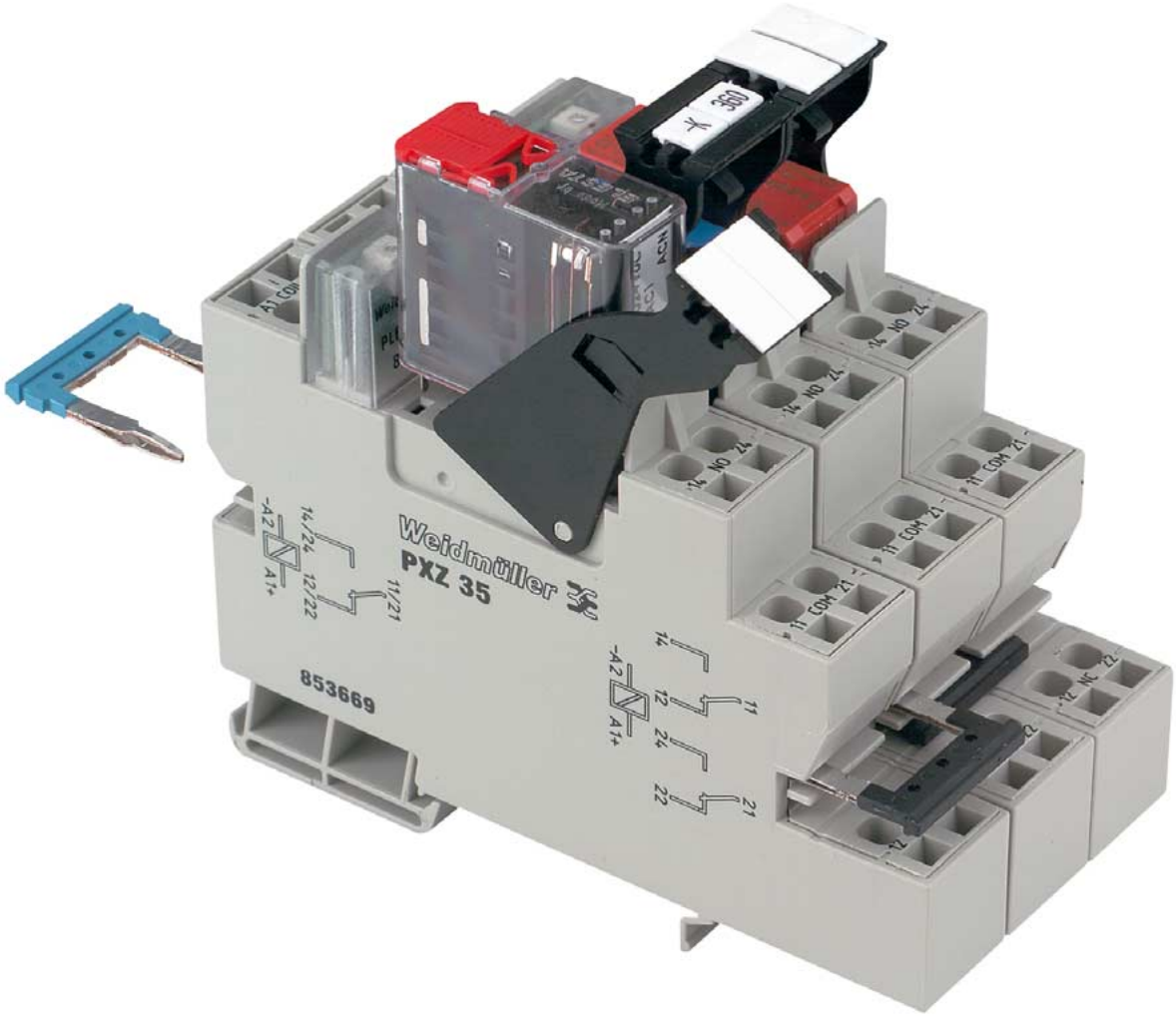
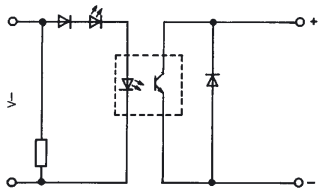
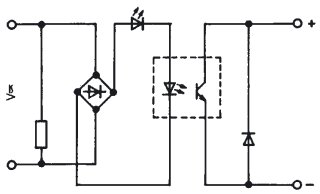

