ASEA

Catalogue RK 93 E
Edition 1 May 1966 File R Part 2

Frames and connectors for relays

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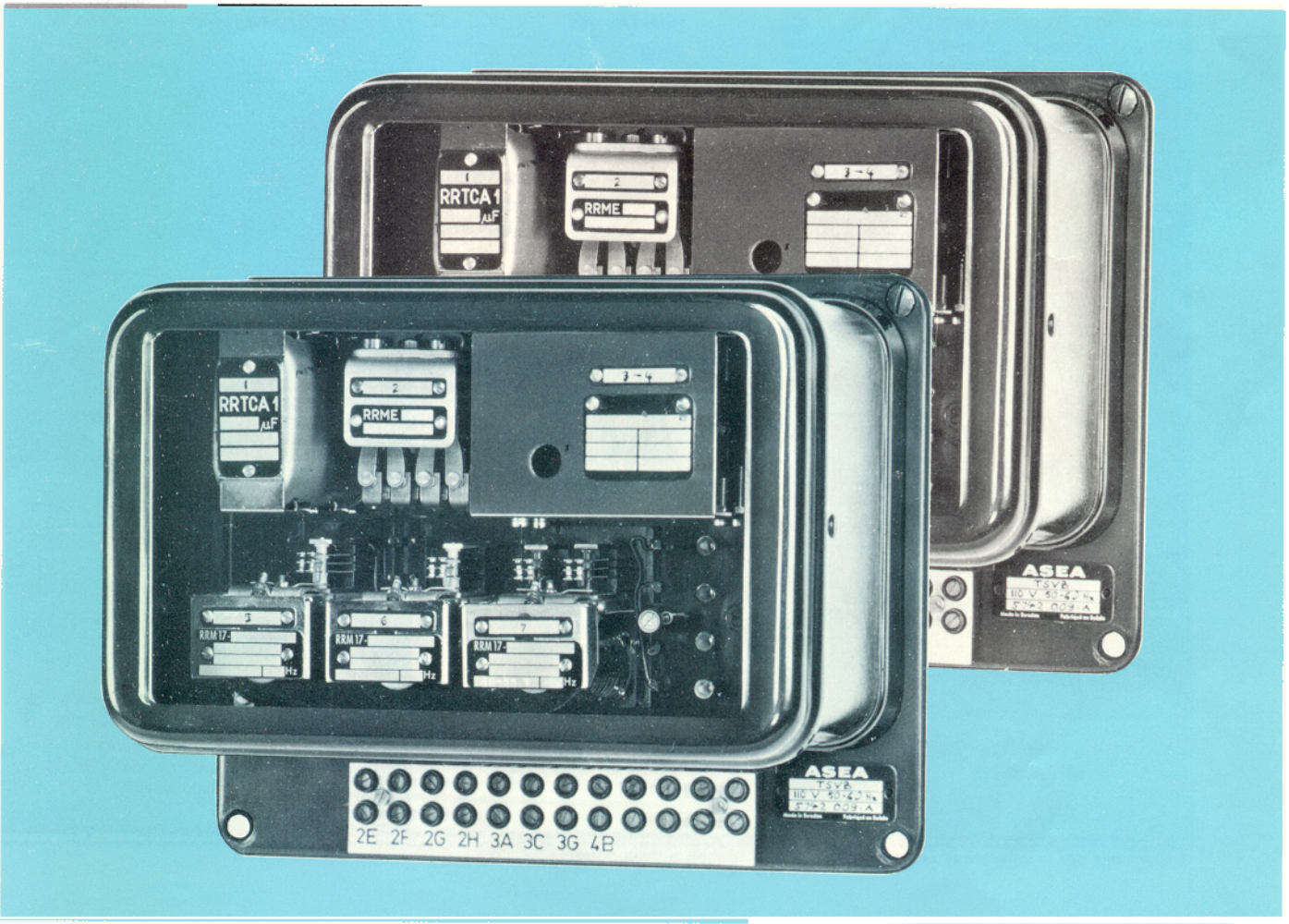


Front terminals for size H2, H4 and H8 relay cases

To permit connection to be made to the front of relays which normally have their connections at the rear, an accessory in the form of a front terminal fitting is available for size H2, H4 and H8 relay cases. It consists of a black enamelled steel mounting plate carrying a terminal block with a marking strip. The plate is attached to the relay case by the M5 screws supplied. Four M5 fixing bolts to mount the plate on a panel up to 5 mm thick are also supplied.
The following four versions of the front terminal fitting are available:

1 With marking strip unstamped

2 With marking strip stamped as required by the customer

3 Fitted to relays delivered at the same time and with the terminals of the relay connected to the terminal block and the marking strip stamped with the terminal numbers of the relay.

4 With special terminal block, extra small dimensions and a larger number of possible terminal arrangements, and with the marking strip stamped as shown in the table below.
This version is chiefly used with cases for plug-in relays and is therefore not available stamped with the corresponding relay terminal markings nor fitted to a relay ordered at the same time.

Front terminals (terminal block, marking strip and mounting plate)

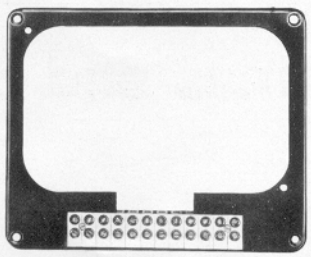
With normal terminal block
for max. continuous current 25 A
for max. conductor area 4 sq.mm

Front terminals

For relay case size	Number of terminals in block	Supplied separately: Net weight kg	Supplied separately: Marking strip unstamped Reference number	Marking strip stamped Reference number	Fitted and connected to a relay ordered at the same time Reference number
H2	6	0.2	RK 935 0001	RK 935 0004	RK 935 0007
H4	12	0.25	0002	0005	0008
H8	12	0.35	0003	0006	0009

