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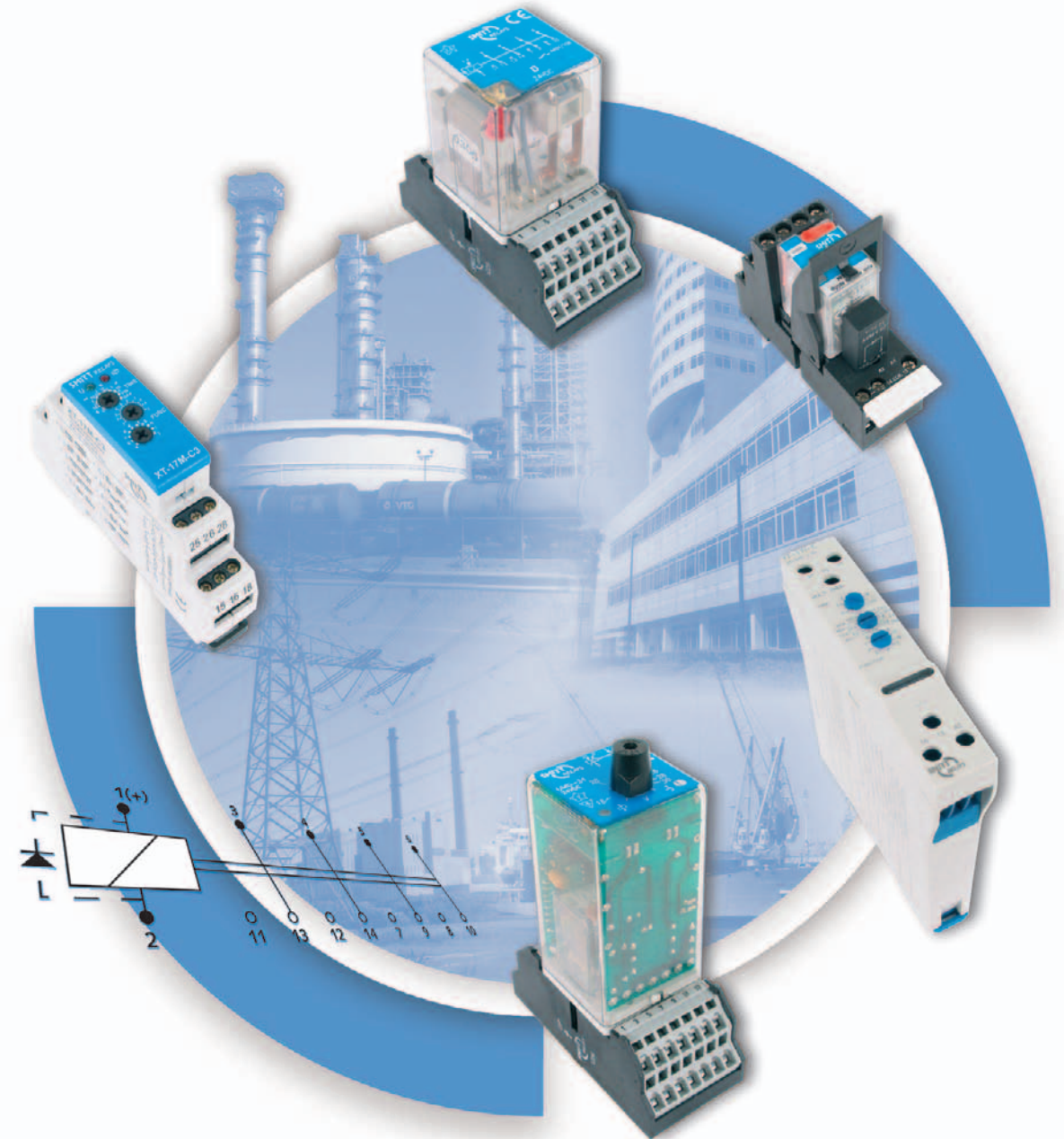


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INDUSTRIAL RELAYS



NIEAF-SMITT

Nieaf-Smitt has been manufacturing relays since 1902. The companies origin is in **SMITT**, a relay manufacturer since 1902 and **NIEAF**, producing test & measurement instruments since 1900. Both companies merged in 1984 to become Nieaf-Smitt.



Nieaf-Smitt is ISO-9001:2000 certified for marketing, sales, design, development, production, calibration and distribution of measuring & switching equipment.



stands for high-quality, reliable relays tuned to the demands of the market. To offer a solution for most applications we have a wide range of relays, varying from standard, general purpose relays, heavy-duty relays to relays for safety/critical applications.

Mission Statement

Supplying products and solutions to support our customers in meeting their reliability and quality objectives.

Standards and approvals



are designed and manufactured with utmost care for reliability and durability. The relays are in compliance with the leading international standards.

EN 60255	Relay design, specifications and environmental conditions.
EN 60947 EN 60947-4-1 EN 60947-5-1	Low voltage switch gear and control gear. Electromechanical contactors and motor starters. Electromechanical components for control applications. This standard examines both coil and contact specifications in depth.
VDE0435	This German standard specifies regulations for electrical relays in control applications, which are related to EN 60947 and EN 60255.
EN 60529	European standard describes the protection class (IP-code). This standard corresponds to VDE0470 and DIN40050.
EN 50205	European standard specifying weld no transfer contacts.
Approvals	Are mentioned at each specific relay series (VDE, UL, CSA, Lloyd's, etc.)

General specifications

- All contact specifications in this catalogue are for switching resistive loads in AC voltages.
- The I-, M-, G- and L-series pinning is according to the worldwide standards.
- C-, D- and A&B-400 series have been developed for more demanding applications, and have plug-in bases with flat and silver or tinplated pins for optimum and long lasting contact between relay and socket.

Contact descriptions

	International	USA	ANSI
Normally Open contact	NO	SPST-NO	form A
Normally Closed contact	NC	SPST-NC	form B
Change Over contact	1 CO	SPDT	form C
2 Change Over contacts	2 CO	DPDT	form C
3 Change Over contacts	3 CO	3PDT	form C
4 Change Over contacts	4 CO	4PDT	form C
1 Double break /double make contact	1 CO DB-DM	SPDT(DB-DM)	form Z
4 Double break /double make contact	4 CO DB-DM	4PDT(DB-DM)	form Z

Nieaf-Smitt is constantly improving its Smitt Relays products, specifications can be changed without notice.
No rights can be derived from the specifications in this brochure.

CONTENTS						
Relay Type	Page	Contact configuration			Rated current	
		NO	NC	CO	CO, DB-DM	Amp.
Instantaneous relays						
General purpose						
I-series	4			1		6
M-series	4			2, 3 or 4		12, 10, 6
G-series	5			2 or 3		10
L-series	5			2		12
C-series	6			2		8
D-series	6			4		10
D8-UL	8			8		10
DGG	8			2		10
Heavy duty						
C...-B/C	9			2		8
D-B	9			4		10
D-YB	9				2	10
Safety/critical						
C...-U/V	10				1	6
A400...C	10				4	8
B400	10				4	12
Modular relays						
XT-17M-...	11			1 or 3		16
Function relays						
Latching						
BD	12		1	3		10
KDN	12			8		10
KCS	12			2		6
Dry circuit						
CU-...-E	13			2		400 mA
D-E	13			4		400 mA
Pulse transducing						
IOD	14					100 mA
EIOD	14					100 mA
Current coil						
CU...I/J	15			1		6
CP...I/J	15			1		6
DI	15			2		10
Measuring & monitoring						
UMD	16	1		1		6
ACD	16	1		1		6
SMD	17			1		2
UB	17	3				250 mA
Timing 1-function (plug-in)						
TDB2	19			2		6
TDB4	19			4		10
TDE	20	1		1		6
TDE4	20			4		10
FDA	21			2		8
FDC	21			3		6
WDDE / WDDF	21			4		8
Timing 2-functions (plug-in)						
TDBE	22			2		6
TBAU	22				4	8
TBBU	22				4	12
Electronic timers (DIN-rail)						
XT-17M-... series	23/25			1/2/3		16
XT-17I-... series	26			1		10
XT-35-... series	27			1/2		8/10
Sockets & accessories	28/32					
Special relay products						
Current measuring/monitoring	33					
Voltage measuring/monitoring	34					

12 Amp

↑

Contact Rating

↓

0 Amp

B-series

M2-series and L-series

D8-series and KDN-series

D-series

G-series

M3-series

A-series

C-series

I-Series and M4-series

DE-series and CU-...E-series

G-series

M4-series

M4-series

Markets

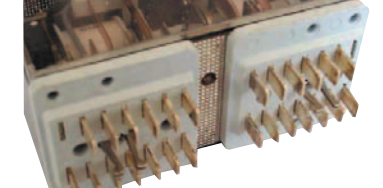
Factory Automation

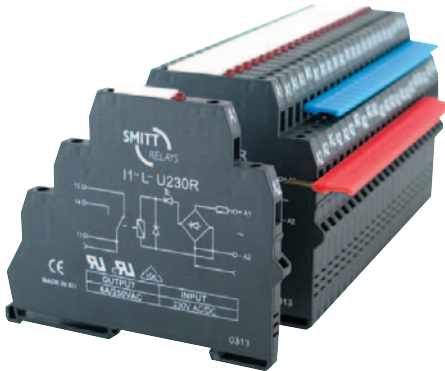
LV Installations

Industry

Power Utility

Maritime Offshore

Relay pinning					
M-series 2-pole	M-series 3-pole	M-series 4-pole	G-series 2-pole	G-series 3-pole	L-series 2-pole
					
CU-series 2-pole	CP-series 2-pole	D-series 4-pole	D8 & KDN-series 8-pole		A400 & B400 series, 4-pole
					

