

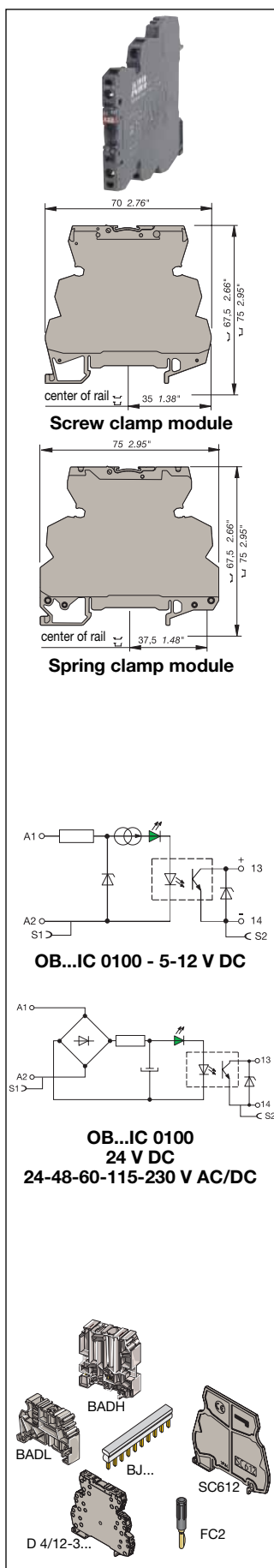


Optocoupler : 5 to 58 V DC output / 100 mA - 6 mm .236" spacing

Characteristics

Opto. characteristics	OB...IC 0100								
	INPUT		5 V DC - 12 V DC		24 V DC	48 V AC/DC	60 V AC/DC	115 V AC/DC	230 V AC/DC
Input voltage +20% -15% on DC, +10% -10% on AC									
Frequency						50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
Input current	5 mA	9 mA			4 mA	4 mA	5 mA		
Pull-in voltage at Is=100%	4 V	4 V			15 V	25 V	25 V		
Switching time C / O	10 µs / 500 µs				10 µs / 500 µs	5 ms / 20 ms			
Operating frequency	1000 Hz				1000 Hz	20 Hz			
Permissible leakage current	0,9 mA				1 mA	0,9 mA			
OUTPUT									
Output voltage	4,5 to 58 VDC								
Output current min.	1 mA								
Output current max.	100 mA								
Output leakage current at Umax.	< 50 µA								
Residual voltage at I max and U rated	typical				1 V		max.		
Frequency on inductive load	2500 V RMS								
Isolation Input / Output	2500 V RMS								
TEMPERATURE									
Ambient temperature storage	-40°C to +80°C								
operating	-20°C to +70°C (1)								
Other characteristics									
Body material	grey	Screw clamp				Spring clamp			
Wire size	Solid wire	0,2 - 4 mm ² / 24 - 12 AWG				0,2 - 2,5 mm ² / 24 - 12 AWG			
Stranded wire		0,22 - 2,5 mm ² / 24 - 12 AWG				0,22 - 2,5 mm ² / 24 - 12 AWG			
Rated wire size		2,5 mm ² / 12 AWG				2,5 mm ² / 12 AWG			
Wire stripping length		9 mm .354"				9 mm .354"			
Recommended screwdriver		3,5 mm .137"				3,5 mm .137"			
Protection		IP20 NEMA1				IP20 NEMA1			
Recommended torque		0,4 - 0,6 Nm 3.5 - 5.3 lb.in				0,4 - 0,6 Nm 3.5 - 5.3 lb.in			
Approvals									
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.								

(1) Over 55°C, blocks have to be mounted on horizontal rail with 10 mm spacing between each block. For vertical rail mounting use temperature is 15°C less decreased.