Weidmüller
PXZ 35
853669
-A2
A1+
14/24
12/22
11/21
11
12
14
21
22
24
A1 COM
14 NO 24
11 COM 21
12 NC 22

Opto-coupler on locking socket profile RS 40

Opto-couplers for signal input

RS 40





Rated data							
Input voltage	**5 V–[2])**	**12 V0 ± 10 %**	**24 V– ± 10 %**	**24 V0 ± 10 %**	**48 V0 ± 10 %**	**115 V0, +5%-15%**	**230 V~, +5%-15%**
Rated consumption – (W)	0.045 W	0.25 W	0.51 W	0.34 W	0.55 W	0.33 W	
Rated consumption ~ (VA)		0.32 VA		0.5 VA	0.65 VA	0.65 VA	0.52 VA
Output supply voltage	5…48 V–[1])	5…48 V–[1])	5…48 V–[1])	5…48 V–[1])	5…48 V–[1])	5…48 V–[1])	5…48 V–[1])
Voltage drop at max. load current	< 0.9 V	< 1.6 V	< 0.9 V	< 1.6 V	< 1.6 V	< 1.5 V	< 1.5 V
Output current	20 mA	100 mA	20 mA	100 mA	100 mA	100 mA	100 mA
Derating curve							
a = rowed on mounting rail without clearances							
b = rowed with clearances ≥ 20 mm							
Continuous current → Ambient temperature			mA, 20 or 100, a, b, 10 20 30 40 50 60 °C			mA, 20 or 100, a, b, 10 20 30 40 50 60 °C	
Pulse duration, limiting overload current (not periodic)	0.2 A/10 ms	0.8 A/10 ms	0.2 A/10 ms	0.8 A/10 ms	0.8 A/10 ms	0.8 A/10 ms	0.8 A/10 ms
Sperrstrom (Ruhestrom), max. at U = 48 V	0.16 mA	0.16 mA	0.16 mA	0.16 mA	0.16 mA	0.16 mA	0.16 mA
Switch-on time (cyclic operation)	≤ 12 µs	≤ 6 ms	≤ 30 µs	≤ 2 ms	≤ 5 ms	≤ 10 ms	≤ 6 ms
Switch-off time (cyclic operation)	≤ 15 µs	≤ 13 ms	≤ 60 µs	≤ 15 ms	≤ 20 ms	≤ 23 ms	≤ 18 ms
Max. switching frequency DC voltage	3 kHz	20 Hz	3 kHz	20 Hz	< 20 Hz	10 Hz	
Max. switching frequency AC voltage		< 10 Hz			< 10 Hz		
Switching ratio	1 : 2	10 Hz 1 : 2	1 : 2	10 Hz 1 : 1	10 Hz 1 : 1	10 Hz 1 : 1	10 Hz 1 : 1
Insulation coordination to EN 50 178							
Rated voltage	300 V	300 V	300 V	300 V	300 V	300 V	300 V
Rated impulse voltage	6 kV	6 kV	6 kV	6 kV	6 kV	6 kV	6 kV
Overvoltage category	IV	IV	IV	III	IV	IV	IV
Pollution severity	2	2	2	2	2	2	2
Clearances and creepage distances	≥ 5.5 mm	≥ 5.5 mm	≥ 5.5 mm	≥ 5.5 mm	≥ 5.5 mm	≥ 5.5 mm	≥ 5.5 mm
Opto-coupler	according to DIN VDE 0884	according to DIN VDE 0884	according to DIN VDE 0884	according to DIN VDE 0884	according to DIN VDE 0884	according to DIN VDE 0884	according to DIN VDE 0884
Test voltage (corresponds 100% module test)	according to DIN VDE 0884 non-destructive test 1 kV	according to DIN VDE 0884 non-destructive test 1 kV	according to DIN VDE 0884 non-destructive test 1 kV	according to DIN VDE 0884 non-destructive test 1 kV	according to DIN VDE 0884 non-destructive test 1 kV	according to DIN VDE 0884 non-destructive test 1 kV	according to DIN VDE 0884 non-destructive test 1 kV
Module is immune to interference	acc. to IEC 801-4 severity 4	acc. to IEC 801-4 severity 4	acc. to IEC 801-4 severity 4	acc. to IEC 801-4 severity 4	acc. to IEC 801-4 severity 4	acc. to IEC 801-4 severity 4	acc. to IEC 801-4 severity 4
Insulation voltage							
Input – output/mounting rail	4 kV~eff 1 min.					4 kV~eff 1 min.	
Storage temperature	–40 °C…+85 °C					–40 °C…+70 °C	
Ambient temperature							
–, rowed on mounting rail without clearances	–25 °C…+60 °C					–25 °C…+40 °C	
–, rowed with clearances ≥ 20 mm	–25 °C…+60 °C					–25 °C…+45 °C	

