

# SHANGHAI FAIVELEY RAILWAY TECHNOLOGY CO.

**AMSTERDAM (Alstom)**

## **7 PARTS CATALOGUE**

## AMSTERDAM (Alstom)

### Rolling stock

HVAC System

7 Parts Catalogue

#### Release History

	Name	Department	Date	Signature
Prepared by:	Huang Yuanhua	EHD	15.10.2010	
Checked by:	Zhangjun	EHD	15.10.2010	
Released by	Olaf.Giel	EH	15.10.2010	

#### Revision Table

Revision	Date	Revised Sections, Description, Reason for changes
01	15.10.2010	First issue
02	08.03.2011	Modify according to the modification of mechanical design of cab HVAC unit
03	31.05.2011	Updated according to conf call discussion in March 2011.
04	18.10.2011	Control panel components updated
05	12.11.2011	Components added in accordance with LCC file
06	15.04.2014	Damper actuator no. updated, saloon unit drawing no. updated.
07	22.04.2014	Figure 1-4 updated

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**Table 0:**HVAC System

SPP: Spare part/EWP: Easily worn part/FAP: fastening part/LRU: Line replaceable unit/SRU: secondary replaceable unit/ MRU: main replaceable unit

1	2	3						4	5	6	7	8	9	10	11	12
OSC	Pos	Quantity/car						Unit	Designation Specification & type	Manufacturer	Manufacturer No	Vehicle manufacturer Part No	SMC No	Drawing No	Category SPP EWP FAP	TRU LRU SRU MRU
		DM1	M1	M2	M3	M4	DM2									
		1	1	1	1	1	1		Saloon HVAC Unit	SFRT	97.1733.0001			KS97A000.000-97A.M1	SPP	MRU
		1	0	0	0	0	1		Cab HVAC Unit	SFRT	97.1733.0006			KS97C000.000-97A.M2	SPP	MRU
		1	0	0	0	0	1		Cab aerotherm Unit	SFRT	97.1733.0009			KS97E000.000-97A.M2	SPP	MRU

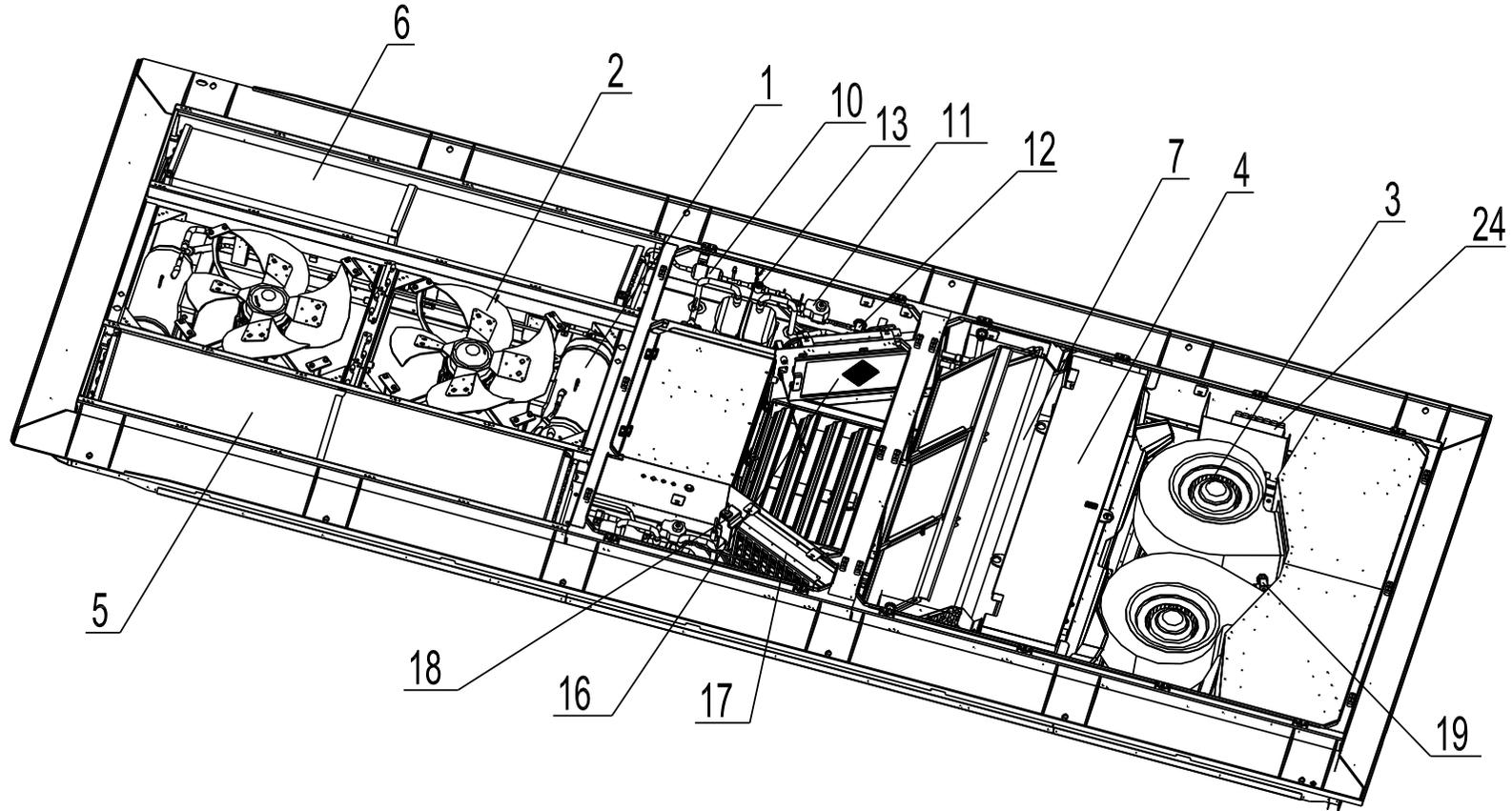
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Figure 1 (1 of 5): Saloon HVAC Unit



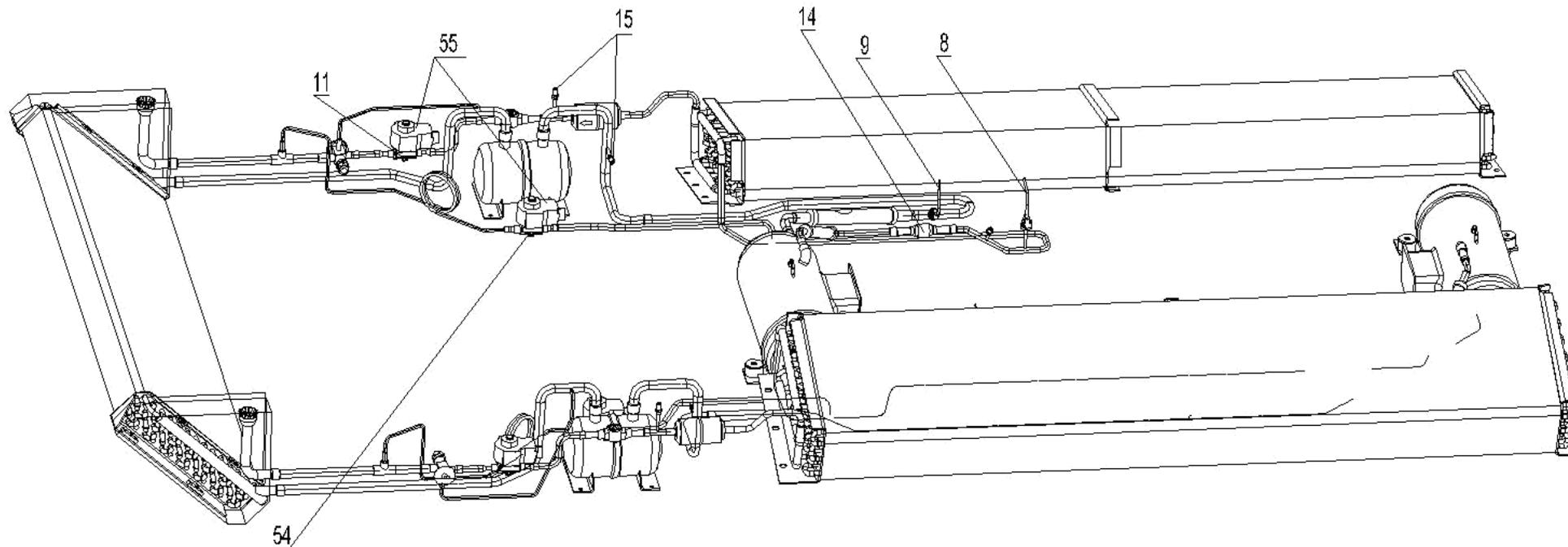
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Figure 1 (2 of 5): HVAC Unit Saloon



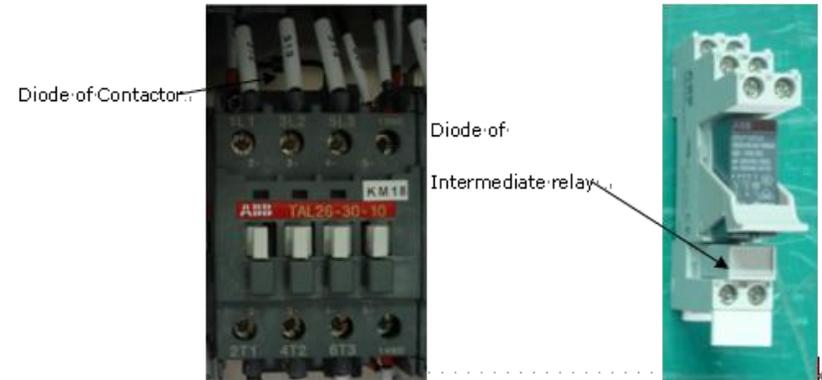
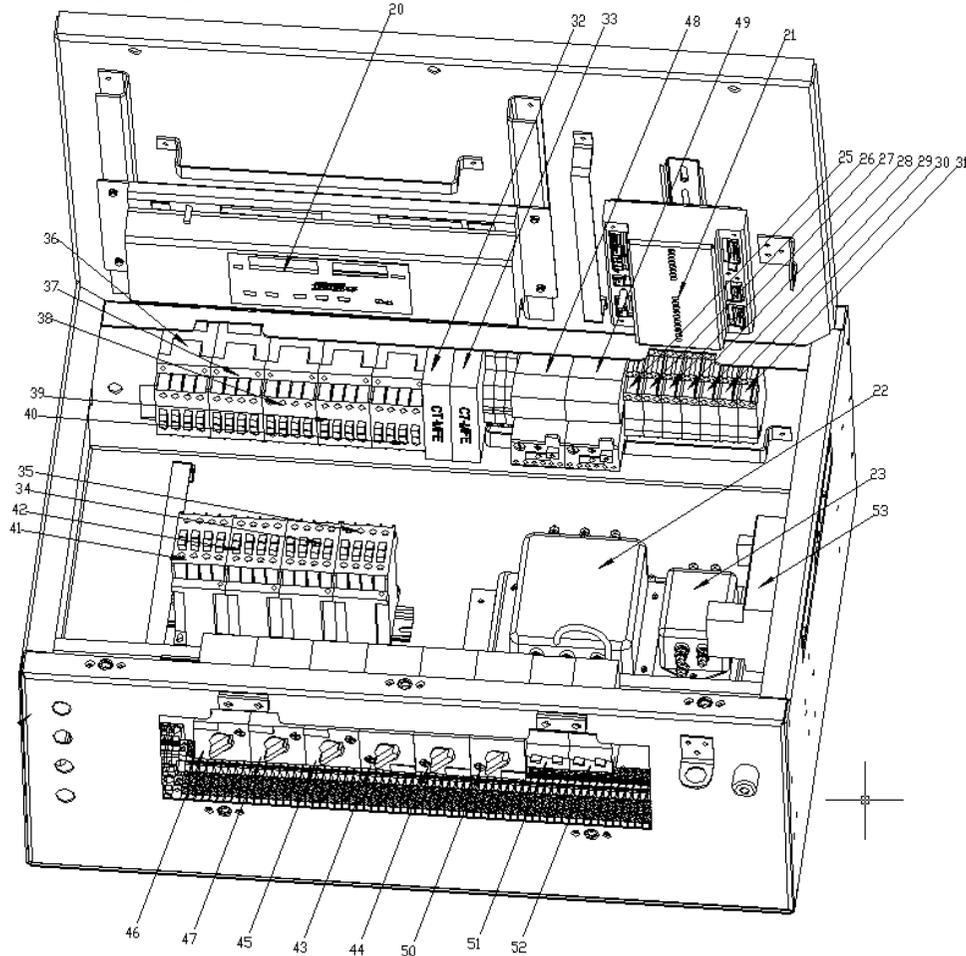
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Figure 1 (3 of 5): HVAC Unit Saloon



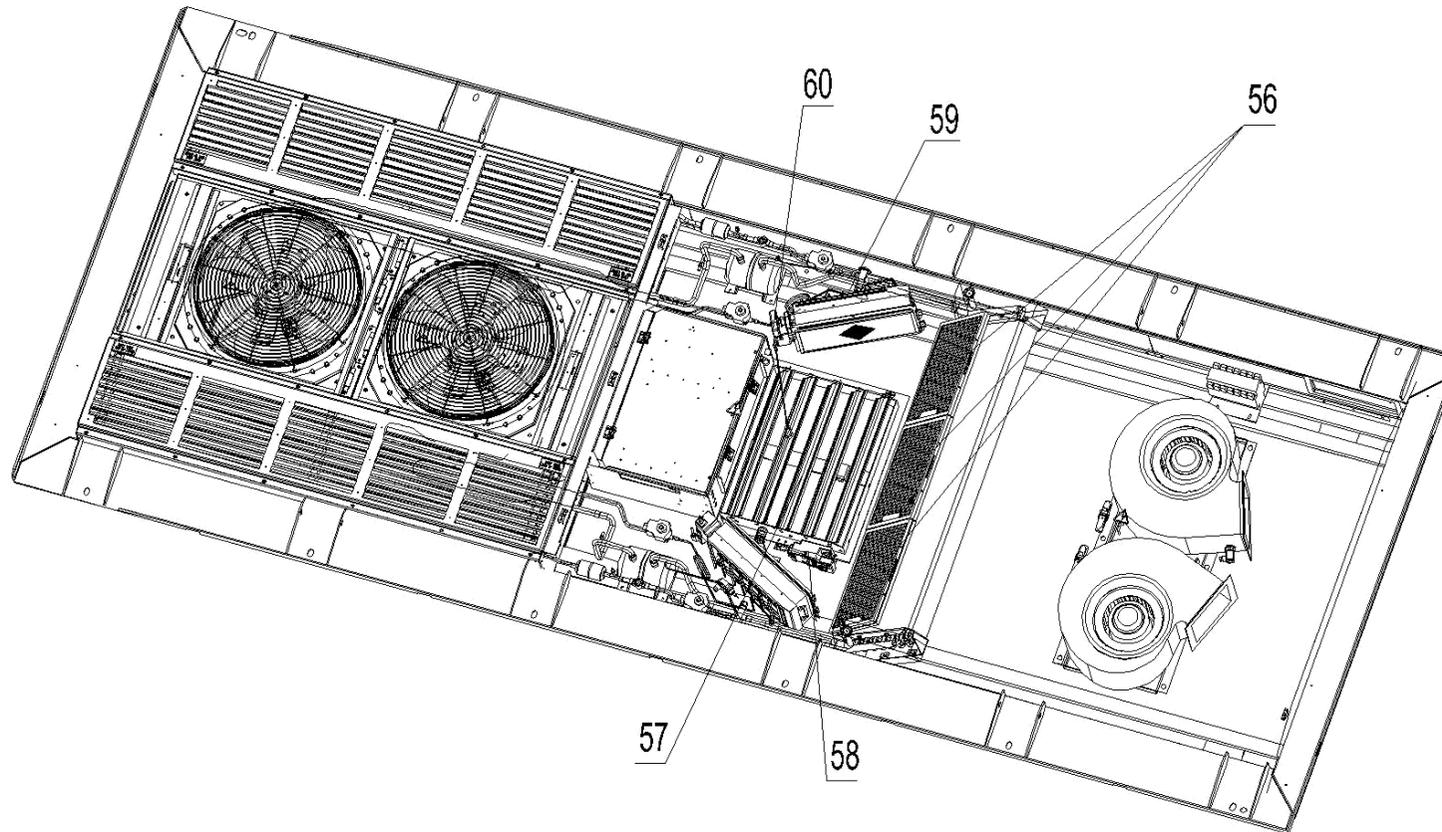
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Figure 1 (4 of 5): HVAC Unit Saloon



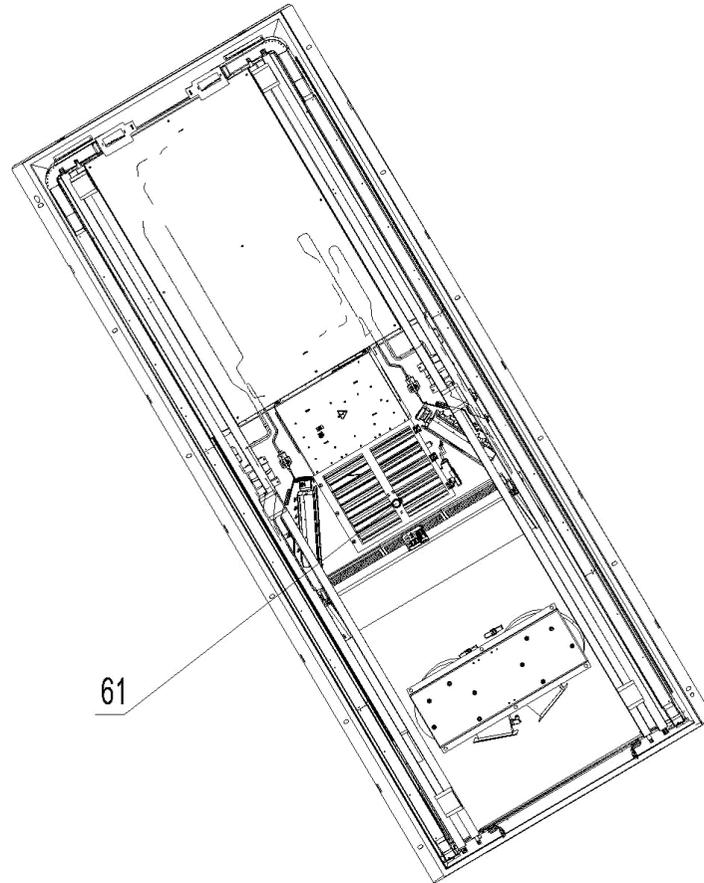
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**Figure 1 (5 of 5):** HVAC Unit Saloon



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**Table 1: Saloon HVAC Unit**

SPP: Spare part/EWP: Easily worn part/FAP: fastening part/LRU: Line replaceable unit/SRU: secondary replaceable unit/ MRU: main replaceable unit

1	2	3					4	5	6	7	8	9	10	11	12		
		OS	Pos	Quantity/car												Unit	Designation Specification & type
		DM1	M 1	M 2	M 3	M 4	DM2										
	1		2	2	2	2		8	Compressor	Hitachi	12.0100.0073		G600DL-90DTP.N4	SPP	SRU		
	2		2	2	2	2		2	Condenser fan		12.0202.0095		KS97A100.000-02A.Z3	SPP	LRU		
	3		2	2	2	2		8	Supply air fan		12.0201. 0185 12.0201. 0186		ERAD 281-4A-L ERAD 281-4A-R	SPP	LRU		
	4		1	1	1	1		2	Electric heater		12.0400.0101		KS97A100.000-04A.Z3	SPP	LRU		
	5		1	1	1	1		2	Condenser on the left side		12.1700.0308		KS97A100.210-00A.Z2	SPP	SRU		
	6		1	1	1	1		2	Condenser on the right side		12.1700.0309		KS97A100.220-00A.OZ	SPP	SRU		
	7		1	1	1	1		2	Evaporator		12.1700.0310		KS97A100.230-00A.Z3	SPP	SRU		
	8		2	2	2	2		8	High pressure switch	Johnson	12.0501.0053		HS200-835-0019	SPP	SRU		
	9		2	2	2	2		8	Low pressure switch	Johnson	12.0502.0032		HS200-835-0020	SPP	SRU		
	10		2	2	2	2		8	Filter dryer	Danfoss	12.0700.0005		023Z5060	SPP	SRU		
	11		2	2	2	2		8	Solenoid valve in liquid line	Danfoss	12.1000.0139		032F1213_TRD	SPP	SRU		
	12		2	2	2	2		8	Expansion valve	Danfoss	12.1000.0102		067N4043_TRD	SPP	SRU		
	13		2	2	2	2		8	sight glass	Danfoss	12.1000.0065		014-0183	SPP	SRU		
	14		2	2	2	2		8	check valve	Danfoss	12.1000.0066		020-1038	SPP	SRU		
	15		6	6	6	6		24	Schrader valve JY6-Diam.6	Austar	12.1000.0009		NA	SPP	SRU		
	16		2	2	2	2		8	Fresh air filter		12.1200.0156		KS97A100.000-09A.Z3	EWP	LRU		