GENERAL PURPOSE		
Application: General purpose applications in industry, utility and maritime (M4-series). Switching of: Resistive and AC loads		
	I-series	M-series
Contact specifications		
Contact material	AgSnO2	AgNi
Number & configuration	1 CO	2 CO/3 CO/4 CO
Rated current A	6	12/10/6
Max. inrush current A	15	24/20/12
Min. switched current mA	8/24V	5
Rated/max. switched voltage VAC	250	250
Coil specifications		
Nominal voltage (Un) VDC	12VDC / 24VDC / 24VAC/DC	12/24/48/110/125
VAC	230VAC / 230VAC/DC	12/24/48/115/230
Power consumption W/VA	0,3...0,6W (12V/24V)	DC: 0,9W
	1,8VA (230VAC), 1W/VA (230VAC/DC)	AC: 1,6VA
Operating range VDC	0,75...1,1 Un	0,8...1,1 Un
VAC	0,75...1,1 Un	0,8...1,1 Un
Technical data		
Mechanical life (cycles)	≥ 20x10 ⁶	≥ 20x10 ⁶
Dielectric strength, coil-contact VAC	4000	2500
Isolation class	C 250	C 250
Pick-up time DC/AC (ms)	6/7	13/10
Drop-out time DC/AC (ms)	8/15	3/8
Weight (gram)	40	35
Operating ambient temperature (°C)	-40... +55°C	-40... +85°C
Size, l x w x h (mm)	80x93,8x6,2	21,2x27,5x35,6
Protection category	IP 20	IP 40
Standard equipped with		
	LED-indicator DC versions + back-EMF-diode Marking tag Screw connections Cadmium free contacts	Flash barriers DC/AC colour coding Test/latching button Mechanical indicator Cadmium free contacts
Options		
	I-connect-20 (interconnection strips) Available in the colours red, blue and black (see page 28)	Option: LED-indicator Diode module pluggable in socket (see page 28)
Remarks		
	AC coil: 50/60Hz  	AC coil: 50/60Hz   (M4 series) 
Sockets & Accessories		
	See page 28	See page 28

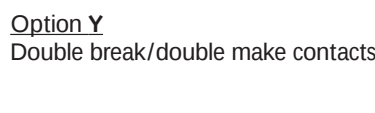
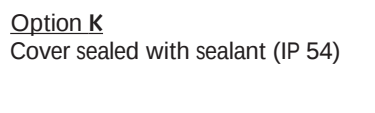
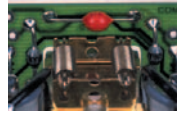
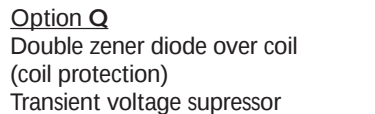
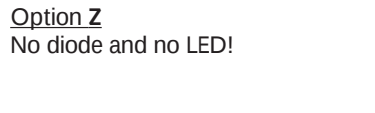
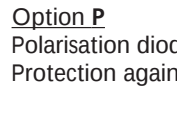
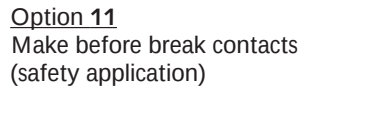
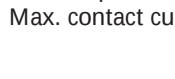
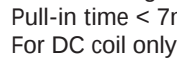
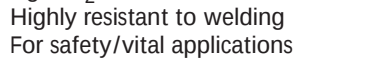
See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

GENERAL PURPOSE		
Application: General purpose application in industry, utility and maritime (G-series). Switching of: Resistive and AC loads		
	G-series	L-series
Contact specifications		
Contact material	AgNi	AgCdO
Number & configuration	2 CO/3 CO	2 CO
Rated current/max. switched current A	10/20	12/20
Min. switched current mA	5	50
Rated/max. switched voltage VAC	250	250
Coil specifications		
Nominal voltage (Un) VDC	12/24/48/110/120	12/24/48/110/125
VAC	12/24/28/115/130	12/24/48/110/230
Power consumption (DC/AC) W/VA	1,5/2,8	1,1/1,9
Operating range VDC	0,8...1,1 Un	0,8...1,1 Un
VAC	0,8...1,1 Un	0,8...1,1 Un
Technical data		
Mechanical life (cycles)	≥ 20x10 ⁶	≥ 10x10 ⁶
Dielectric strength, coil-contact VAC	2500	2000
Isolation class	C 250	B 250
Pick-up time DC/AC (ms)	12/12	15/15
Drop-out time DC/AC (ms)	7/10	10/10
Weight (gram)	83	35
Ambient temperature (°C)	-40... +70°C	-40... +55°C
Size, l x w x h (mm)	35x35x54,4	21,2x27,5x35,5
Protection category	IP 40	IP 40
Standard equipped with		
	Flash barriers DC/AC colour coding Test/latching button Mechanical indicator Cadmium free contacts	Flash barriers LED-indicator Marking area
Options		
	Option: LED-indicator Modules pluggable in socket (see page 29)	
Remarks		
	AC coil: 50/60Hz   	AC coil: 50/60Hz 
Sockets & Accessories		
	See page 29	See page 29

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

GENERAL PURPOSE		
Application: General purpose for Utility, Industry and Power Plants. Switching of: - Resistive loads - AC loads		
	C-series (G/W)	D-series
Contact specifications		
Contact material Number & configuration Rated current/max. switched current A Min. switched current/voltage mA/V Max. switched voltage VDC/VAC	Ag + 0,2µm Au 2 CO 6/15 10/6 300/250	Ag 4 CO 10/16 10/12 350/440
Coil specifications		
Nominal voltage (Un) VDC VAC Power consumption (DC/AC) W/VA Operating range VDC/VAC	5...93 24...240 0,4/0,6 0,8...1,1/ 0,7...1,1 Un	12...220 12...380 2/2,5 0,8...1,1 Un
Technical data		
Mechanical life (cycles) Dielectric strength, coil-contact VAC Isolation class Pick-up time DC/AC (ms) Drop-out time DC/AC (ms) Weight (gram) Ambient temperature (°C) Size, l x w x h (mm) Protection category	30x10 ⁶ 3500 C 250 15/10 4/8 40 -25...+55°C 20x30x33 IP 50	30x10 ⁶ 2500 C 380 20/10 18/5 125 -25...+55°C 40x40x53 IP 50
Standard equipped with		
	Flash barrier Cadmium free contacts	LED indicator DC coil, with back EMF diode Cadmium free contacts Integrated snap-lock
Options		
	CU-G plug-in, DC coil CU-W plug-in, AC coil CP-G PCB, DC coil CP-W PCB, AC coil	For all options See page 7
Remarks		
	AC coil = 50/60Hz	AC coil = 50Hz 60Hz coil on request
Sockets & Accessories		
	See page 32	See page 30

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

GENERAL PURPOSE					
Options for D-series relays					
	Option B Magnetic arc blow out (for DC and/or inductive loads)		Option S Mechanical position indicator		Option Y Double break/double make contacts
	Option D Back EMF diode (standard in DC coil)		Option T Push-to-test button		Option K Cover sealed with sealant (IP 54)
	Option A Trip indicator		Option X2 Rectifier circuit Coil both for DC & AC		Option Q Double zener diode over coil (coil protection) Transient voltage supressor
	Option E Goldplated contacts (16 micron)		Option Colour coding Coloured cover, on request (coil voltage coding)		Option Z No diode and no LED!
	Option Keying Coil coding Relay + socket		Option P Polarisation diode Protection against inverse polarity		Option 11 Make before break contacts (safety application)
	Option C Low temperature (-40°C) Max. contact current 8A		Option R Fast switching Pull-in time < 7ms For DC coil only		Option M AgSnO ₂ contacts Highly resistant to welding For safety/vital applications



See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

GENERAL PURPOSE

Application:
General purpose for Utility, Industry and Power Plants.

Switching of:
- Resistive loads
- AC loads



D8-UL series

DGG-series
Extremely sensitive coil

Contact specifications

Contact material
Number & configuration
Rated current/max. switched current A
Min. switched current/voltage mA/V
Max. switched voltage VDC/VAC

Ag
8 CO
10/16
10/12
350/440

Ag
2 CO
10/16
10/12
350/440

Coil specifications

Nominal voltage (Un) VDC
VAC
Power consumption (DC/AC) W/VA
Operating range VDC/VAC

24...240 VDC/AC
24...240 VDC/AC
2,5/3,5
0,8...1,2 Un

12...220
12...380
2/2
0,4...1,1 Un / 0,6...1,1 Un

Technical data

Mechanical life (cycles)
Dielectric strength, coil-contact VAC
Isolation class
Pick-up time DC/AC (ms)
Drop-out time DC/AC (ms)
Weight (gram)
Ambient temperature (°C)
Size, l x w x h (mm)
Protection category

30x10⁶
2500
C 380
17/18
12/12
330
-25...+55°C
88x40x56
IP 50

30x10⁶
2500
C 380
30/15
8
125
-25...+55°C
40x40x53
IP 50

Standard equipped with

LED indicator
Cadmium free contacts
Integrated snap-lock

Cadmium free contacts
Integrated snap-lock

Options

For options information see page 7

B - Magnetic arc blow out
E - Goldplated contacts

B - Magnetic arc blow out
E - Goldplated contacts
D - Back EMF diode

Remarks

Coil is standard for DC & AC!