[1]) Not TTL-compatible

[2]) Conditionally level-compatible

Opto-coupler on locking socket profile RS 40

RS 40

Ordering data				
Connection method	**Input voltage**	Function indicator	Screw connection (GSE)	Disconnect plug with screw connection (BL/SL)
	5 V[2]	Yellow LED	**1118861001**	**1161560000**
	12 V0	Green LED	**1118761001**	**1161660000**
	24 V–	Yellow LED	**1160961001**	**1161760000**
				1177860000[1]
	24 V0	Yellow LED	**1117461001**	**1119460000**
		Green LED	**8065031001**	
	48 V0	Green LED	**1161061001**	**1161860000**
	115 V0	Green LED	**1161161001**	**1161960000**
	230 V~	Green LED	**1161461001**	**1162060000**
	230 V~	Red LED		**8182690000**

Connection data			
Insulation stripping length		7 mm	6 mm
Conductor cross-section	0.5…2.5 mm^2	0.5…1.5 mm^2	
		AWG 26…14	AWG 26…16

Dimensions			
Mounting width		11.2 mm	11.2 mm
Length (perpendicular to mounting rail)		70 mm	74 mm
Height TS/TS 35 x 7.5		56 mm/51.5 mm	56 mm/51.5 mm

[1]) Output 5 VTTL-compatible
[2]) Conditionally level-compatible

Opto coupler on locking socket with multiple interface RSM

(Opto-couplers)

Note!

During operation and maintenance please observe the relevant ESD measures.

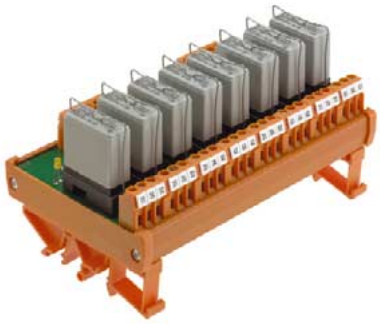
(ESD endangered area)