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1	2	3					4	5	6	7		8	9	10	11	12
		OS	Pos	Quantity/car						Unit	Designation Specification & type					
		DM1	M 1	M 2	M 3	M 4	DM2									
	17		1	1	1	1		4	Fresh air damper 1		12.1900.0078			KS97A100.000-06A.Z3	SPP	SRU
	18		1	1	1	1		4	Damper actuator		12.1000.0098	SN2010001- SN2014115		TRD	SPP	SRU
											12.1000.0127 12.1000.0129	From SN2014116				
	19		3	3	3	3		12	Temperature sensor	Zhenhai	12.0603.0005			KT38A000.000-21A.Z4	SPP	LRU
	20		1	1	1	1		4	Programmed logical controller	Faiveley	12.0301.0016			FPC08	SPP	LRU
	21		1	1	1	1		4	Module for controller	Faiveley	12.0301.0021			DI08	SPP	LRU
	22		1	1	1	1		4	EMC filter BTF004	BROTEK	12.0510.0214			NF1	SPP	LRU
	23		1	1	1	1		4	EMC filter BTF002	BROTEK	12.0510.0206			NF2	SPP	LRU
	24		1	1	1	1		4	3-phase transformer		12.0511.0015			SOG-2-0.4/0.14-0.35	SPP	LRU
	25		1	1	1	1		4	Intermediate relay KA1	ABB	12.0505.0034			CR-P110DC2-PSS/F	SPP	LRU
				1	1	1	1		4	diode-intermediate relay(KA1)	ABB	12.0510.0210			CR-P/M22	
	26		1	1	1	1		4	Intermediate relay KA2	ABB	12.0505.0034			CR-P110DC2-PSS/F	SPP	LRU

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1	2	3					4	5	6	7	8	9	10	11	12
OS C	Pos	Quantity/car					Unit	Designation Specification & type	Manufactur er	Manufacturer No	Vehicle manufacturer Part No	SMC No	Drawing No	Category SPP EWP FAP	TRU LRU SRU MRU
		DM1	M 1	M 2	M 3	M 4									
			1	1	1	1		4	diode- intermediate relay KA2	ABB	12.0510.0210		CR-P/M22		
	27		1	1	1	1		4	Intermediate relay KA3	ABB	12.0505.0034		CR-P110DC2-PSS/F	SPP	LRU
				1	1	1	1		4	diode- intermediate relay KA3	ABB	12.0510.0210		CR-P/M22	
	28		1	1	1	1		4	Intermediate relay KA4	ABB	12.0505.0034		CR-P110DC2-PSS/F	SPP	LRU
				1	1	1	1		4	diode- intermediate relay KA4	ABB	12.0510.0210		CR-P/M22	
	29		1	1	1	1		4	Intermediate relay KA5	ABB	12.0505.0034		CR-P110DC2-PSS/F	SPP	LRU
				1	1	1	1		4	diode- intermediate relay KA5	ABB	12.0510.0210		CR-P/M22	
	30		1	1	1	1		4	Intermediate relay KA6	ABB	12.0505.0034		CR-P110DC2-PSS/F	SPP	LRU
				1	1	1	1		4	diode- intermediate relay KA6	ABB	12.0510.0210		CR-P/M22	
	31		1	1	1	1		4	Intermediate relay KA7	ABB	12.0505.0034		CR-P110DC2-PSS/F	SPP	LRU

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1	2	3					4	5	6	7	8	9	10	11	12									
		Quantity/car														Unit	Designation Specification & type	Manufacturer	Manufacturer No	Vehicle manufacturer Part No	SMC No	Drawing No	Category SPP EWP FAP	TRU LRU SRU MRU
		DM1	M1	M2	M3	M4																		
			1	1	1	1		4	diode- intermediate relay KA7	ABB	12.0510.0210			CR-P/M22										
	32		1	1	1	1		4	Time relay KT1	ABB	12.0505.0205			CT-MFE	SPP	LRU								
	33		1	1	1	1		4	Time relay KT2	ABB	12.0505.0205			CT-MFE	SPP	LRU								
	34		1	1	1	1		4	Contacto TAL26-30-10 KM18	ABB	12.0507.0061			TAL26-30-10 DC110V	SPP	LRU								
			1	1	1	1		4	diode-(KM18)		13.0615.0004													
	35		1	1	1	1		4	Contacto TAL26-30-10 KM19	ABB	12.0507.0061			TAL26-30-10 DC110V	SPP	LRU								
			1	1	1	1		4	diode-(KM19)		13.0615.0004													
	36		1	1	1	1		4	Contacto TAL9- 30-10 KM13	ABB	12.0507.0063			TAL9-30-10 DC110V	SPP	LRU								
			1	1	1	1		4	diode-(KM13)		13.0615.0004													
	37		1	1	1	1		4	Contacto TAL9- 30-10 KM14	ABB	12.0507.0063			TAL9-30-10 DC110V	SPP	LRU								
			1	1	1	1		4	diode-(KM14)		13.0615.0004													
	38		1	1	1	1		4	Contacto TAL9- 30-10 KM15	ABB	12.0507.0063			TAL9-30-10 DC110V	SPP	LRU								
			1	1	1	1		4	diode-(KM15)		13.0615.0004													
	39		1	1	1	1		4	Contacto TAL9- 30-10 KM16	ABB	12.0507.0063			TAL9-30-10 DC110V	SPP	LRU								
			1	1	1	1		4	diode-(KM16)		13.0615.0004													
	40		1	1	1	1		4	Contacto TAL9- 30-10 KM17	ABB	12.0507.0063			TAL9-30-10 DC110V	SPP	LRU								

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1	2	3					4	5	6	7	8	9	10	11	12											
		OS	Pos	Quantity/car												Unit	Designation Specification & type	Manufactur er	Manufacturer No	Vehicle manufacturer Part No	SMC No	Drawing No	Category SPP EWP FAP	TRU LRU SRU MRU		
				DM1	M	M																			M	M
			1	1	1	1		4	diode-(KM17)		13.0615.0004															
	41		1	1	1	1		4	Contacto r TAL16-30-10 KM11	ABB	12.0507.0035			AL16-30-10 DC110V	SPP	LRU										
			1	1	1	1		4	diode-(KM11)		13.0615.0004															
	42		1	1	1	1		4	Contacto r TAL16-30-10 KM12	ABB	12.0507.0035			AL16-30-10 DC110V	SPP	LRU										
			1	1	1	1		4	diode-(KM12)		13.0615.0004															
	43		1	1	1	1		4	Manual motor starter MS116- 2.5(1.6-2.5) QF3	ABB	12.0508.0046			MS116-2.5(1.6-2.5)	SPP	LRU										
	44		1	1	1	1		4	Manual motor starter MS116- 2.5(1.6-2.5) QF4	ABB	12.0508.0046			MS116-2.5(1.6-2.5)	SPP	LRU										
	45		1	1	1	1		4	Manual motor starter MS116- 4.0(2.5-4.0)	ABB	12.0508.0047			MS116-4.0(2.5-4.0)	SPP	LRU										
	46		1	1	1	1		4	Manual motor starter MS116- 16(10-16) QF1	ABB	12.0508.0048			MS116-16(10-16)	SPP	LRU										
	47		1	1	1	1		4	Manual motor starter MS116- 16(10-16) QF2	ABB	12.0508.0048			MS116-16(10-16)	SPP	LRU										
	48		1	1	1	1		4	Thermostat relay FR02	ABB	12.0505.0125			TA 25 DU 2.4(1.7-2.4A)	SPP	LRU										

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1	2	3					4	5	6	7	8	9	10	11	12	
		OS	Pos	Quantity/car												Unit
C		DM1	M 1	M 2	M 3	M 4	DM2									
	49		1	1	1	1		4	Thermostat relay FR01	ABB	12.0505.0117			TA 25 DU 4.0(2.8-4.0A)	SPP	LRU
	50		1	1	1	1		4	Circuit breaker QF05	ABB	12.0508.0141			S263-C63	SPP	LRU
	51		1	1	1	1		4	Circuit breaker QF06	ABB	12.0508.0146			S263-C63	SPP	LRU
	52		1	1	1	1		4	Circuit breaker QF07	ABB	12.0508.0121			S262-C6	SPP	LRU
	53		1	1	1	1		4	H/L frequency Detector		12.0510.0213			BTDT-01	SPP	LRU
	54		2	2	2	2		8	solenoid valve of hot gas bypass circuit	Danfoss	12.1000.0006				SPP	SRU
	55		4	4	4	4		8	coil for solenoid valve of liquid circuit\hot gas bypass circuit	Danfoss	12.1000.0101			018F6860_TRD	SPP	SRU
	56		3	3	3	3		12	mixed air filter		12.1200.0155				SPP	LRU
	57		1	1	1	1		4	return air damper		12.1900.0080				SPP	LRU
	58		1	1	1	1		4	actuator for return air damper		12.1000.0127				SPP	SRU
	59		1	1	1	1		4	fresh air damper 2		12.1900.0079				SPP	SRU
	60		1	1	1	1		4	actuator for fresh		12.1000.0098	SN2010001- SN2014115			SPP	SRU

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1	2	3					4	5	6	7		8	9	10	11	12
OS C	Pos	Quantity/car					Unit	Designation Specification & type	Manufactur er	Manufacturer No		Vehicle manufacturer Part No	SMC No	Drawing No	Category SPP EWP FAP	TRU LRU SRU MRU
		DM1	M 1	M 2	M 3	M 4				DM2						
										12.1000.0127	From					
										12.1000.0129	SN2014116					
	61		1	1	1	1		4	thermostat			12.0601.0002				SPP SRU

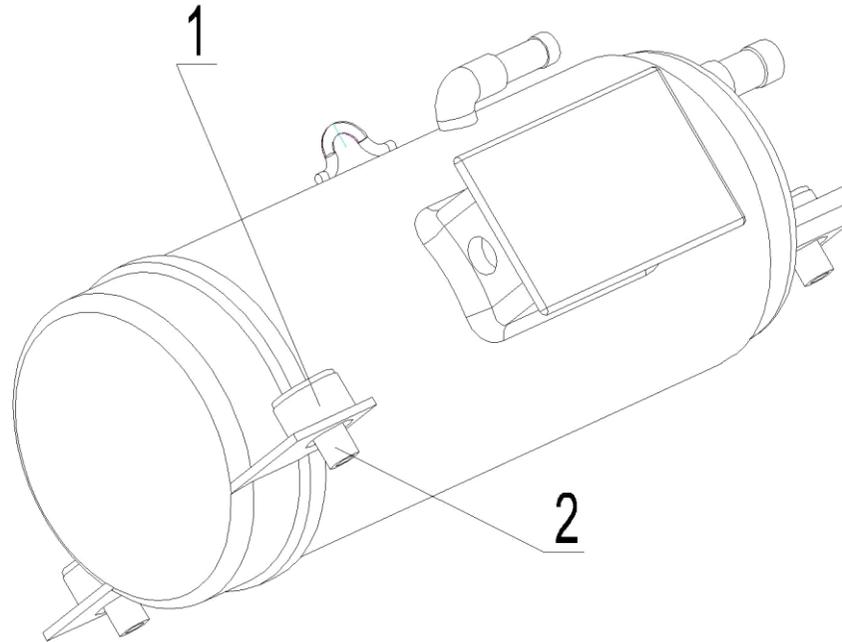
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**Figure 1-1: Compressor**



Name	pos in the part list(Table 1)	drawing number	vehicle manufacturer part number	comment
Compressor	1	G600DL-90DTP.N4		

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**Table 1-1: Compressor**

SPP: Spare part/EWP: Easily worn part/FAP: fastening part/LRU: Line replaceable unit/SRU: secondary replaceable unit/ MRU: main replaceable unit

1	2	3				4	5	6	7	8	9	10	11	12
OSC	Pos	Quantity/car				Unit	Designation Specification & type	Manufacturer	Manufacturer No	Vehicle manufacturer Part No	SMC No	Drawing No	Category SPP EWP FAP	TRU LRU SRU MRU
		DT1	M1	M2	DT2									
	1					3	upper vibration damper for compressor		13.0501.0011				SPP	SRU
	2					3	down vibration damper for compressor r		13.0501.0012				SPP	SRU

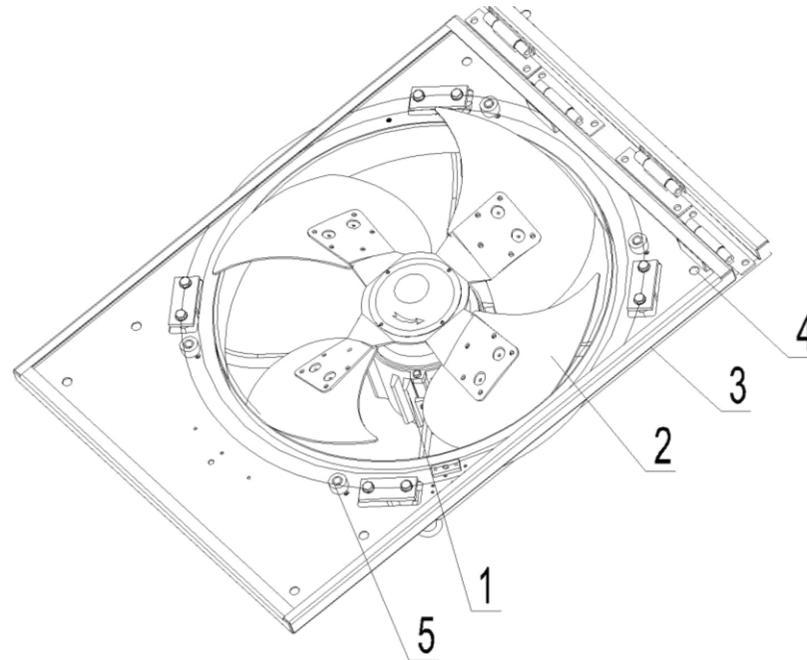
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**Figure 1-2: Condenser Fan**



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Condenser Fan	2	KS97A100.000-02A.Z3		

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**Table 1-2: Condenser Fan**

SPP: Spare part/EWP: Easily worn part/FAP: fastening part/LRU: Line replaceable unit/SRU: secondary replaceable unit/ MRU: main replaceable unit

1	2	3				4	5	6	7	8	9	10	11	12
OSC	Pos	Quantity/car				Unit	Designation Specification & type	Manufacturer	Manufacturer No	Vehicle manufacturer Part No	SMC No	Drawing No	Category SPP EWP FAP	TRU LRU SRU MRU
		DT1	M1	M2	DT2									
	1					1	Condenser fan motor	ABB	12.0203.0030		Y2-100S1-4 LCK/E	SPP	SRU	
	2					1	Condenser fan impeller	Jiake	12.0203.2014			SPP	SRU	
	3					1	Condenser Fan bracket	Jiake	NA			SPP	SRU	
	4					4	Screw		12.1401.0303			FAP	SRU	
	5					16	Bumper for condenser fan		13.0502.0057			SPP	SRU	

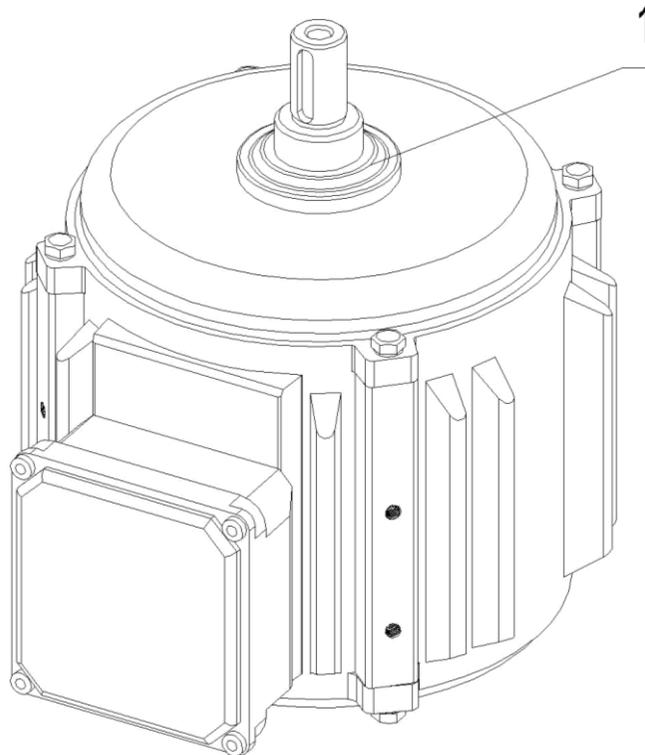
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**Figure 1-2-1:** Condenser Fan motor



Name	Pos in the part list(Table 1-1)	Drawing number	Vehicle manufacturer part number	Comment
Condenser Fan motor	1	Y2-100S1-4 LCK/E		

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**Table 1-3: Condenser Fan motor**

SPP: Spare part/EWP: Easily worn part/FAP: fastening part/LRU: Line replaceable unit/SRU: secondary replaceable unit/ MRU: main replaceable unit

1	2	3				4	5	6	7	8	9	10	11	12
OSC	Pos	Quantity/car				Unit	Designation Specification & type	Manufacturer	Manufacturer No	Vehicle manufacturer Part No	SMC No	Drawing No	Category SPP EWP FAP	TRU LRU SRU MRU
		DT1	M1	M2	DT2									
	1					1	condenser fan motor bearing		12.1403.0074				SPP	SRU

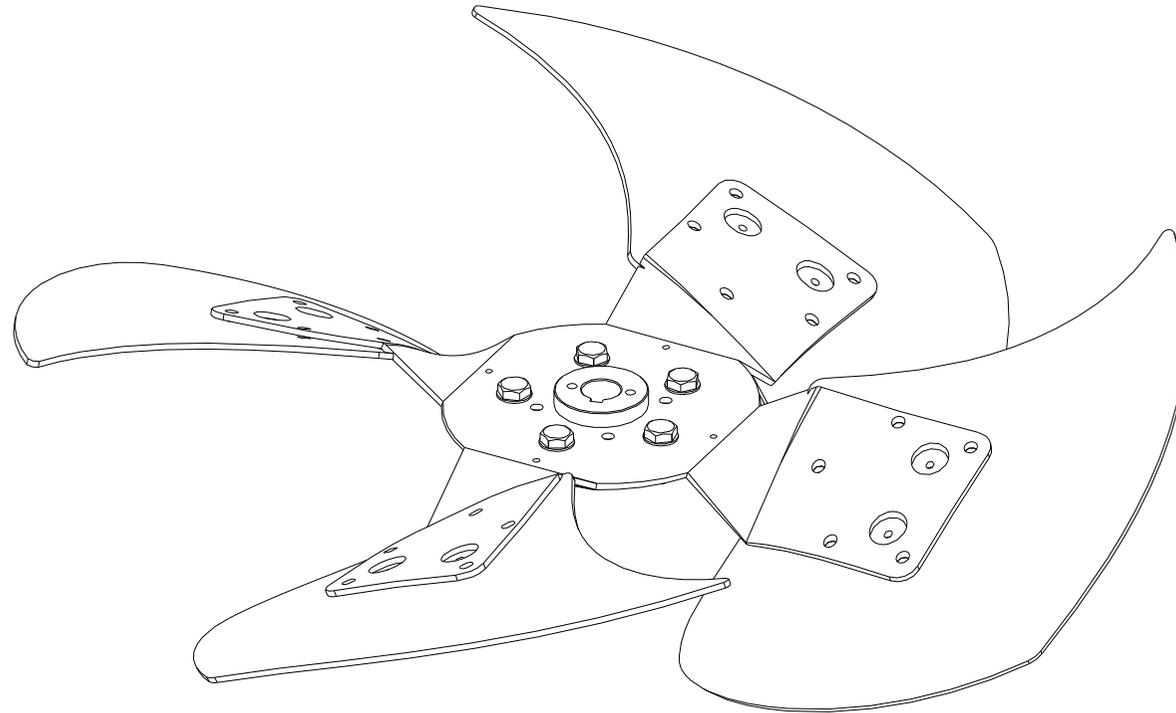
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**Figure 1-2-2:** Condenser Fan impeller



Name	Pos in the part list(Table 1-1)	Drawing number	Vehicle manufacturer part number	Comment
Condenser Fan impeller	2			

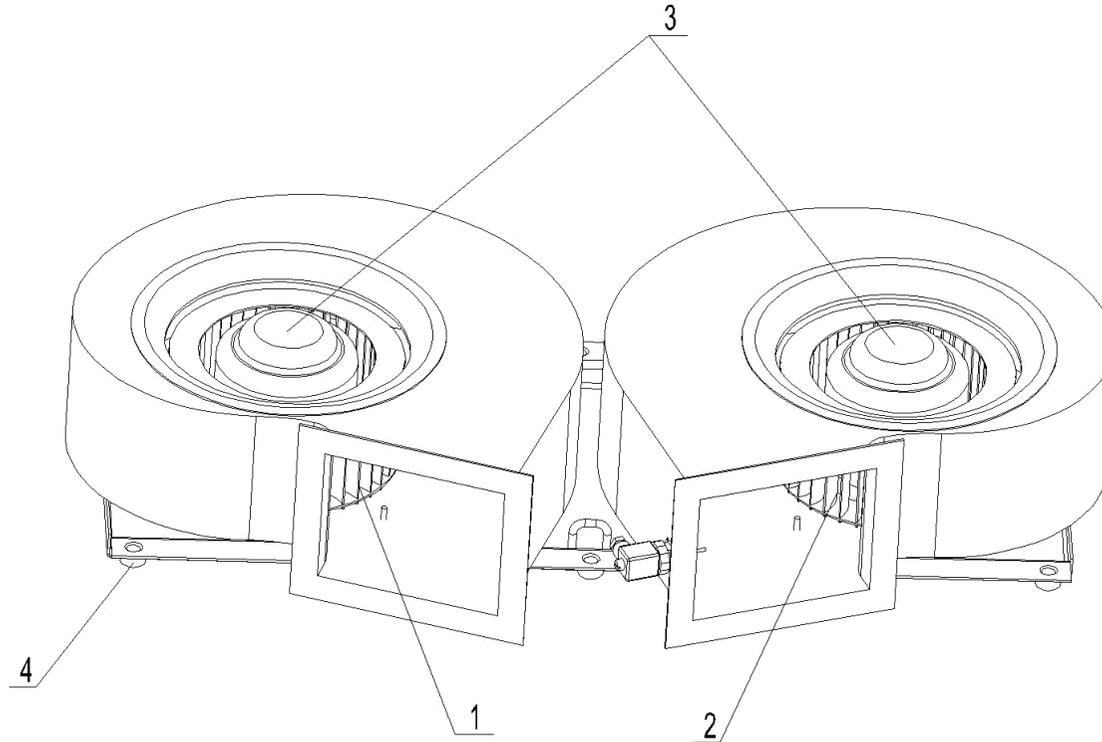
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Figure 1-3: Supply air fan