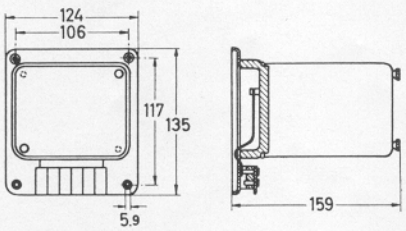
With specially designed terminal block
for max. continuous current 25 A
for max. conductor area 4 sq.mm

For relay case size	Number of terminals in block	Marking strip stamped	Front terminals: Net weight kg	Front terminals: Reference number
H2	12	1–12	0.2	RK 935 0015
H4	14	1–14	0.25	RK 935 0016
H8	27	1–27	0.35	RK 935 0017

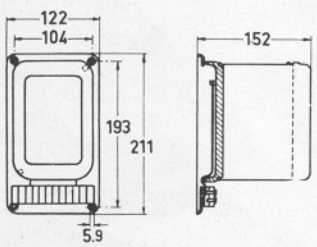


Front terminals for size H8 relay case. (49627)

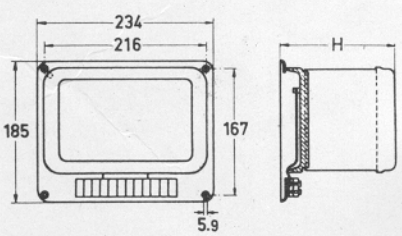
Front terminals fitted to size H8 relay case. (49626)



Mounting plate with terminal block and marking strip fitted to a relay in a case size H2 (5231 592)
M5 fixing screws (countersunk)



Mounting plate with terminal block and marking strip fitted to a relay in a case size H4 (5231 555)
M5 fixing screws (countersunk)



Mounting plate with terminal block and marking strip fitted to a relay in a case size H8
H=152 for relays with a cover depth of 145 mm
H=172 for relays with a cover depth of 165 mm
M5 fixing screws (countersunk) (5231 556)

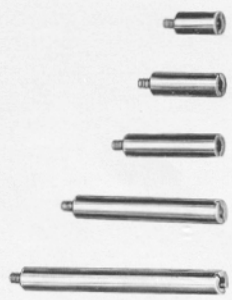
Dimensions are in millimetres and are subject to modification without notice.

Extension bolts and terminal screws

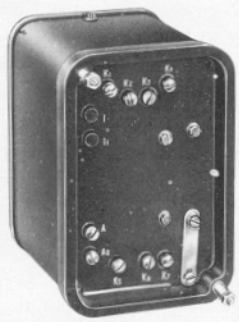
Extension bolts are used to extend the terminals at the rear of the base of relays and relay cases; this often facilitates fitting or allows the connections to be made at different levels. Each terminal has an M4-threaded hole with a screw.
The extension bolts are of nickel-plated brass 8 mm in diameter; their length is stated in the table. At one end there is an external thread which is screwed into the terminal hole; the original terminal screw is fitted to the hole at the other end of the extension bolt.

If the extension bolts need to be insulated they can be fitted with an insulating tube which is slipped over them. The insulating tube is of black p.v.c. and the material is 0.5–0.7 mm thick; for length see the table.

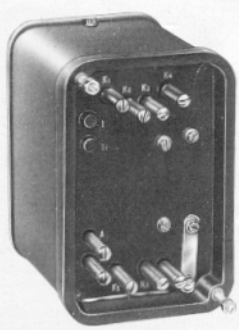
The terminal screws are of the cross-headed type, and are normally supplied together with relays and cases. They can also be obtained separately; se the table below.



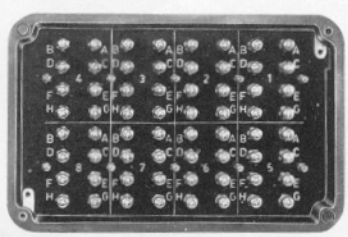
Extension bolts. (41840)



Rear of a relay showing the terminals without extension bolts. (57305)



The same relay with extension bolts fitted to the terminals. (57304)



The rear of a size H8 relay case with terminal screws. (64764)

Extension bolts

Length excluding the threaded end mm	Length above base mm	Net weight g	Reference number
15	10	9	RK 935 0020
25	20	11	0021
35	30	15	0022
55	50	24	0023
75	70	32	0024

	Length mm	Reference number
Insulating tube for extension bolts	25	RK 935 0030
	35	0031
	55	0032
	75	0033

	Net weight g	Reference number
Terminal screws	1	RK 935 0035

Flush-mounting frames

Flush-mounting frames are used when a relay, relay case or apparatus is to be flush mounted in a panel.
The function of a flush-mounting frame is partly to fix the relay and partly to cover the gap between the relay and the panel.
The flush-mounting frames are available in three versions:

1 Rubber flush-mounting frame for size H2, H4, H8 and H20 relay cases.

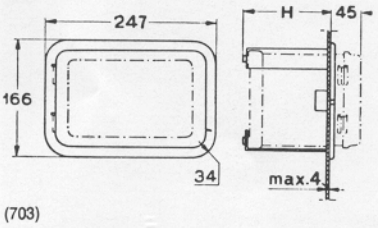
2 Aluminium flush-mounting frame for size H4 and H8 relay cases.

3 Light-alloy flush-mounting frame for older types of relay or relay case.

Rubber flush-mounting frames
for size H2, H4, H8 and H20 relay cases

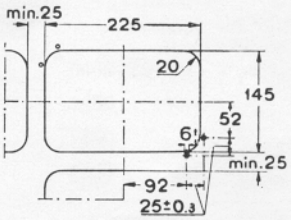
These flush-mounting frames consist of black rubber and are manufactured in one piece. The frame is pressed over the relay cover and its only function is to cover the gaps between the panel and the relay. Two fixtures are supplied to attach the relay to the panel. These are screwed to the panel by 4 M4-screws and to the relay by 2 M5-screws. The flush-mounting frame is suitable for sheet steel panels not exceeding 4 mm in thickness. A size H2 relay or relay case with transparent cover can be supplied on request with a cover having the part below the surface of the panel masked.