RSM 4 OS

4 opto-couplers

RSM 8 OS

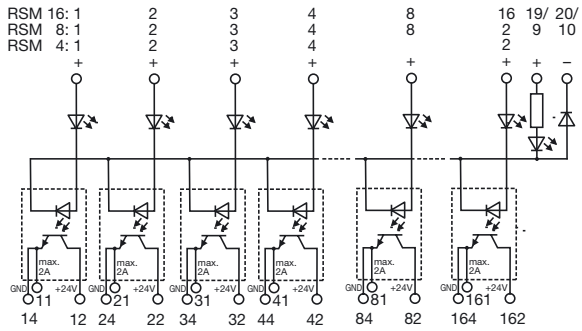
8 opto-couplers



Also available as relay coupler, see page 84/85

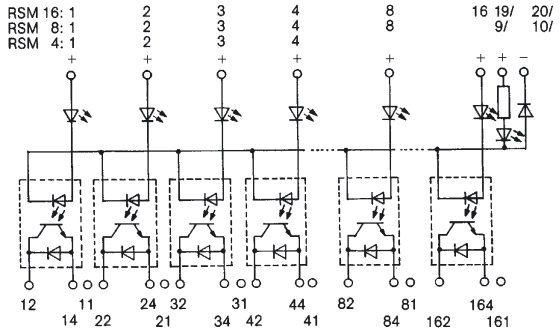
Schematic circuit diagram

Opto coupler 24 Vdc / 2A

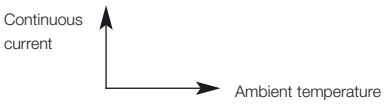


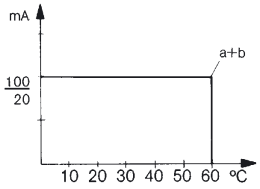
DC voltage/positive switching (joint negative)

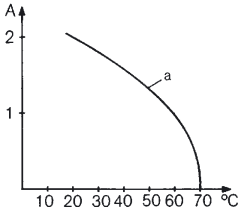
Standard Opto coupler 5…48 Vdc / 100 mA



Rated data				
Input voltage	**5 V–[1] ±10 %**	**24 V– ±10 %**	**24 V0 ±10 %**	**24 V– +10 %**
Rated consumption – (W)	60 mW	400 mW	300 mW	288 mW
Rated consumption ~ (VA)	–	–	0.35 VA	–
Output operating voltage	5…48 V[1])	5…48 V[1])	5…48 V[1])	24 V ±10 %
Voltage drop at max. load current	<1.6 V	<1.6 V	<1.6 V	≤0.4 V
Output current	0.1 A	0.1 A	0.1 A	2 A
Derating curve				
a = Continous operation				
b = Switching mode				







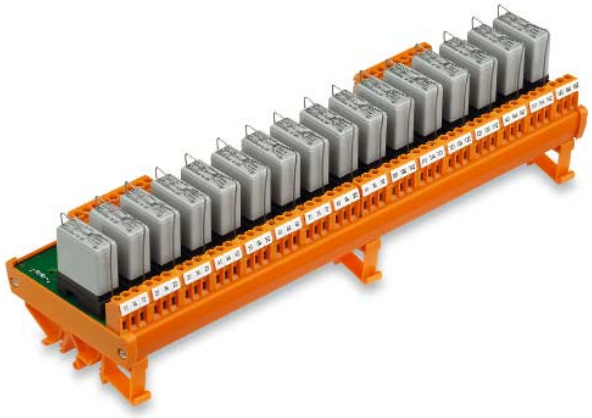
Pulse duration, limiting overload current (not periodic)	0.8 A/10 ms	0.8 A/10 ms	0.8 A/10 ms	12 A/10 ms
Max. reverse current (static current), at U	0.16 mA	0.16 mA	0.16 mA	12 mA
Switching frequency	100 Hz	100 Hz	20 Hz	max. 100 Hz
Storage temperature	–40 °C…+85 °C	–40 °C…+85 °C	–40 °C…+85 °C	–40 °C…+60 °C
Ambient temperature				
–, rowed on mounting rail without clearances	–25 °C…+60 °C	–25 °C…+60 °C	–25 °C…+60 °C	–25 °C…+60 °C
–, rowed with clearances x 20 mm	–25 °C…+60 °C	–25 °C…+60 °C	–25 °C…+60 °C	–25 °C…+60 °C
Dimensions				
Mounting width				
RSM 4	75 mm	75 mm	75 mm	75 mm
RSM 8	145 mm	145 mm	145 mm	145 mm
RSM 16	285 mm	285 mm	285 mm	285 mm
Length (perpendicular to mounting rail)	87 mm	87 mm	87 mm	87 mm

[1]) Not TTL-compatible

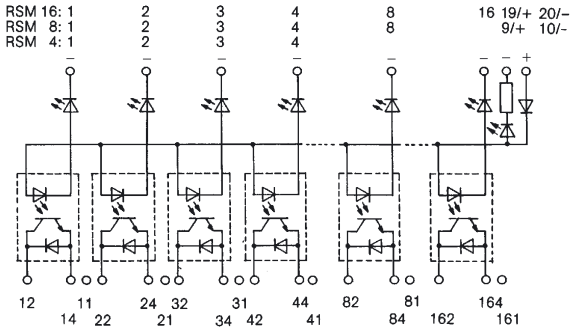
Opto coupler on locking socket with multiple interface RSM