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Supply air Fan	3	ERAD 281-4A-L ERAD 281-4A-R		

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**Table 1-4: Supply air fan**

SPP: Spare part/EWP: Easily worn part/FAP: fastening part/LRU: Line replaceable unit/SRU: secondary replaceable unit/ MRU: main replaceable unit

1	2	3				4	5	6	7	8	9	10	11	12
OSC	Pos	Quantity/car				Unit	Designation Specification & type	Manufacturer	Manufacturer No	Vehicle manufacturer Part No	SMC No	Drawing No	Category SPP EWP FAP	TRU LRU SRU MRU
		DT1	M1	M2	DT2									
	1					1	supply air fan impeller left		12.0203.2012				SPP	SRU
	2					1	supply air fan impeller right		12.0203.2013				SPP	SRU
	3					1	supply air fan motor		12.0203.0028				SPP	SRU
	4					6	bumper for supply air fan		13.0502.0057				FAP	SRU

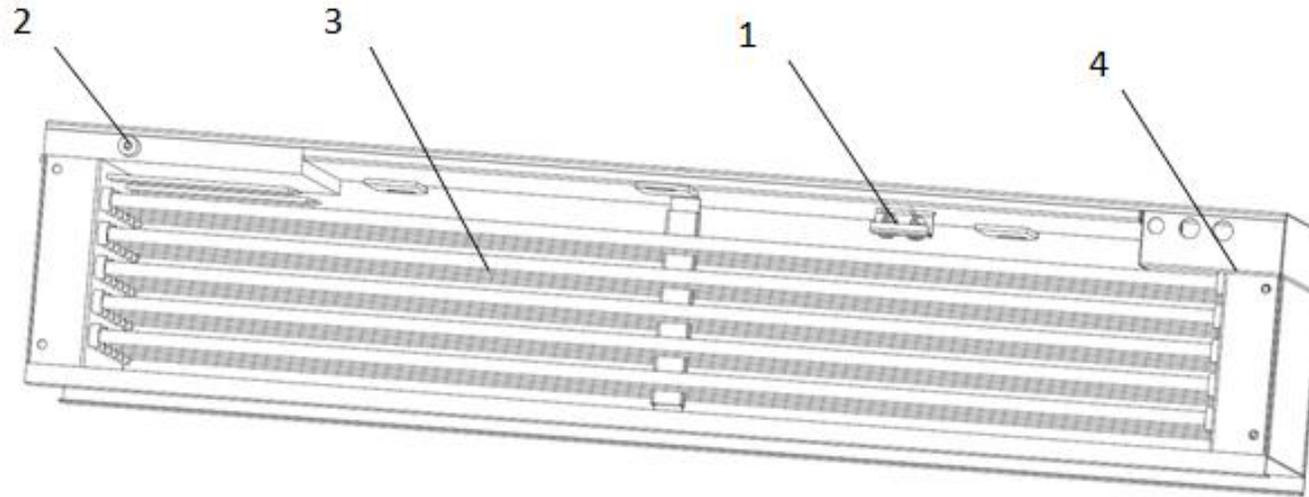
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**Figure 1-4:** Electrical heater



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Electrical heater	4	KS97A100.000-04A.Z3		

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**Table 1-5: Electrical heater**

SPP: Spare part/EWP: Easily worn part/FAP: fastening part/LRU: Line replaceable unit/SRU: secondary replaceable unit/ MRU: main replaceable unit

1	2	3				4	5	6	7	8	9	10	11	12
OSC	Pos	Quantity/car				Unit	Designation Specification & type	Manufacturer	Manufacturer No	Vehicle manufacturer Part No	SMC No	Drawing No	Category SPP EWP FAP	TRU LRU SRU MRU
		DT1	M1	M2	DT2									
	1					1	Thermostat		12.0601.0018		Emerson 36TMH21	SPP	SRU	
	2					1	Thermal breaker		12.0601.0019		Emerson WQB139B	SPP	SRU	
	3						Heateing rods		12.0401.0005					
	4					1	Heater frame							

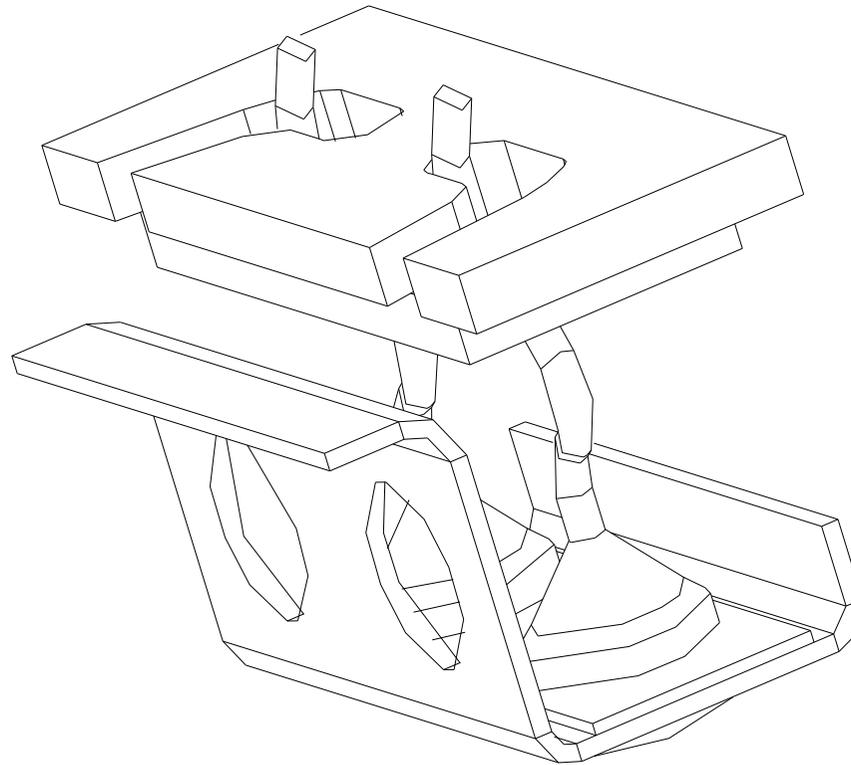
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**Figure 1-4-1: Thermostat**



Name	Pos in the part list(Table 1-2)	Drawing number	Vehicle manufacturer part number	Comment
Thermostat	1	Emerson 36TMH21		

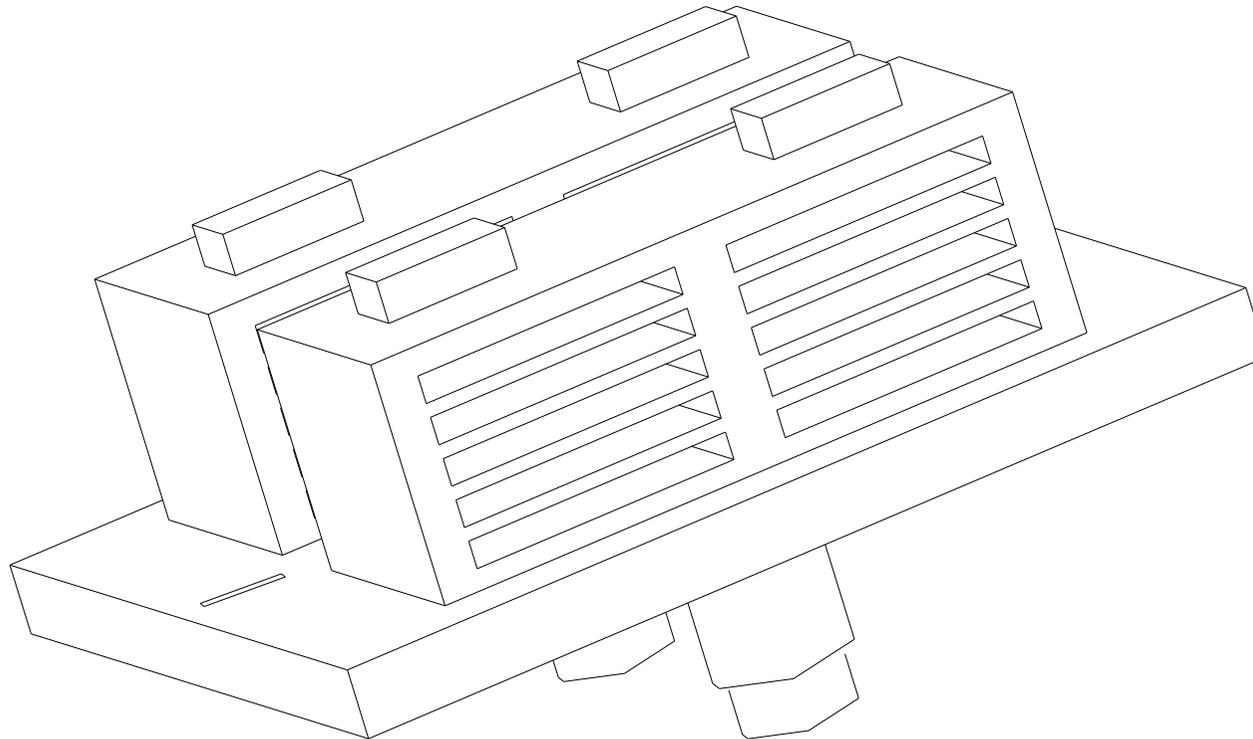
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**Figure 1-4-2:** Thermal breaker



Name	Pos in the part list(Table 1-2)	Drawing number	Vehicle manufacturer part number	Comment
Thermal breaker	2	Emerson WQB139B		

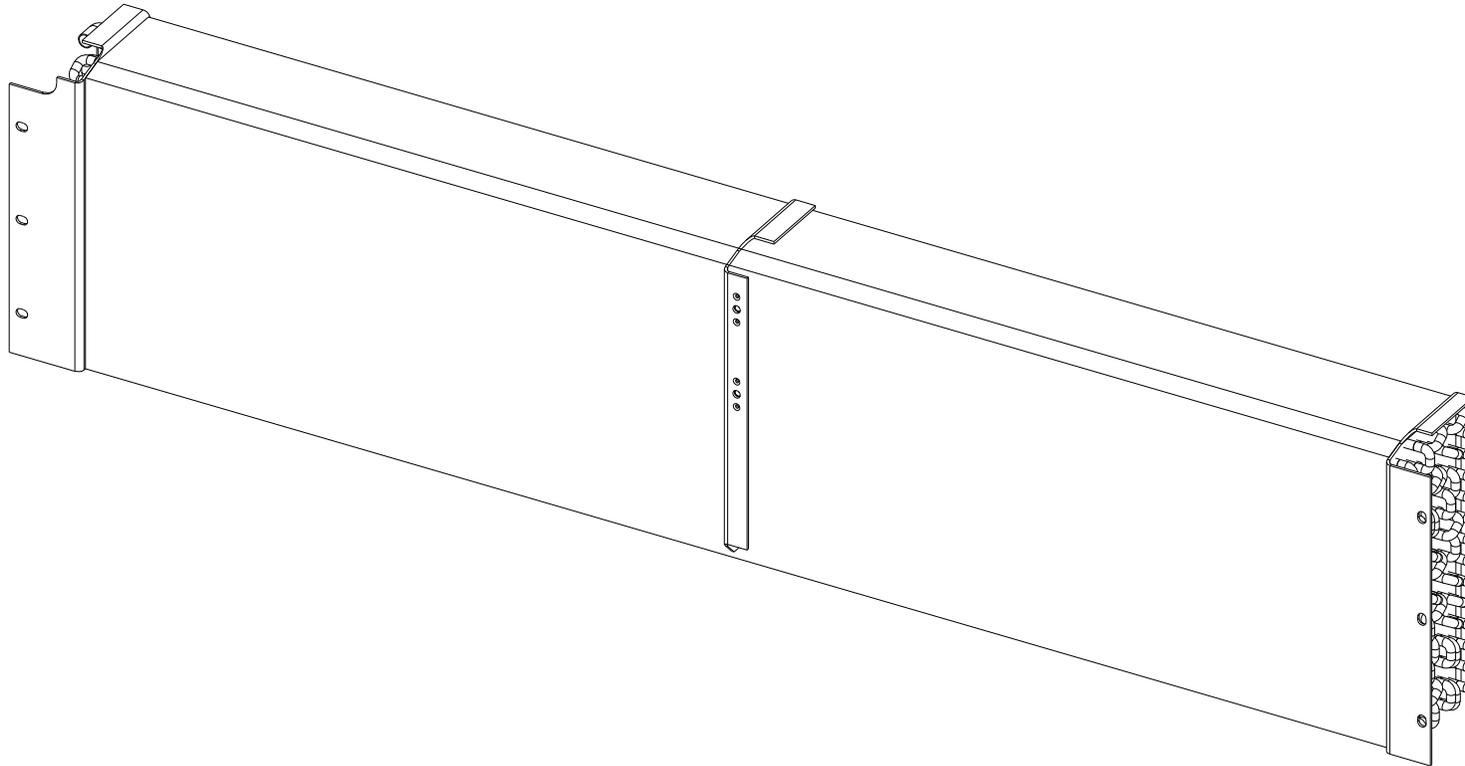
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**Figure 1-5:** Condenser on the left side



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Condenser on the left side	5	KS97A100.210-00A.Z2		

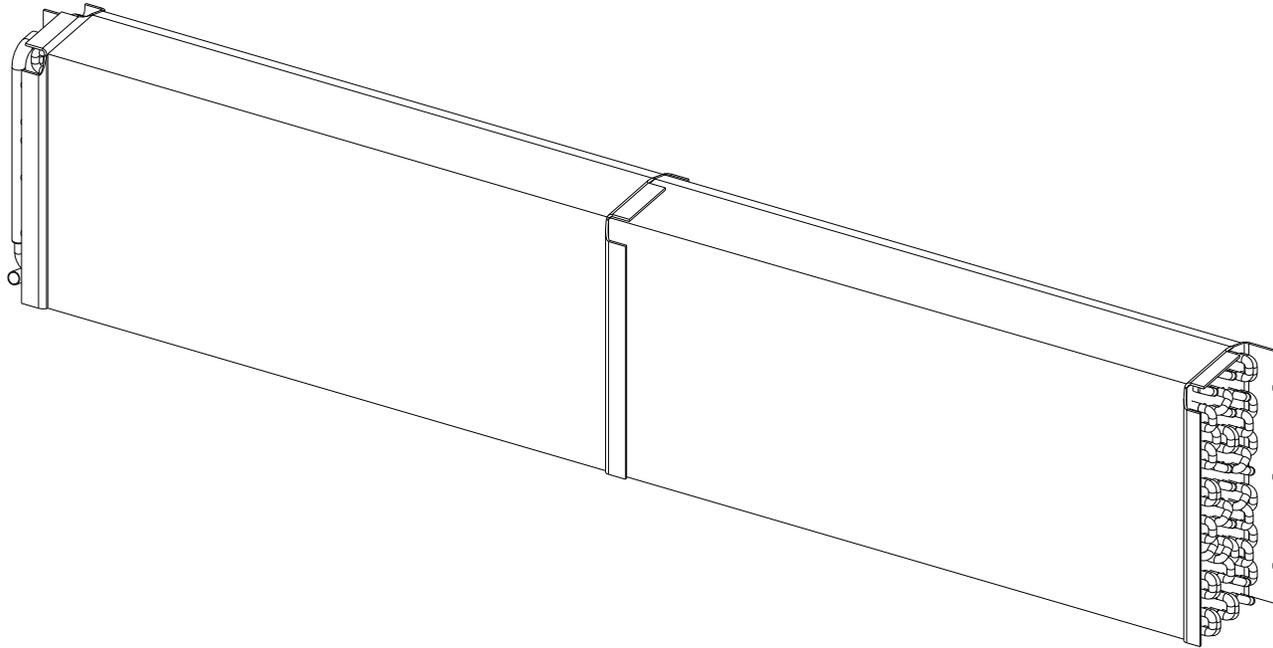
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**Figure 1-6:** Condenser on the right side



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Condenser on the right side	6	KS97A100.220-00A.OZ		

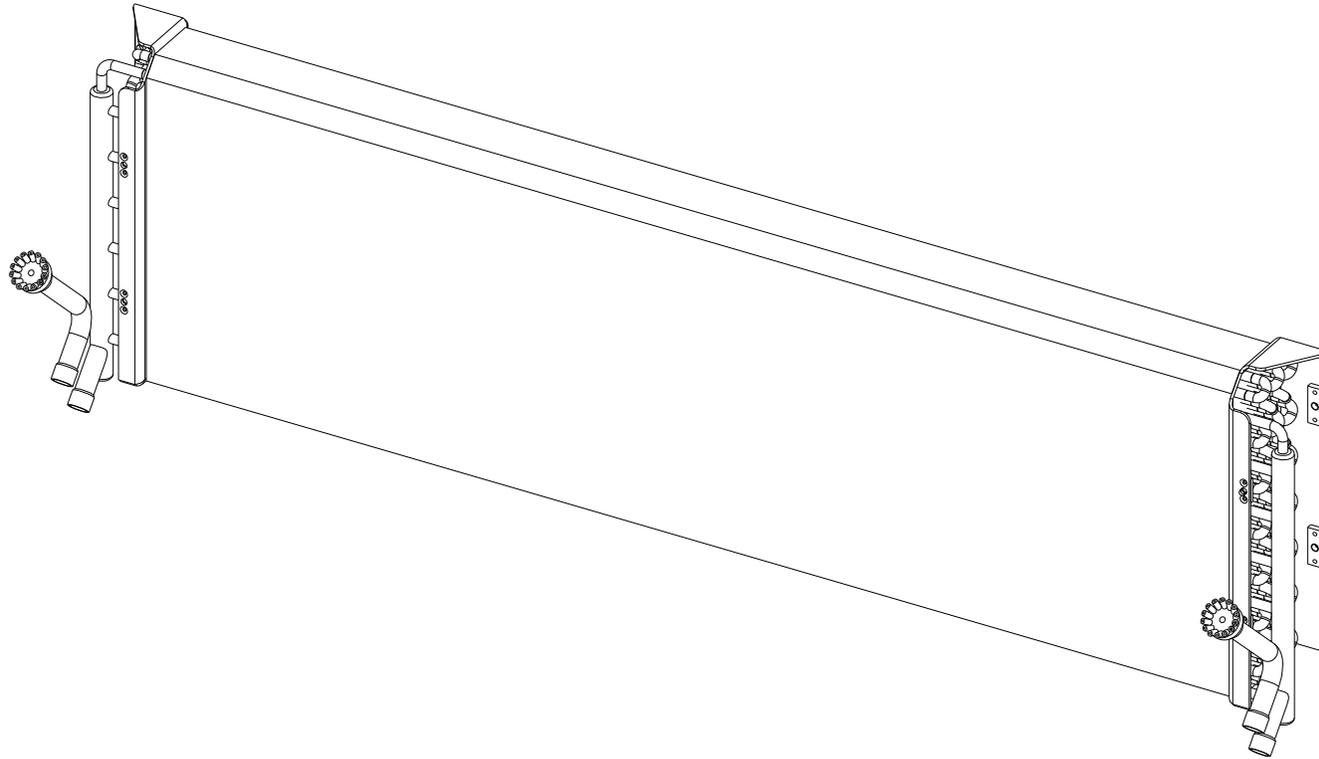
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Figure 1-7: Evaporator



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Evaporator	7	KS97A100.230-00A.Z3		

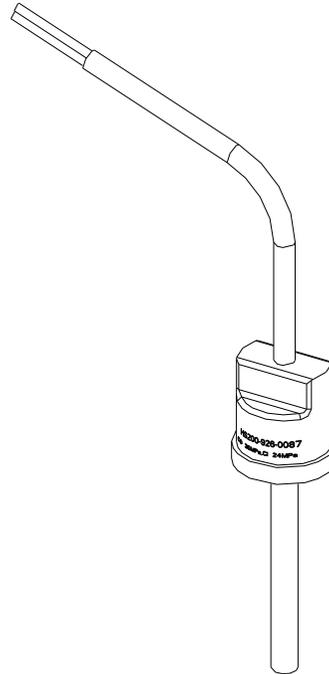
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**Figure 1-8:** High pressure switch



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
High pressure switch	8	HS200-835-0019		

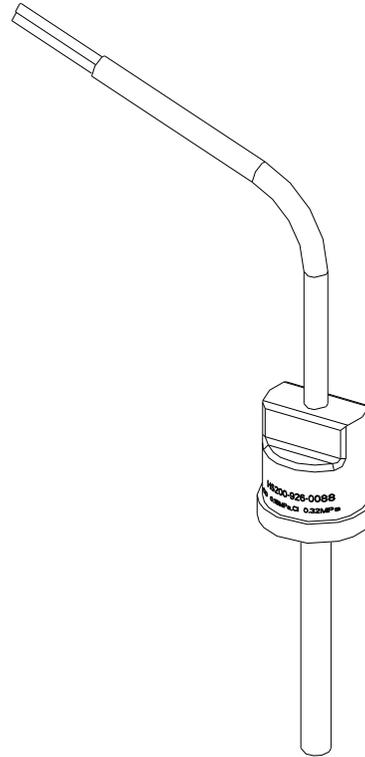
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**Figure 1-9:** Low pressure switch