Frame with fixtures for relay or relay case size	with dimension H on dimension drawing	Net weight kg	Reference number
H2	–	0.16	RK 935 0040
H4	105	0.15	0042
H8	105	0.17	RK 935 0044
	125	0.2	0046
H20	105	0.2	RK 935 0047

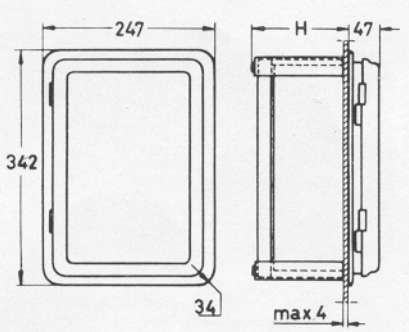


(703)

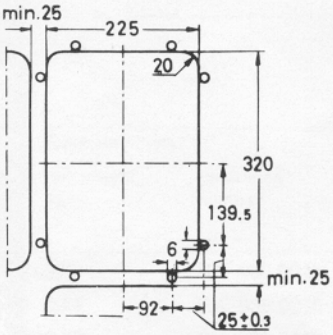
H8 RK 935 0044
0046



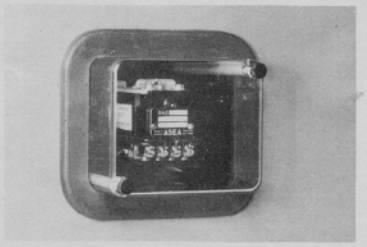
Drilling plan (seen from the front of the panel) 5283 266



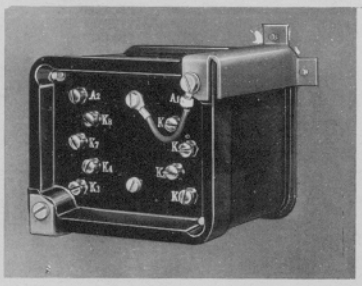
H20 RK 935 0047



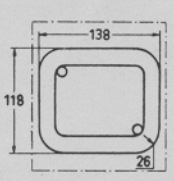
Drilling plan (seen from the front of the panel) 5283 466

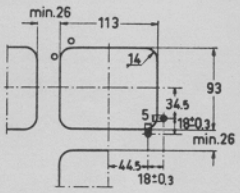


Front (54333)



Rear
Flush-mounted relay type RME. (54334)

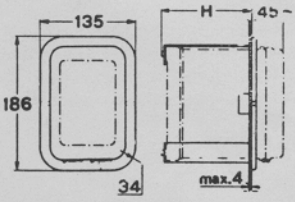


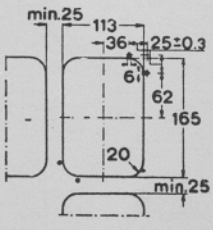


Drilling plan (seen from the front of the panel) 5283 237

(2669)

H2 RK 935 0040





Drilling plan (seen from the front of the panel)

H4 RK 935 0042

(702)

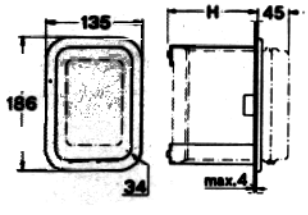
5283 266

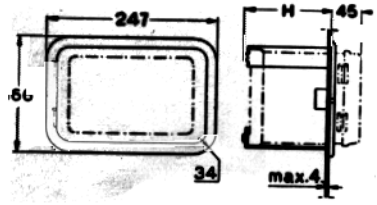
Dimensions are in millimetres and are subject to modification without notice.

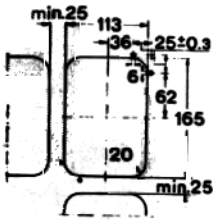
Aluminium flush-mounting frames
for size H4 and H8 relay cases

These flush-mounting frames consist of two halves pressed from sheet aluminium and painted black; fixing parts are also supplied. The only function of the frames is to cover the gaps between the relay and the panel. The relay is attached to the panel by two fixtures screwed to the panel by 4 M4-screws. The fixture is attached to the relay by 2 M5-screws. The flush-mounting frame is designed for panels max. 4 mm in thickness.

Frame with fixtures for relay or relay case size	with dimension H on the dimension drawing mm	Net weight kg	Reference number
H4	105	0.17	RK 935 0048
H8	105	0.19	RK 935 0050
	125	0.2	0052



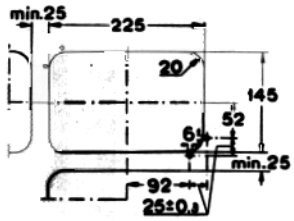




Drilling plan (seen from the front of the panel)

H4 RK 935 0048

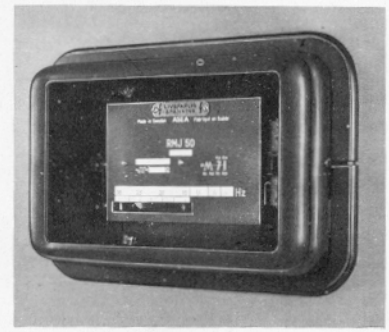
5283 286



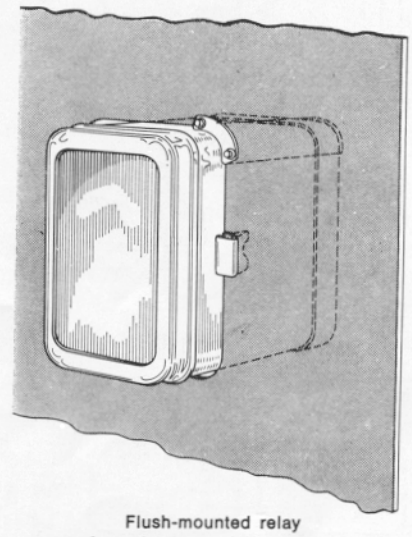
Drilling plan (seen from the front of the panel)

H8 RK 935 0050
0052

5283 285



Flush-mounting frame
RK 935 0050
with relay type RMJ 50. (46798)