RSM 16 OS

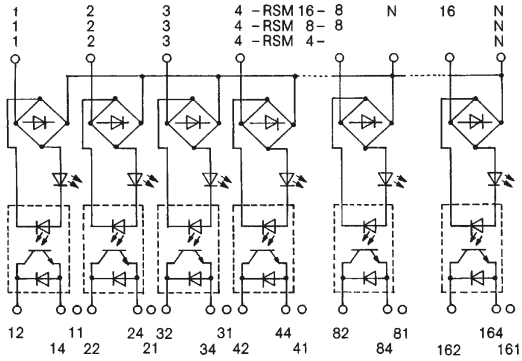
16 Opto couplers



DC/negative switching (common positive)



DC/AC voltage



Ordering data

Conn. method Input/output	Input voltage	RSM 4 OS w/o. optocoupl.	4 optocoupl.	RSM 8 OS w/o. optocoupl.	8 optocoupl.	RSM 16 OS w/o. optocoupl.	16 optocoupl.	Positive switching[3]	Negative switching[4]	Cat. No.	Mount. width (mm)
Screw/			●					●		**1123661001**	75
	5 V–[2]				●			●		**1124061001**	145
							●	●		**1124461001**	285
		●						●		**8017581001**	75
			●*					●		**1123861001**	75
			●*						●	**1123761001**	75
				●				●		**8003671001**	145
	24 V–			●					●	**8021391001**	145
					●*			●		**1124261001**	145
						●		●		**8018221001**	285
						●			●	**8082471001**	285
							●*	●		**1124661001**	285
			●*							**1125161001**	75
	24 V0				●*					**1125261001**	145

***** equipped as standard with opto-coupler 5…48 Vdc / 100 mA

Connection data

Insulation stripping length	7 mm
Conductor cross-section	0.5…2.5 mm²/AWG 26…14

Replacement opto-c.	Type	Input voltage	Output voltage	Output current	Cat. No.
	OS	5 V–[5] ±10 %	24 V– ±20 %	0.1 A	**1121100000**
	OS	12 V–[5] ±10 %	5…48 V–	0.1 A	**1124800000**
	OS	12 V0 ±10 %	5…48 V–	0.1 A	**1121200000**
	OS	24 V–[5] ±10 %	5…48 V–	0.1 A	**1124900000**
	OS	24 V–[5] ±10 %	24 V– +10 %	2.0 A	**1170200000**
	OS	24 V–[5] ±10 %	250 V~	0.1 A	**1153200000**
	OS	24 V0 ±10 %	5…48 V–	0.1 A	**1121300000**

[2] 5 V TTL Input voltage on request

[3] Common negative potential, positive is switched

[4] Common positive potential, negative is switched

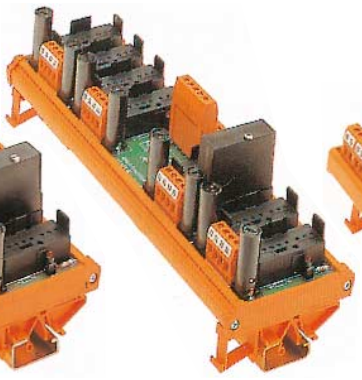
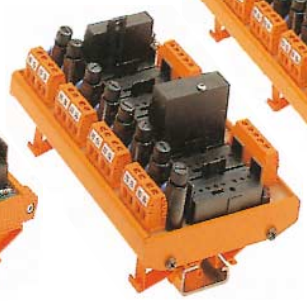
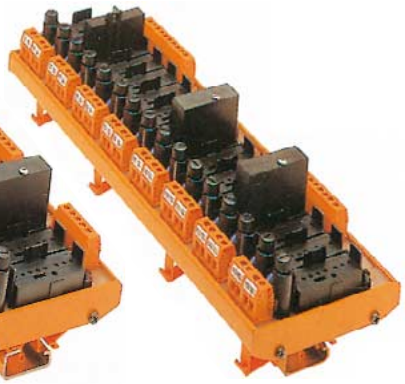
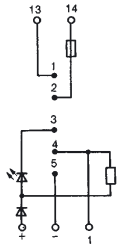
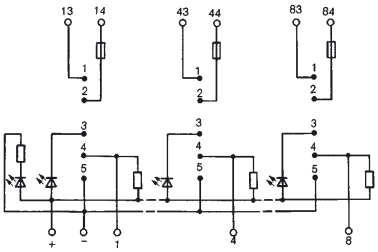
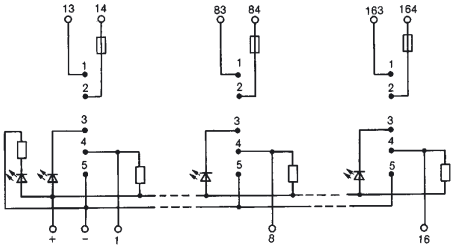
[5] Not suitable for DC/AC version

