5-OBOC-2000-24VAC/DC	1SNA 607 255 R1000	1	0.04
Optocoupler module 2 A/DC	D 2,5/5-OBOC-2000-48VAC/DC	1SNA 607 256 R1100	1	0.04
Optocoupler module 2 A/DC	D 2,5/5-OBOC-2000-110VAC	1SNA 607 272 R1100	1	0.04
Optocoupler module 2 A/DC	D 2,5/5-OBOC-2000-230VAC	1SNA 607 273 R1200	1	0.04

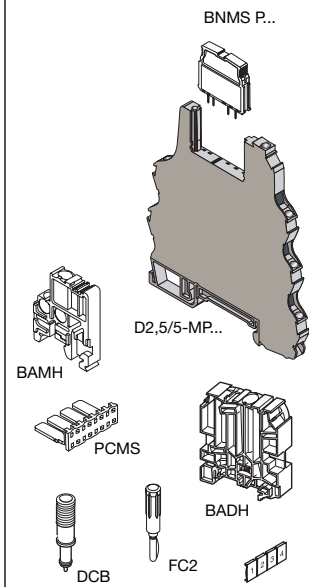
Accessories

High end stop	BAMH 9,1 mm	1SNA 114 836 R0000	50	
	BAMH V0 9,1 mm	1SNA 194 836 R0100	50	
	BADH 12 mm	1SNA 116 900 R2700	50	
Comb type jumper bar 2 to 22 poles		consult us		
Jumper bar 10 poles grey	PCMS V0	1SNA 205 523 R2200	8	
Relay / Opto base	D 2,5/5-MP	1SNA 607 224 R0100	10	0.028
Relay / Opto base with LED 24 VAC/VDC	D 2,5/5-MP-24VAC/DC	1SNA 607 260 R2100	10	0.036
Relay / Opto base with LED 48 VAC/VDC	D 2,5/5-MP-48VAC/DC	1SNA 607 261 R1600	10	0.036
Relay / Opto base with LED 110 VAC	D 2,5/5-MP-110VAC	1SNA 607 266 R1300	10	0.036
Relay / Opto base with LED 230 VAC	D 2,5/5-MP-230VAC	1SNA 607 267 R1400	10	0.036
Plug (2)	red ■ BNMS P5V-1 5 V/2 A	1SNA 031 814 R0200	4	
Plug (3)	red ■ BNMS P24V-1 24 V/2 A	1SNA 031 815 R0300	4	
Test device	blue □ DCB (1)	1SNA 105 028 R2100	10	
Test plug	DIA. 2 mm FC2	1SNA 007 865 R2600	10	
Marking method	RC55	see marking		

(1) Only on top decks.

(2) For D 2,5/5-OBOC-2000 5 V DC only.

(3) For all D 2,5/5-OBOC-2000 except 5 V DC model.



Electronic Interfaces



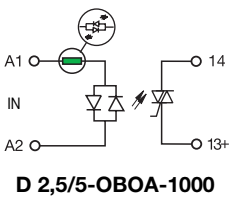
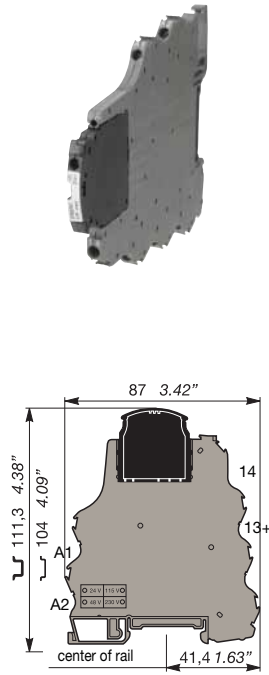
R500 pluggable optocoupler modules

DIN 3

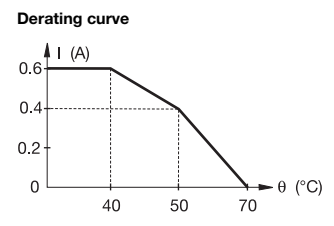
Pluggable optocoupler : 24 to 253 V AC output / 1 A - 5.08 mm .200" spacing

