

Siemens.com/mobility

VT1 and VT1(T) Relays

A relay unit comprising a transformer and rectifier

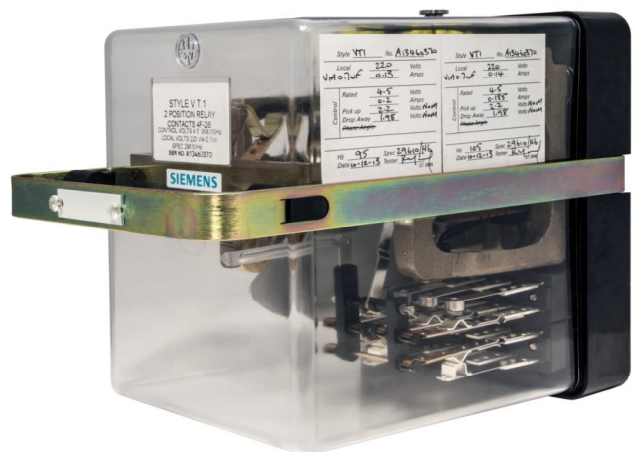
General data

Height: 208 mm (including lock plunger).

Width: 157 mm.

Depth: 248 mm (including relay handle).

Weight: 6.5 kg (approximate)



Description

The style VT1 is a two element ac induction track relay in which a pivoted vane is caused to rotate in a magnetic field. The magnetic field is produced by two elements each consisting of a winding on a laminated iron core.

These elements are termed 'Local' and 'Control'. The rotary movement of the vane is converted into linear movement by cranks and links and transmitted to contact assemblies.



Contact Information

VTI 4F, 2B Contacts - SJ509/1, SJ509/11, SJ509/9 and SJ509/17

Coil Connection	Front Contacts								Back Contacts							
See Coil Connection Diagrams on next page		13	23	33	43						15	45				
		14	24	34	44						16	46				

VTI 4F, 2B Contacts - SJ509/2 and SJ509/16

Coil Connection	Front Contacts								Back Contacts							
See Coil Connection Diagrams on next page		13	23	33	43	53	63	73	83		15	45	55	85		
		14	24	34	44	54	64	74	84		16	46	56	86		

VTI 4F, 2B Contacts - SJ509/4 and SJ509/15

Coil Connection	Front Contacts				Back Contacts										
See Coil Connection Diagrams on next page		23	33							13	43				
		24	34							14	44				

VTI 4F, 2B Contacts - SJ509/5, SJ509/7, SJ509/13 and SJ509/14

Coil Connection	Front Contacts								Back Contacts							
See Coil Connection Diagrams on next page		13	33	43	53	63	83				15	45	55	85		
		14	34	44	54	64	84				16	46	56	86		

VTI 4F, 2B Contacts - SJ509/6

Coil Connection	Front Contacts								Back Contacts							
See Coil Connection Diagrams on next page		13	23	33	43						15	25	35	45		
		14	24	34	44						16	26	36	46		

VTI 4F, 2B Contacts - SJ509/10

Coil Connection	Front Contacts								Back Contacts							
See Coil Connection Diagrams on next page		13	23	33	43	15	45				25	35				
		14	24	34	44	16	46				26	36				

VTI 4F, 2B Contacts - SJ509/12

Coil Connection	Front Contacts				Back Contacts										
See Coil Connection Diagrams on next page		23	33							13	43				
		24	34							14	44				

VTI 4F, 2B Contacts - SJ509/3

Coil Connection	Front Contacts								Back Contacts							
See Coil Connection Diagrams on next page		13	23	33	43						15	45				
		14	24	34	44						16	46				

VTI 4F, 2B Contacts - SJ509/8

Coil Connection	Front Contacts								Back Contacts							
See Coil Connection Diagrams on next page		13	23	33	43	53	63	73	83		15	45	55	85		
		14	24	34	44	54	64	74	84		16	46	56	86		