Opto coupler, locking socket for semi-conductor relays

Single and multiple socket interface-unit

Advantages of semiconductor relays:
- Wear-free switching also with high switching frequencies
- Bounce-free switching
- No electomagnetic interferences
- High insulation-voltage between load and control circuit

Note!
The relevant ESD measures are to be observed during commissioning and maintenance (ESD endangered area)

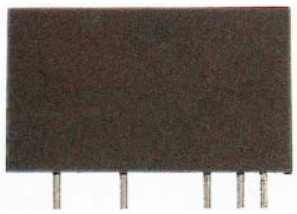
	RS 1 HR	RSM 4 HR	RSM 8 HR	RSM 8 HR-100	RSM 16 HR-100
					
Schematic circuit diagram					
					
Ordering data	Type / Cat. No.	Type / Cat. No.	Type / Cat. No.	Type / Cat. No.	Type / Cat. No.
	RS 1 HR **1166961001**	RSM 4 HR **1167061001**[3]	RSM 8 HR **1167161001**[3]	RSM 8 HR-100 **1166261001**[3]	RSM 16 HR-100* **1167261001**[3]
Rated data (with inpu module)[1]					
Input voltage, max.	**250 V~**	**250 V~**	**250 V~**	**250 V~**	**250 V~**
Input current (per channel)	25 mA	25 mA	25 mA	25 mA	25 mA
Max. output voltage	24 V0	24 V0	24 V0	24 V0	24 V0
Output current (per channel), max.	Depending on module	Depending on module	Depending on module	Depending on module	Depending on module
Rated data (with output module)[1]					
Input voltage, max.:	24 V0	24 V0	24 V0	24 V0	24 V0
Input current (per channel)	Depending on module	Depending on module	Depending on module	Depending on module	Depending on module
Max. output supply voltage	250 V	250 V	250 V	250 V	250 V
Max. output current (per channel)	Depending on module	Depending on module	Depending on module	Depending on module	Depending on module
Auxilary voltage	24 V– ±10 %	24 V– ±10 %	24 V– ±10 %	24 V– ±10 %	24 V– ±10 %
Status indicator	LED red	LED red	LED red	LED red	LED red
Fuse	5x20, 5 A quick	5x20, 5 A quick	5x20, 5 A quick	5x20, 5 A quick	5x20, 5 A quick
Storage temperature	–40 °C…+70 °C	–40 °C…+70 °C	–40 °C…+70 °C	–40 °C…+70 °C	–40 °C…+70 °C
Ambient temperature	–25 °C…+70 °C	–25 °C…+70 °C	–25 °C…+70 °C	–25 °C…+70 °C	–25 °C…+70 °C
	Dependent on semiconductor relay used	Dependent on semiconductor relay used	Dependent on semiconductor relay used	Dependent on semiconductor relay used	Dependent on semiconductor relay used
Connection data					
Conductor cross-section					
Screw connection	0.5…2.5 mm²	0.5…2.5 mm²	0.5…2.5 mm²	0.5…2.5 mm²	0.5…2.5 mm²
Male connect. block DIN 41651[2]	–	–	10-pole	10-pole	20-pole
„Sub-D"-connection[2]	–	–	15-pole	15-pole	25-pole
Dimensions					
Mounting width	35 mm	130 mm	249 mm	156 mm	305 mm
Length (perpendicular (to mounting rail)	87 mm	87 mm	87 mm	109 mm	109 mm

[1] The rating data depend on the used module
[2] on request
[3] Mixed placement of input and output modules is not valid.