Order codes

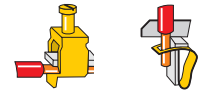
Description	Type	Order P/N	Packaging	Weight
Optocoupler module 100 mA/DC	OBIC 0100-5-12VDC	1SNA 645 047 R0000	10	0,02
Optocoupler module 100 mA/DC	OBIC 0100-24VDC	1SNA 645 021 R2600	10	0,02
Optocoupler module 100 mA/DC	OBIC 0100-48-60VAC/DC	1SNA 645 049 R1200	10	0,02
Optocoupler module 100 mA/DC	OBIC 0100-115-230VAC/DC	1SNA 645 022 R2700	10	0,02
Optocoupler module 100 mA/DC	OBRIC 0100-5-12VDC	1SNA 645 547 R0200	10	0,02
Optocoupler module 100 mA/DC	OBRIC 0100-24VDC	1SNA 645 521 R2000	10	0,02
Optocoupler module 100 mA/DC	OBRIC 0100-48-60VAC/DC	1SNA 645 549 R1400	10	0,02
Optocoupler module 100 mA/DC	OBRIC 0100-115-230VAC/DC	1SNA 645 522 R2100	10	0,02

Accessories

End section	BADH V0	1SNA 116 900 R2700	50
	BADL V0	1SNA 399 903 R0200	50
	BAM2 V0	1SNA 399 967 R0100	50
Separator end section	SC 612	1SNA 290 474 R0200	10
Divisible shunt 10 poles	BJ 612-10	1SNA 290 488 R0100	10
	BJ 612-70	1SNA 290 489 R0200	10
Screw clamp distribution block sp. 12 mm	D4/12-3A-3A	1SNA 645 031 R2000	5
Spring clamp distribution block sp. 12 mm	D4/12-3L-3L	1SNA 645 531 R2200	5
Test plug DIA. 2 mm	FC2	1SNA 007 865 R2600	10
Marking method	RC65		
	RC610	see marking	

Electronic Interfaces

R600 optocoupler modules



DIN 3

Optocoupler : 5 to 58 V DC output / 2 A - 6 mm .236" spacing

Characteristics

Opto. characteristics	OB...OC 1000		OB...OC 1500		OB...OC 1000				
	INPUT		INPUT		INPUT				
Input voltage +20% -15% on DC, +10% -10% on AC	5 V DC - 12 V DC		24 V DC	24 V AC/DC	48 V AC/DC	60 V AC/DC	115 V AC/DC	230 V AC/DC	
Frequency	5 mA 9 mA		5,4 mA	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	
Input current	4 V		12 V	6,3 mA	4 mA	5,1 mA	4,2 mA	4 mA	
Pull-in voltage at Is=100%	15 µs / 250 µs		30 µs/400 µs	15 V	27 V	27 V	50 V	80 V	
Switching time C / O	2000 Hz		1000 Hz	1 ms/7 ms	5 ms/20 ms	5 ms/20 ms	500 µs/10 ms	1 ms / 15 ms	
Operating frequency	1 mA		0,8 mA	0,9 mA	1 mA	1 mA	0,3 mA	0,3 mA	
Permissible leakage current									
OUTPUT									
Output voltage	4,5 to 58 VDC								
Output current min.	1 mA								
Output current max.	2 A								
Output leakage current at Umax.	< 50 µA								
Residual voltage at I max and U rated	typical		0,1 V						
	max.		0,5 V						
Frequency on inductive load									
Isolation Input / Output	2500 V RMS								
TEMPERATURE									
Ambient temperature storage	-40°C to +80°C								
operating	-20°C to +70°C (1)								
Other characteristics									
Body material	grey		Screw clamp			Spring clamp			
Wire	Solid wire		UL 94 V0			UL 94 V0			
size	Stranded wire		0,2 - 4 mm ² / 24 - 12 AWG			0,2 - 2,5 mm ² / 24 - 12 AWG			
Rated wire size			0,22 - 2,5 mm ² / 24 - 12 AWG			0,22 - 2,5 mm ² / 24 - 12 AWG			
Wire stripping length			2,5 mm ² / 12 AWG			2,5 mm ² / 12 AWG			
Recommended screwdriver			9 mm .354"			9 mm .354"			
Protection			3,5 mm .137"			3,5 mm .137"			
Recommended torque			IP20 NEMA1			IP20 NEMA1			
			0,4 - 0,6 Nm 3.5 - 5.3 lb.in			0,4 - 0,6 Nm 3.5 - 5.3 lb.in			
Approvals	UL 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.								

(1) Over 55°C, blocks have to be mounted on horizontal rail with 10 mm spacing between each block. For vertical rail mounting use temperature is 15°C less decreased.