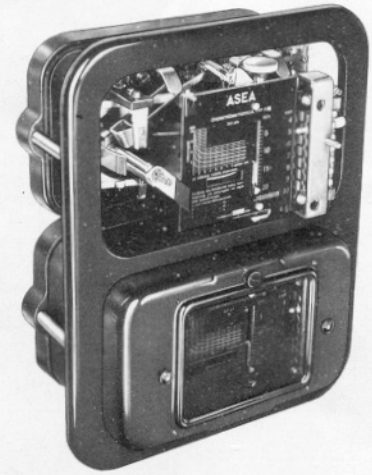


Flush-mounted relay
seen from the front of the panel (frame removed). The flush-mounting frame is attached by means of two spring fittings between the relay and the panel. (3246)

Cast alloy mounting-frames
for older types of relay or relay case

These flush-mounting frames are cast in light alloy and painted black. Fixing bolts to fix the case to the relay and to a panel max. 5 mm thick are supplied. Fixing bolts for panel max. 30 mm can be supplied on request.

P.T.O.



Flush-mounting frame RK 935 0058
with 2 relays type RI. (19878)

Dimensions are in millimetres and are subject to modification without notice.

Cast alloy flush-mounting frame for relay or relay case type	number	Fig	Dimension H mm	Net weight kg	Reference number
RI, RIS	1	1		0.52	RK 935 0055
RKB, RKOA	2	2		1	0056
	3	3	105	1.55	0057
	2	4		0.83	0058
	3	5		1.14	0059
	1	1		0.52	RK 935 0060
RMJS 1, RR 8	2	2		1	0061
	3	3	109	1.55	0062
	2	4		0.83	0063
	3	5		1.14	0064

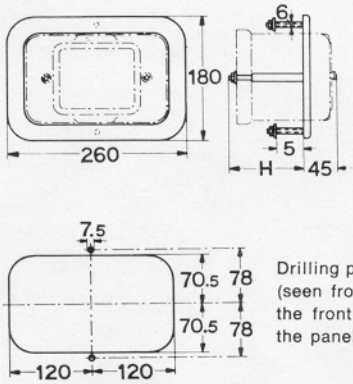


Fig. 1. RK 935 0055 and RK 935 0060

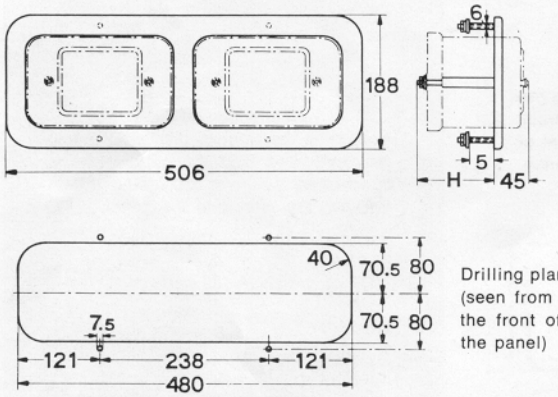


Fig. 2. RK 935 0056 and RK 935 0061

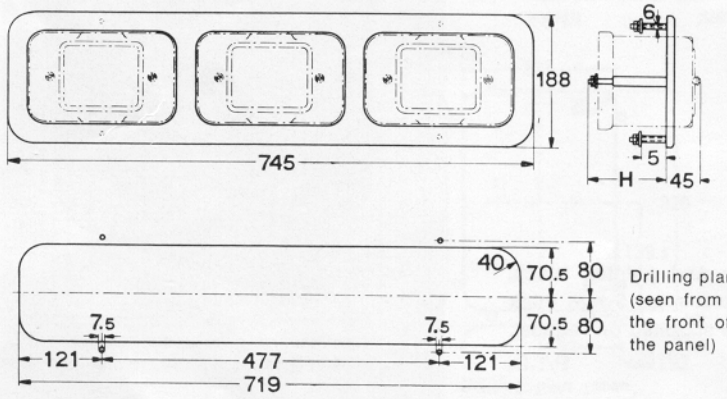
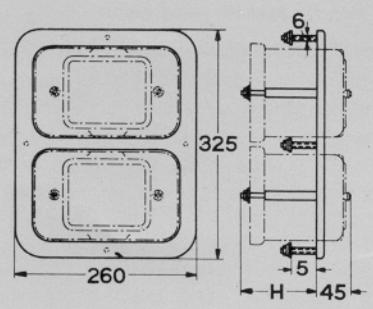


Fig. 3. RK 935 0057 and RK 935 0062

5283 125



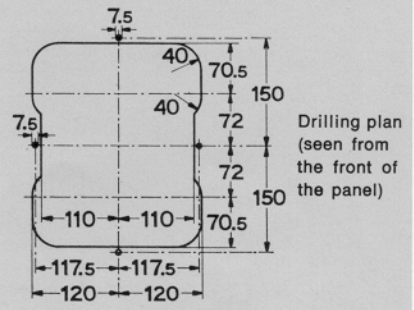
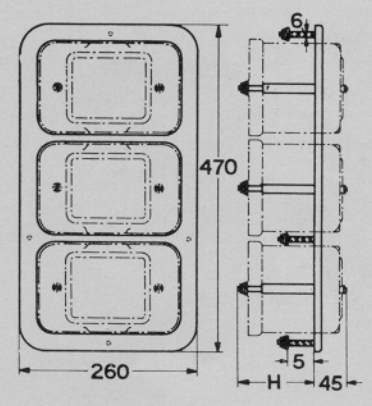


Fig. 4. RK 935 0058 and RK 935 0063



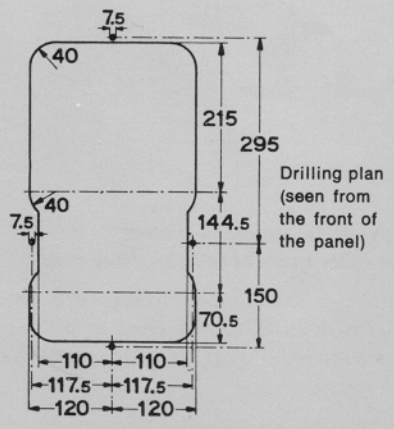
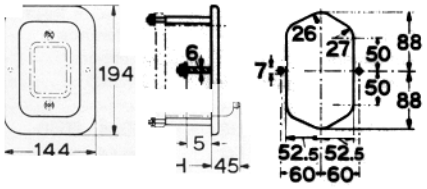


Fig. 5. RK 935 0059 and RK 935 0064

Dimensions are in millimetres and are subject to modification without notice.