Semi-conductor relays

Solid state relays for signal input and output

Input module HRE 24
DC/DC

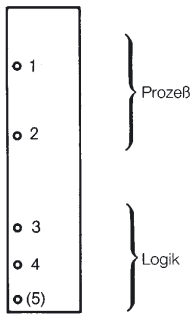


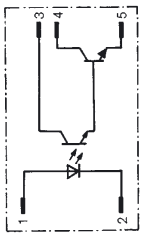
Input module HRE 115/HRE 230
AC/DC

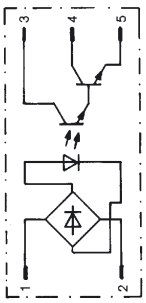
Output module HRA 230
DC/AC

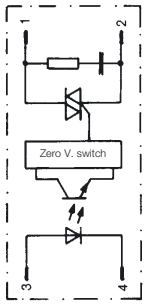
Output module HRA 60
DC/DC

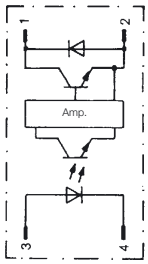
Schematic circuit diagram

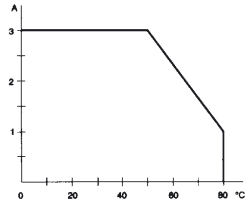










Ordering data	Type	Cat. No.	Type	Cat. No.	Type	Cat. No.	Type	Cat. No.	Type	Cat. No.
	HRE 24	**117440000**	HRE 115	**1174500000**	HRE 230	**1174600000**	HRA 230	**1174100000**	HRA 60	**1174300000**
Rated data										
Input voltage	**10…32 V– (process)**		**90…140 V0 (process)**		**180 V…280 V0 (process)**		**18…32 V– (Logic)**		**18…32 V– (Logic)**	
Input current at max. V	21.33 mA		10 mA		6.4 mA		–		–	
Input resistance	1.5 kΩ		14 kΩ		44 kΩ		2.2 kΩ		2.2 kΩ	
Switch-on voltage	–		–		–		3 V		3 V	
Switch-off voltage	–		–		–		1 V		1 V	
Max. output operating voltage	18…32 V (Logic)[1]		18…32 V (Logic)[1]		18…32 V (Logic)[1]		24…250 V~[1][2] (process)		5…60 V~[1][2] (process)	
Voltage drop at max. load current	0.4 V		0.4 V		0.4 V		–		–	
Max. output current (Continous test)	100 mA		100 mA		100 mA		3 A		3 A, resistive load	
Derating curve a = self-cooling b = mounted on 2 k/W heat sink Continuous current Ambient temperature										
Min. Load current	–		–		–		20 mA		–	
Leakage current in off-condition at rated load voltage	max. 100 µA		max. 100 µA		max. 100 µA		6 mA		1 mA	
Surge current	–		–		–		75 A/20 ms		5 A/1 s	
Switch-on time	5 ms		20 ms		20 ms		≤ 1/2 Period		100 µs	
Switch-off time	5 ms		20 ms		20 ms		≤ 1/2 Period		750 µs	
Input impulse	–		–		–		unlimited, t_{min} 100 µs		unlimited, t_{min} 100 µs	
Storage temperature	–40 °C…+100 °C		–40 °C…+100 °C		–40 °C…+100 °C		–40 °C…+100 °C		–40 °C…+100 °C	
Ambient temperature	–20 °C…+ 70 °C		–25 °C…+ 70 °C		–25 °C…+ 70 °C		–25 °C…+ 70 °C		–25 °C…+ 70 °C	

[1] 250 V max. in connection with HR modules. Only negative-switching when used on HR-socket!

[2] For inductive loads the module must be protected with diode or varistor.