Реле безопасности H-480

Технические характеристики

По вопросам продаж и поддержки обращайтесь:

Алматы (727)345-47-04
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Саранск (8342)22-96-24
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70
Казахстан +(727)345-47-04
Беларусь +(375)257-127-884
Узбекистан +998(71)205-18-59
Киргизия +996(312)96-26-47

эл.почта: hro@nt-rt.ru || сайт: https://hengstler.nt-rt.ru

Datasheet Safety Relay H-480/2

General
- 6 contacts, forcibly guided contact set
- Acccording to IEC/EN 61810-3, type A
- Reinforced (double) insulation at all contacts
- Low coil power consumption
- Ambient temperature - 25 ... + 75 °C
- Soldering heat resistance 260 °C / 5 s
- RoHS compliance

Connections
- Pre-soldered pins for PCB

Drive:
- Direct current, monostable

Approvals:
- TÜV
- cULus

Standards:
- IEC/EN 61810-1 ● IEC/EN 61810-3 ● UL 61810-1

Technical Data
mechanical

Dimensions L x W x H (in mm)	55 x 16,5 x 15,7
Shock resistance NO / NC contact	15/3 g, 11 ms half sine
Vibration resistance NO / NC contact	10/3 g, 10 - 200 Hz
Operating time NC-contact, contact opens	max. 11 ms [1]
Operating time NO-contact, contact closes	max. 17 ms [1]
Releasing time NO-contact, contact opens	max. 5 ms [1]
Releasing time NC-contact, contact closes	max. 17 ms [1]
Mechanical service life (without load)	> 10^7 cycles
Weight	30 g

[1] At nominal voltage, 20°C ambient temperature and without contact bouncing

Technical Data
electrical

Max. switching capacity		AC 2,000 VA; DC [1] W
Max. switching voltage		AC 230/240 V; DC [1] V
Max. switching current (NO / NC contact)		8/8 A at contactmaterial $AgSnO_2$ + 0.2 µm Au
Max. switching current (NO / NC contact)		8/6 A at contactmaterial $AgSnO_2$ + 2.0 µm Au
Max. switching current (NO / NC contact)		8/6 A at contactmaterial AgNi + 0.2 µm Au
Constant current I_{th2} over 1 contact at the same time		8 A
Constant current I_{th2} over 2 contact at the same time		8 A
Constant current I_{th2} over 3 contact at the same time		8 A
Constant current I_{th2} over 4 contact at the same time		8 A
Constant current I_{th2} over 5 contact at the same time		6 A
Min. switching capacity (recommendation)		10 mA / 5 V
Contact resistance (factory setting)		< 100 mΩ (at 1 A / 24 VDC contact load)
Switching capacity (NO-contacts)	AC-15 230/240 V	I_e = 5 A at contactmeterial $AgSnO_2$
	DC-13 24 V	I_e = 6 A [2] at contactmaterial $AgSnO_2$
	DC-13 24 V	I_e = 5 A [2] at contactmaterial AgNi
Electrical service life (at T_A = 75 °C)		
(NO-contacts) AC-1	230 V / 8 A	80,000 cycles [3]
DC-1	24 V / 8 A	100,000 cycles [4]
Short-circuit capacity 1,000 A / AC 230 V		6 A gL/gG-fuse at contact material $AgSnO_2$
		4 A gL/gG-fuse at contact material AgNi

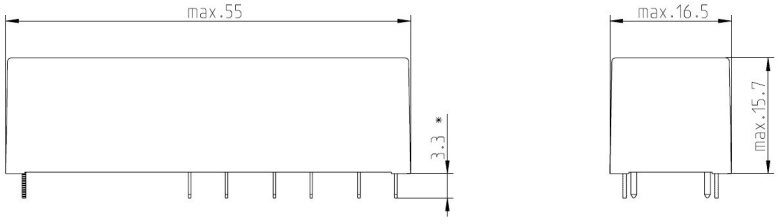
[1] See DC-switching capacity (page 4, graph 1).

[2] Modified test according IEC DIN EN 60947-5-1: 50 switching cycles at 0,1 Hz / 1.1 x Ue
6000 switching cycles at 0,1 Hz / 1.0 x Ue

[3] Values at open ventilation element (drawing 10, page 4)

[4] Value independent from ventilation element

Dimensions



* Length of pins according to customer requests (Standard: 3,3 mm)

Drawing 1

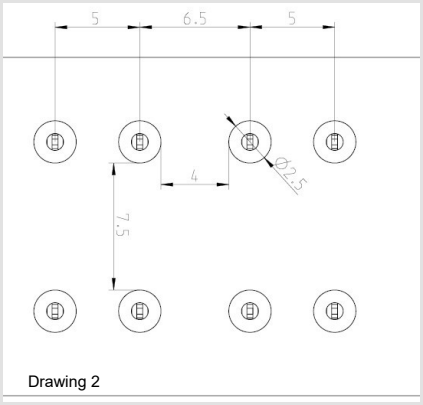
Insulation

Over voltage category (Ü) III
Degree of pollution (V) 2
Insulating material group II