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Low pressure sensor	9	HS200-835-0020		

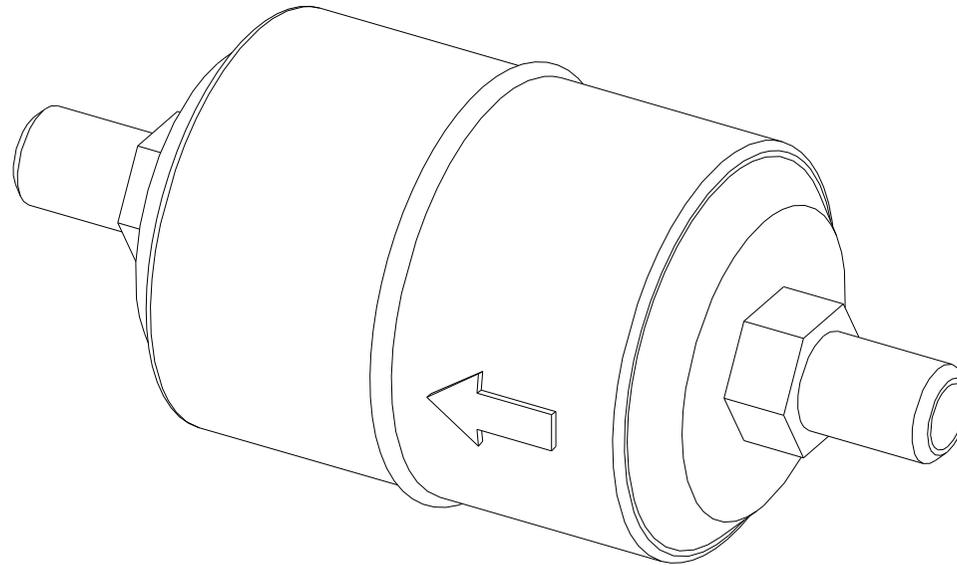
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**Figure 1-10:** Filter dryer



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Filter dryer	10	023Z5060		

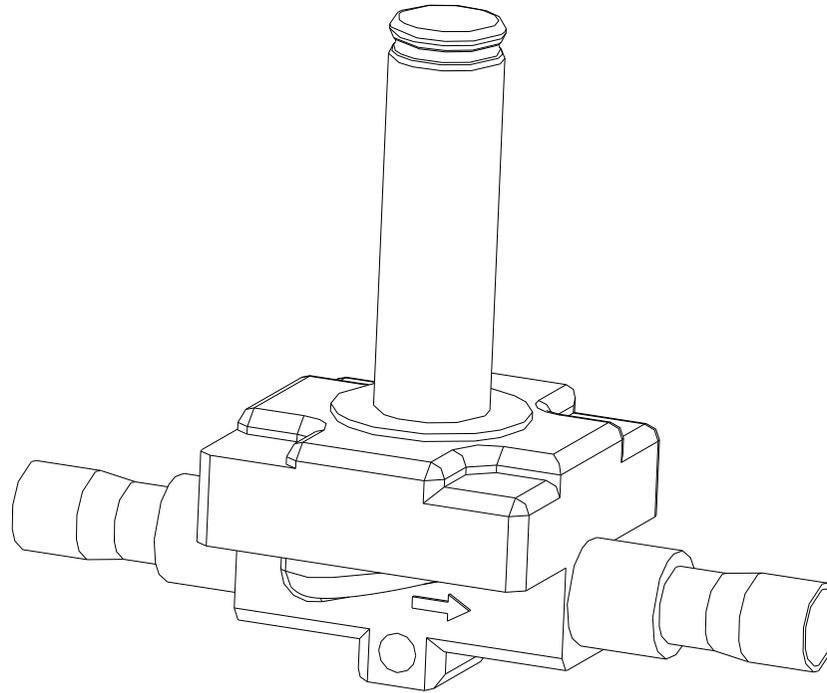
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**Figure 1-11:** Solenoid valve in liquid line



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Solenoid valve in liquid line	11	032F1213_TRD		

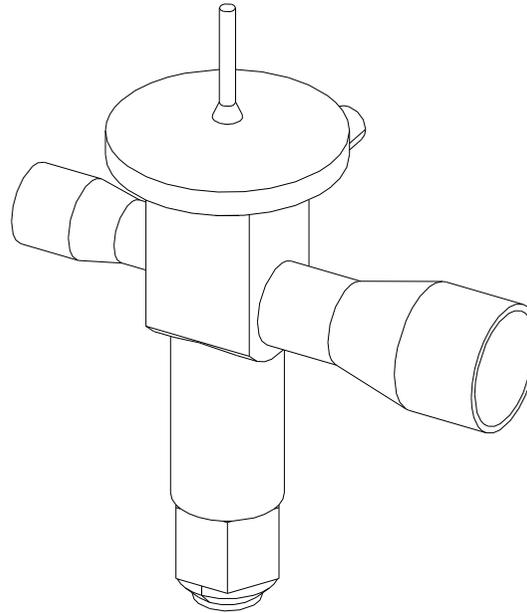
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**Figure 1-12:** Expansion valve



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Expansion valve	12	067N4043_TRD		

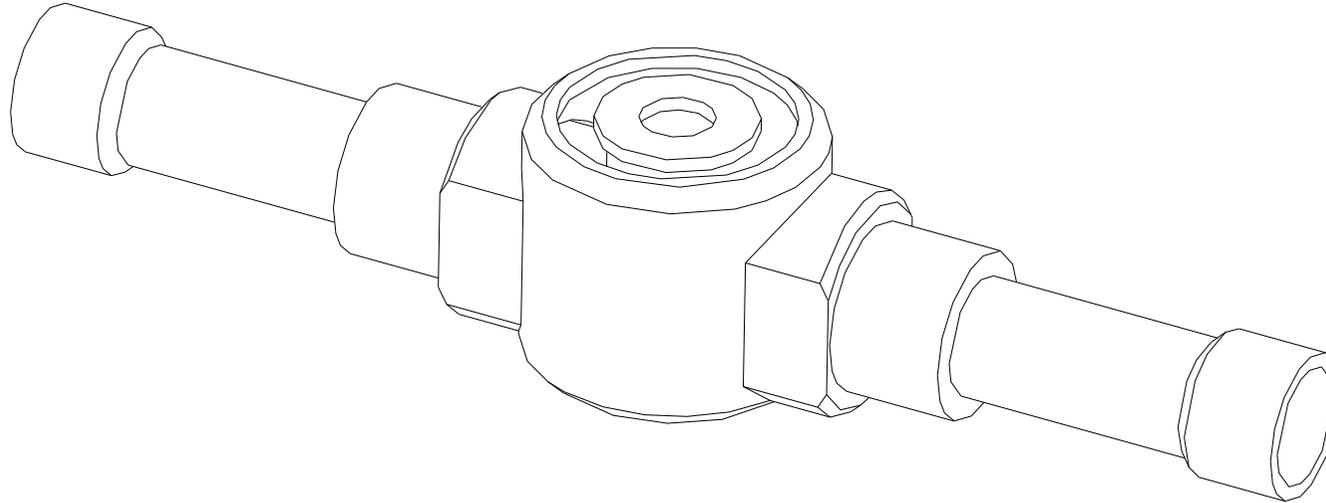
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**Figure 1-13:** Sight glass



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Sight glass	13	014-0183		

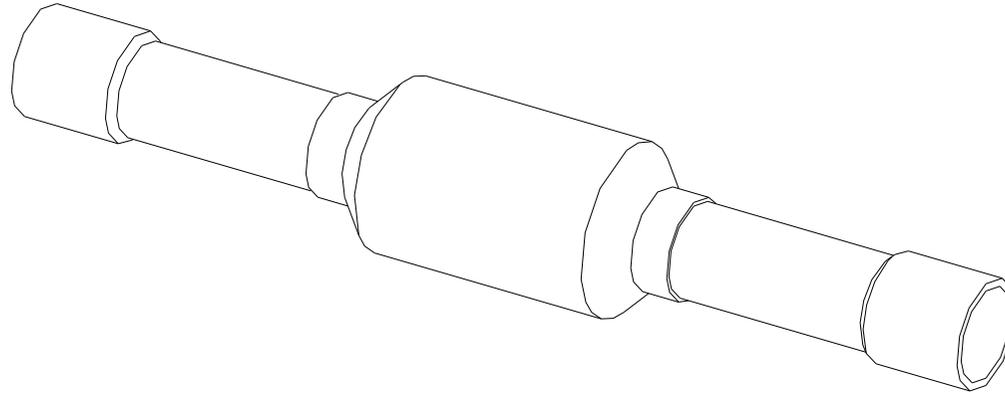
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**Figure 1-14:** Check valve



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Check valve	14	020-1038		

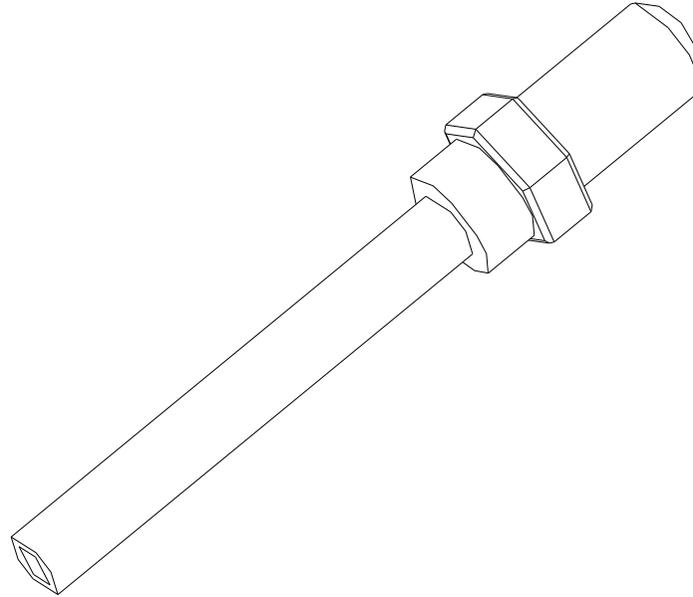
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**Figure 1-15:** Schrader valve JY6-Diam.6



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Schrader valve JY6-Diam.6	15	-		

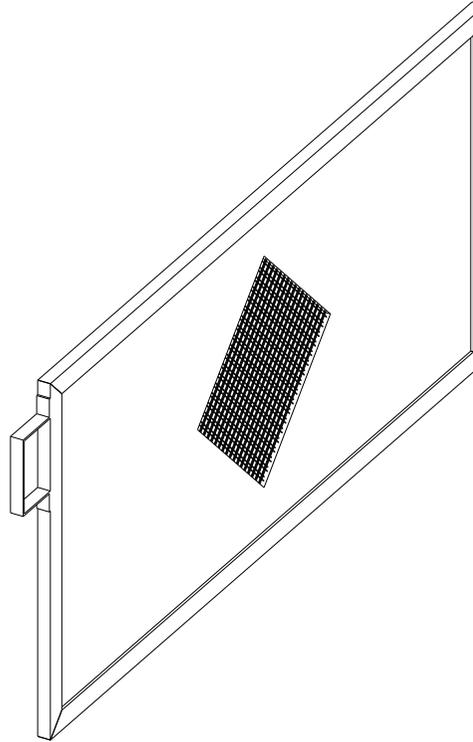
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**Figure 1-16:** Fresh air filter



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Fresh air filter	16	KS97A100.000-09A.Z3		

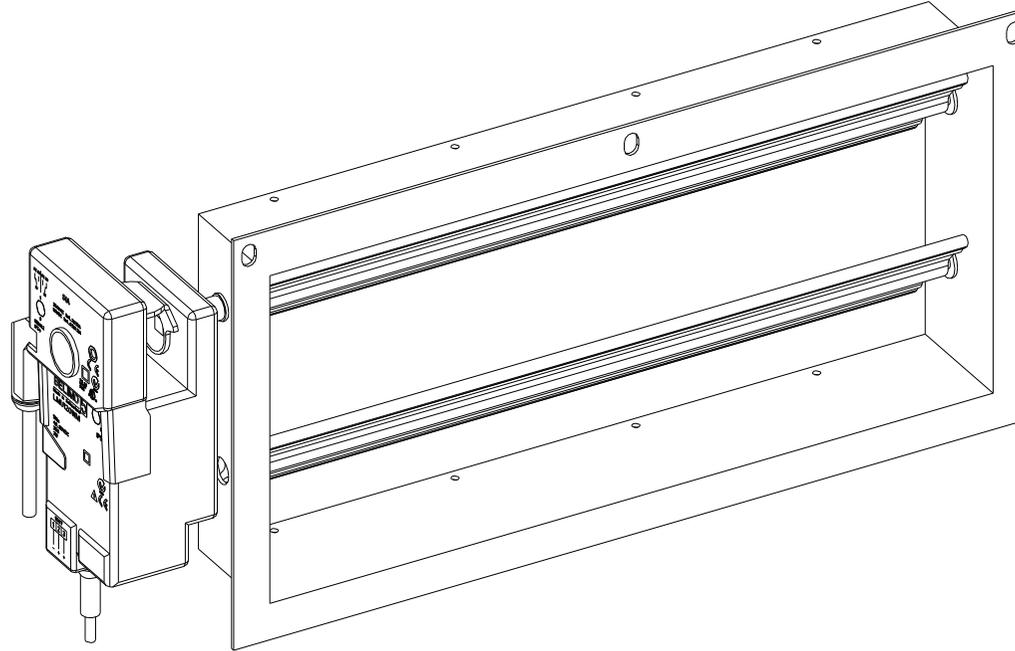
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**Figure 1-17:** Fresh air damper1



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Damper for air control	17	KS97A100.000-06A.Z3		

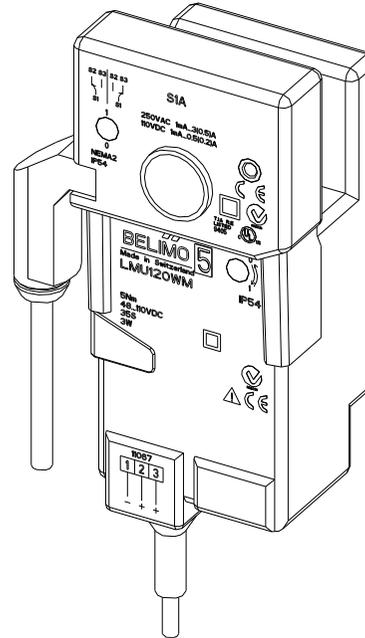
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**Figure 1-18:** Damper actuator



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Damper actuator (1m cable)	18	TRD		

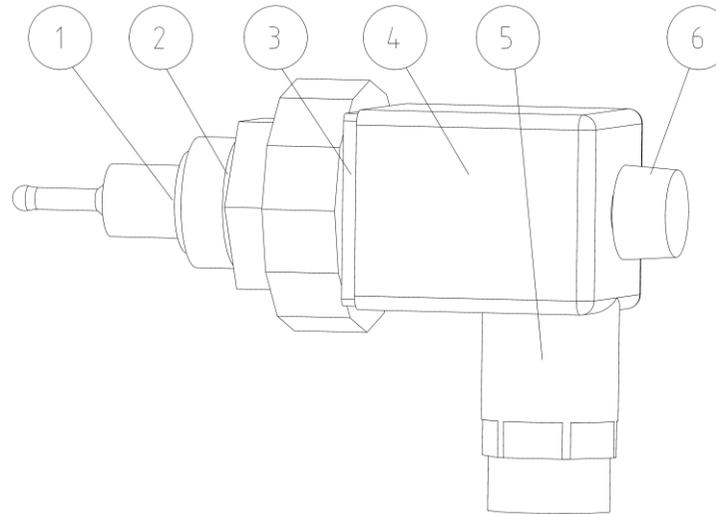
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**Figure 1-19:** Temperature sensor



1 Temperature detector	2 O-ring M20*1.5
3 Flat gasket	4 Cable socket
5 Cable gland M16*1.5	6 Socket fixed screw

Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Temperature sensor	19	KT38A000.000-21A.Z4		

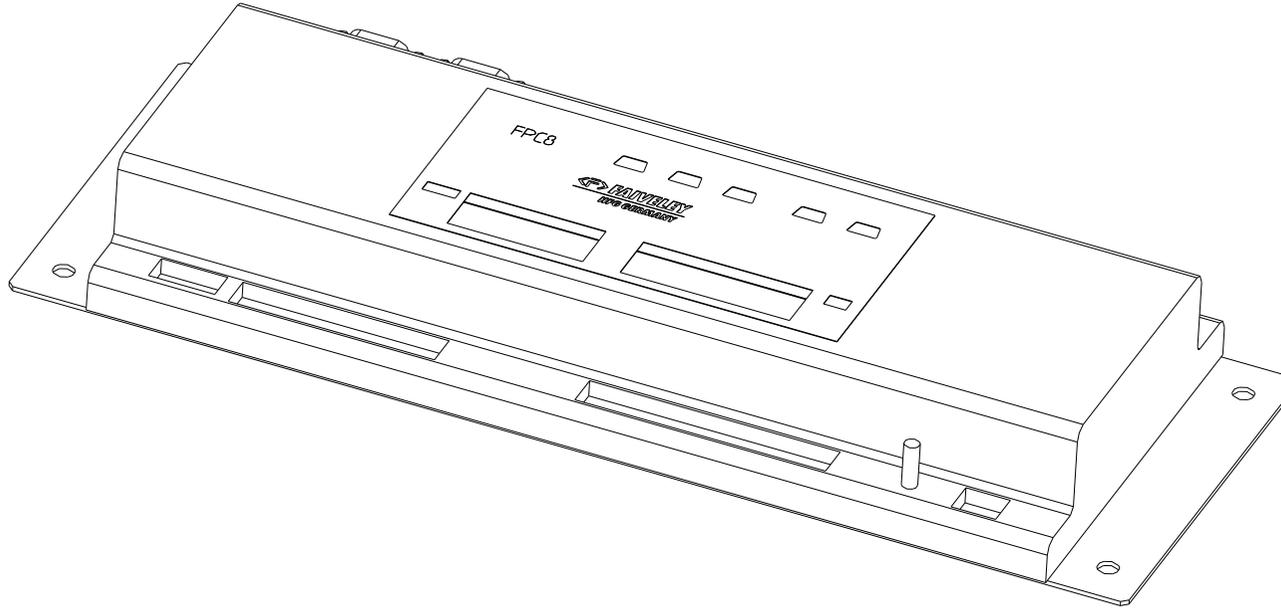
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**Figure 1-20:** Programmed logical controller



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Programmed logical controller	20	FPC08 DC110V		

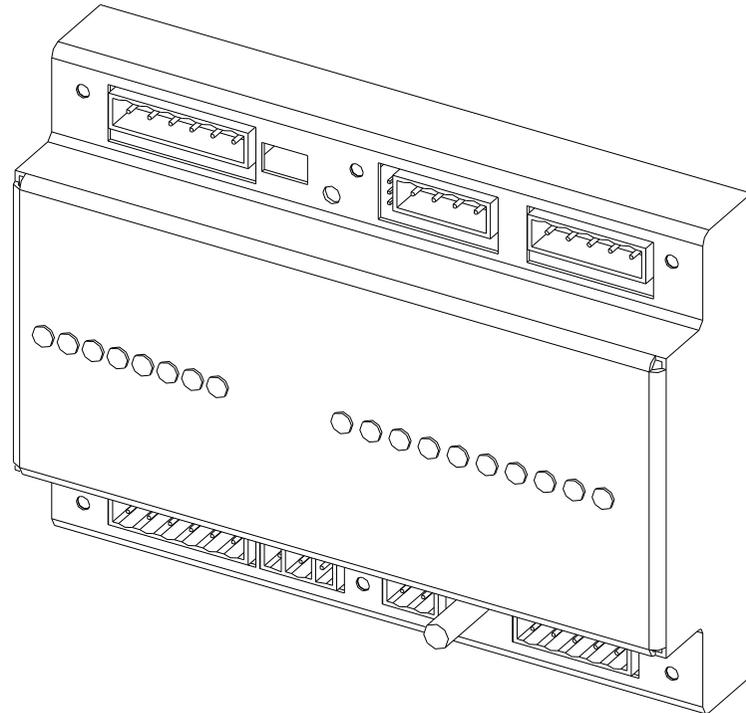
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**Figure 1-21:** Module for controller



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Module for controller	21	DI08		

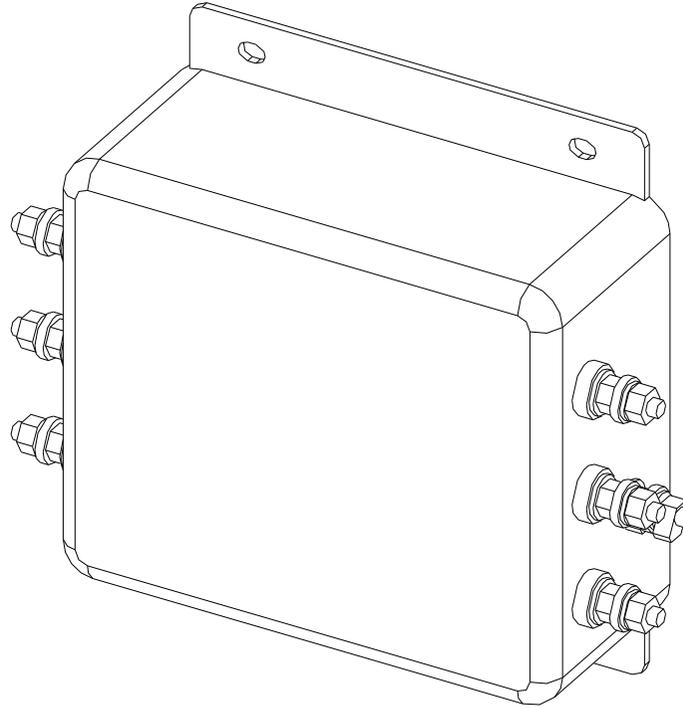
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**Figure 1-22:** EMC filter