Cast alloy flush-mounting frame for relay or apparatus type	Dimension H mm	Net weight kg	Reference number
YXIBC, YXICC, YXILA, YXIMA	92	0.36	RK 935 0065
RVAE, RVAF	102	0.36	0066
RRA 4	107	0.36	0067
	122	0.36	0068

(30534)

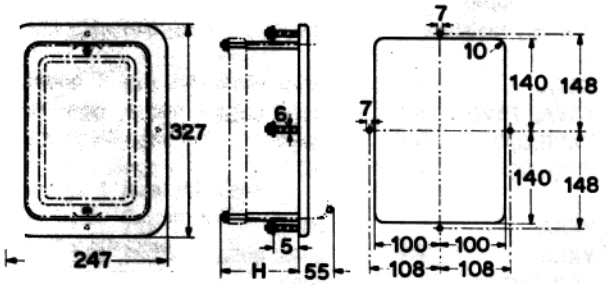


Drilling plan (seen from the front of the panel)

5283 125

Cast alloy flush-mounting frame for relay, apparatus or relay case type	With or without cut-out for the door hinges	Dimension H mm	Net weight kg	Reference number
	with	95	0.9	RK 935 0070
	without	95	0.9	0071
RRG 16, RRH 16, RYOA TSBA, TSCA, TSTA	without	111	0.9	0072
RRDG 16	with	111	0.9	0073
	with	115	0.9	0074
	without	115	0.9	0075
RBEA, RCLA 3, RPA RTYA, TSTA*)	without	127	0.9	0076
RBF 5, RK 316	with	127	0.9	0077
	with	136	0.9	0078
	without	136	0.9	0079
	with	157	0.9	0080
RPC, RPT, TGKA	without	157	0.9	0081
RLG, YRVG, YRLH	with	145	0.9	0082

TSTA supplementary resistor unit



Drilling plan (seen from the front of the panel)

5283 125

RK 935 0076 and RK 935 0082:
The above drilling plan should be turned 90° for type RCLA 3, YRLG, YRVG and YRLH. In other words the long sides of the frame are horizontal.

Length of fixing bolts: standard for 5 mm panel thickness;
on request for panels up to 30 mm thick.

Dimensions are in millimetres and are subject to modification without notice.

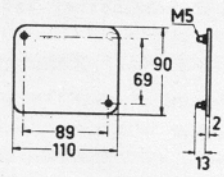
List of relays and equipment and suitable flush-mounting frames

Relay or equipment type	Case	Suitable flush-mounting frame Reference number RK 935	Previous designation Cat. No. 557
RBA	H8	0044, 0050	081, 083
RBE	H8	0044, 0050	081, 083
RBEA	–	0076	616
RBF 5	–	0077	617
RCA	H8	0044, 0050	081, 083
RCLA	H8	0044, 0050	081, 083
RCLA 3	–	0076	616
RCRA	H8	0044, 0050	081, 083
RDRA, RDRB	H8	0044, 0050	081, 083
REC 1	H2	0040	021
RED 1	H2	0040	021
RF 2	H8	0044, 0050	081, 083
RFA	H8	0046, 0052	082, 084
RHGA 2	H2	0040	021
RHGA 4	H4	0042, 0048	041, 043
RHGA 8	H8	0044, 0050	081, 083
RHHA 2	H2	0040	021
RHHA 4	H4	0042, 0048	041, 043
RHHA 8	H8	0044, 0050	081, 083
RI (S)	–	0055–0059	421–425
RIB	H8	0044, 0050	081, 083
RIC 1	H2	0040	021
RIC 2	H4	0042, 0048	041, 043
RID 1	H2	0040	021
RIDA	H4	0042, 0048	041, 043
RIRA	H8	0044, 0050	081, 083
RK 3	H8	0046, 0052	082, 084
RK 316	–	0062	617
RKB	–	0055–0059	421–425
RKC	H4	0042, 0048	041, 043
RKF	H8	0046, 0052	082, 084
RKOA	–	0055–0059	421–425
RMA 16	H4	0042, 0048	041, 043
RMA 40	H8	0044, 0050	081, 083
RME, RMH	H2	0040	021
RMJ 5, 50	H8	0044, 0050	081, 083
RMJ 1, 2, 10, 11, 12, 20	H4	0042, 0048	041, 043
RMJS 1	–	0060–0064	431–435
RMM 4	H4	0042, 0048	041, 043
RMOB	H2	0040	021
RODA	H8	0044, 0050	081, 083
ROTA	H8	0044, 0050	081, 083
RP 1–RP 5	H8	0044, 0050	081, 083
RPA	–	0076	616
RPB	H8	0046, 0052	082, 084
RPC	–	0081	621
RPF	H8	0044, 0050	081, 083
RPT	–	0081	621
RR 8	–	0060–0064	431–435
RRA 4	–	0067	231
RRDG 16	–	0073	613
RRG 16	–	0072	612
RRH 16	–	0072	612
RTYA	–	0076	616
RVAA	H8	0046, 0052	082, 084
RVAE	–	0066	227
RVAF	–	0066	227
RYNA	H8	0044, 0050	081, 083
RYOA	–	0072	612
RYRIA	H8	0044, 0050	081, 083
TGKA	–	0081	621
TSAA	H8	0044, 0050	081, 083
TSBA	–	0072	612
TSCA	–	0072	612
TSRB	H8	0044, 0050	081, 083
TSSB, TSSC	H8	0044, 0050	081, 083
TSTA supplementary resistor	–	0076	616
TSTA	–	0072	612
TSVA, TSVB	H8	0044, 0050	081, 083
YXI(B,C)C	–	0065	221
YXI(L,M)A	–	0065	221
YXKA	–	0055	421
YXKB	H8	0046, 0052	082, 084
YR(L,V)G	–	0082	625
YRLH	–	0082	625

Blanking plates to cover holes in panels

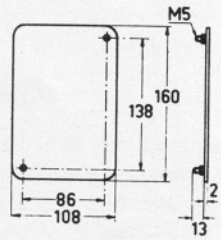
The blanking plates are made of sheet metal painted grey-blue; they are intended to be mounted over holes for relay cases size H2, H4 or H8, and the necessary bolts are supplied.

