



Siemens.com/mobility

## QTD5 Relay

A safety critical, slow to pick timer relay

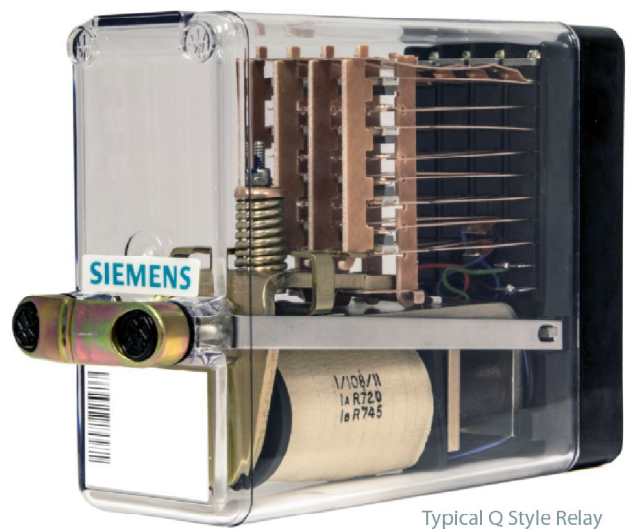
### General data

Contact arrangement: 5F 2B and 4F 3B  
 Nominal Rated Voltage: 12V, 24V and 50V dc

Note: Refer to the following data sheets:

- 7-1-1 for general information and contact ratings.
- 7-2-1 for dimensions.
- 8.2 for tools.
- 8.3 for plugboard and connector details.

Refer overleaf for specific data.



Typical Q Style Relay

### Description

The relay will pick and remain up after the expiration of the user selectable time. Even under external or internal component failure, the QTD5 will never pick in less than 80% of the set time.

56 time settings, from 2.5 to 325 seconds are set via straps on the rear of the plugboard. Fine adjustment between the pre-set times is achieved via a multi-turn potentiometer inside a sealing screw plug on the front cover.

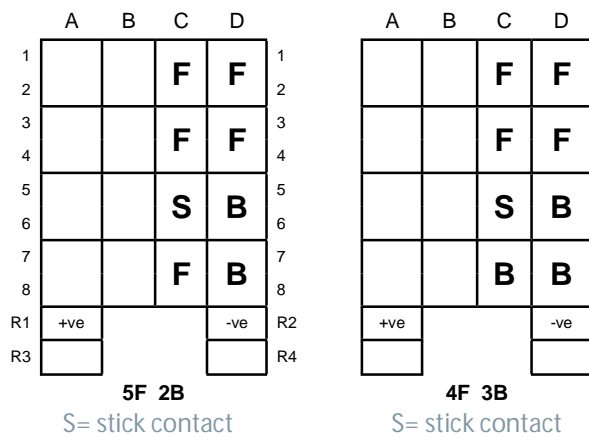
#### DIRECT OPERATION OF RELAY

Bridge the stick contact (C5-C6) to operate the relay without timing out or when partially timed. This will pick the relay if the circuit to R1- R2 is energised.

#### TIME STRAPPING

Refer overleaf for time strapping details.

## Contact layout viewed from rear



## Packaging

Q-Relays are packed in a carton holding ten relays; the same container is used for quantities of four to nine relays. Quantities less than four are packed individually in cardboard boxes, as are all train-carried relays. Each container has a bar-coded label affixed to the outside, stating details of the packaged relay(s) and the quantity therein.

## EMC Compliance

Q-Relays comply with the relevant emission requirements of EN 55014. It is considered that these relays have inherent immunity to in-service electro-magnetic disturbance.

A Technical Certificate for EU Directive on EMC (89/336/EEC) has been obtained.

## Time Strapping

Time Nominal(s)	Strap (Coarse)	Strap (Fine)
2.5	A1 - B7	B7 - B8
7.5	A1 - B7	B7 - A8
13.5	A1 - B7	A8 - B8
18.5	A1 - B7	----
26	A1 - A7	B7 - B8
31	A1 - A7	B7 - A8
37	A1 - A7	A8 - B8
42	A1 - A7	----
50	A1 - B6	B7 - B8
55	A1 - B6	B7 - A8
61	A1 - B6	A8 - B8
66	A1 - B6	----
73	A1 - A6	B7 - B8
78	A1 - A6	B7 - A8
84	A1 - A6	A8 - B8
89	A1 - A6	----
97	A1 - B5	B7 - B8
102	A1 - B5	B7 - A8
108	A1 - B5	A8 - B8
113	A1 - B5	----
120	A1 - A5	B7 - B8
125	A1 - A5	B7 - A8
131	A1 - A5	A8 - B8
136	A1 - A5	----
144	A1 - B4	B7 - B8
149	A1 - B4	B7 - A8
155	A1 - B4	A8 - B8
160	A1 - B4	----