Extremely sensitive coil (50Hz)
Pull-in voltage 0,4 Un
60Hz coil on request

Sockets & Accessories

See page 31

See page 30

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

HEAVY DUTY

Application:
Heavy duty applications in Power Utility and other demanding industries

Switching of:
- Resistive & inductive loads
- AC & DC voltages

Feature:
- High DC breaking capacity
- Long contact life

C...-B/C
Magnetic arc blow outD-B series
Magnetic arc blow outD-YB series
Magnetic arc blow out
Double make/double break

Contact specifications

Contact material
Number & configuration
Rated current/max. switched current A
Min. switched current/voltage mA/V
Max. switched voltage VDC/VAC

Ag
2 CO
8/10
10/12
300/250

Ag
4 CO
10/16
10/12
350/440

Ag
2 CO, DB-DM
10/16
10/12
350/440

Coil specifications

Nominal voltage (Un) VDC
VAC
Power consumption (DC/AC) W/VA
Operating range VDC/VAC

6...110
24...230
1/0,9 (50Hz)
0,8...1,1 Un

12...220
12...380
2/2
0,8...1,1 Un

12...220
12...380
2/2
0,8...1,1 Un

Technical data

Mechanical life (cycles)
Dielectric strength, coil-contact VAC
Isolation class
Pick-up time DC/AC (ms)
Drop-out time DC/AC (ms)
Weight (gram)
Ambient temperature (°C)
Size, l x w x h (mm)
Protection category

10x10⁶
4000
C 250
12/11
5/12
40
-25...+55°C
20x30x33
IP 50

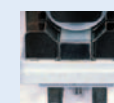
30x10⁶
2500
C 380
20/10
18/5
140
-25...+55°C
40x40x53
IP 50

30x10⁶
2500
C 380
20/10
18/5
140
-25...+55°C
40x40x53
IP 50

Standard equipped with

Standard in these relay series

Magnetic arc
blow out



Weld no transfer contacts
Cadmium free contacts
Magnetic arc blow out

Flash barriers
LED indicator
DC coil with back EMF diode
Cadmium free contacts
Magnetic arc blow out
Integrated snap-lock

Double make-double break
Flash barriers
LED indicator
DC coil with back EMF diode
Cadmium free contacts
Magnetic arc blow out
Integrated snap-lock

Options

For options information see page 7

CU-B... plug-in, DC coil
CU-C... plug-in, AC coil

CP-B... PCB, DC coil
CP-C... PCB, AC coil

T - Push-to-test-button
A - Trip indicator
E - Goldplated contacts
S - Mech. on/off indicator
Z - no diode and no LED
Colour coding

T - Push-to-test-button
A - Trip indicator
E - Goldplated contacts
S - Mech. on/off indicator
Z - no diode and no LED
Colour coding

Remarks

AC coil = 50Hz
60 Hz coil on request

AC coil = 50Hz
60 Hz coil on request

AC coil = 50Hz
60 Hz coil on request

Sockets & Accessories

See page 32

See page 30

See page 30

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

SAFETY CRITICAL

Application:
Safety/critical applications in
Power Utility and other
demanding industries

Switching of:
- Inductive loads
- DC voltages

Feature:
- Double break/double make
- Weld no transfer contacts



C...-U/V



A400...C-series



B400-series

Contact specifications

Contact material	Ag + 0,2µm Au	Ag	Ag
Number & configuration	1 CO, DB-DM	4 CO, DB-DM	4 CO, DB-DM
Rated current/max. switched current A	6/15	8/20	12/30
Min. switched current/voltage mA/V	10/6	20/24	20/24
Max. switched voltage VDC/VAC	300/250	440/...	750/...

Coil specifications

Nominal voltage (Un) VDC	5...93	24...125	12...700
VAC	24...240	115...220	127...220
Power consumption (DC/AC) W/VA	0,4/1,4	3/3	4/4
Operating range VDC	0,8...1,25 Un	0,7...1,25 Un	0,7...1,25 Un
VAC	0,7...1,1 Un	0,8...1,1 Un	0,8...1,1 Un

Technical data

Mechanical life (cycles)	30x10 ⁶	100x10 ⁶	100x10 ⁶
Dielectric strength, coil-contact VAC	4500	2600	2600
Isolation class	C 380	C 500	C 660
Pick-up time DC/AC (ms)	15/8	40	55
Drop-out time DC/AC (ms)	4/8	15	25
Weight (gram)	40	300	450
Ambient temperature (°C)	-25...+70°C	-40...+80°C	-40...+80°C
Size, l x w x h (mm)	20x30x33	45x45x73	45x45x102
Protection category	IP 50	IP 50	IP 50

Standard equipped with

	Double break contact Cadmium free contacts	Double break contact Weld no transfer contacts Keying relay/socket Cadmium free contacts	Double break contact Weld no transfer contacts Keying relay/socket Cadmium free contacts
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Options

		LED indicator Coil protection Non-weldable contacts	LED indicator Coil protection Non-weldable contacts
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Remarks

	AC coil = 50Hz 60 Hz coil on request max. 90%	AC coil = 50Hz 60 Hz coil on request max. 93%, 40°C for 4 days max. 5%, 35°C for 4 days	AC coil = 50Hz 60 Hz coil on request max. 93%, 40°C for 4 days max. 5%, 35°C for 4 days
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Sockets & Accessories

	See page 32	See page 32	See page 32
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See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

MODULAR HOUSING

Instantaneous relays
Equipped with 16A contact(s) and
high intensity LED



XT-17M-161



XT-17M-163

Supply specifications

Supply voltage	24VAC/DC (A1-A3) 230VAC (A1-A2)	24VAC/DC (A1-A3) 230VAC (A1-A2)
Frequency	50/60Hz	50/60Hz
Tolerance	+/- 15%	+/- 15%
Consumption	Max. 7,5VA/1W (230VAC) Max. 1VA/1W (24VAC/DC)	Max. 11,6VA/1,7W (230VAC) Max. 1,7VA/1,7W (24VAC/DC)

Contact specifications

Number & configuration	1 CO	3 CO
Rated current	16A (AC 1)	16A (AC 1)
Max. inrush current	30A (<3s.)	30A (<3s.)
Max. breaking capacity	4000 VA/AC1 - 384W/DC1	4000 VA/AC1 - 384W/DC1
Max. switched voltage	250VAC/24VDC	250VAC/24VDC
Mechanical life	3x10 ⁷	3x10 ⁷
Contact indication	High intensity LED (red)	High intensity LED (red)

General data

Time between switches	Min. 20 ms	Min. 20 ms
Connections	Screw	Screw
Max. cable connections	2,5 mm ²	2,5 mm ²
Electrical strength	2,5kV	2,5kV
Max. operating temperature	-20... +60°C	-20... +60°C
Dimensions (mm)	90x17,5x65 (1 module)	90x17,5x65 (1 module)
Weight (gram)	58	84
Mounting	on DIN rail	on DIN rail

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

LATCHING / BISTABLE

Bistable relays

Application:

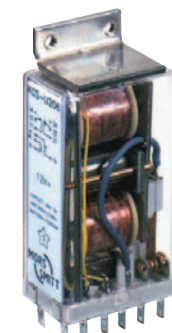
- Pulse actuation (or permanent)
- Remote pulse control
- No continuous energizing necessary (no power consumption or heat dissipation)
- Supply failure resistive



BD-series
(magnetic latch)



KDN-series
(mechanical latch)



KCS
(magnetic latch)

Contact specifications

Contact material	Ag	Ag	Ag + 0,2µm Au
Number & configuration	3 CO and 1 N/C	8 CO	2 CO
Rated current/max. switched current A	10/16	10/16	6/15
Min. switched current/voltage mA/V	10/12	10/12	10/6
Max. switched voltage VDC/VAC	110/440	350/440	300

Coil specifications

Nominal voltage (Un) VDC	12...110	12...220	12...110 VDC/AC
VAC	24...220	24...380	12...110 VDC/AC
Power consumption (DC/AC) W/VA	1,7/4	2,5/6	1,1/...
Operating range VDC/VAC	0,85...1,1 Un	0,8...1,1 Un (2 Un energizing)	0,7...1,25 Un

Technical data

Mechanical life (cycles)	10x10 ⁶	2x10 ⁶	30x10 ⁶
Dielectric strength, coil-contact VAC	2000	2500	3000
Isolation class	C 380	C 380	C 250
Pick-up time DC/AC (ms)	25/50	50/50	25
Weight (gram)	135	320	68
Ambient temperature (°C)	-25...+55°C	-25...+55°C	-25...+70°C
Size, l x w x h (mm)	40x40x53	88x40x56	20x30x55(61)
Protection category	IP 50	IP 50	IP 50

Standard equipped with

	Cadmium free contacts Integrated snap-lock	Cadmium free contacts Position indicator (red/green) Integrated snap-lock	Weld no transfer contacts Cadmium free contacts Flash barrier
--	---	---	---

Options

For options information see page 7	B - Magnetic arc blow out D - Back EMF diode S - Mechanical position indicator E - Goldplated contacts	B - Magnetic arc blow out D - Back EMF diode E - Goldplated contacts	B - Magnetic arc blow out E - Goldplated contacts
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Remarks

		2 mechanical interlocked relays	Connection: 2,8x0,8 fastons
--	--	---------------------------------	-----------------------------

Sockets & Accessories

	See page 30	See page 31	Not applicable
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See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

DRY CIRCUIT (gold contacts)

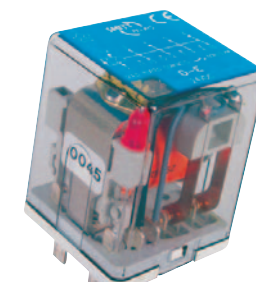
Dry circuit relays

Application:

- Switching of low currents
Relays with Goldplated contacts
(low contact resistance, resistive against corrosive atmosphere)