Blanking plate for holes for case size	Net weight kg	Reference number
H2	0.15	RK 935 0101
H4	0.3	0102
H8	0.5	0103



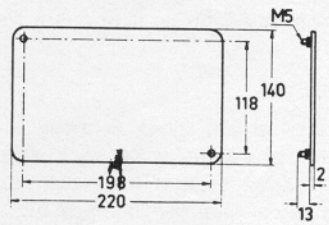
RK 935 0101 for size H2

5283 472



RK 935 0102 for size H4

5283 472



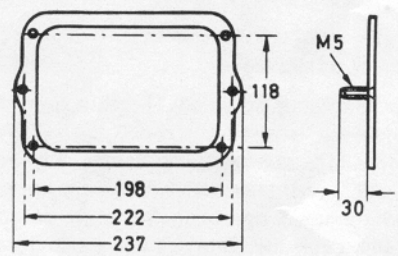
RK 935 0103 for size H8

5283 472

Adapting frames for relay and relay cases

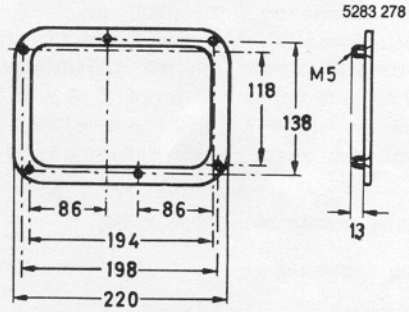
There are adapting frames to allow a size H8 case to be mounted on a panel with a hole for the old type of case; there are also frames which allow 1 or 2 size H4 cases to be mounted on the panel with a hole for a size H8 case. The first of these adapting frames can also be used to mount a case of the former design on a panel with a hole for a H8-case. The adapting frames are made of sheet metal painted grey-blue; fixing holes are ready drilled and the necessary screws to fix the relays or the cases to the frame are supplied.
Fixing bolts to fix the adapting frames to a panel are supplied.

Adapting frame for	Net weight kg	Reference number
mounting 1 size H8 case on a panel max. 15 mm thick drilled for the older design of case	0.25	RK 935 0110
mounting 2 size H4 cases on a panel max. 8 mm thick drilled for a size H8 case	0.25	RK 935 0111
mounting 1 size H4 case on a panel max. 8 mm thick drilled for a size H8 case	0.4	RK 935 0112



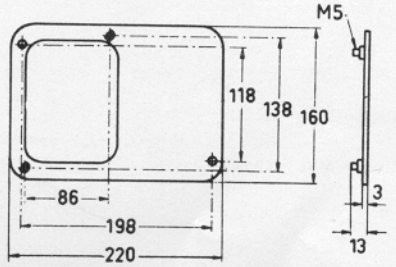
RK 935 0110

5283 278



RK 935 0111

5283 278



RK 935 0112

5283 278

Dimensions are in millimetres and are subject to modification without notice.

Relay testing block type RTNP

The relay testing block RTNP is used when a simpler means of testing is preferable, one which requires less space and less wiring than relay testing selector switches with testing contacts. RTNP occupies little space and is chiefly intended for smaller distribution boards in factories and power stations. It can be easily connected to conventional over-current protections using relays of type RI, RIDA, RRL, (R)RMJ or RVAA and earth fault protection with a current or voltage relay and a time-lag relay.

Mounting

The relay testing block is either fitted direct to a panel immediately under the relay in question or together with the relay on a common fixing plate which is then attached to the panel. There are two sizes of fixing plate, one for a testing block combined with a size H4 relay case and the other for size H8. For flush-mounting relays the block is mounted directly on the panel under the relay, allowing space for removal of the flush-mounting frame. Fixing screws are supplied.

Description

The relay testing block is made of a black insulating material and has M4 terminal screws at the rear. At the front the block has a black plastic cover shaped so that it cannot be fitted until the connection strips are folded back and the short-circuit plug has been moved back to the operating position (1–2). Inside the cover there is a diagram which shows how RTNP is used together with a current relay.

Typical applications

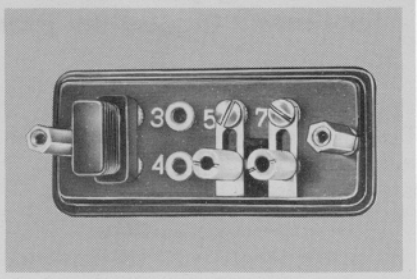
The diagrams on page 11 show how the testing block is connected for a time-lag over-current relay e.g. RIDA (the upper two diagrams); also shown is a voltage relay which may be combined with a time-lag relay, in which case terminals 3 and 4 are not connected (the lower two diagrams). Under normal operation the relay contact is connected with the tripping circuit over the short-circuit plug (terminal 1–2) and the relay coil is connected to the current transformers or voltage transformers over the two connection strips (terminals, 5–6 and 7–8). When testing the short-circuit plug is first moved to the right (terminals 3–4) so that the tripping circuit is broken and the current transformer circuit is short-circuited. Then both connection strips (5–6 and 7–8) can be turned downwards so that the relay coil is free and a test set e.g. type TURE (see Cat. RK 91–2 E) can be connected by wander plugs to terminals 2, 6 and 8.