Screw clamp module
70 2.76"
67,5 2.66"
75 2.95"
center of rail 35 1.38"

Spring clamp module
75 2.95"
67,5 2.66"
75 2.95"
center of rail 37,5 1.48"

OB...OC 1000 - 5-12-24 V DC

OB...OC 1500 - 24 V AC/DC
OB...OC 1000
48-60-115-230 V AC/DC

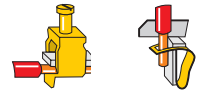
Accessories

Order codes

Description	Type	Order P/N	Packaging	Weight
Optocoupler module 2 A/DC	OBOC 1000-5-12VDC	1SNA 645 050 R1700	10	0,02
Optocoupler module 2 A/DC	OBOC 1000-24VDC	1SNA 645 051 R0400	10	0,02
Optocoupler module 2 A/DC	OBOC 1500-24VAC/DC	1SNA 645 025 R2200	10	0,02
Optocoupler module 2 A/DC	OBOC 1000-48-60VAC/DC	1SNA 645 053 R0600	10	0,02
Optocoupler module 2 A/DC	OBOC 1000-115VAC/DC	1SNA 645 054 R0700	10	0,02
Optocoupler module 2 A/DC	OBOC 1000-230VAC/DC	1SNA 645 026 R2300	10	0,02
Optocoupler module 2 A/DC	OBROC 1000-5-12VDC	1SNA 645 550 R1100	10	0,02
Optocoupler module 2 A/DC	OBROC 1000-24VDC	1SNA 645 551 R0600	10	0,02
Optocoupler module 2 A/DC	OBROC 1500-24VAC/DC	1SNA 645 525 R2400	10	0,02
Optocoupler module 2 A/DC	OBROC 1000-48-60VAC/DC	1SNA 645 553 R0000	10	0,02
Optocoupler module 2 A/DC	OBROC 1000-115VAC/DC	1SNA 645 554 R0100	10	0,02
Optocoupler module 2 A/DC	OBROC 1000-230VAC/DC	1SNA 645 526 R2500	10	0,02

Accessories

End section	BADH V0	1SNA 116 900 R2700	50
	BADL V0	1SNA 399 903 R0200	50
	BAM2 V0	1SNA 399 967 R0100	50
Separator end section	SC 612	1SNA 290 474 R0200	10
Divisible shunt 10 poles	BJ 612-10	1SNA 290 488 R0100	10
	BJ 612-70	1SNA 290 489 R0200	10
Screw clamp distribution block sp. 12 mm	D4/12-3A-3A	1SNA 645 031 R2000	5
Spring clamp distribution block sp. 12 mm	D4/12-3L-3L	1SNA 645 531 R2200	5
Test plug DIA. 2 mm	FC2	1SNA 007 865 R2600	10
Marking method	RC65 RC610	see marking	



Optocoupler : 5 to 58 V DC output / 5 A - 6 mm .236" spacing

Characteristics

Opto. characteristics	OB...OC 5000			
	24 V DC	115 V AC/DC	230 V AC/DC	
INPUT				
Input voltage +20% -15% on DC, +10% -10% on AC		115 V AC/DC	230 V AC/DC	
Frequency		50 / 60 Hz	50 / 60 Hz	
Input current	5,4 mA	4,2 mA	4 mA	
Pull-in voltage at Is=100%	12 V	50 V	80 V	
Switching time C / O	30 µs/400 µs	500 µs/10 ms	1 ms / 15 ms	
Operating frequency	1000 Hz	50 Hz	35 Hz	
Permissible leakage current	0,8 mA	0,3 mA	0,3 mA	

OUTPUT

Output voltage	4,5 to 58 VDC
Output current min.	1 mA
Output current max.	5 A
Output leakage current at Umax.	< 50 µA
Residual voltage at I max and U rated	typical 0,1 V max. 0,5 V
Frequency on inductive load	
Isolation Input / Output	2500 V RMS

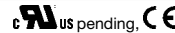
TEMPERATURE

Ambient temperature storage	-40°C to +80°C
operating	-20°C to +70°C (1)