CU-...E series



D-E series

Contact specifications

Contact material	Ag + 10µm Au	Ag + 16µm Au
Number & configuration	2 CO	4 CO
Rated current/max. switched current A	-/400mA	-/400mA
Min. switched current/voltage mA/V	1µA/1µV (dry circuit)	1µA/1µV (dry circuit)
Max. switched voltage VDC/VAC	60/60	60/60

Coil specifications

Nominal voltage (Un) VDC	5...93	12...220
VAC	24...240	12...380
Power consumption (DC/AC) W/VA	0,4/0,6	2/2
Operating range VDC	0,8...1,1 Un	0,8...1,1 Un
VAC	0,7...1,1 Un	0,8...1,1 Un

Technical data

Mechanical life (cycles)	30x10 ⁶	30x10 ⁶
Dielectric strength, coil-contact VAC	3500	2500
Isolation class	C 250	C 380
Pick-up time DC/AC (ms)	15/10	20/10
Drop-out time DC/AC (ms)	4/8	18/5
Weight (gram)	40	125
Ambient temperature (°C)	-25...+70°C	-25...+55°C
Size, l x w x h (mm)	20x30x33	40x40x53
Protection category	IP 50	IP 50

Standard equipped with

	Goldplated contacts Cadmium free contacts	Goldplated contacts LED indicator DC coil, with back EMF diode Cadmium free contacts Integrated snap-lock
--	--	---

Options

For options information see page 7		B - Magnetic arc blow out T - Push-to-test-button A - Trip indicator S - Mechanical on/off indicator Z - no diode and no LED Colour coding
------------------------------------	--	---

Remarks

	Switching at higher rating than standard rating, gold will evaporate	Switching at higher rating than standard rating, gold will evaporate
--	--	--

Sockets & Accessories

	See page 32	See page 30
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See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

PULSE TRANSDUCING

Application:
Pulse transducing
(from energy/kWh meters).

IOD
Passive solid state relay, activated by
voltage-pulse.

EIOD
Active solid state relay, activated by
current input circuit according
DIN 43846. Separate supply voltage.



IOD-series
(voltage pulse input)



EIOD
(electronic pulse input, DIN 43864)

Contact specifications

Contact
Number & configuration
Rated current/max. switched current A

Solid State
2 NO or 2 NC or 1NO & 1NC
100mA/400mA (max. 100ms)

Solid State
2 NO or 2 NC or 1NO & 1NC
100mA/400mA (max. 100ms)

Coil specifications

Nominal voltage (Un) VDC
VAC

IOD-1... = 110V DC/AC
IOD-2... = 24V DC/AC
IOD-3... = 48/60V DC/AC
IOD-4... = 220V DC/AC
0,2...1,7VA (depends on type)
0,8...1,4 Un
0,7...1,2 Un

EIOD-1... = 110V AC
EIOD-2... = 24V DC
EIOD-4... = 220V AC

0,9VA

Power consumption (DC/AC) W/VA
Operating range VDC
VAC

Technical data

Mechanical life (cycles)
Dielectric strength, coil-contact VAC
Isolation class
Pick-up time DC/AC (ms)
Drop-out time DC/AC (ms)
Weight (gram)
Ambient temperature (°C)
Size, l x w x h (mm)
Protection category

2,3x10⁶
2000
Solid state, 2kV in/out
5
1
55
-10...+55°C
40x40x53
IP 50

2,3x10⁶
2000
Solid state, 2kV in/out
5
5
160
-10...+55°C
40x40x76
IP 50

Standard equipped with

Solid state element
Integrated snap-lock

Solid state element
Input acc. DIN 43864
Integrated snap-lock

Options

IOD-...MM = 2 n/o
IOD-...MB = 1 n/o, 1 n/c
IOD-...BM = 1 n/c, 1 n/o
IOD-...BB = 2 n/c

EIOD-...MM = 2 n/o
EIOD-...MB = 1 n/o, 1 n/c
EIOD-...BM = 1 n/c, 1 n/o
EIOD-...BB = 2 n/c

Remarks

Switched voltage,
230V +20% DC/AC
Switching freq. max. 10Hz

Switched voltage,
230V +20% DC/AC
Switching freq. max 10Hz

Sockets & Accessories

See page 30

See page 30

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

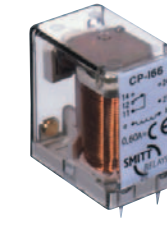
CURRENT ACTIVATED

Application:
Monitoring the status of lamps,
motors, heating elements, etc.

These relays are activated by the flow
of current. Easy solution to detect
power consumption.



CU-I/J series
(plug-in)



CP-I/J series
(PCB)



DI-series
(plug-in)

Contact specifications

Contact material
Number & configuration
Rated current/max. switched current A
Min. switched current/voltage mA/V
Max. switched voltage VDC/VAC

Ag + 0,2µm Au
1 CO
6/15
10/6
300(300mA)/250(2,6A)

Ag + 0,2µm Au
1 CO
6/15
10/6
300(300mA)/250(2,6A)

Ag
2 CO
10/16
10/12
110(1A)/440

Coil specifications

Nominal current (In) A DC
A AC
Power consumption (DC/AC) W/VA
Operating range VDC
VAC

0,072...4,4
0,072...7,5
0,32/1,3
0,4...1,5 In
0,4...1,2 In

0,072...4,4
0,072...7,5
0,32/1,3
0,4...1,5 In
0,4...1,2 In

0,018...3,9
0,018...3,9
0,3/1,5
0,8...2 In
0,8...1,4 In

Technical data

Mechanical life cycles
Dielectric strength, coil-contact VAC
Isolation class
Pick-up time DC/AC (ms)
Drop-out time DC/AC (ms)
Weight (gram)
Ambient temperature (°C)
Size, l x w x h (mm)
Protection category

30x10⁶
4000
C 250
15
3
40
-25...+70°C
20x30x33
IP 50

30x10⁶
4000
C 250
15
3
40
-40...+70°C
20x30x33
IP 50

30x10⁶
2500
C 380
20
5
125
-25...+55°C
40x40x53
IP 50

Standard equipped with

Extremely sensitive coil
High insulation
Cadmium free contacts

Extremely sensitive coil
High insulation
Cadmium free contacts

Cadmium free contacts
Integrated snap-lock

Options

For options information see page 7

E - Goldplated contacts

E - Goldplated contacts

B - Magnetic arc blow out
T - Push-to-test-button
E - Goldplated contacts
S - Mechanical on/off indicator

Remarks

CU-I = Plug-in version (DC)
CU-J = Plug-in version (AC)

CP-I = PCB version (DC)
CP-J = PCB version (AC)

Drop out current must be:
< 0,1 In DC / < 0,3 In AC

Sockets & Accessories

See page 32

Not applicable

See page 30

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

MEASURING & MONITORING

Application:
Monitoring of voltage
or battery voltage



UMD-series
(Voltage)



ACD-series
(Battery voltage) (2 levels)

Contact specifications

Contact material
Number & configuration
Rated current/max. switched current A
Min. switched current/voltage mA/V
Max. switched voltage VDC/VAC

Ag + 0,2µm Au
1 CO & 1 NO
6/15
10/6
300 (300mA)/250 (2,6A)

Ag + 0,2µm Au
1 CO & 1 NO
6/15
10/16
300 (300mA)/250 (2,6A)

Coil specifications

Nominal voltage (Un)

Power consumption (DC/AC) W/VA
Operating range VDC
VAC

24...220 VDC
24...220 VAC

0,3...1,6/0,6...6
0,7...1,3 Un
0,7 ...1,3 Un

12/24/48/110 VDC

0,3...1,35
0,9...1,3 Un

Technical data

Mechanical life (cycles)
Dielectric strength, coil-contact VAC
Isolation class
Pick-up time DC/AC (ms)
Drop-out time DC/AC (ms)
Weight (gram)
Ambient temperature (°C)
Size, l×w×h (mm)
Protection category

30x10⁶
2000
C 250
20
20
130
-25...+70°C
40x40x79
IP 50

30x10⁶
4000
C 250
15
120
120
-25...+70°C
40x40x76
IP 50

Standard equipped with

Adjustable/lockable knob
2 LED
Cadmium free contacts
Integrated snap-lock

Cadmium free contacts
Integrated snap-lock

Remarks

Voltage monitoring relay single phase
Time/temp. constant: 0,1%/K
Under- or overvoltage
No aux. supply required

Adjustable pull-in & hysteresis
Triptime, 20ms (if 6 & 8 conn. 0,25 s)

Sockets & Accessories

See page 30

See page 30

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

MEASURING & MONITORING

Application:
Monitoring of current
or battery voltage



SMD-series
(Current)



UB-003 series
(Load shedding) (3 groups)

Contact specifications

Contact material
Number & configuration
Rated current/max. switched current A
Min. switched current/voltage mA/V
Max. switched voltage VDC/VAC

Ag
1 CO
2/5
.../20
250

solid state
3 NO
8mA/250mA

Coil specifications

Nominal voltage (Un)

Power consumption (DC/AC) W/VA
Operating range VDC
VAC

0,4...5 ADC
0,4...5 AAC
1,5/6
I 0,5...1 In
I 0,5...1 In

24/36/48/72/110 VDC

0,65...1,25 Un

Technical data

Mechanical life (cycles)
Dielectric strength, coil-contact VAC
Isolation class
Pick-up time DC/AC (ms)
Drop-out time DC/AC (ms)
Weight (gram)
Ambient temperature (°C)
Size, l×w×h (mm)
Protection category