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
EMC filter	22	NF1		

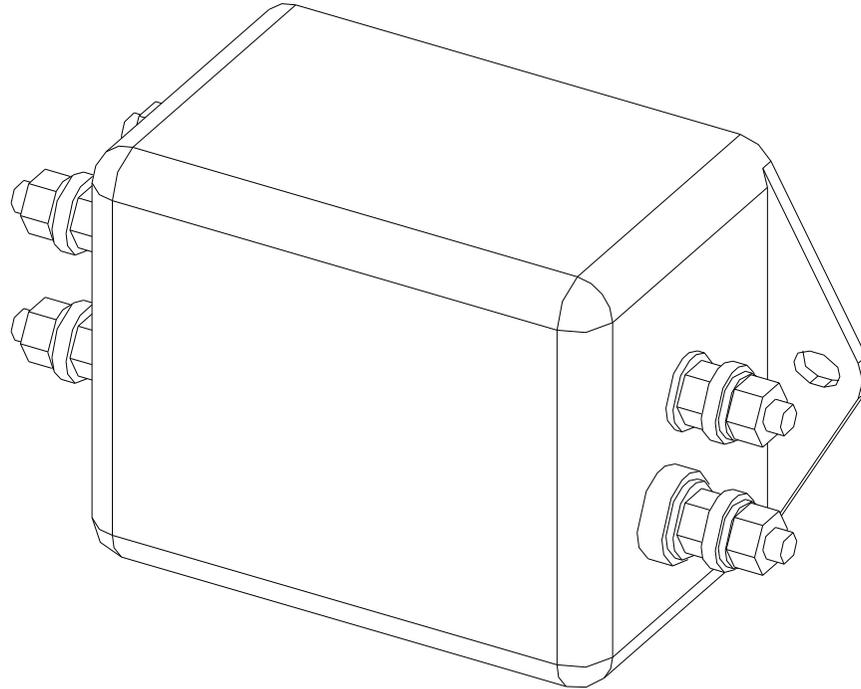
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**Figure 1-23:** EMC filter



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
EMC filter	23	NF2		

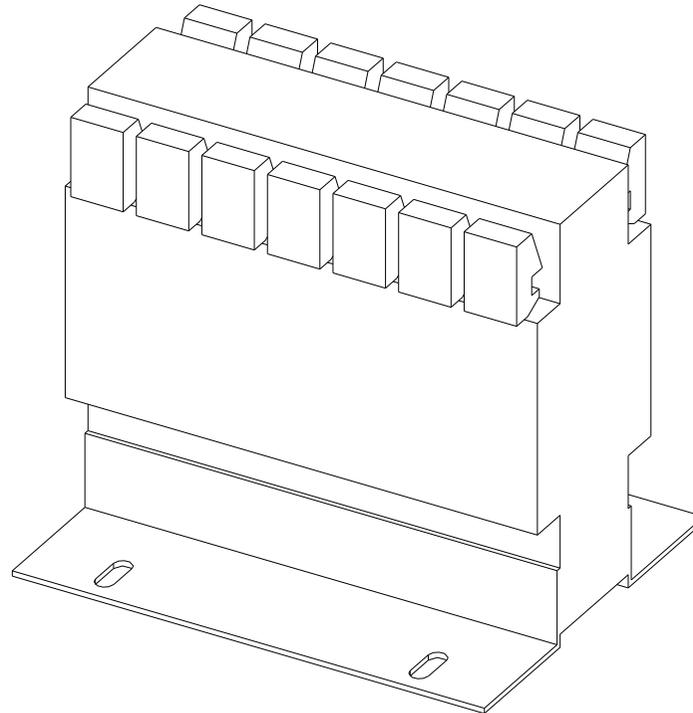
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**Figure 1-24:** Transformer



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Transformer	24	SOG-2-0.4/0.14-0.35		

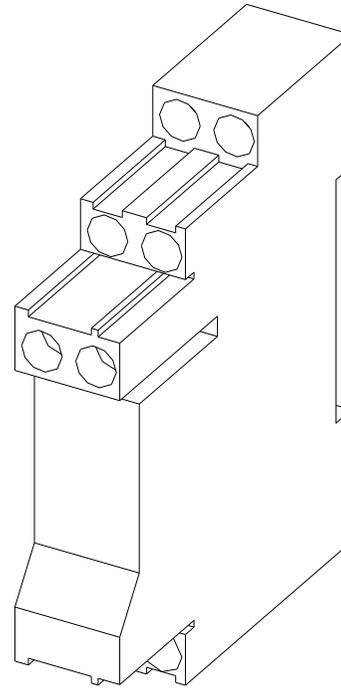
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**Figure 1-25:** Intermediate relay



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Intermediate relay	25-31	CR-P110DC2-PSS/F		

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**Figure 1-26:** diode-Intermediate relay



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Intermediate relay	25-31	CR-P/M22		

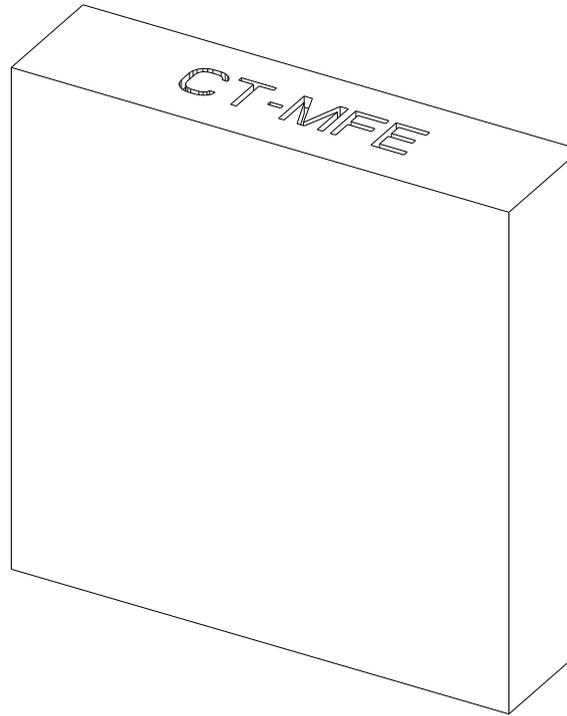
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**Figure 1-27:** Time relay



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Time relay	32-33	CT-MFE		

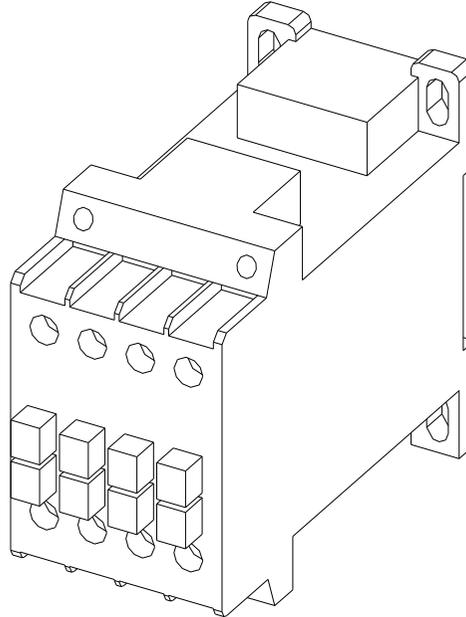
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**Figure 1-28:** Contactor(DC110V)



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Contactora(DC110V)	34-35	TAL26-30-10 DC110V		

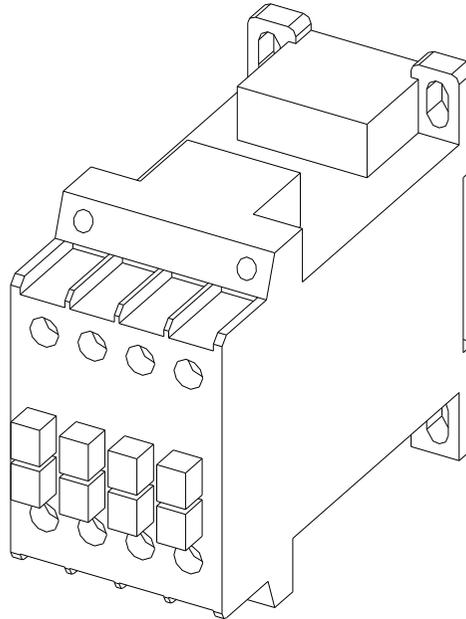
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**Figure 1-29:** Contactor(DC110V)



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Contactora(DC110V)	36-40	TAL9-30-10 DC110V		

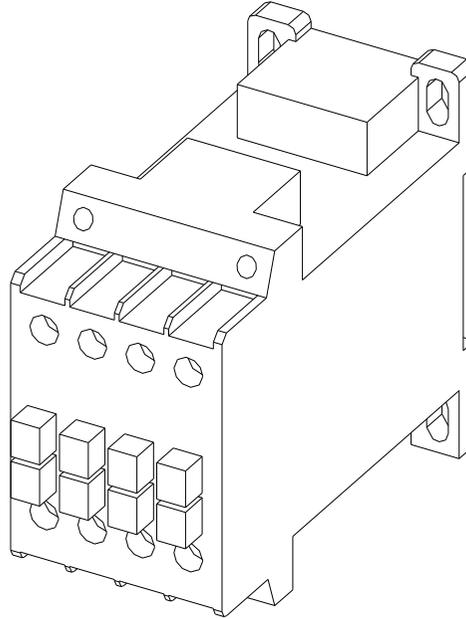
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**Figure 1-30:** Contactor(DC110V)



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Contactor(DC110V)	41-42	AL16-30-10 DC110V		

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**Figure 1-31:**diode -Contactor(DC110V)

Diode of Contactor



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Contactor(DC110V)	34-42			

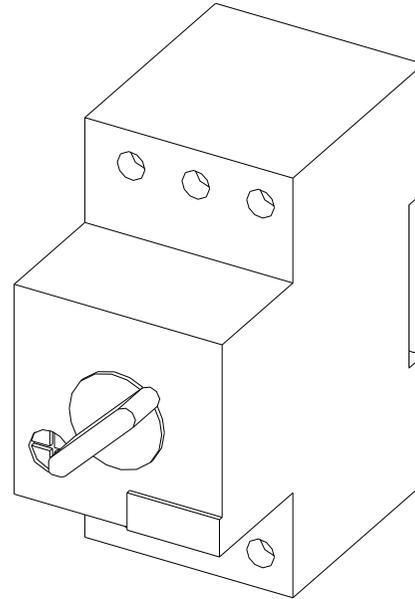
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**Figure 1-32:** Manual motor starter



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Manual motor starter	43-44	MS116-2.5(1.6-2.5A)		

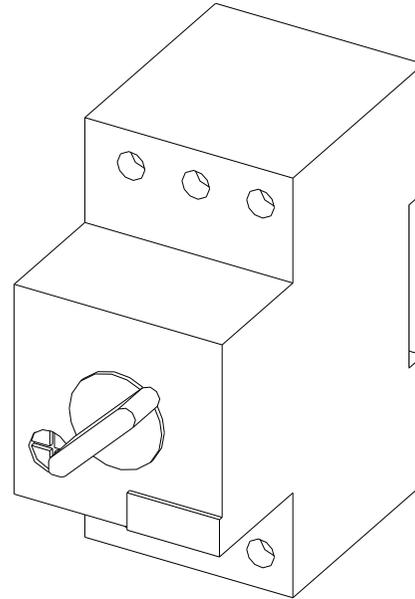
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**Figure 1-33:** Manual motor starter



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Manual motor starter	45	MS116-4(2.5-4.0A)		

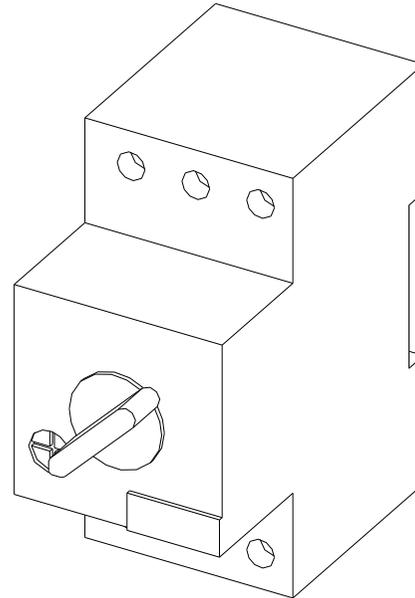
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**Figure 1-34:** Manual motor starter



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Manual motor starter	46-47	MS116-16.0(10.0-16.0A)		

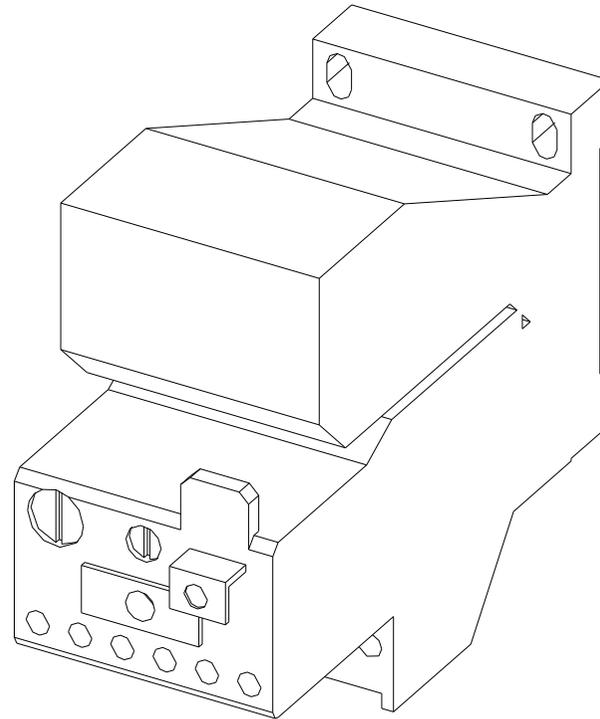
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**Figure 1-35:** Thermostat relay



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Thermostat relay	48	TA 25 DU 2.4(1.7-2.4A)		

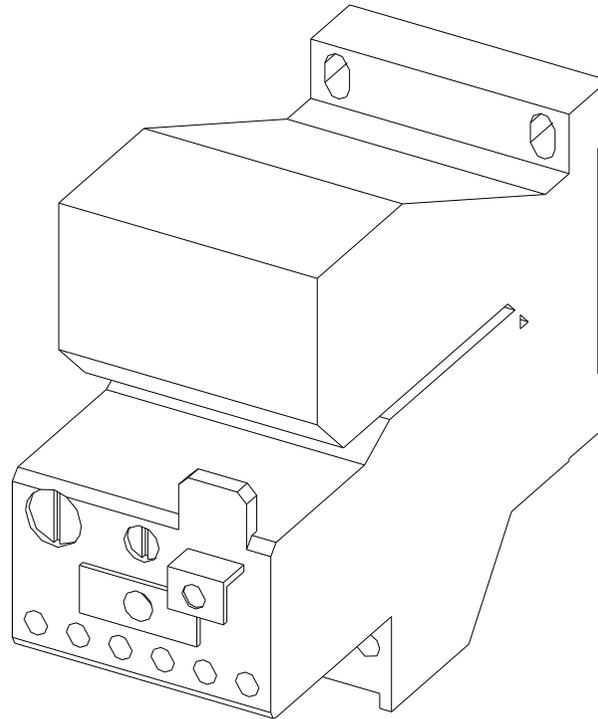
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**Figure 1-36:** Thermostat relay



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Thermostat relay	49	TA 25 DU 4.0(2.8-4.0A)		

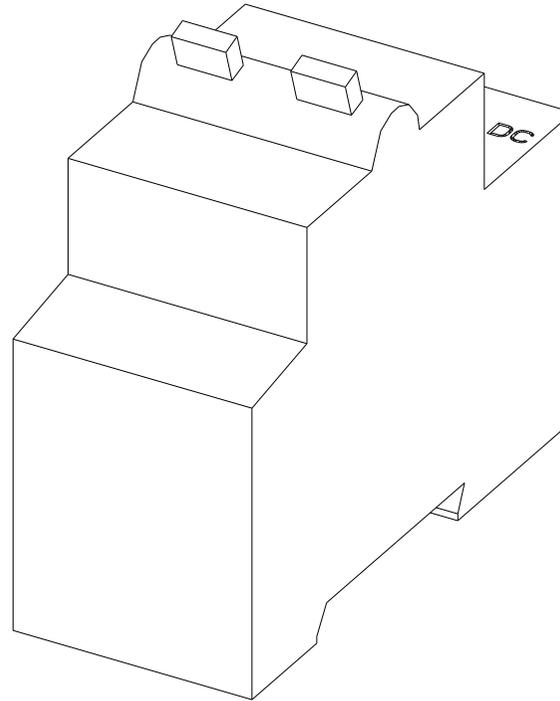
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**Figure 1-37:** Circuit breaker



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Circuit breaker	50-51	S253S-C63		

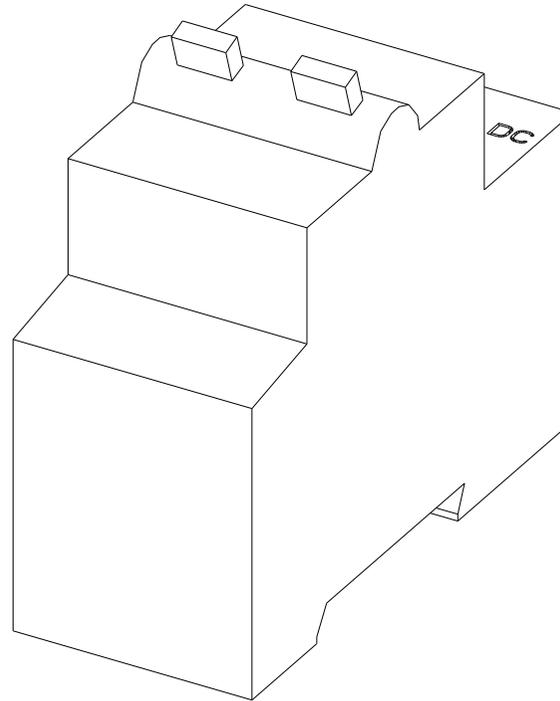
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**Figure 1-38:** Circuit breaker



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Circuit breaker	52	S252S-C6		

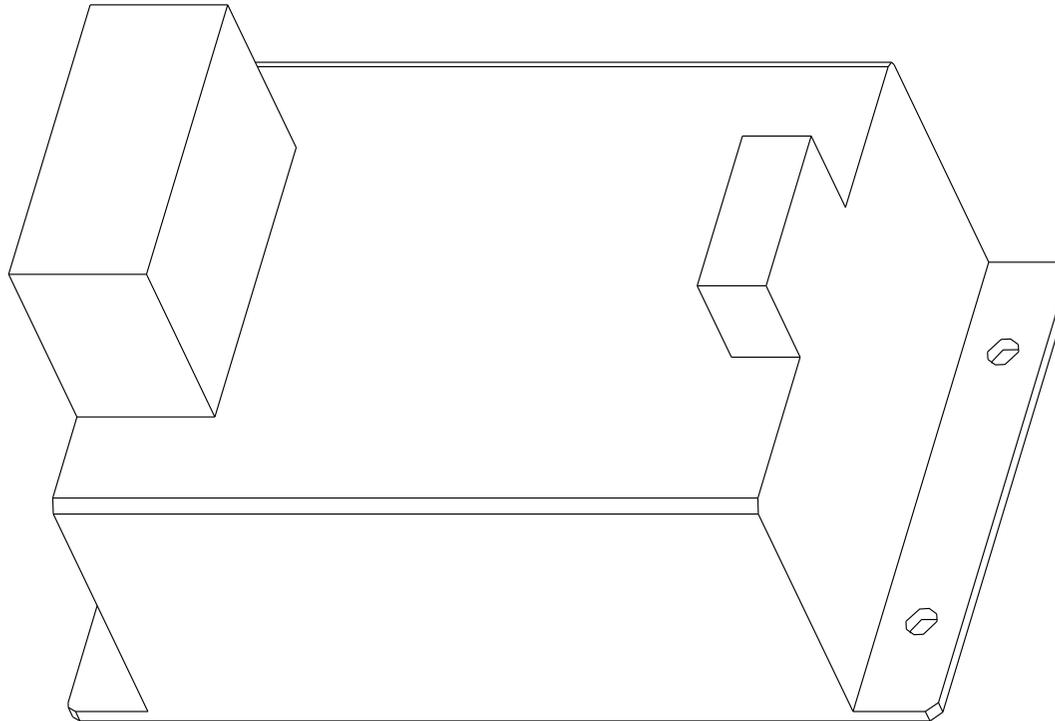
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**Figure 1-39** H/L frequency Detector



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
H/L frequency Detector	53	BTDT-01		