Other characteristics

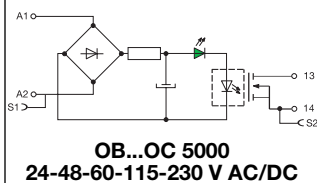
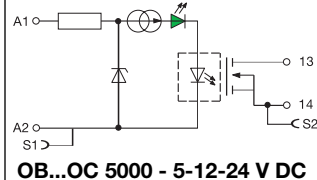
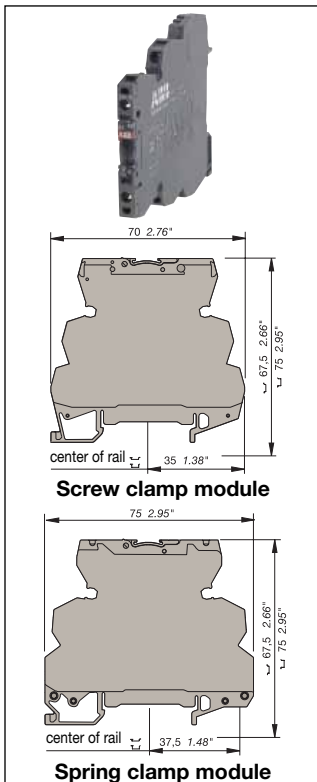
	Screw clamp	Spring clamp
Body material	grey UL 94 V0	UL 94 V0
Wire size	Solid wire 0,2 - 4 mm ² / 24 - 12 AWG	0,2 - 2,5 mm ² / 24 - 12 AWG
Stranded wire	0,22 - 2,5 mm ² / 24 - 12 AWG	0,22 - 2,5 mm ² / 24 - 12 AWG
Rated wire size	2,5 mm ² / 12 AWG	2,5 mm ² / 12 AWG
Wire stripping length	9 mm .354"	9 mm .354"
Recommended screwdriver	3,5 mm .137"	3,5 mm .137"
Protection	IP20 NEMA1	IP20 NEMA1
Recommended torque	0,4 - 0,6 Nm 3.5 - 5.3 lb.in	0,4 - 0,6 Nm 3.5 - 5.3 lb.in

Approvals



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.

(1) Over 55°C, blocks have to be mounted on horizontal rail with 10 mm spacing between each block. For vertical rail mounting use temperature is 15°C less decreased.



Order codes

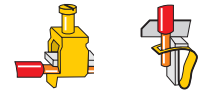
Description	Type	Order P/N	Packaging	Weight
Optocoupler module 5 A/DC	OBOC 5000-24VDC	1SNA 645 024 R2100	10	0,02
Optocoupler module 5 A/DC	OBOC 5000-115VAC/DC	1SNA 645 058 R1300	10	0,02
Optocoupler module 5 A/DC	OBOC 5000-230VAC/DC	1SNA 645 059 R1400	10	0,02
Optocoupler module 5 A/DC	OBROC 5000-24VDC	1SNA 645 524 R2300	10	0,02
Optocoupler module 5 A/DC	OBROC 5000-115VAC/DC	1SNA 645 558 R1500	10	0,02
Optocoupler module 5 A/DC	OBROC 5000-230VAC/DC	1SNA 645 559 R1600	10	0,02

Accessories

End section	BADH V0	1SNA 116 900 R2700	50
	BADL V0	1SNA 399 903 R0200	50
	BAM2 V0	1SNA 399 967 R0100	50
Separator end section	SC 612	1SNA 290 474 R0200	10
Divisible shunt 10 poles	BJ 612-10	1SNA 290 488 R0100	10
	BJ 612-70	1SNA 290 489 R0200	10
Screw clamp distribution block sp. 12 mm	D4/12-3A-3A	1SNA 645 031 R2000	5
Spring clamp distribution block sp. 12 mm	D4/12-3L-3L	1SNA 645 531 R2200	5
Test plug DIA. 2 mm	FC2	1SNA 007 865 R2600	10
Marking method	RC65		
	RC610	see marking	