10x10⁶
2500
C 250
10
10
245
0...+55°C
40x40x86
IP 50

100x10⁶
1500

2 s.
25 s.
142
-25...+70°C
IP 50

Standard equipped with

Adjustable knob
Cadmium free contacts
Integrated snap-lock

3 groups for monitoring of battery voltage

Options

Scale options on request

Remarks

Protected against high inrush currents
AC: only for sinusoidal currents
Range: 0,5...1 Inom

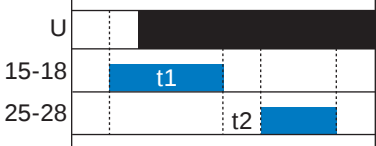
Several contact configuration and
voltagelevels possible

Sockets & Accessories

See page 30

See page 32

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

SERIES - FUNCTIONS - MODELS		
Function	Plug-in models	DIN-rail models
		
Delay-ON	TDB2 (see page 19) TDB4 (see page 19)	XT-17M-A... (see page 23)
Delay-OFF	TDE (see page 20) TDE4 (see page 20)	XT-17M-B... (see page 23)
Delay-ON & Delay-OFF	TDBE (see page 22) TBAU (see page 22) TBBU (see page 22)	XT-17M-C1 (see page 24) XT-17M-C3 (see page 24) XT-17I-C (see page 26) XT-35I-C (see page 27) XT-35P-CH (see page 27)
Multifunction	COM-3TP (see page 29) (module pluggable in VG-...Sockets) XT-17I-C (see page 26) XT-35I-C (see page 27) XT-35P-CH (see page 27)	XT-17M-C1 (see page 24) XT-17M-C3 (see page 24)
Recycler	FDA (see page 21) FDC (see page 21)	XT-17M-P (see page 25) XT-17I-P (see page 26)
One-Shot	WDDE (see page 21) WDDF (see page 21)	
Star-Delta		XT-17M-S (see page 25)

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

DELAY-ON		
Electronic plug-in timer relays for delay-on functions Feature: Time is adjustable by a lockable potentiometer		
	TDB2-series (Delay-on)	TDB4-series (Delay-on)
Contact specifications		
Contact material	Ag + 0,2µm Au	Ag
Number & configuration	2 CO	4 CO
Rated current/max. switched current A	6/15	10/16
Min. switched current/voltage mA/V	10/16	10/12
Max. switched voltage VDC/VAC	300 (300mA)/250 (2,6A)	110 (1A)/440V
Coil specifications		
Nominal voltage (Un) VDC	24...110	24...220
VAC	24...110	24...220
Power consumption (DC/AC) W/VA	2/...	2,2/...
Operating range VDC	0,8...1,2 Un	0,8...1,2 Un
VAC	0,8...1,2 Un	0,8...1,2 Un
Technical data		
Mechanical life (cycles)	30x10 ⁶	30x10 ⁶
Dielectric strength, coil-contact VAC	2000	2000
Isolation class	C 380	C 380
Pick-up time DC/AC (ms)	Depends on time setting	Depends on time setting
Drop-out time DC/AC (ms)	40	40
Weight (gram)	110	140
Ambient temperature (°C)	-25...+70°C	-25...+55°C
Size, l x w x h (mm)	40x40x66 (incl. knob)	40x40x88 (incl. knob)
Protection category	IP 50	IP 40
Standard equipped with		
	Adjustable/lockable knob coil protection (double zener) Weld no transfer contacts Cadmium free contacts Integrated snap-lock	Adjustable/lockable knob LED (supply/energized) Cadmium free contacts Integrated snap-lock
Options		
For options information see page 7	B - Magnetic arc blow out E - Goldplated contacts Option: Fixed delay time, no knob	B - Magnetic arc blow out E - Goldplated contacts Q - Double zener Option: Fixed delay time, no knob
Remarks		
Time ranges	0,1-1s./0,3-3s./0,6-6s./1-10s. 3-30s./6-60s./0,3-3min. 0,6-6min./1-10min./3-30min. range to be ordered	0,1-1s./0,3-3s./0,6-6s./1-10s. 3-30s./6-60s. 0,3-3min./0,6-6min. 0,6-6min./1-10min. 3-30min./6-60min. range to be ordered
Sockets & Accessories		
	See page 30	See page 30

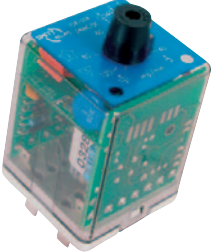
See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

ELECTRONIC TIMER RELAYS

DELAY-OFF		
Electronic plug-in timer relays for delay-off functions		
Feature: Time is adjustable by a lockable potentiometer		
		
	TDE-series (Delay-off) (without auxiliary supply)	TDE4-series (Delay-off) (without auxiliary supply)
Contact specifications		
Contact material	Ag + 0,2µm Au	Ag
Number & configuration	1 CO + 1 NO	4 CO
Rated current/max. switched current A	6/15	10/16
Min. switched current/voltage mA/V	10/16	10/12
Max. switched voltage VDC/VAC	300 (300mA/250 (2,6A)	250/440
Coil specifications		
Nominal voltage (Un) VDC	24...220	24/48/60/110/125/220
VAC	24...220	24/48/60/110/125/220
Power consumption (DC/AC) W/VA	1,5...4/1,5...3	1...9W
Operating range VDC	0,8...1,1 Un	0,8...1,2 Un
VAC	0,8...1,1 Un (1,2 220Vac)	0,8...1,2 Un
Technical data		
Mechanical life (cycles)	30x10 ⁶	30x10 ⁶
Dielectric strength, coil-contact VAC	2000	2000
Isolation class	C 250	C 380
Pick-up time DC/AC (ms)	300	40
Drop-out time DC/AC (ms)	Depends on time setting	Depends on time setting
Weight (gram)	140	270
Ambient temperature (°C)	-25...+70°C	-25...+70°C
Size, l x w x h (mm)	40x40x88 (incl. knob)	45x55x98 (incl. knob)
Protection category	IP 50	IP 50
Standard equipped with		
	Adjustable/lockable knob LED (energized) Weld no transfer contacts Cadmium free contacts Integrated snap-lock	Adjustable/lockable knob LED (energized) Cadmium free contacts Integrated snap-lock
Options		
	See page 7	See page 7
Remarks		
Time ranges	No auxiliary supply needed 0,1-1s./0,3-3s./1-10s. 3-30s./10-100s. range to be ordered	No auxiliary supply needed 0,1-1s/0,3-3s/06-6s 1-10s/3-30s/6-60s/10-100s range to be ordered
Sockets & Accessories		
	See page 30	See page 30

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

ELECTRONIC TIMER RELAYS

FLASHING / ONE SHOT				
FDA/FDC flashing relays Pulse/interval relays Special long life contacts (even when switching incandescent lamps)				
WDDE/WDDF one-shot relays Generates an 0,5s. pulse Both relays with 2 instantaneous and 2 timed contacts				
				
	FDA-series (Pulse = Interval)	FDC-series (Pulse/Interval different)	WDDE-series (one shot, on)	WDDF-series (one shot, off)
Contact specifications				
Contact material	AgCdo	Ag + 0,2µm Au	AgNi + 0,15µm Au	AgNi + 0,15µm Au
Number & configuration	2 CO	2 CO	2 CO inst. & 2 NC time	2 CO inst. & 2 NC time
Rated current/max. switched current A	8/14	6/15	8/14	8/14
Min. switched current/voltage mA/V	10/12	10/6	10/12	10/12
Max. switched voltage VDC/VAC	300/250	300(300mA)/250(2,6A)	300/250	300/250
Coil specifications				
Nominal voltage (Un) VDC	24...120	12...110	24/48/60/110/220 VDC/VAC!	24/48/60/110/220 VDC/VAC!
VAC	24...220	12...110	24/48/60/110/220 VDC/VAC!	24/48/60/110/220 VDC/VAC!
Power consumption (DC/AC) W/VA	1,5/3,2	1,2/...	1,3/1,3	1,3/1,3
Operating range VDC	0,8...1,1 Un	0,7...1,25 Un	0,8...1,1 Un	0,8...1,1 Un
VAC	0,8...1,1 Un	0,8...1,1 Un	0,8...1,1 Un	0,8...1,1 Un
Technical data				
Mechanical life (cycles)	100x10 ⁶	30x10 ⁶	20x10 ⁶	20x10 ⁶
Dielectric strength, coil-contact VAC	2000	2000	2000	2000
Isolation class	C 250	C 250	C 250	C 250
Weight (gram)	120	115	125	125
Ambient temperature (°C)	-10...+50°C	-40...+70°C	-10...+50°C	-10...+50°C
Size, l x w x h (mm)	40x40x89	40x40x53	40x40x76	40x40x76
Protection category	IP 50	IP 50	IP 50	IP 50
Standard equipped with				
	Adjustable/lockable knob Cadmium free contacts Integrated snap-lock	Fixed times Weld no transfer contacts Cadmium free contacts Integrated snap-lock	Cadmium free contacts Integrated snap-lock	Cadmium free contacts Integrated snap-lock
Options				
		Others times on request	Longer pulses	Longer pulses
Remarks				
Range	Pulse = Interval time Start with intervaltime 20...60 flashes/minute 40...120 flashes/minute Also available, FDG	Pulsetime different from Interval time Start with pulsetime Standard pulse = 1s interval = 30s	Generates an 0,5s pulse on energization fixed 0,5s	Generates an 0,5s pulse on de-energization fixed 0,5s
Sockets & Accessories				
	See page 30	See page 30	See page 30	See page 30

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

DELAY-ON & DELAY-OFF

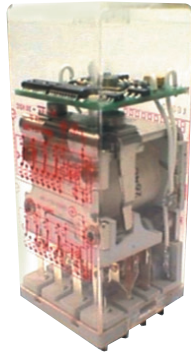
Electronic plug-in timer relays
Both for delay-on & delay-off functions