B-I = Basic insulation
V-I = Reinforced (double) insulation
F-I = Functional insulation

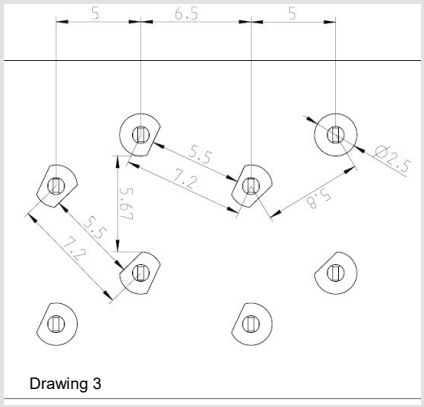
Insulation between	Nominal voltage network system		Air-/creeping distance [3]	Test voltage [1] 50 Hz / 60 s
	AC 120/240 V	AC 230/400 V		
Drive - Contactset	V-I	V-I	> 6.0 mm	3,000 V
Contact - Contact	V-I	V-I	> 6.0 mm	3,000 V
Between open contact	F-I	F-I	> 1.0 mm [2]	500 V

[1] Rated impuls withstand voltage at V-I: 6,000 V (1.2/50µs)
[2] When opening failure at the antivalent contacts > 0.5 mm (IEC/EN 61810-3)
[3] The below drawing should support the design of the circuit board (diameter of the solder pad):



Drawing 2

Variant 1



Drawing 3

Variant 2

Type code

Enclosure
D washtight (RT III)

Connections
3 Soldering pins for PCB

Special version
1 Variant 1 (Contact set 420)
2 Variant 2 (Contact set 420)
Variants 1+2 see at connection grid at page 3

Version
00 Standard
01 Special version

H	D	Z	-	0	3	4	8	0	/	2	1	-	0	0	1	0	1	2	-	4	2	0	/	0	0	2	.	0	0

Special feature
Z forcibly guided contacts

Drive
0 DC,monostable

Size
2 6 Contacts

Coil
See coil table

NO
NC
CO

Contactset-number
See contactset table

Contactset table

Number of contacts	Contact material				
NO/NC/CO-contacts	$AgSnO_2$ + 0,2 µm Au	$AgSnO_2$ + 2 µm Au	AgNi + 0,2 µm Au	AgNi	
420 (Variant 1)	002	008	014	020	Contactset-number
420 (Variant 2)	004	010	016	022	

Coil table

Number of contacts
420

Coil-No.	Resistance [Ω]	Resistance-tolerance ± [%]	Ambient temperature				Printing (U_{nom})
			+ 20 °C	+ 75 °C	- 25 °C	+ 20 °C	
			U_1 [V]	U_2 [V]	U_3 [V]	U_{rel} [V]	
001022	52	8	4,4	7,1	22	0,7	6 V
001088	110	9	6,6	10,4	32	1,0	9 V
001016	210	11	9,0	14,1	44	1,4	12 V
001080	400	10	12,8	19,5	61	1,9	18 V
001076	555	13	14,9	23,0	72	2,2	21 V
001012	785	9	18,2	27,3	86	2,7	24 V
001082	1600	9	25,8	38,9	121	3,7	36 V
001078	2830	12	34,4	51,9	164	5,1	48 V
001006	4860	12	45,8	67,9	215	6,7	62 V
001090	15510	15	82,2	121,0	384	11,9	110 V
Further coils are possible and available							

U_1: Minimum operating voltage with consideration of coil self heating
U_2: Thermal restricted maximum coil voltage
U_3: Maximum admissible coil voltage to realize a contact gap of > 0.5 mm also at a contact fault
U_{rel}: Releasing voltage

All values only valid for new (unused) relays!