Electronic Interfaces

R600 optocoupler modules



DIN 3

Optocoupler : 24 to 400 V AC output / 2 A max. - 6 or 12 mm spacing

Characteristics

Opto. characteristics	OB...OA 1000						OB...OA 2000
	INPUT						
Input voltage +20% -15% on DC, +10% -10% on AC	24 V DC		48 V AC/DC	60 V AC/DC	115 V AC/DC	230 V AC/DC	24 V DC
Frequency			50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	
Input current	3,6 mA		4,3 mA	5,5 mA	4,15 mA	4,6 mA	3,6 mA
Pull-in voltage at Is=100%	14 V		15 V	18 V	60 V	135 V	14 V
Switching time C / O	150 µs/1ms		3 ms / 30 ms		2,2 ms/18 ms	2,5 ms/25 ms	150 µs/1 ms
Operating frequency	500 Hz		20 Hz	25 Hz	20 Hz	20 Hz	500 Hz
Permissible leakage current	1 mA		1 mA		1 mA	1 mA	1 mA
OUTPUT							
Output voltage	24 to 400 V AC						10to230VAC
Frequency	50 / 60 Hz						50 / 60 Hz
Output current min.	25 mA						25 mA
Output current max.	1 A						2 A
Output leakage current at Umax.	< 0,5 mA						
Residual voltage at I max and U rated	typical 1 V max. 1,6 V						
Frequency on inductive load	2500 V RMS						
Isolation Input / Output	2500 V RMS						
TEMPERATURE							
Ambient temperature storage	- 40°C to + 80°C						
operating	-20°C to +70°C (1)						
Other characteristics	Screw clamp			Spring clamp			
Body material	grey UL 94 V0			grey UL 94 V0			
Wire	Solid wire 0,2 - 4 mm ² / 24 - 12 AWG			Solid wire 0,2 - 2,5 mm ² / 24 - 12 AWG			
size	Stranded wire 0,22 - 2,5 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			2,5 mm ² / 12 AWG			
Wire stripping length	9 mm .354"			9 mm .354"			
Recommended screwdriver	3,5 mm .137"			3,5 mm .137"			
Protection	IP20 NEMA1			IP20 NEMA1			
Recommended torque	0,4 - 0,6 Nm 3.5 - 5.3 lb.in			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.						

(1) Over 55°C, blocks have to be mounted on horizontal rail with 10 mm spacing between each block. For vertical rail mounting use temperature is 15°C less decreased.

Screw clamp module
70 2.76"
67,5 2.66"
35 1.38"
75 2.95"

Spring clamp module
75 2.95"
67,5 2.66"
37,5 1.48"

OB...OA 1000 - 24 V DC

OB...OA 1000 48-60-115-230 V AC/DC
OB...OA 2000 - 24 V DC

Order codes

Description	Type	Order P/N	Packaging	Weight kg
Optocoupler module 1 A/AC 6 mm spac.	OBOA 1000-24VDC	1SNA 645 027 R2400	10	0,03
Optocoupler module 1 A/AC 6 mm spac.	OBOA 1000-48-60VAC/DC	1SNA 645 061 R0600	10	0,03
Optocoupler module 1 A/AC 6 mm spac.	OBOA 1000-115VAC/DC	1SNA 645 062 R0700	10	0,03
Optocoupler module 1 A/AC 6 mm spac.	OBOA 1000-230VAC/DC	1SNA 645 028 R0500	10	0,03
Optocoupler module 2 A/AC 12 mm spac.	OBOA 2000-24VDC	1SNA 645 029 R0600	5	0,03
Optocoupler module 1 A/AC 6 mm spac.	OBROA 1000-24VDC	1SNA 645 527 R2600	10	0,03
Optocoupler module 1 A/AC 6 mm spac.	OBROA 1000-48-60VAC/DC	1SNA 645 561 R0000	10	0,03
Optocoupler module 1 A/AC 6 mm spac.	OBROA 1000-115VAC/DC	1SNA 645 562 R0100	10	0,03
Optocoupler module 1 A/AC 6 mm spac.	OBROA 1000-230VAC/DC	1SNA 645 528 R0700	10	0,03
Optocoupler module 2 A/AC 12 mm spac.	OBROA 2000-24VAC/DC	1SNA 645 529 R0000	5	0,03

Accessories

End section	BADH V0	1SNA 116 900 R2700	50
	BADL V0	1SNA 399 903 R0200	50
	BAM2 V0	1SNA 399 967 R0100	50
Separator end section	SC 612	1SNA 290 474 R0200	10
Divisible shunt 10 poles	BJ 612-10	1SNA 290 488 R0100	10
	BJ 612-70	1SNA 290 489 R0200	10
Screw clamp distribution block sp. 12 mm	D4/12-3A-3A	1SNA 645 031 R2000	5
Spring clamp distribution block sp. 12 mm	D4/12-3L-3L	1SNA 645 531 R2200	5
Test plug DIA. 2 mm	FC2	1SNA 007 865 R2600	10
Marking method	RC65 RC610	see marking	