TDBE
Adjustable by 2 lockable potentiometers

TBAU & TBBU
Adjustable by dipswitch



TDBE-series
(delay-on & delay-off)



TBAU-series
(delay-on or delay-off)



TBBU-series
(delay-on or delay-off)

Contact specifications

Contact material
Number & configuration
Rated current/max. switched current A
Min. switched current/voltage mA/V
Max. switched voltage VDC / VAC

Ag + 0,2µm Au
2 CO
6/15
10/6
300 (300mA)/250 (2,6A)

Ag
4 CO double break
8/20
20/24

Ag
4 CO double break
12/30
20/24

Coil specifications

Nominal voltage (Un) VDC
VAC
Power consumption (DC/AC) W/VA
Operating range VDC
VAC

24/36/48/72/96/110
.....
1,8/-
0,7...1,25 Un

24...125
115...220
3/3
0,7...1,25 Un
0,8...1,1 Un

12...700
127...220
4/4
0,7...1,25 Un
0,8...1,1 Un

Technical data

Mechanical life (cycles)
Dielectric strength, coil-contact VAC
Isolation class
Pick-up time DC/AC (ms)
Drop-out time DC/AC (ms)
Weight (gram)
Ambient temperature (°C)
Size, lwxh (mm)
Protection category

30x10⁶
2000
C 250
depends on time setting
depends on time setting
140
-25...+70°C
40x40x89
IP 50

100x10⁶
2600
C 500
40
15
300
-40...+80°C
45x45x73
IP 50

100x10⁶
2600
C 660
55
25
450
-40...+80°C
45x45x102
IP 50

Standard equipped with

2 adjustable/lockable knobs
2 LED (supply & energization)
Cadmium free contacts
Integrated snap-lock

Double break contact
Weld no transfer contacts
Keying relay/socket
Cadmium free contacts

Double break contact
Weld no transfer contacts
Keying relay/socket
Cadmium free contacts

Options

For options information see page 7

Other aux. supplies on request

LED indicator
Coil protection

LED indicator
Coil protection

Remarks

Time ranges

0,1-1s./0,3-3s./0,6-6s./1-10s.
3-30s./6-60s./0,3-3min./
0,6-6min./1-10min./
3-30min./6-60min.
range to be ordered

0,25s...63min.
selectable by dipswitch

0,25s...63min.
selectable by dipswitch

Sockets & Accessories

See page 30

See page 32

See page 32

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

MODULAR HOUSING

Single function electronic timer relays, for low-cost timer applications.

Equipped with 16A contact
6 time range-types



XT-17M-A... series



XT-17M-B... series

Time/Function

Function
Type + time range

Delay-on

XT-17M-A1 0,1-1s
XT-17M-A2 1-10s
XT-17M-A3 6-60s
XT-17M-A4 1min-10min
XT-17M-A5 6min-60min
XT-17M-A6 1h-10h
Potentiometer (front)

Delay-off

XT-17M-B1 0,1-1s
XT-17M-B2 1-10s
XT-17M-B3 6-60s
XT-17M-B4 1min-10min
XT-17M-B5 6min-60min
XT-17M-B6 1h-10h
Potentiometer (front)

Time setting

Supply specifications

Supply voltage
Tolerance
Consumption
Supply indication

12...240VAC/DC (AC 50/60Hz)
+/- 15%
AC 0,7...3VA DC 0,5...1,7W
LED (green)

12...240VAC/DC (AC 50/60Hz)
+/- 15%
AC 0,7...3VA DC 0,5...1,7W
LED (green)

Contact specifications

Number & configuration
Rated current
Max. inrush current
Max. breaking capacity
Max. switched voltage
Mechanical life
Contact indication

1 CO
16A (AC 1)
30A (<3s.)
4000 VA/AC1 - 384W/DC1
250VAC/24VDC
3x10⁷
LED (red)

1 CO
16A (AC 1)
30A (<3s.)
4000 VA/AC1 - 384W/DC1
250VAC/24VDC
3x10⁷
LED (red)

General data

Reset time
Connections
Max. cable connections
Electrical strength
Max. operating temperature
Dimensions (mm)
Weight (gram)
Mounting

Max. 150 ms
Screw
2,5 mm²
2,5kV
-20...+60°C
90x17,5x65 (1 module)
64
on DIN rail

Max. 150 ms
Screw
2,5 mm²
2,5kV
-20...+60°C
90x17,5x65 (1 module)
64
on DIN rail

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

MODULAR HOUSING		
Multifunction electronic timer relays Equipped with 16A contact(s)		
	XT-17M-C1	XT-17M-C3
Time/Function		
Function	Multifunction (10) • 5 controlled via supply voltage • 4 controlled via control input • 1 memory function (latching) Rotary switch (front) 0,1s...10 days (10 scales) Rotary switch (front) Potentiometer (front)	Multifunction (10) • 5 controlled via supply voltage • 4 controlled via control input • 1 memory function (latching) Rotary switch (front) 0,1s...10 days (10 scales) Rotary switch (front) Potentiometer (front)
Function setting Time range Time setting		
Supply specifications		
Supply voltage Tolerance Consumption Supply indication	12...240VAC/DC (AC 50/60Hz) +/- 15% AC 0,7...3VA DC 0,5...1,7W LED (green)	12...240VAC/DC (AC 50/60Hz) +/- 15% AC 0,7...3VA DC 0,5...1,7W LED (green)
Contact specifications		
Number & configuration Rated current Max. inrush current Max. breaking capacity Max. switched voltage Mechanical life Contact indication	1 CO 16A (AC 1) 30A (<3s.) 4000 VA/AC1 - 384W/DC1 250VAC/24VDC 3x10 ⁷ Multifunctional LED (red)	3 CO 8A (AC 1) 30A (<3s.) 4000 VA/AC1 - 384W/DC1 250VAC/24VDC 3x10 ⁷ Multifunctional LED (red)
General data		
Reset time Connections Max. cable connections Electrical strength Max. operating temperature Dimensions (mm) Weight (gram) Mounting	Max. 150 ms Screw 2,5 mm ² 2,5kV -20... +60°C 90x17,5x65 (1 module) 65 on DIN rail	Max. 150 ms Screw 2,5 mm ² 2,5kV -20... +60°C 90x17,5x65 (1 module) 90 on DIN rail

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MODULAR HOUSING		
Single function electronic timer relays Equipped with 16A contact(s)		
	XT-17M-P	XT-17M-S
Time/Function		
Function	Asymmetrical recycler 2 ranges: • starting with Pulse • starting with Pause 0,1s...100 days	Star-Delta (delay-on) 0,1s...100 days (star) 0,1s...1s (open position) Star & Delta separate adjustable with rotary switch + potentiometer
Time range		
Time setting	Pulse & Pause separate adjustable with rotary switch + potentiometer	
Supply specifications		
Supply voltage	12...240VAC/DC (AC 50/60Hz)	12...240VAC/DC (AC 50/60Hz)
Tolerance	+/- 15%	+/- 15%
Consumption	AC 0,7...3VA - DC 0,5...1,7W	AC 0,7...3VA - DC 0,5...1,7W
Supply indication	LED (green)	LED (green)
Contact specifications		
Number & configuration	1 CO	2 CO
Rated current	16A (AC 1)	16A (AC 1)
Max. inrush current	30A (<3s.)	30A (<3s.)
Max. breaking capacity	4000 VA/AC1 - 384W/DC1	4000 VA/AC1 - 384W/DC1
Max. switched voltage	250VAC/24VDC	250VAC/24VDC
Mechanical life	3x10 ⁷	3x10 ⁷
Contact indication	LED (red)	LED (red)
General data		
Reset time	Max. 150 ms	Max. 150 ms
Connections	Screw	Screw
Max. cable connections	2,5 mm ²	2,5 mm ²
Electrical strength	2,5kV	2,5kV
Max. operating temperature	-20... +60°C	-20... +60°C
Dimensions (mm)	90x17,5x65 (1 module)	90x17,5x65 (1 module)
Weight (gram)	65	90
Mounting	on DIN rail	on DIN rail

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

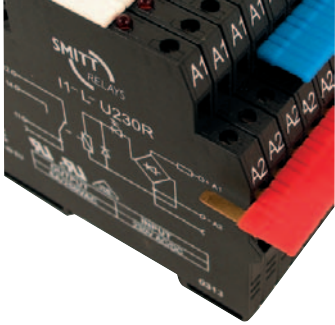
INDUSTRIAL HOUSING		
Electronic timer relays for industrial applications		
	XT-17I-P	XT-17I-C
Time/Function		
Function	Asymmetrical recycler 2 ranges: • starting with Pause • starting with Pulse Control contact Y1 0,1s...192h Pause & Pulse separate adjustable with rotary switch + potentiometer	Multifunction (12) • 4 controlled by voltage supply • 8 controlled by control input Rotary switch (front) 0,1s...192h Rotary switch + potentiometer
Function setting		
Time range		
Time setting		
Supply specifications		
Supply voltage	24...240VAC/DC	24...240VAC/DC
Tolerance	+/- 10%	+/- 10%
Consumption	1,8 VA	1,8 VA
Contact specifications		
Number & configuration	1 CO	1 CO
Rated current	10A (AC 1)	10A (AC 1)
Max. breaking capacity	2500 VA/AC1 - 240W (DC1)	2500 VA/AC1 - 240W (DC1)
Max. switched voltage	250VAC/24VDC	250VAC/24VDC
Mechanical life	≥3x10 ⁷	≥3x10 ⁷
Contact indication	LED (red)	LED (red)
General data		
Reset time	Max. 60 ms	Max. 60 ms
Connections	Screw	Screw
Max. cable connections	2,5 mm ²	2,5 mm ²
Electrical strength	2,5kV	2,5kV
Max. operating temperature	-20... +50°C	-20... +50°C
Dimensions (mm)	91,5x17,5x98 (1 module)	91,5x17,5x98 (1 module)
Weight (gram)	110	105
Mounting	on DIN rail	on DIN rail