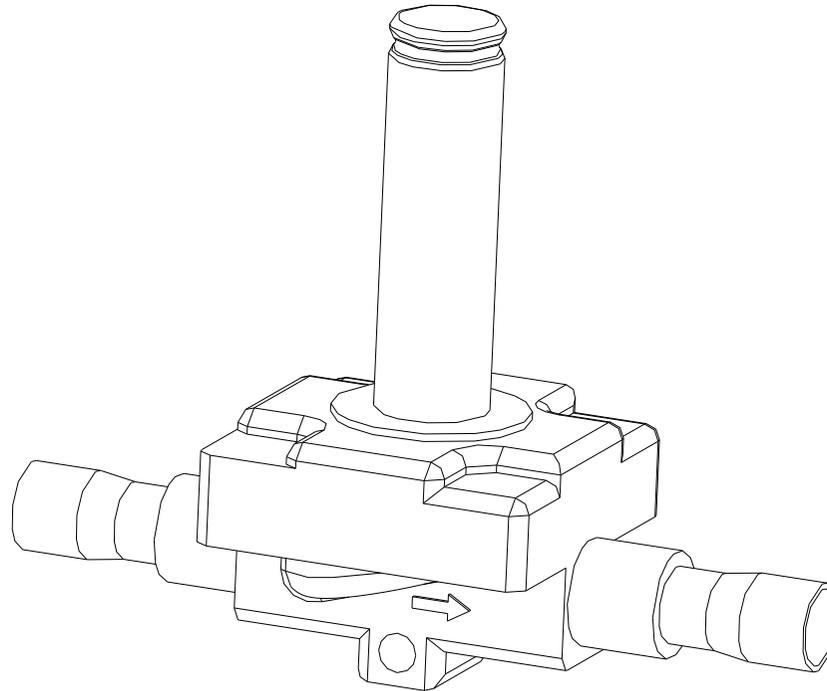
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**Figure 1-40:** solenoid valve of hot gas bypass circuit



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
solenoid valve of hot gas bypass circuit	54			

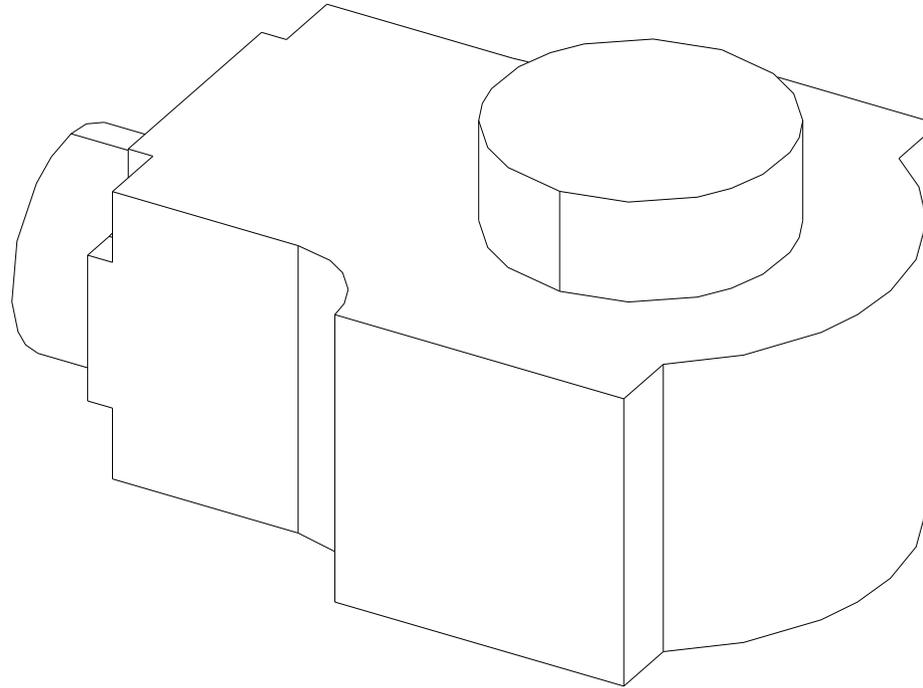
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**Figure 1-41:** Coil for solenoid valve



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Coil for solenoid valve	55	018F6860_TRD		

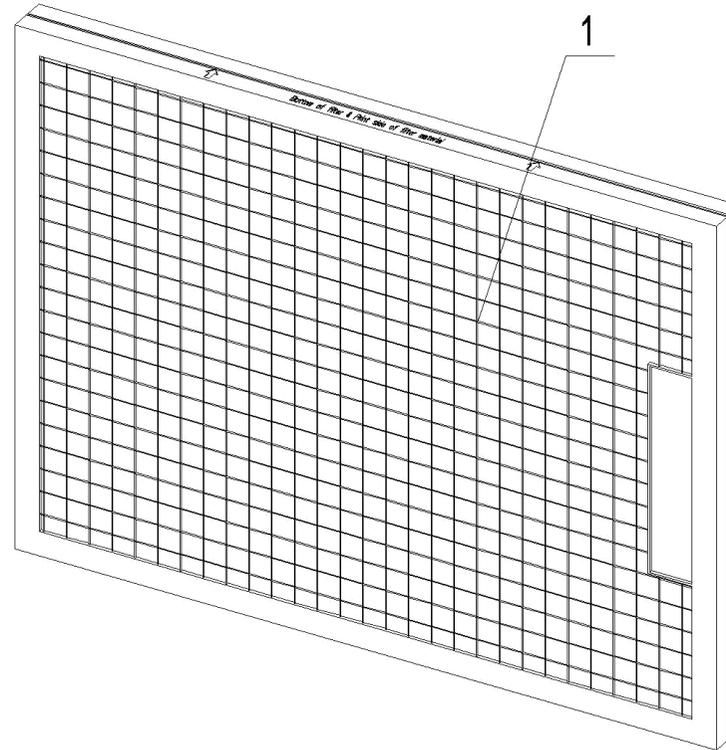
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**Figure 1-42:** mixed air filter



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
mixed air filter	56			

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**Table 1-6: mixed air filter**

SPP: Spare part/EWP: Easily worn part/FAP: fastening part/LRU: Line replaceable unit/SRU: secondary replaceable unit/MRU: main replaceable unit

1	2	3				4	5	6	7	8	9	10	11	12
OSC	Pos	Quantity/car				Unit	Designation Specification & type	Manufacturer	Manufacturer No	Vehicle manufacturer Part No	SMC No	Drawing No	Category SPP EWP FAP	TRU LRU SRU MRU
		DT1	M1	M2	DT2									
	1					1	filter material		12.1201.0050			SPP	SRU	

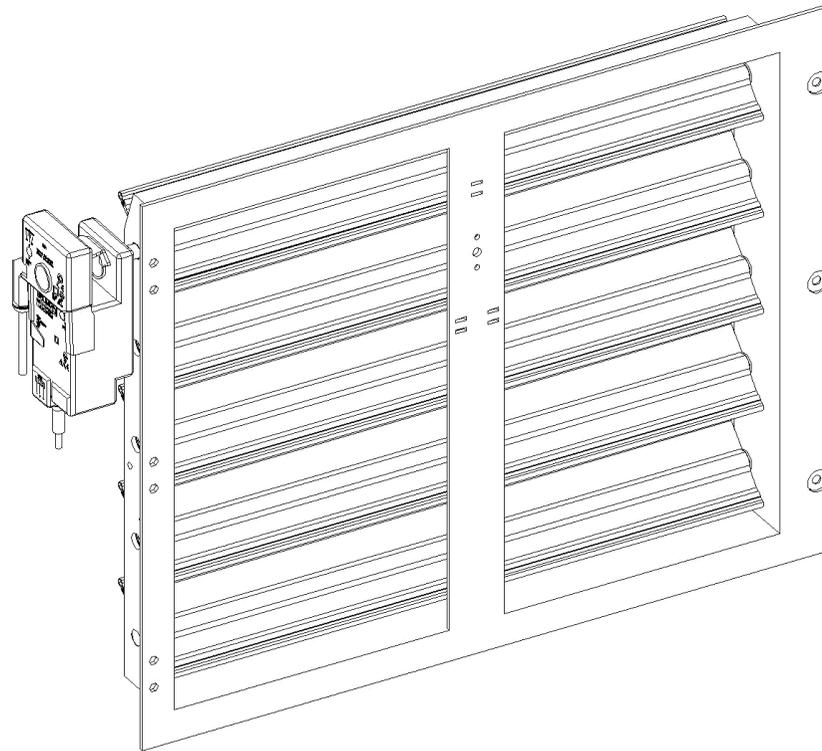
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**Figure 1-43:** return air damper



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
return air damper	57			

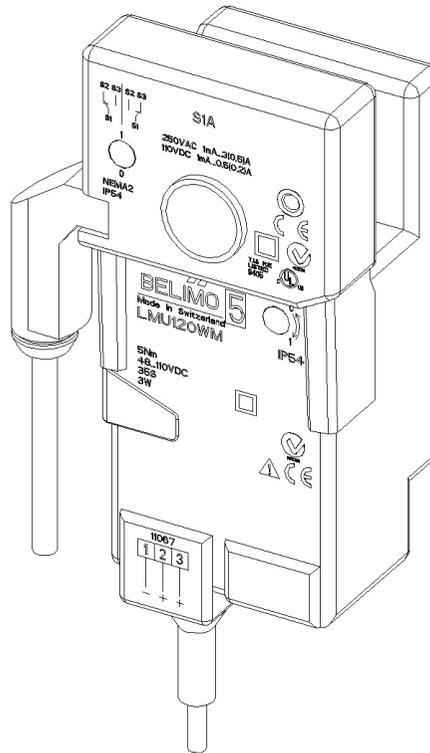
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**Figure 1-44:** actuator for fresh air damper



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
actuator for fresh air damper	58			

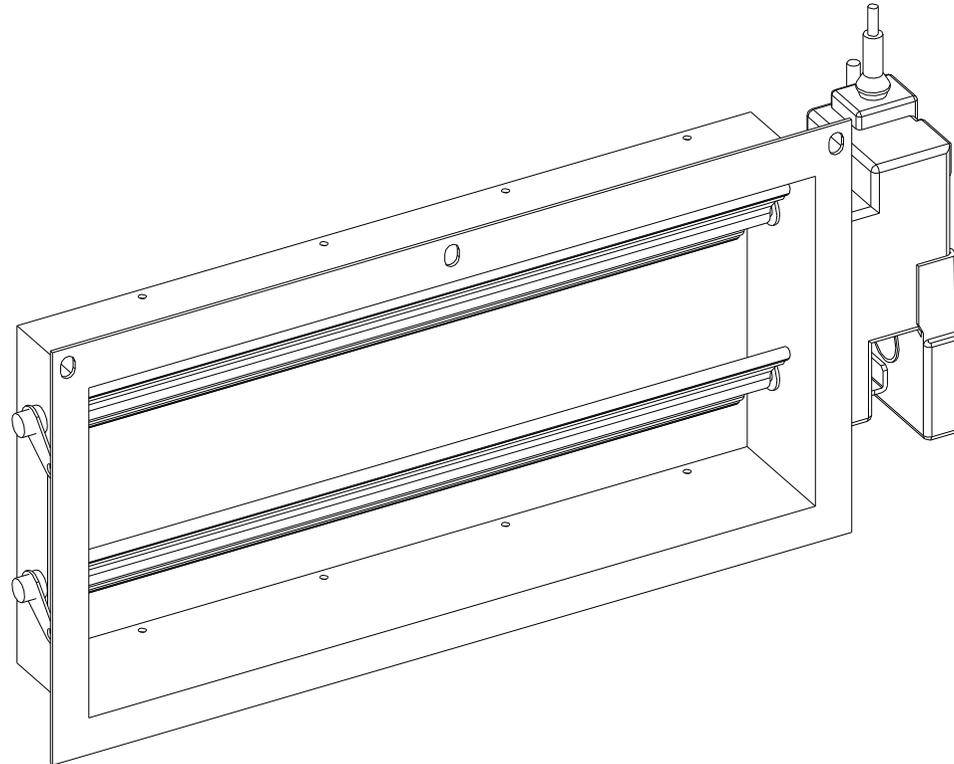
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**Figure 1-45:** Fresh air damper 2



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Fresh air damper 2	59	KS97A100.000-07A.Z3		

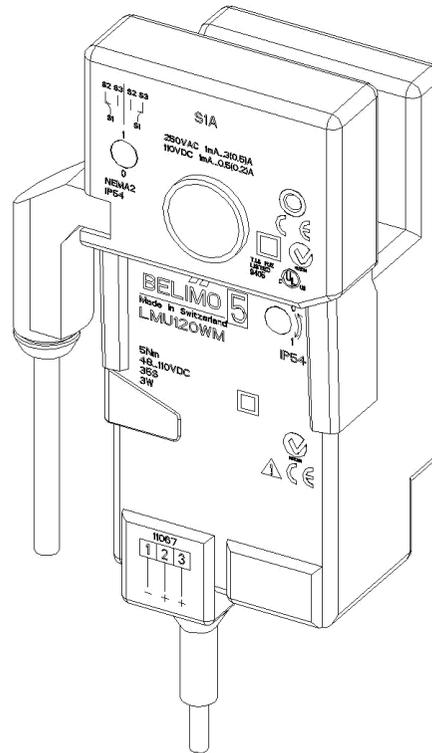
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**Figure 1-46:** actuator for fresh air damper 2



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
actuator for fresh air damper	60			

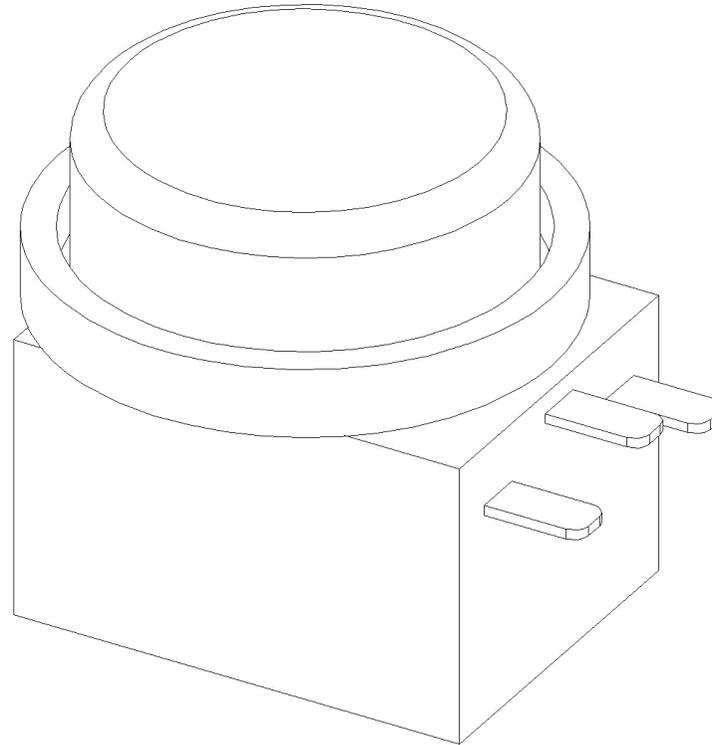
# AMSTERDAM (Alstom)

## Rolling stock

HVAC System

7 Parts Catalogue

**Figure 1-47:** thermostat

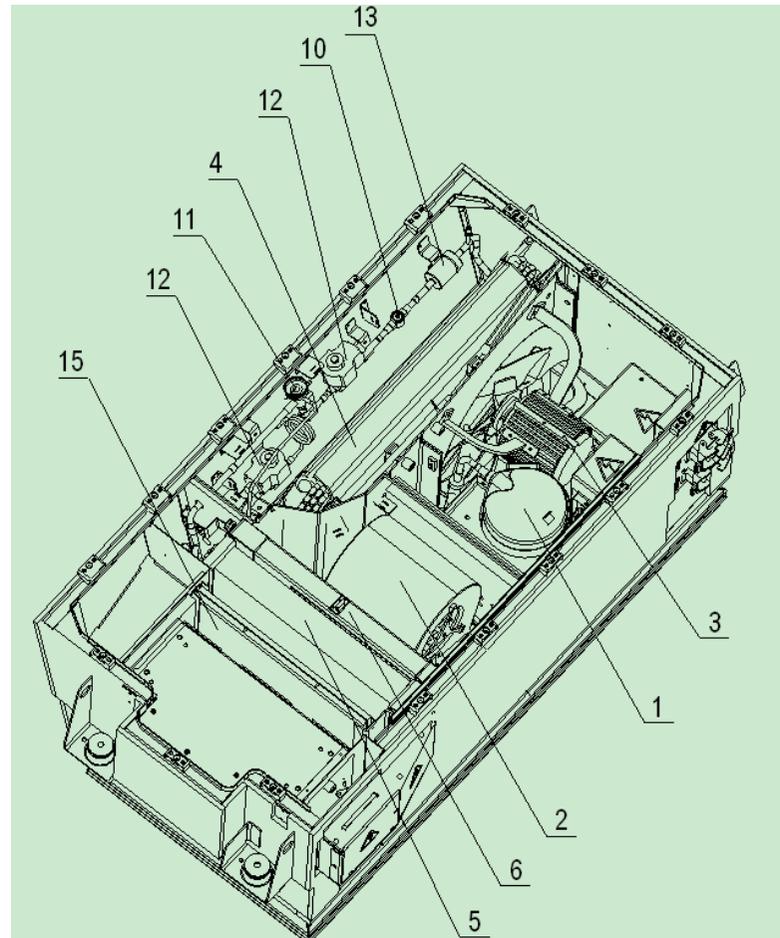


Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
thermostat	61			

# AMSTERDAM (Alstom)

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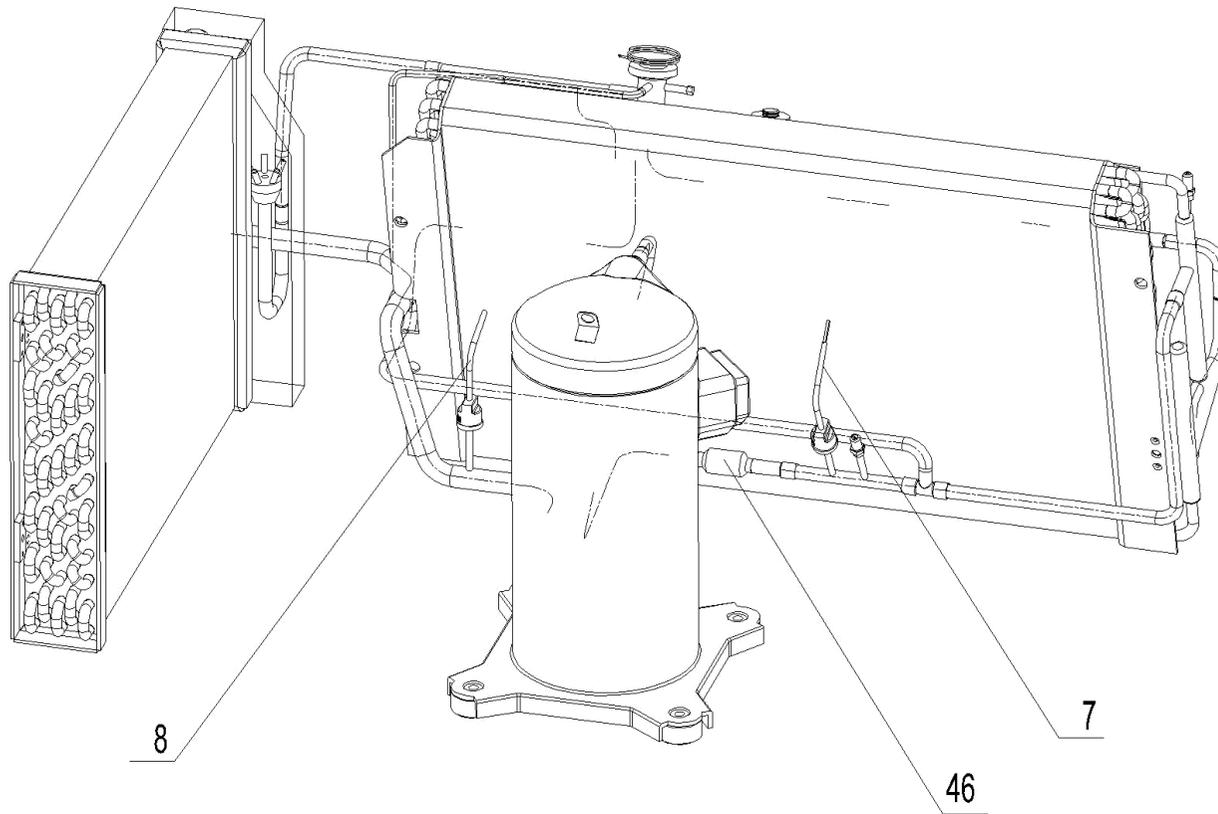
Figure 2(1 of 8):HVAC Unit Cab



# AMSTERDAM (Alstom)

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Figure 2(2 of 8):HVAC Unit Cab