Relay testing block type RTNP

Max. testing current		Net weight kg	Reference number
continuous A	for 1 second A		
40	500	0.2	RK 935 0120

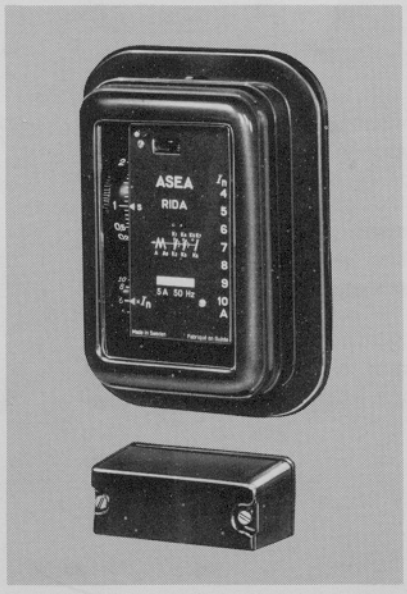
Fixing plate

For relay with case size	Net weight kg	Reference number
H4	0.25	RK 935 0121
H8	0.35	0122



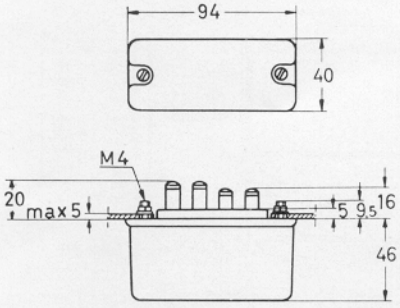
Relay testing block RTNP, cover removed. (57307)

Relay testing block and relay mounted on a special plate. (57303)



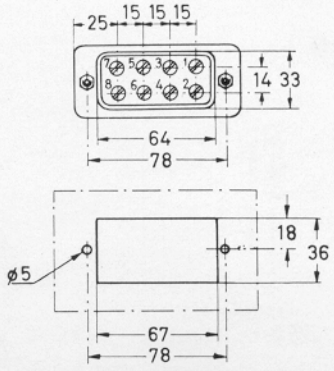
Flush-mounted relay type RIDA with relay testing block. (60635)

Relay testing block type RTNP



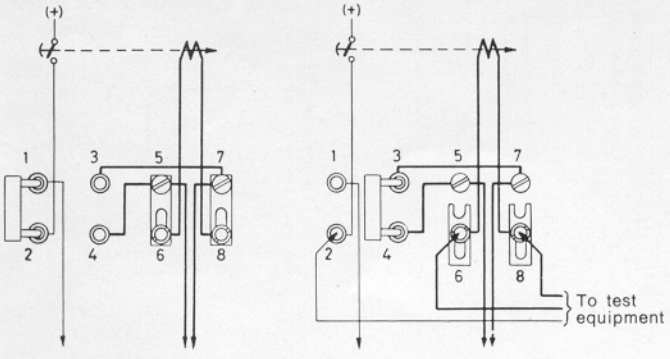
Terminal screws M4

(4121)



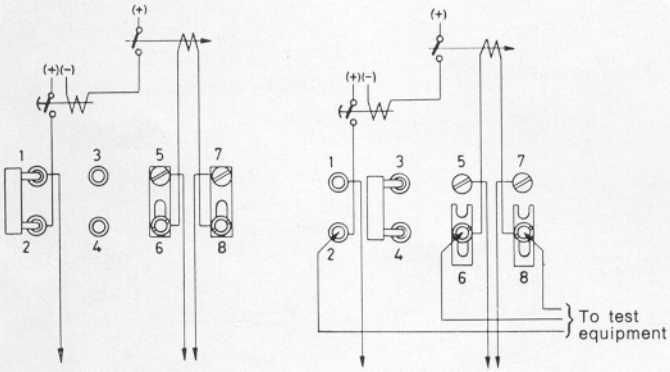
Drilling plan **5231 652**

Typical applications



Tripping Current transformer **Service position**

Tripping Current transformer **Test position**

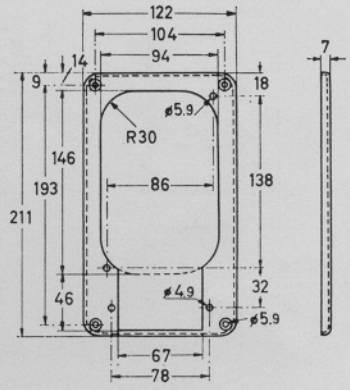


(4120) Tripping Voltage transformer **Service position**

Tripping Voltage transformer **Test position**

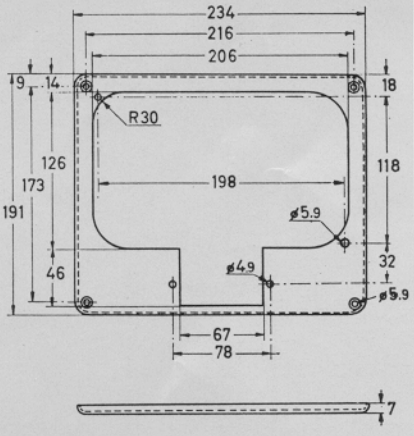
Mounting plates for testing block RTNP and a relay

For relay with size H4 case



5283 370

For relay with size H8 case



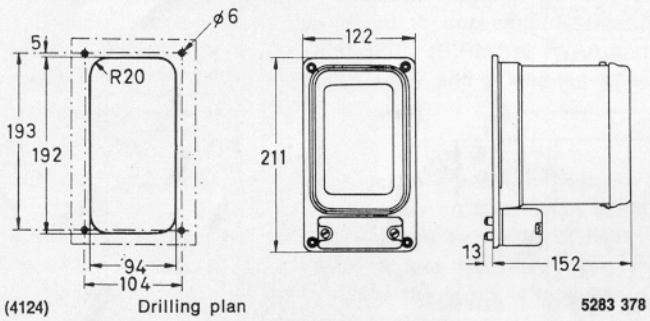
5283 371

Dimensions are in millimetres and are subject to modification without notice.