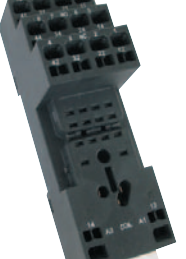
See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

INDUSTRIAL HOUSING		
Electronic timer relays for industrial applications		 
	XT-35I-C	XT-35P-CH
Time/Function		
Function	Multifunction (12) • 4 controlled via supply voltage • 8 controlled via control input Rotary switch (front) 0,1s...192h Rotary switch + potentiometer	Multifunction (12) • 4 controlled via supply voltage • 8 controlled via control input Rotary switch (front) 0,1s...192h Rotary switch + potentiometer (front)
Function setting		
Time range		
Time setting		
Supply specifications		
Supply voltage	24...240VAC/DC	60...240VAC/DC
Tolerance	+/- 10%	+/- 10%
Consumption	1,8 VA	1,8 VA
Supply indication	-	LED (green)
Contact specifications		
Number & configuration	2 CO	2 CO
Rated current	10A (AC 1)	8A (AC 1)
Max. breaking capacity	2500 VA/AC1 - 240W (DC1)	2500 VA/AC1 - 240W (DC1)
Max. switched voltage	250VAC/24VDC	250VAC/24VDC
Mechanical life	≥3x10 ⁷	≥3x10 ⁷
Contact indication	LED (red)	LED (red)
General data		
Reset time	Max. 60 ms	Max. 60 ms
Connections	Screw	Screw
Max. cable connections	2,5 mm ²	2,5 mm ²
Electrical strength	2,5kV	2,5kV
Max. operating temperature	-20... +50°C	-20... +50°C
Dimensions (mm)	90x17,5x65 (1 module)	91,5x17,5x65 (1 module)
Weight (gram)	140	135
Mounting	on DIN rail	Plug-in (11-pin) in socket, type VG-11T

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

SOCKETS & ACCESSORIES FOR INDUSTRIAL PLUG-IN RELAYS

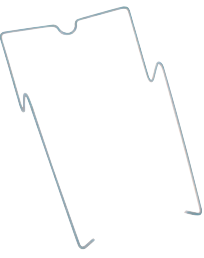
I-SERIES				
				
		I-connect-20 Red	I-connect-20 Blue	I-connect-20 Black
Product		Interconnection strip		
Mounting Applicable for ... Remarks		on I-series I-series relays max. 36A or 20 relays	on I-series I-series relays max. 36A or 20 relays	on I-series I-series relays max. 36A or 20 relays

M-SERIES					
					
	VM-3R	VM-4T	VM-3L	VM-4L	VM-4CC
Product	Mounting socket	Mounting socket	Mounting socket	Mounting socket	Mounting socket
Mounting Applicable for ... Remarks	DIN rail or Wall M3-series relays Screw terminals	DIN rail or Wall M2 & M4-series relays Screw terminals	DIN rail or Wall M3-series relays Screw terminals (3 level)	DIN rail or Wall M2 & M4-series relays Screw terminals (3 level)	DIN rail M2 & M4-series relays Cage Clamp terminals

M-SERIES					
					
	MS-35	CM-1	DM-1	VM-2PCB	VM-4PCB
Product	Relay retaining clip	Relay retaining clip	Diode module	PCB socket	PCB socket
Mounting Applicable for ... Remarks	on VM-... sockets M2, M3, M4-series Plastic	on VM-... sockets M2, M3, M4-series Metal	on VM-... sockets M2, M3, M4-series (+A1, -A2)	PCB M2-series	PCB M4-series

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SOCKETS & ACCESSORIES FOR INDUSTRIAL PLUG-IN RELAYS

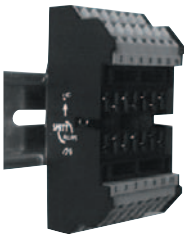
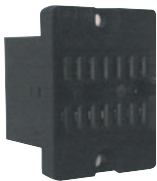
G-SERIES					
					
	VG-8T	VG-11T	CG-1	T-21	
Product	Mounting socket	Mounting socket	Relay retaining clip	Diode module	
Mounting Applicable for ... Remarks	DIN rail or wall G08-series relays Screw terminals	DIN rail or wall G11-series relays Screw terminals	on VG-8T/VG-11T G08 & G11-relays Metal	in VG-8T/VG-11T G08 & G11-relays (+A1, -A2)	

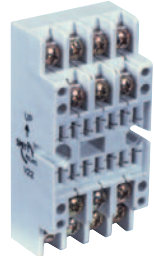
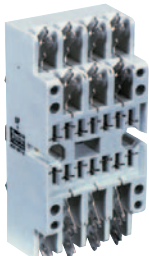
G-SERIES		
		
	COM-3TP	Change a general purpose G-series relay into a multifunction timer relay
Product	Timer module	
Mounting Applicable for ... Remarks	in VG-8T/VG-11T G08- & G11-series relays Multifunction timer	Multifunction timer module. Suitable for plug-in in VG-8T and VG-11T sockets. 8 time ranges (0.05s ... 240h). 8 different time functions. Function and time setting by dip-switch and rotary switch for fine-tuning.

G-SERIES			L-SERIES		
					
	VG-8PCB	VG-11PCB	VL-2	CL-1	VL-2PCB
Product	PCB socket	PCB socket	Mounting socket	Relay retaining clip	PCB socket
Mounting Applicable for ... Remarks	PCB G08-series relays	PCB G11-series relays	DIN rail or Wall L2-series relays	on VL-2 socket L2-series relays Metal	PCB L2-series relays

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SOCKETS & ACCESSORIES FOR INDUSTRIAL PLUG-IN RELAYS

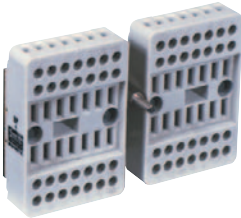
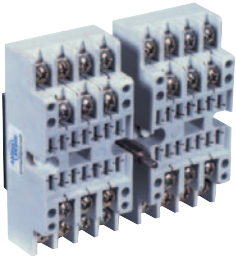
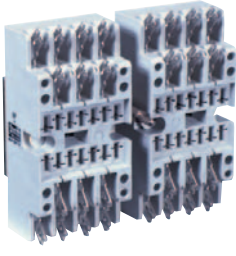
D-SERIES MOUNTING POSSIBILITIES			
			
Surface/wall mounting	Mounting rail 35mm	Panel/flush mounting	PCB mounting

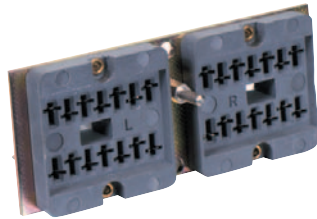
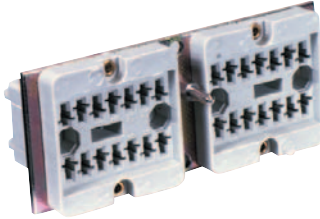
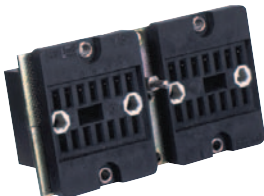
D-SERIES					
					
Surface/wall mounting, Type	V2	V22	V22BR	V24	V28
DIN rail mounting Type	V21	V23	V23BR	V25	V29
Product	Mounting socket	Mounting socket	Mounting socket	Mounting socket	Mounting socket
Applicable for ... Connections	D-series relays Screw terminals bush connections up to 2,5 mm²	D-series relays Screw terminals up to 2 wires 2,5 mm² per terminal	D-series relays Screw terminals large contact surface wires up to 2,5 mm²	D-series relays Faston tabs for: 1 faston 6,8x0,8 mm 2 fastons 2,8x0,8 mm	D-series relays Double cage clamp per terminal up to 2,5 mm²
Remarks		7 mm wide terminals	9 mm wide terminals		Both for solid and stranded wires

D-SERIES					
					
Panel/flush mounting, Type	V3	V26	A260	V31	
PCB mounting Type					V32
Product	Mounting socket	Mounting socket	Crimp contact	Mounting socket	Mounting socket
Applicable for ... Connections	D-series relays Soldering	D-series relays Crimp terminals	V-26 socket	D-series relays Double Faston, 5 mm	D-series relays PCB-Soldering

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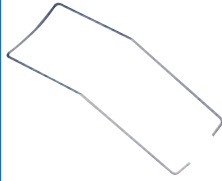
SOCKETS & ACCESSORIES FOR INDUSTRIAL PLUG-IN RELAYS

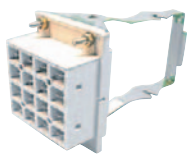
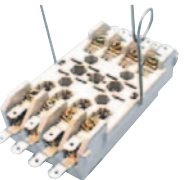
KDN & D8-SERIES				
				
Surface/wall mounting, Type	V9	V92	V94	V98
DIN rail mounting Type	V91	V93	V95	V99
Product	Mounting socket	Mounting socket	Mounting socket	Mounting socket
Applicable for ... Connections	KDN & D8 Relays Screw terminals bush connections up to 2,5 mm²	KDN & D8 Relays Screw terminals up to 2 wires 2,5 mm² per terminal	KDN & D8 Relays Faston tabs for: 1 faston 6,8x0,8 mm 2 fastons 2,8x0,8 mm	KDN & D8 Relays Double cage clamp per relay pin up to 2,5 mm²
Remarks		7 mm wide terminals		Both for solid and stranded wires