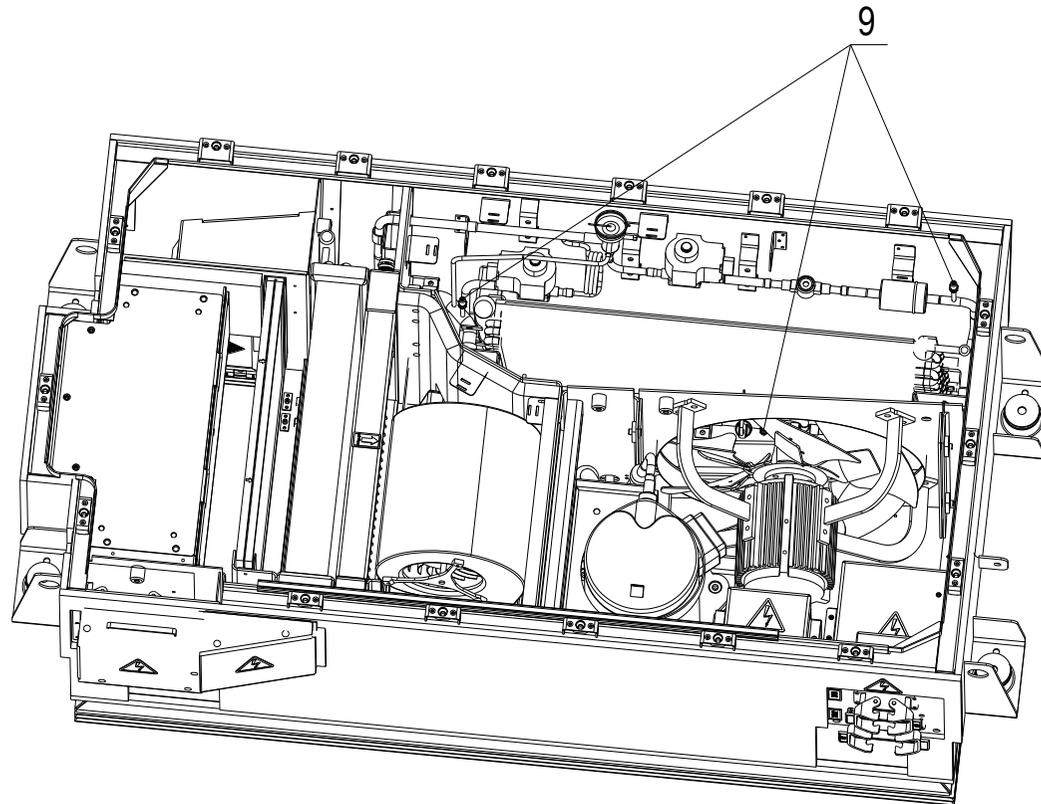
# AMSTERDAM (Alstom)

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HVAC System

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Figure 2(3 of 8) :HVAC Unit Cab



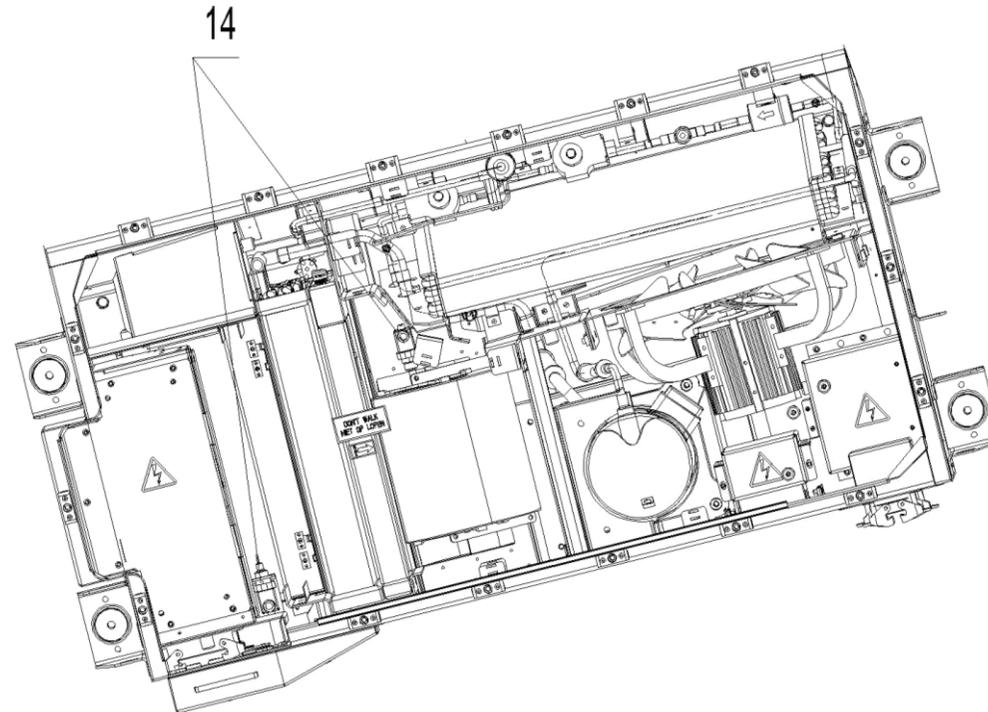
# AMSTERDAM (Alstom)

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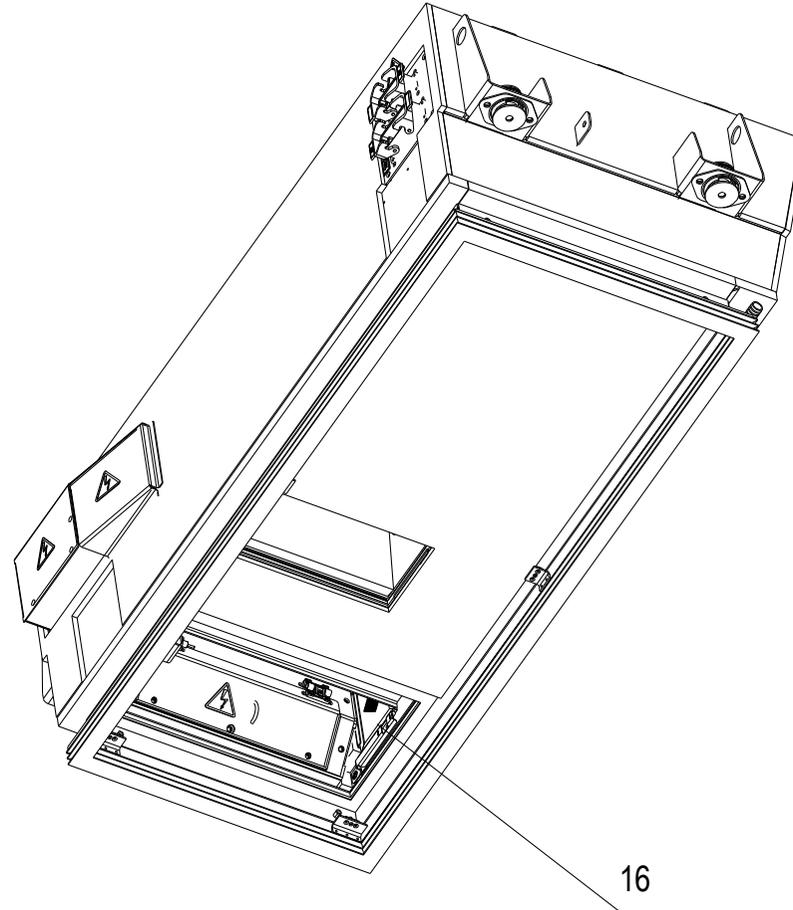
Figure 2(4 of 8) :HVAC Unit Cab



# AMSTERDAM (Alstom)

## Rolling stock

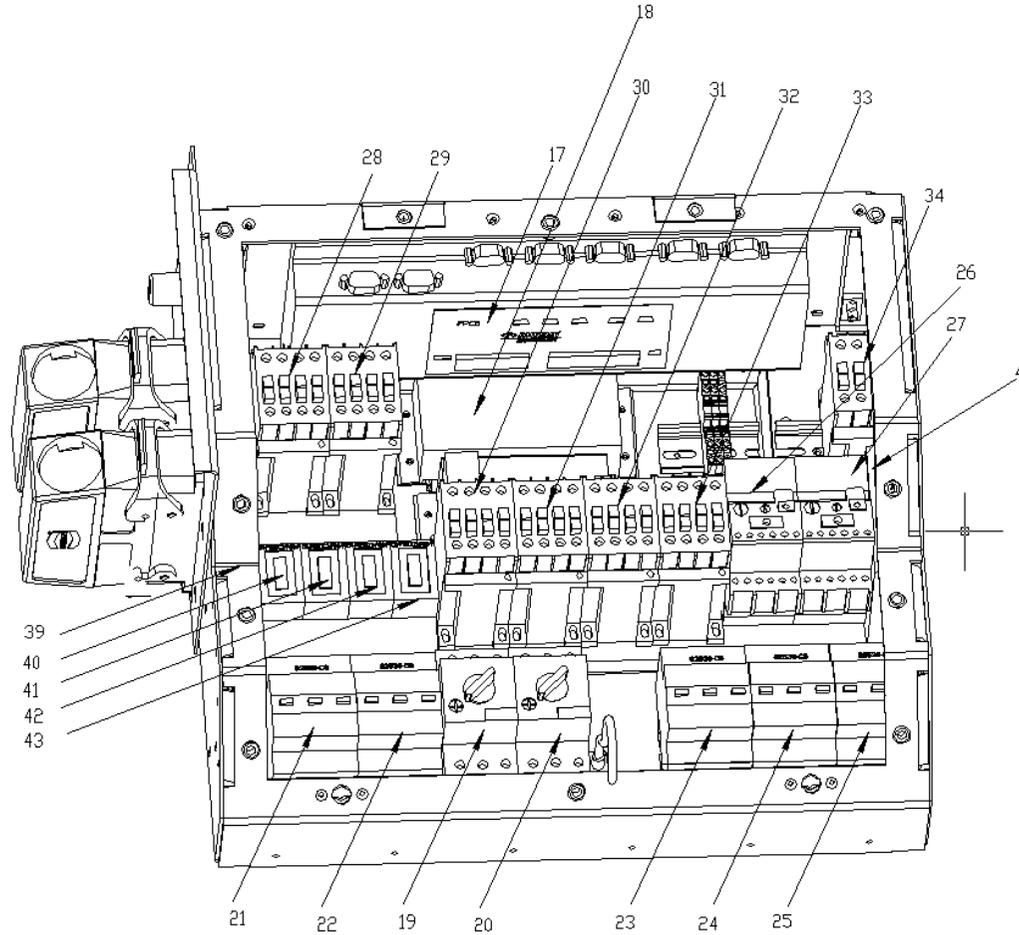
Figure 2(5 of 8) :HVAC Unit Cab



# AMSTERDAM (Alstom)

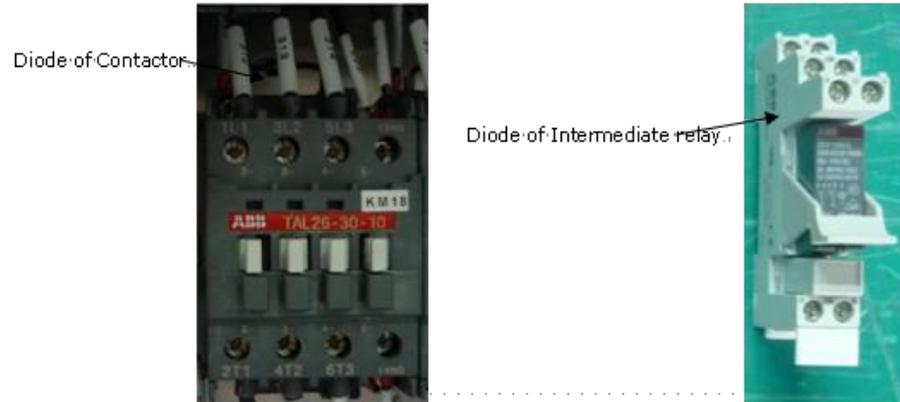
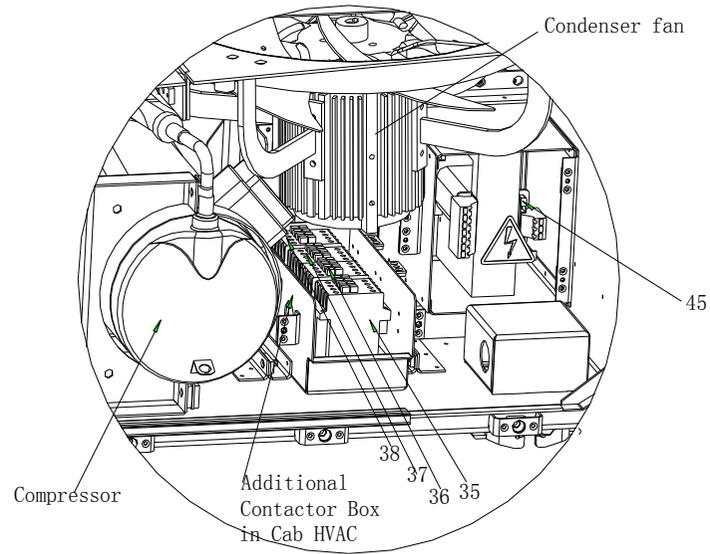
## Rolling stock

Figure 2(6 of 8) :HVAC Unit Cab



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## Rolling stock



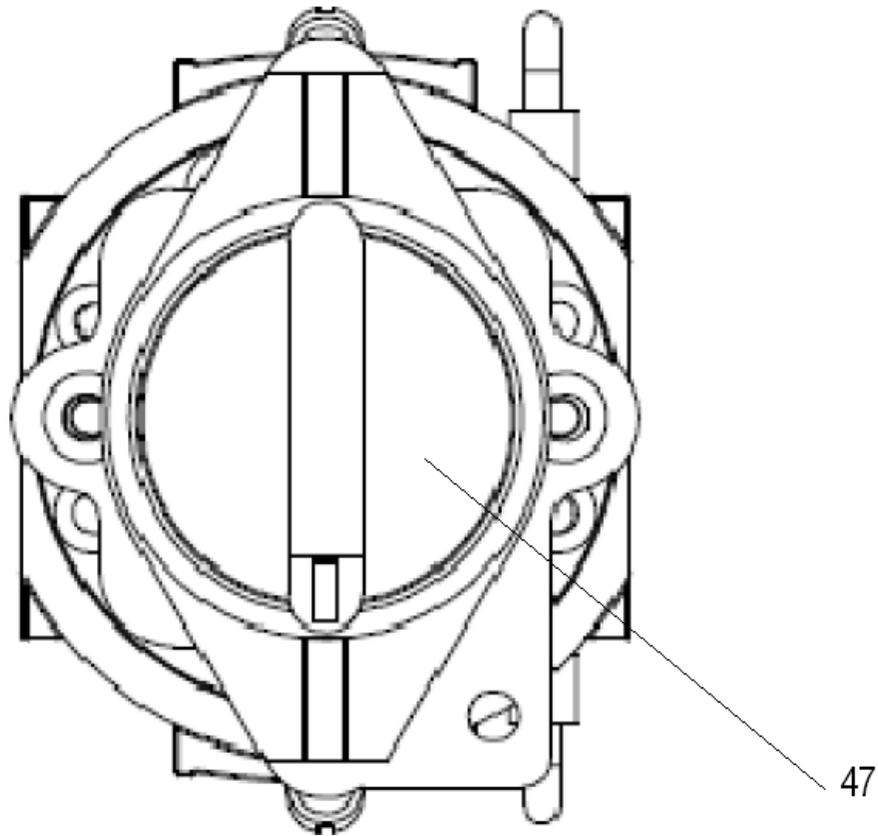
# AMSTERDAM (Alstom)

## Rolling stock

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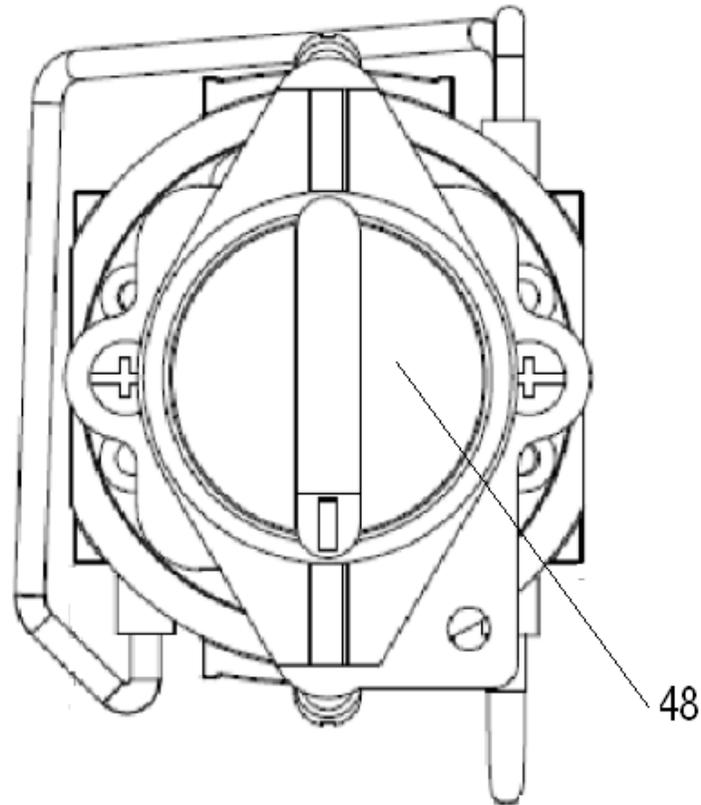
**Figure 2(7 of 8) :** temperature setting switch\_cab HVAC



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Figure 2(8 of 8) : mode & fan speed switch\_cab HVAC



# AMSTERDAM (Alstom)

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HVAC System

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**Table 2:HVAC Unit Cab**

SPP: Spare part/EWP: Easily worn part/FAP: fastening part/LRU: Line replaceable unit/SRU: secondary replaceable unit/ MRU: main replaceable unit

1	2	3						4	5	6	7	8	9	10	11	12
		Quantity/car														
OSC	Pos	DM1	M1	M2	M3	M4	DM2									
	1	1					1	2	Compressor	Copeland	12.0100.0032		ZR24KTE-TFD-522	SPP	SRU	
	2	1					1	2	Supply air Fan	EBM	12.0201.0067		D2E146-AP43-C9	SPP	LRU	
	3	1					1	2	Condenser Fan		12.0202.0099		KS97C100.000-02A.Z3	SPP	LRU	
	4	1					1	2	Condenser		12.1700.0320		KS97C100.210-00A.Z2	SPP	SRU	
	5	1					1	2	Evaporator		12.1700.0321		KS97C100.230-00A.Z2	SPP	SRU	
	6	1					1	2	Heater		12.0400.0108		KS97C100.000-04A.Z3	SPP	SRU	
	7	1					1	2	High Pressure switch	Johnson	12.0501.0052		HS200-926-0087_TRD	SPP	SRU	
	8	1					1	2	Low Pressure switch	Johnson	12.0502.0031		HS200-926-0088_TRD	SPP	SRU	
	9	3					3	6	Schrader valve JY6-Diam.6	Austar	12.1000.0009			SPP	SRU	
	10	1					1	2	Sight glass	Danfoss	12.1000.0140		014-0182	SPP	SRU	
	11	1					1	2	Thermal expansion valve	Danfoss	12.1000.0151		068U1916_TRD	SPP	SRU	
	12	2					2	4	Solenoid valve	Danfoss	12.1000.0139 12.1000.0101		032F1213_TRD 018F6860_TRD	SPP	SRU	
	13	1					1	2	Filter dryer	Danfoss	12.0700.0026		023Z5050	SPP	SRU	
	14	2					2	4	Temperature Sensor	Zhenhai				SPP	LRU	
	15	1					1	2	MA-Filter		12.1200.0163		KS97C100.000-03A.Z3	EWP	LRU	
	16	1					1	2	FA-Filter		12.1200.0164		KS97C100.000-06A.Z3	EWP	LRU	
	17	1					1	2	Programmed logical controller	Faiveley	12.0301.0016		FPC08	SPP	LRU	
	18	1					1	2	H/L frequency Detector	ABB	12.0510.0213		BTDT-01	SPP	LRU	

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## Rolling stock

HVAC System

7 Parts Catalogue

1	2	3						4	5	6	7	8	9	10	11	12
		Quantity/car														
OSC	Pos	DM1	M1	M2	M3	M4	DM2									
	19	1					1	2	Manual motor starter QF1	ABB	12.0508.0043		MS116-6.3	SPP	LRU	
	20	1					1	2	Manual motor starter QF2	ABB	12.0508.0044		MS116-1.6	SPP	LRU	
	21	1					1	2	Circuit breaker QF3	AMP	12.0508.0162		S262-C4	SPP	LRU	
	22	1					1	2	Circuit breaker QF4	AMP	12.0508.0141		S262-C4	SPP	LRU	
	23	1					1	2	Circuit breaker QF5	AMP	12.0508.0141		S263-C6	SPP	LRU	
	24	1					1	2	Circuit breaker QF6	AMP	12.0508.0162		S263-C6	SPP	LRU	
	25	1					1	2	Circuit breaker QF7	ABB	12.0508.0163		S262UC-C3	SPP	LRU	
	26	1					1	2	thermostat relay FR1	ABB	12.0505.0124		TA25DU1.4(1.0-1.4A)	SPP	LRU	
	27	1					1	2	thermostat relay FR2	ABB	12.0505.0124		TA25DU1.4(1.0-1.4A)	SPP	LRU	
	28	1					1	2	Contactactor KM1	ABB	12.0507.0063		TAL9-30-10 DC110V	SPP	LRU	
		1						1	2	diode-contactor KM1		13.0615.0004				
	29	1					1	2	Contactactor KM2	ABB	12.0507.0063		TAL9-30-10 DC110V	SPP	LRU	
		1						1	2	diode-contactor KM2		13.0615.0004				
	30	1					1	2	Contactactor KM3	ABB	12.0507.0063		TAL9-30-10 DC110V	SPP	LRU	
		1						1	2	diode-contactor KM3		13.0615.0004				