Characteristics

Opto. characteristics	D 2,5/5-... 24 VDC		D 2,5/5-OBOA-1000 24 VAC/DC-48 VAC/DC			D 2,5/5-OBOA-1000 110 VAC-230 VAC	
	24 VDC	24 VAC	24 VDC	48 VAC	48 VDC	110 VAC	230 VAC
INPUT	24 VDC	24 VAC	24 VDC	48 VAC	48 VDC	110 VAC	230 VAC
Input voltage	20.4 to 28.8 VDC	24 ±10%	20.6 to 28.8 VDC	48 ±10%	40.8 to 57.6 VDC	110 ±10%	230 ±10%
Frequency		50 / 60 Hz		50 / 60 Hz		50 / 60 Hz	50 / 60 Hz
Input current	4 mA	10 mA	7 mA	6 mA	5 mA	8 mA	7.5 mA
Pull-in voltage at Is=100%							
Switching time C / O	10/20 ms	20/20 ms	10/20 ms	20/20 ms	10/20 ms	20/20 ms	20/20 ms
Operating frequency	15 Hz	15 Hz	15 Hz	15 Hz	15 Hz	15 Hz	15 Hz
Permissible leakage current							
OUTPUT	24 to 253 VAC - 50 / 60 Hz						
Output voltage	24 to 253 VAC - 50 / 60 Hz						
Output current min.	25 mA						
Output current max.	1 A						
Output leakage current at Umax.	< 0.5 mA						
Residual voltage at I max and U rated	1 V						
typical	1 V						
max.	1.6 V						
Frequency on inductive load	See Note 1						
Isolation Input / Output	2500 V RMS						
TEMPERATURE							
Ambient temperature storage	-40 to +80°C						
operating	See derating curve						
Other characteristics							
Body material	grey						
Wire	Solid wire						
size	0.2-4 mm ² / 24-12 AWG						
Stranded wire	0.22-2.5 mm ² / 24-12 AWG						
Rated wire size	2.5 mm ² / 12 AWG						
Wire stripping length	10 mm .394"						
Recommended screwdriver	3.5 mm .137"						
Protection	IP 20 NEMA 1						
Recommended torque	0.4-0.6 Nm 3.5-5.3 lb.in						
Approvals	UL 94 V0, CE, cULus pending						
Reference standards	CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (in relevant parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6.						



Note 1 :
 $F_{max} = (1 - 0,012 \times U_s) / (L \times I_s^2)$
 or $F_{max} = (1 - 0,012 \times U_s) / (P \times \frac{L}{R})$
 Us = Output voltage
 Is = Output current
 L = Inductance of load
 P = Power of load
 R = Resistance of load



Order codes

Description	Type	Order P/N	Packaging	Weight kg
Optocoupler module 1 A/AC	D 2,5/5-OBOA-1000-24VDC	1SNA 607 238 R1700	1	0.032
Optocoupler module 1 A/AC	D 2,5/5-OBOA-1000-24VAC/DC	1SNA 607 240 R2500	1	0.04
Optocoupler module 1 A/AC	D 2,5/5-OBOA-1000-48VAC/DC	1SNA 607 241 R1200	1	0.04
Optocoupler module 1 A/AC	D 2,5/5-OBOA-1000-110VAC	1SNA 607 268 R2500	1	0.04
Optocoupler module 1 A/AC	D 2,5/5-OBOA-1000-230VAC	1SNA 607 269 R2600	1	0.04

Accessories

High end stop	BAMH 9,1 mm	1SNA 114 836 R0000	50	
	BAMH V0 9,1 mm	1SNA 194 836 R0100	50	
	BADH 12 mm	1SNA 116 900 R2700	50	
Comb type jumper bar 2 to 22 poles		consult us		
Jumper bar 10 poles grey	PCMS V0	1SNA 205 523 R2200	8	
Relay / Opto base	D 2,5/5-MP	1SNA 607 224 R0100	10	0.028
Relay / Opto base with LED 24 VAC/VDC	D 2,5/5-MP-24VAC/DC	1SNA 607 260 R2100	10	0.036
Relay / Opto base with LED 48 VAC/VDC	D 2,5/5-MP-48VAC/DC	1SNA 607 261 R1600	10	0.036
Relay / Opto base with LED 110 VAC	D 2,5/5-MP-110VAC	1SNA 607 266 R1300	10	0.036
Relay / Opto base with LED 230 VAC	D 2,5/5-MP-230VAC	1SNA 607 267 R1400	10	0.036
Plug	black ■ BNMS A24V-4 250 V/1 A	1SNA 031 839 R1300	4	
Test device	blue □ DCB (1)	1SNA 105 028 R2100	10	
Test plug	DIA. 2 mm FC2	1SNA 007 865 R2600	10	
Marking method	RC55	see marking		

(1) Only on top decks.