KDN & D8-SERIES			
			
Panel/flush mounting, Type	V96	V97	V89
Product	Mounting socket	Mounting socket	Mounting socket
Applicable for ... Connections	KDN & D8... series Soldering	KDN & D8... series Crimp terminals	KDN & D8... series Double faston (5mm) per relay pin

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C-SERIES					
					
	V10	V11	V12	V13	V14
Product	Mounting socket	Mounting socket	Mounting socket	Mounting socket	Mounting socket
Mounting	Wall mounting or on DIN rail with A-109 clip				PCB mounting
Applicable for ...	CU-...relays	CU-...relays	CU-...relays	CU-...relays	CP-...relays
Connections	Screw terminals	Screw terminals	Screw terminals	Screw terminals	Soldering
Remarks	Wire up to 2,5 mm²	Wire up to 2,5 mm² Back EMF diode	Wire up to 2,5 mm²	Wire up to 2,5 mm² LED & diode	
			No contacts 11 & 21 (for CU-V/U)		

C-SERIES					
					
	A109	A110	A104		
Product	DIN rail clip	Relay retaining clip	Key receptable		
Mounting	On socket (V-10, V-11, V-12, V-13)				
Applicable for ...	V-10, V-11, V-12, V-13				

A400 & B400 SERIES					
					
	EA 102 A EA 102 B	EA 103 AFD EA 103 BFD	EA 104 A EA 104 B	EA 105 AFD EA 105 BFD	
For A400 relays For B400 relays	Mounting socket	Mounting socket	Mounting socket	Mounting socket	
Mounting	Flush mounting	DIN rail mounting	Flush mounting	DIN rail mounting	
Applicable for ...	A400 or B400 relays	A400 or B400 relays	A400 or B400 relays	A400 or B400 relays	
Connections	double faston 4,76 mm	Screw terminals	single faston 5 mm	single faston 4,76 mm	
Remarks	Locking bracket	Wire locking spring	Locking bracket	Wire locking spring	

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

CURRENT - MEASURING & MONITORING RELAYS					
	Working principle Detects a preset AC current. Adjustable (33...100%) overcurrent detection.				
	Features The pull-in current is adjustable with a lockable knob. No auxiliary supply is needed. Frequency range from 16 to 60 Hz.				
	Specifications Contacts 2 CO forced contacts, 6A Mechanical life 30x10 ⁶ Max. switched 300VDC (300mA) 250VAC (2,6A) Ambient temp. -40...+60 °C Weight 450 g		Input data CMP 0,5-1,5 I _{nom.} 0,5...1,5A CMP 1-3 I _{nom.} 1...3A CMP 2-6 I _{nom.} 2...6A CMP 4-12 I _{nom.} 4...12A		
CMP AC current threshold relay					
	Working principle Detects preset analogue values such as: DC and AC voltage, DC and AC current, DC voltage & current with active neutral, Frequency, PT 100				
	Features 1 or 2 adjustable setpoints. Each setpoint has a two pole relay output. Analogue output (0...1mA) Small hysteresis. Auxiliary supply both DC and AC.				
	Specifications Contacts 2x2 CO 8A Max. switched 300VDC 250VAC Ambient temp. -10...+55 °C Weight 500 g		Input data LO 800 DC voltage 5mV...1000V LO 802/803 Temp. PT100 40...550 °C LO 806 AC current 1...5A LO 807 AC voltage 100...380V LO 820 Frequency 48/52...380/420Hz		
LO-800 Monitoring of analogue values					
	Working principle Relay detects a high DC current. Pull in 275ADC, Max. continuous 360ADC				
	Features Latching current detection, with electrical set and manual reset. Equipped with push-to-test-button.				
	Specifications Contacts 4 CO 6A Mechanical life 5x10 ⁵ Max. switched 300VDC 250VAC Ambient temp. -25...+55 °C Weight 1400 g		Input data GRG-004L Coil connections left GRG-004R Coil connections right GRG-004-24 Electrical reset		
GRG DC current detection relay					
	Working principle The indicator senses continuous AC overcurrent and short circuit.				
	Features Under normal conditions the fluid inside the SVM is transparent. At overcurrent the liquid turns dark-red and remains red for at least one hour. After 24 hours (if no overcurrent occurs) it will be transparent again.				
	Input data SVM-L20 180A 19,5 mm SVM-G20 290A 20 mm SVM-N20 480A 20 mm SVM-G28 290A 29 mm SVM-N28 480A 29 mm SVM-G38 350A 38 mm SVM-N38 600A 38 mm SVM-N38H 1000A 38 mm		Input data SVM-G47 400A 47 mm SVM-N47 700A 47 mm SVM-N47H 1000A 47 mm SVM-G01 front: 330A 40x5 rail SVM-N01 front: 550A 40x5 rail SVM-G02 side: 340A 40x5 rail SVM-N02 side: 620A 40x5 rail		
SVM AC overcurrent indicator					

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

VOLTAGE - MEASURING & MONITORING RELAYS



NI
Three phase protection relay (3xL + N)

Working principle

For three phase network with neutral. Detects voltage drop and phase loss. The delay-on time (2s) and the delay-off time (15s) are fixed (other time delays on request). Hysteresis max. 3%.

Features

Adjustable drop-out voltage (75...100%)

Specifications

Contacts 1 CO, 8A
Mechanical life 30x10⁶
Max. switched 300VDC
250VAC
Ambient temp. 0...+45 °C
Weight 200 g

Input data

NI-1 3x220/380V 50Hz
NI-3 3x58/100V 50Hz
NI-5 3x127/220V 60Hz
NI-6 3x260/440V 60Hz
NI-7 3x230/400V 50Hz
NI-8 3x280/485V 50Hz



NIF
Three phase protection relay (3xL)

Working principle

For three phase network without neutral. Detects voltage drop and phase loss. The delay-on time (2s) and the delay-off time (15s) are fixed (other time delays on request). Hysteresis max. 3%.

Features

Adjustable drop-out voltage (75...100%)

Specifications

Contacts 1 CO, 8A
Mechanical life 30x10⁶
Max. switched 300VDC
250VAC
Ambient temp. 0...+45 °C
Weight 200 g

Input data

NIF-20 3x380V 50Hz
NIF-21 3x220V 50Hz
NIF-32 3x110V 50Hz
NIF-41 3x220V 60Hz
NIF-50-2 3x380V 100Hz
Other types available



NKF
Undervoltage detection relay

Working principle

Undervoltage detection for a three phase network with or without neutral.

Features

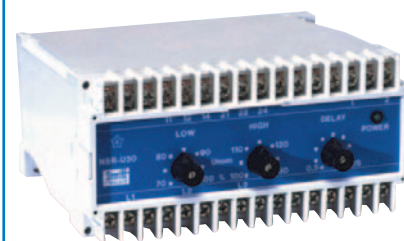
The delay-off time is fixed between 1 and 5s. After dropping out the relay immediately pulls in. The dropping out and return of the voltage is indicated with a LED. The drop-out signalling has to be reset manually.

Specifications

Contacts 1 CO, 8A
Mechanical life 30x10⁶
Max. switched 300VDC
250VAC
Ambient temp. 0...+45 °C
Weight 170 g

Input data

Three phase with neutral
NKF-40 3x220/380V 50Hz
NKF-42 3x64/110V 50Hz
NKF-49 3x58/100V 50Hz
Three phase without neutral
NKF-30 3x380V 50Hz
NKF-32 3x110V 50Hz



NSR
Three phase protection relay

Working principle

Detects undervoltage, overvoltage, phase rotation, phase loss and supply loss for a three phase network with or without neutral.

Features

The overvoltage detection (100...130%) and undervoltage detection (70...100%) are adjustable with a lockable knob. The delay-off time is adjustable (0.5...10s) with a lockable knob. Suitable for AC and DC auxiliary supplies (16.8...250V)

Specifications

Contacts 2 CO, 8A
Max. switched 300VDC
250VAC
Ambient temp. -25...+70 °C
Weight 400 g

Input data

NSR-220 220V 50Hz
NSR-400 400V 50Hz

Auxiliary supply

L-type 16.5...90V 0...60Hz
H-type 65...270V 0...60Hz

See the datasheet of each specific series for all specifications. Available on www.nieaf-smitt.nl

For further information or requests, please complete this form
and fax-return this to our office.

Nieaf-Smitt BV Fax.no.: +31 30 2898816

Company: _____

Name: _____ Position: _____

Address: _____ E-mail: _____

Postal code: _____ City: _____

Country: _____

Telephone: _____ Fax number: _____

Nieaf-Smitt customer (are you using Nieaf-Smitt products?): ☐ YES ☐ NO

Your request:

☐ Pricelist/quotation

Documentation:**Instantaneous relays**

- ☐ General purpose relays
☐ Heavy duty relays
☐ Safety/critical relays
☐ Modular housing relays

Functional Relays

- ☐ Latching relays
☐ Dry circuit relays
☐ Puls transducing relays
☐ Measuring & monitoring relays
☐ Timer relays, plug-in
☐ Timer relays, modular
☐ Sockets & accessories
☐ Special relay products

Traction/Railway relays

- ☐ Send me the separate, specific
Mors Smitt Relays catalogue

☐ Specific relay application

Application: _____

Switch rating: _____ A ac or dc? _____ V ac or dc?

Switching frequency: _____

Load type: _____ Inductive, L/R= _____ ms _____ Resistive

Coil voltage: _____

Number of contacts: _____

Mounting-/wiring method: _____

Quantity needed: _____

Project name: _____



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