ASEA

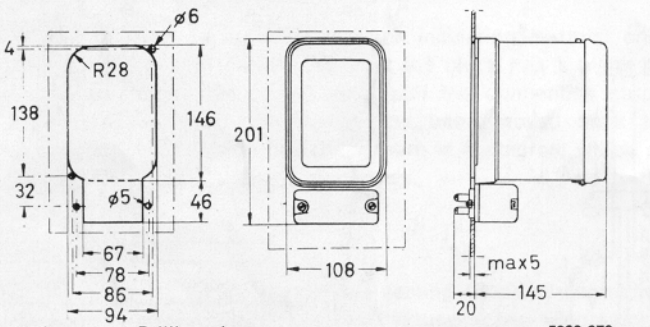
Relay testing block RTNP mounted with size H4 case

Mounting on special plate



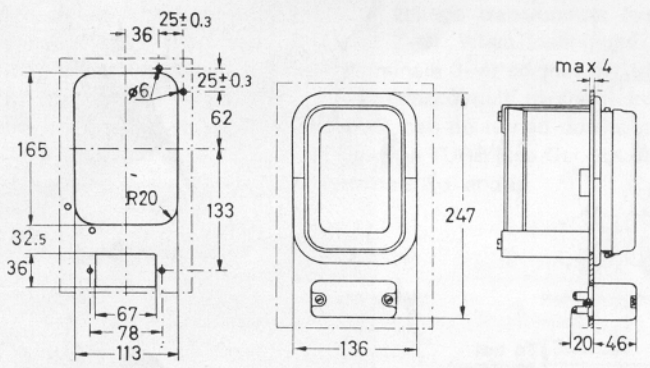
(4124) Drilling plan 5283 378

Mounting direct on sheet metal panel



(4125) Drilling plan 5283 378

Flush-mounting

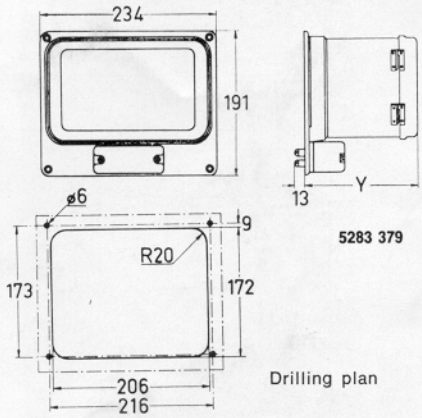


(4126) Drilling plan 5283 380

The drilling plans are seen from the front of the panel

Relay testing block RTNP mounted with size H8 case

Mounting on special plate

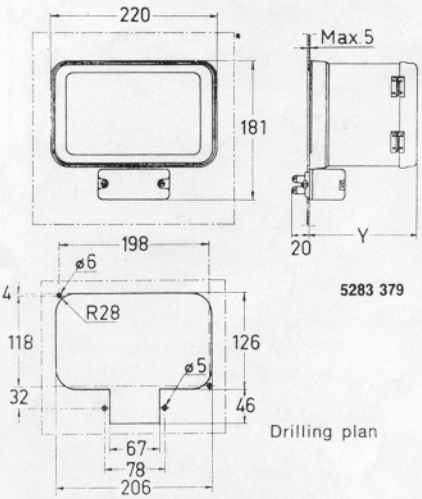


5283 379

Drilling plan

Y=152 for relays with case depth=145
Y=172 for relays with case depth=165
(4127)

Mounting direct on sheet metal panel

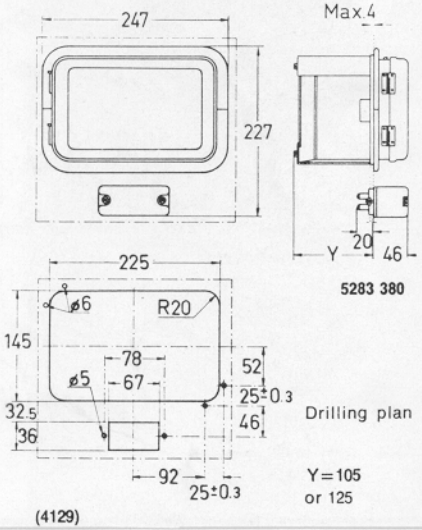


5283 379

Drilling plan

Y=depth of relay case=145 or 165
(4128)

Flush-mounting



5283 380

Drilling plan

Y=105 or 125
(4129)

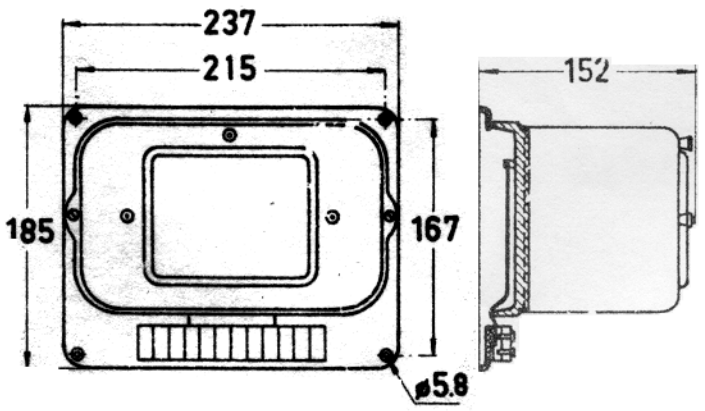
Dimensions are in millimetres and are subject to modification without notice.

Reg. 5283

Printed in Sweden Västerås 5.1977 Västra Aros Tryckeri AB 3000+2000+1500+1000

Främre uttag för tidöverströmsreläer
Front terminals for time-lag over-current relays

RI RIDI
RIS RIDSI

Främre uttag (kopplingsplint, märklist och fästplåt) i nytt utförande för tidöverströmsreläer typ RI, RIS, RIDI och RIDSI enligt nedanstående måttskiss.
Beställningsnummer
RK 935 0010

Front terminals (terminal block, marking strip and mounting plate) in new design for time-lag over-current relays types RI, RIS, RIDI and RIDSI according to the dimension drawing below.
Cat. No. 935 0010