Contact Information

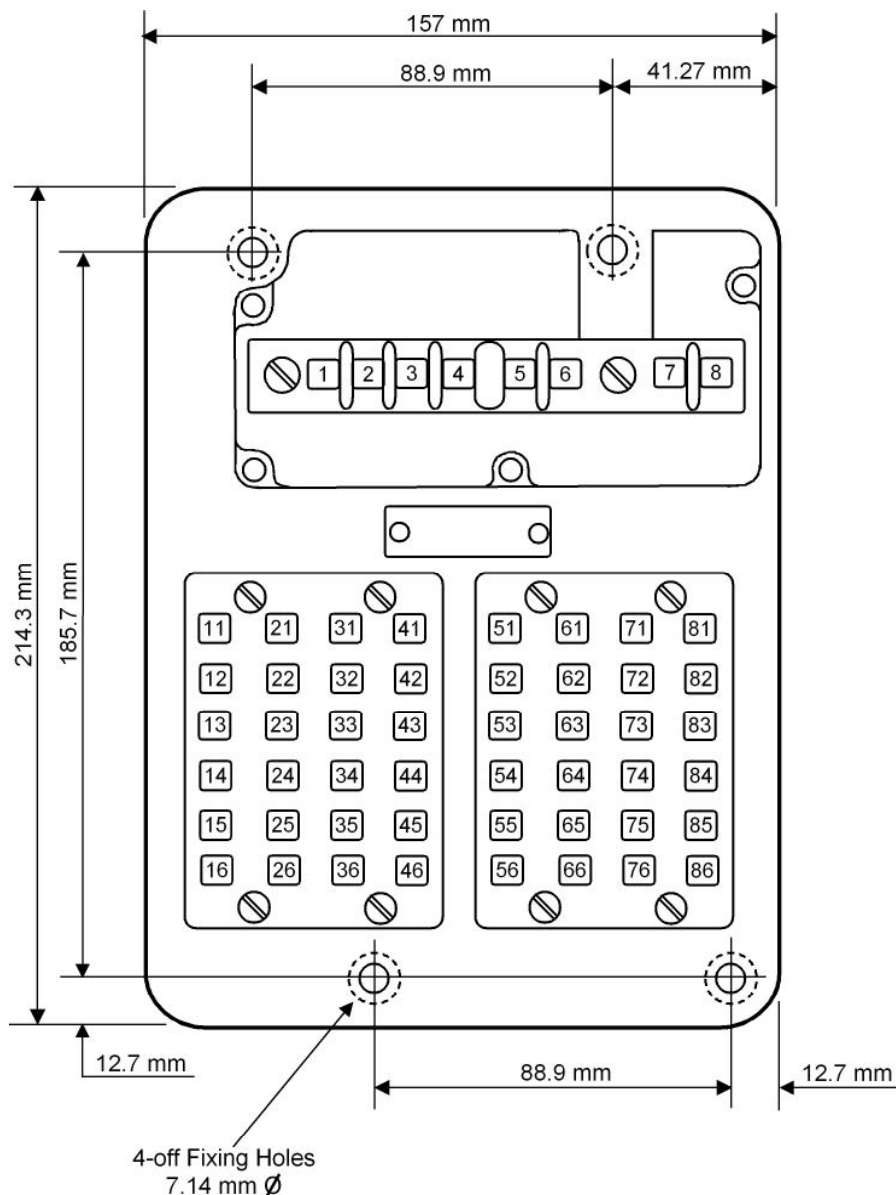
Application

The style VT1 relay is designed for use in ac double and single rail resistive or capacitive fed track circuits.

In capacitive fed applications the 'Control' winding is made to resonate using an internally mounted capacitor.

This gives the sensitivity and correct phase shift for this application. In resistive fed applications the control winding is unresonated.