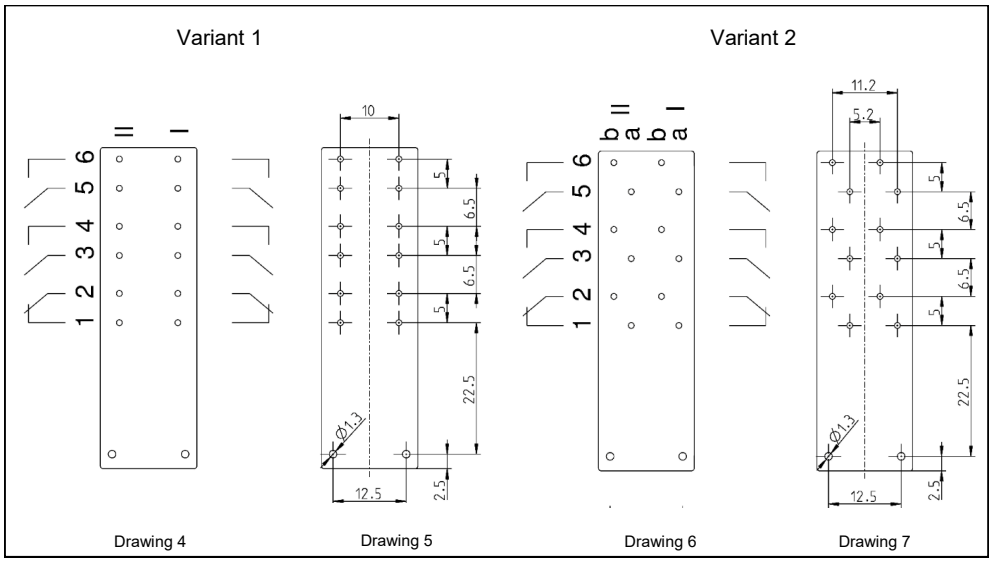
Running types

Printing (U_{nom})	Type code	Article-No.	U_1 [V]	U_2 [V]	U_3 [V]	U_{rel} [V]
12 V	HDZ-03480/21-001016-420/002.00	480-1003	9,0	14,1	44	1,4
12 V	HDZ-03480/22-001016-420/004.00	480-1009	9,0	14,1	44	1,4
18 V	HDZ-03480/21-001080-420/002.00	480-1008	12,8	19,5	61	1,9
21 V	HDZ-03480/21-001076-420/002.00	480-1013	14,9	23,0	72	2,2
24 V	HDZ-03480/21-001012-420/002.00	480-1001	18,2	27,3	86	2,7
24 V	HDZ-03480/22-001012-420/004.00	480-1022	18,2	27,3	86	2,7
48 V	HDZ-03480/21-001078-420/002.00	480-1005	34,4	51,9	164	5,1
110 V	HDZ-03480/21-001090-420/002.00	480-1007	82,2	121,0	384	11,9
110 V	HDZ-03480/22-001090-420/004.00	480-1012	82,2	121,0	384	11,9

Connection grid

View on soldering side

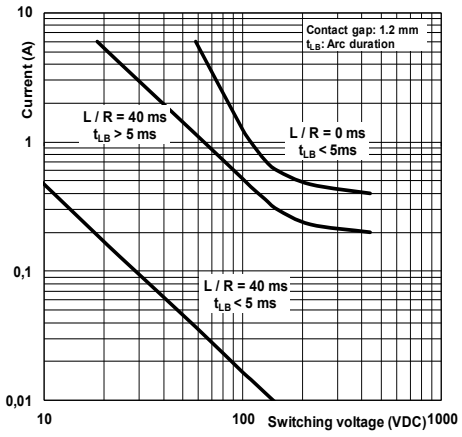
Number of contacts
420



Drawing 4 Drawing 5 Drawing 6 Drawing 7

Diagram

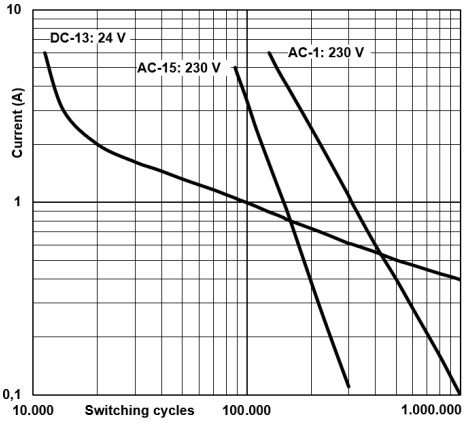
DC-braking capacity



Graph 1

Electrical service life

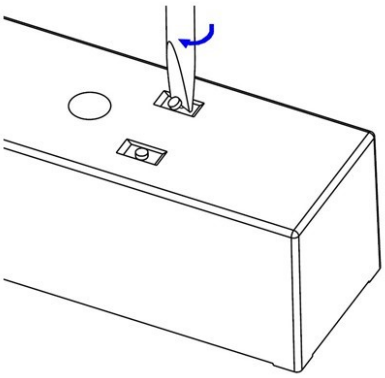
Data for NO-contact, according IEC/EN 61810-1 and 61810-2-1 (B10), ventilation element open



Graph 2

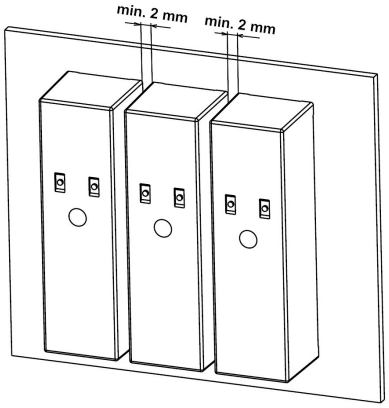
Others

Opening of the ventilation element



Drawing 10

Recommended mountig gap on pcb[1)]



Drawing 11

[1)] Lower mounting gaps are after consulting with Hengstler possible

По вопросам продаж и поддержки обращайтесь:

Алматы (727)345-47-04
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Саранск (8342)22-96-24
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70
Казахстан +(727)345-47-04
Беларусь +(375)257-127-884
Узбекистан +998(71)205-18-59
Киргизия +996(312)96-26-47

эл.почта: hro@nt-rt.ru || сайт: https://hengstler.nt-rt.ru