Time Nominal(s)	Strap (Coarse)	Strap (Fine)
167	A1 - A4	B7 - B8
173	A1 - A4	B7 - A8
178	A1 - A4	A8 - B8
184	A1 - A4	----
191	A1 - B3	B7 - B8
196	A1 - B3	B7 - A8
202	A1 - B3	A8 - B8
207	A1 - B3	----
214	A1 - A3	B7 - B8
220	A1 - A3	B7 - A8
226	A1 - A3	A8 - B8
231	A1 - A3	----
238	A1 - B2	B7 - B8
243	A1 - B2	B7 - A8
249	A1 - B2	A8 - B8
254	A1 - B2	----
262	A1 - A2	B7 - B8
267	A1 - A2	B7 - A8
273	A1 - A2	A8 - B8
278	A1 - A2	----
285	A1 - B1	B7 - B8
290	A1 - B1	B7 - A8
296	A1 - B1	A8 - B8
301	A1 - B1	----
309	---	B7 - B8
314	----	B7 - A8
320	----	A8 - B8
325	----	----

## Technical data

SIEMENS Part No.	CONTACT ARRANGEMENT	RATED VOLTAGE (V dc)	MAX FULL OP (V dc)	MIN REL (V dc)	EARTH SCREEN	PLUGBOARD	REQD No. OF CONNECTORS J4137/3	REMARKS
M25161	5F 2B	50	BDFHX	40	7.5	J4138/408	16	See time strapping table on page. 2
M25162	4F 3B	50	BEGHX	40	7.5	J4138/427	16	
M25163	5F 2B	24	BDFJX	19.2	3.6	J4138/473	16	
M25164	4F 3B	24	BEFKX	19.2	3.6	----	16	
M25165	5F 2B	12	BDGHX	10	1.8	J4138/472	16	
M25166	4F 3B	12	BEFJX	10	1.8	J4138/488	16	

## Power Supply characteristics

Nominal Voltage of Relay Smoothed or Unsmoothed dc	50 V	24 V	12 V S	12 V U
Maximum Current	50 mA	50 Ma	200 mA	200 mA
Minimum Voltage	40 V	19.2 V	10 V	9.6 V
Maximum Voltage	60 V	28.8 V	18 V	14.4 V

S = smoothed d.c., U = unsmoothed d.c., Blank = smoothed or unsmoothed

NOTES: Times listed are with potentiometer adjusted fully anti clockwise.  
Times are  $\pm 5\%$  at 20°C with the potentiometer set to minimum.  
Relays are dispatched with the potentiometer set to maximum.

## Warnings

The safety-critical specification of this product is not assured unless it is applied in accordance with all the requirements of this data sheet and maintained by Siemens Rail Asia Pacific.

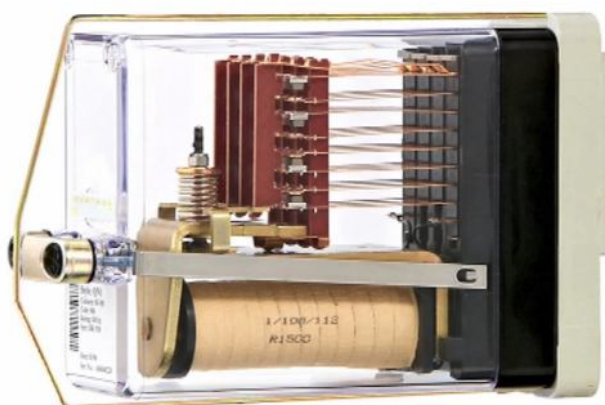
Always reset the potentiometer for the required time whenever the relay is replaced.

Wires connected to the terminals C5-C6 must be as short as possible (absolute maximum 5 metres) to avoid the capacitance affecting the timer's electronic circuitry.



Un-drilled plugboard  
Part No. E7218/1

Representation of Relay,  
Plugboard and Retaining clip  
(Clip Part No. J4136/1)



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# SIEMENS

The information within this document contains general descriptions of the technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.