Mounting base details viewed from



Technical data

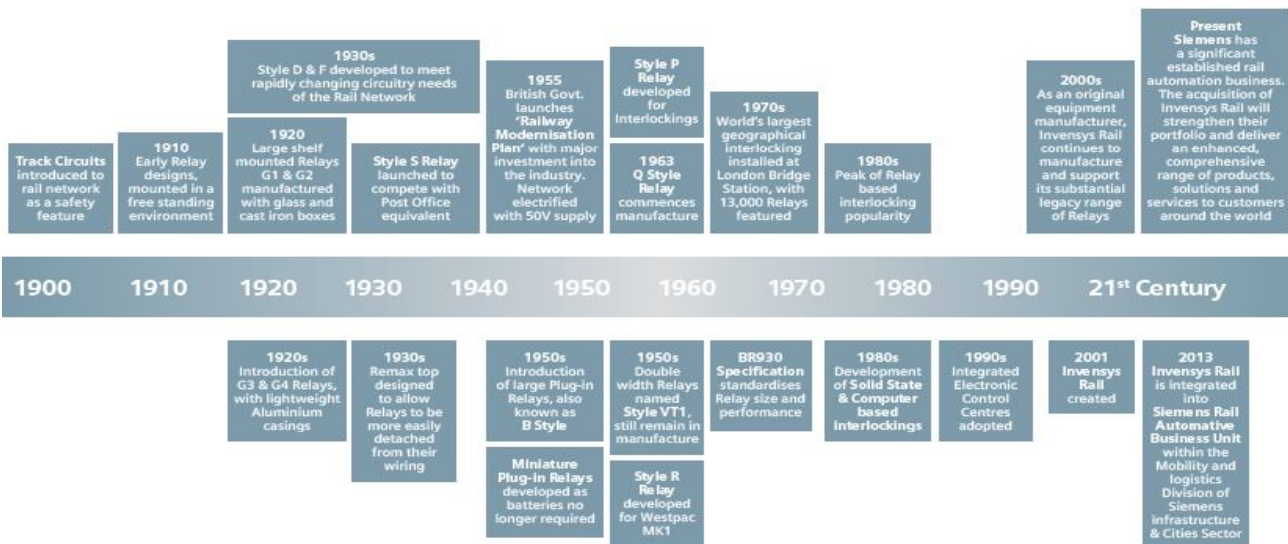
Siemens Part No. (Pad No.)	Contact Arrangement	Local Volts (ac)	Control Volts (ac)	Frequency	Mounting Base	Reqd No. Of Connectors J976/1	Remarks
SJ509/1 (88/030703)	4F 2B	110	1.0	50	A59785/7	16	Capacitive Fed
SJ509/2 (88/044226)	8F 4B	110	1.0	50	A59785/16	28	Capacitive Fed
SJ509/3 (88/044371)	4F 2B	110	1.0	50	A59783/34*	16	Capacitive Fed
SJ509/4 (88/044376)	2F 2B	110	1.0	50	A59785/1	12	Capacitive Fed
SJ509/5	6F 4B	220	2.5	75	A59785/100	24	Resistive Fed
SJ509/6	4F 4B	220	220	75	A59785/101	20	Power On Power Off
SJ509/7	6F 4B	220	1.0	50	A59785/102	24	Resistive or Capacitive Fed**
SJ509/8 (88/044377)	8F 4B	110	1.0	50	A59783/36*	28	Capacitive Fed
SJ509/9	4F 2B	155***	4.5	95 & 105	A59785/103	16	Resistive Fed
SJ509/10	6F 2B	110	1.5	50	A59785/14	20	Capacitive Fed
SJ509/11	4F 2B	110	1.5	50	A59785/7	16	Resistive Fed
SJ509/12 (88/044373)	2F 2B	110	1.0	50	A59783/33*	12	Capacitive Fed
SJ509/13	6F 4B	115	0.5	100	A59785/106	24	Capacitive Fed
SJ509/14	6F 4B	115	5.5	60	A59785/7107	24	Resistive Fed
SJ509/15	2F 2B	115	3.05	60	A59785/108	12	Resistive Fed
SJ509/16	8F 4B	220	2.5	75	A59785/109	28	Resistive Fed
SJ509/17	4F 2B	110	0.5	50	A59785/112	16	Capacitive Fed

* Denotes mounting base fitted with test switch (VT1(T) relay).

** When capacitive fed a 2µF capacitor must be fitted across terminals C and D.

*** Volts across Local Winding when fed from 220 V via 0.7 µF capacitor.

A History of Relay Development



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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.