# AMSTERDAM (Alstom)

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HVAC System

7 Parts Catalogue

1	2	3						4	5	6	7	8	9	10	11	12
		Quantity/car														
OSC	Pos	DM1	M1	M2	M3	M4	DM2									
	31	1					1	2	Contact KM4	ABB	12.0507.0063		TAL9-30-10 DC110V	SPP	LRU	
		1					1	2	diode-contact KM4		13.0615.0004					
	32	1					1	2	Contact KM5	ABB	12.0507.0063		TAL9-30-10 DC110V	SPP	LRU	
		1					1	2	diode-contact KM5		13.0615.0004					
	33	1					1	2	Contact KM6	ABB	12.0507.0063		TAL9-30-10 DC110V	SPP	LRU	
		1					1	2	diode-contact KM6		13.0615.0004					
	34	1					1	2	Contact KM9	ABB	12.0507.0063		TAL9-30-10 DC110V	SPP	LRU	
		1					1	2	diode-contact KM7		13.0615.0004					
	35	1					1	2	Contact KM7	ABB	12.0507.0063		TAL9-30-10 DC110V	SPP	LRU	
		1					1	2	diode-contact KM8		13.0615.0004					
	36	1					1	2	Contact KM8	ABB	12.0507.0063		TAL9-30-10 DC110V	SPP	LRU	
		1					1	2	diode-contact KM9		13.0615.0004					
	37	1					1	2	Contact KM10	ABB	12.0507.0063		TAL9-30-10 DC110V	SPP	LRU	
		1					1	2	diode-contact KM10		13.0615.0004					

# AMSTERDAM (Alstom)

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HVAC System

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1	2	3					4	5	6	7	8	9	10	11	12
		Quantity/car													
OSC	Pos	DM1	M1	M2	M3	M4	DM2								
	38	1					1	2	Contactor KM11	ABB	12.0507.0063		TAL9-30-10 DC110V	SPP	LRU
		1					1	2	diode-contactor KM11		13.0615.0004				
	39	1					1	2	intermediate relay KA1	ABB	12.0505.0034		CR-P110DC2-PSS/F	SPP	LRU
		1					1	2	diode- intermediate relay KA1		12.0510.0210		CR-P/M22		
	40	1					1	2	intermediate relay KA2	ABB	12.0505.0034		CR-P110DC2-PSS/F	SPP	LRU
		1					1	2	diode- intermediate relay KA2		12.0510.0210		CR-P/M22		
	41	1					1	2	intermediate relay KA3	ABB	12.0505.0034		CR-P110DC2-PSS/F	SPP	LRU
		1					1	2	diode- intermediate relay KA3		12.0510.0210		CR-P/M22		
	42	1					1	2	intermediate relay KA4	ABB	12.0505.0034		CR-P110DC2-PSS/F	SPP	LRU
		1					1	2	diode- intermediate relay KA4		12.0510.0210		CR-P/M22		
	43	1					1	2	intermediate relay KA5	ABB	12.0505.0034		CR-P110DC2-PSS/F	SPP	LRU
		1					1	2	diode- intermediate relay KA5		12.0510.0210		CR-P/M22		

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1	2	3						4	5	6	7	8	9	10	11	12
		Quantity/car														
OSC	Pos	DM1	M1	M2	M3	M4	DM2									
	44	1					1	2	time relay KT1	ABB	12.0505.0205		CT-MFE	SPP	LRU	
	45	1					1	2	single-pahse transformer	SFRT	12.0511.0016		MEHT-800-400/80-230	SPP	LRU	
	46	1					1	2	Check valve	SFRT	12.1000.0097			SPP	LRU	
	47	1					1	2	temperature setting switch_cab HVAC		12.0509.0115					
	48	1					1	2	mode & fan speed switch_cab HVAC		12.0509.0115					

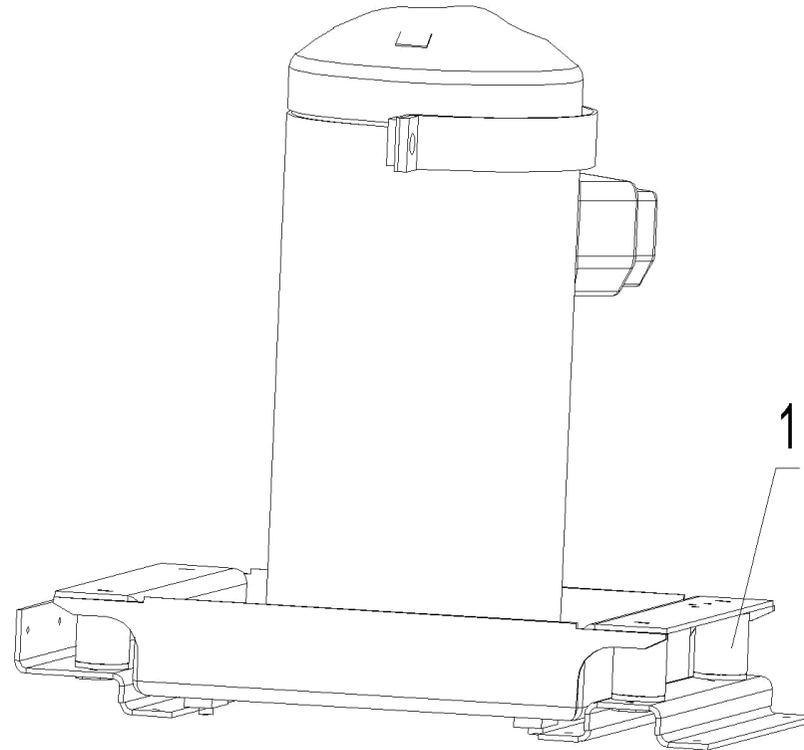
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## Rolling stock

HVAC System

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**Figure 2-1: Compressor**



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Compressor	1	ZR24KTE-TFD-522		

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**Table 2-1: Compressor**

SPP: Spare part/EWP: Easily worn part/FAP: fastening part/LRU: Line replaceable unit/SRU: secondary replaceable unit/ MRU: main replaceable unit

1	2	3				4	5	6	7	8	9	10	11	12
OSC	Pos	Quantity/car				Unit	Designation Specification & type	Manufacturer	Manufacturer No	Vehicle manufacturer Part No	SMC No	Drawing No	Category SPP EWP FAP	TRU LRU SRU MRU
		DT1	M1	M2	DT2									
	1					1	compressor damper		13.0501.0013				SPP	SRU

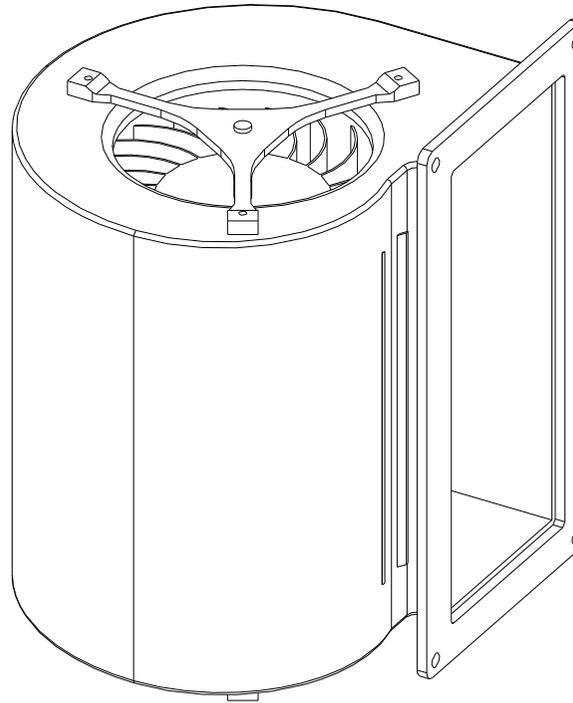
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## Rolling stock

HVAC System

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**Figure 2-2:** Supply air Fan



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Supply air Fan(Left)	2	D2E146-AP43-C9		

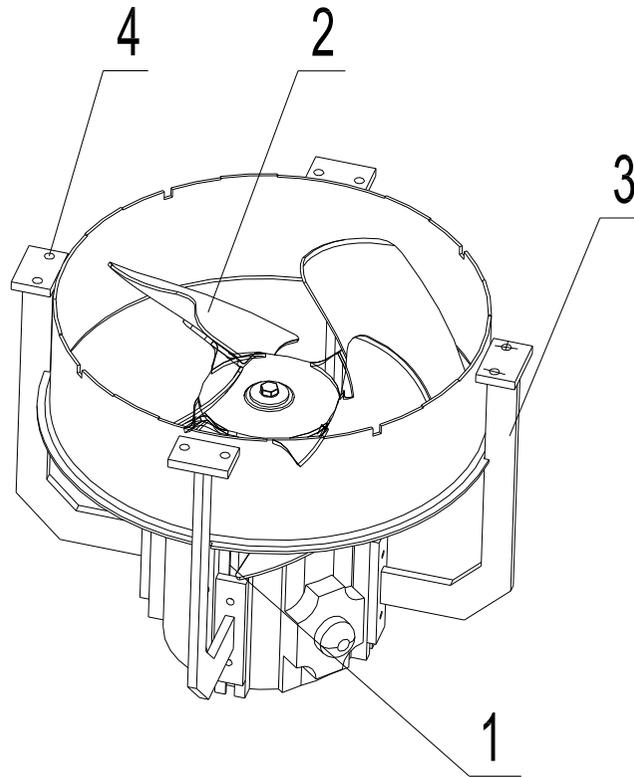
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HVAC System

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Figure 2-3: Condenser Fan



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Condenser Fan	3	KS97C100.000-02A.Z3		

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**Table 2-2: Condenser Fan**

SPP: Spare part/EWP: Easily worn part/FAP: fastening part/LRU: Line replaceable unit/SRU: secondary replaceable unit/ MRU: main replaceable unit

1	2	3				4	5	6	7	8	9	10	11	12
OSC	Pos	Quantity/car				Unit	Designation Specification & type	Manufacturer	Manufacturer No	Vehicle manufacturer Part No	SMC No	Drawing No	Category SPP EWP FAP	TRU LRU SRU MRU
		DT1	M1	M2	DT2									
	1					1	Condenser fan Motor	ABB	12.0203.0030		YF80X-4	SPP	SRU	
	2					1	Condenser fan impeller	Langdi	12.0203.2015			SPP	SRU	
	3					1	Condenser Fan bracket	Langdi				SPP	SRU	
	4					8	Screw	SFRT	12.1401.0308		GB/T5783-2000	SPP	SRU	

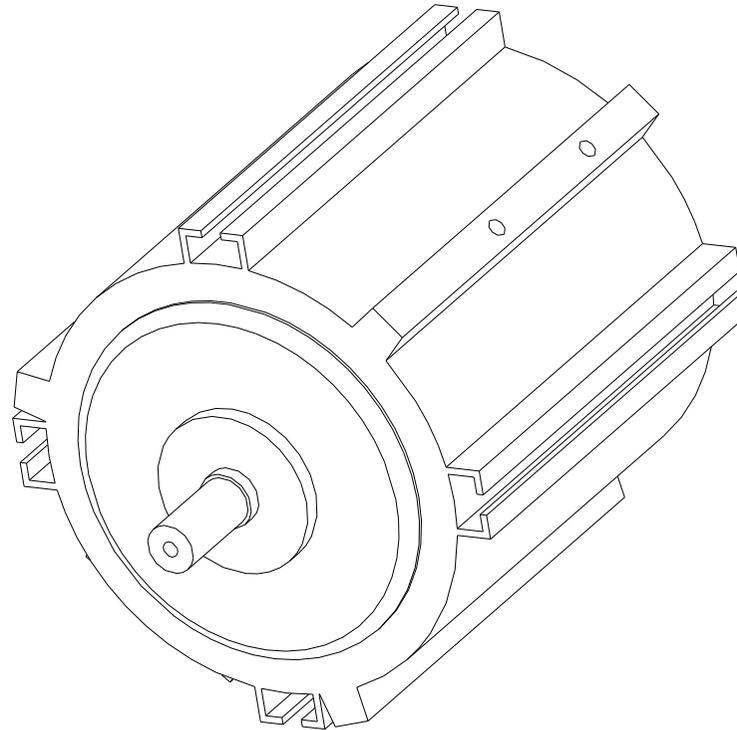
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## Rolling stock

HVAC System

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**Figure 2-3-1:** Condenser Fan motor



Name	Pos in the part list(Table 2-1)	Drawing number	Vehicle manufacturer part number	Comment
Condenser Fan motor	1	YF80X-4		

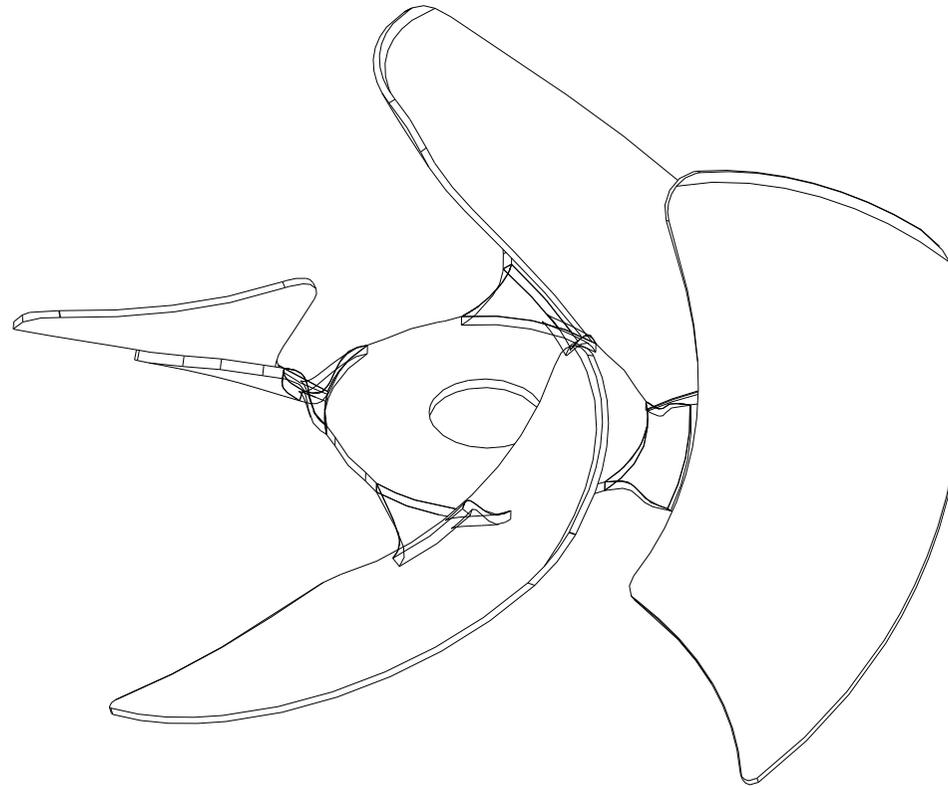
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HVAC System

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**Figure 2-3-2:** Condenser Fan impeller



Name	Pos in the part list(Table 2-1)	Drawing number	Vehicle manufacturer part number	Comment
Condenser Fan impeller	2			

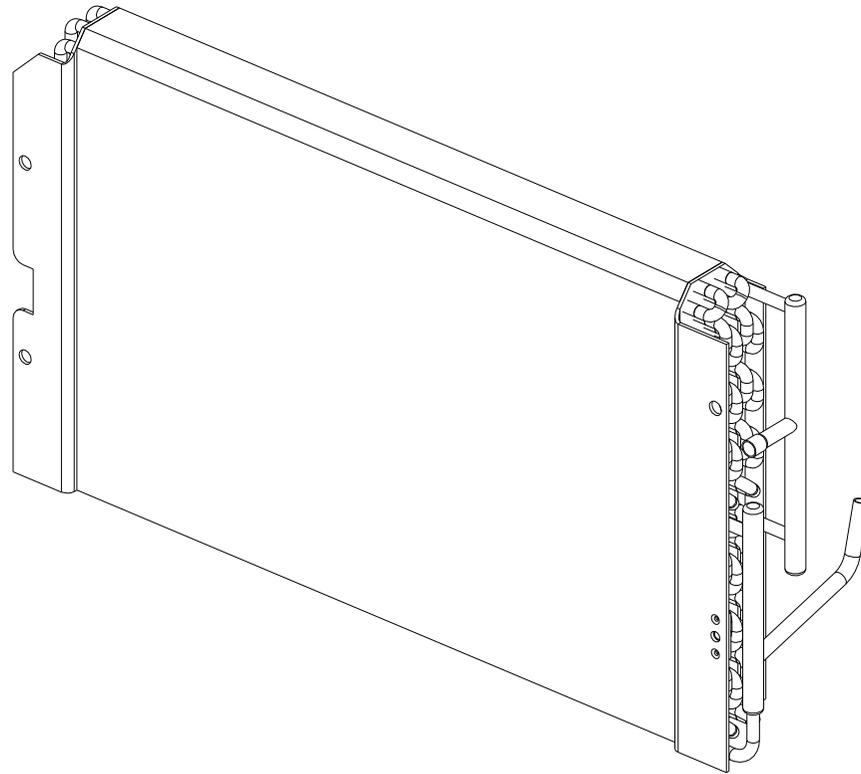
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**Figure 2-4: Condenser**



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Condenser right	4	KS97C100.210-00A.Z2		

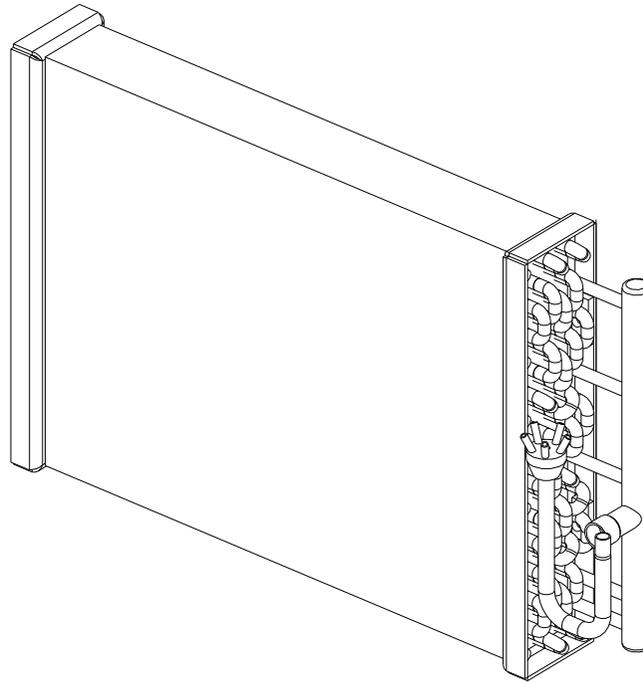
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HVAC System

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**Figure 2-5:** Evaporator



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Evaporator	5	KS97C100.230-00A.Z2		

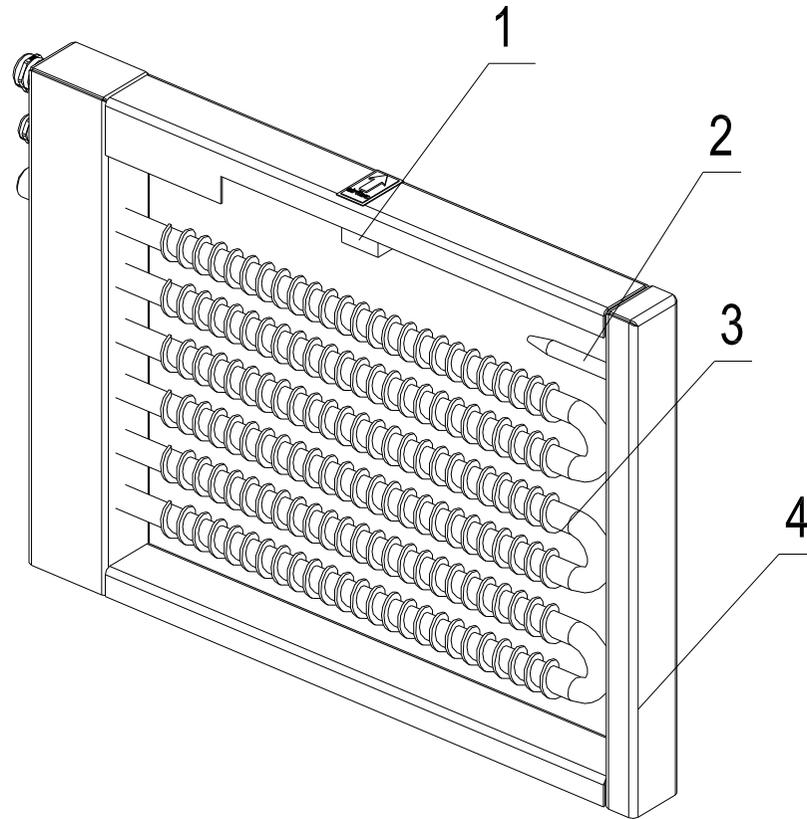
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HVAC System

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Figure 2-6: Heater



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Heater	6	KS97C100.000-04A.Z3		

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## Rolling stock

HVAC System

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**Table 2-3: Electrical heater**

SPP: Spare part/EWP: Easily worn part/FAP: fastening part/LRU: Line replaceable unit/SRU, secondary replaceable unit/ MRU: main replaceable unit

1	2	3				4	5	6	7	8	9	10	11	12
OSC	Pos	Quantity/car				Unit	Designation Specification & type	Manufacturer	Manufacturer No	Vehicle manufacturer Part No	SMC No	Drawing No	Category SPP EWP FAP	TRU LRU SRU MRU
		DT1	M1	M2	DT2									
	1					1	Thermostat	SFRT	12.0601.0018		Emerson 36TMH21	SPP	SRU	
	2					1	Thermal breaker	SFRT	12.0601.0019		Emerson WQB139B	SPP	SRU	
	3						Heater rod	SFRT	12.0401.0006					
	4					1	Heater frame	SFRT						

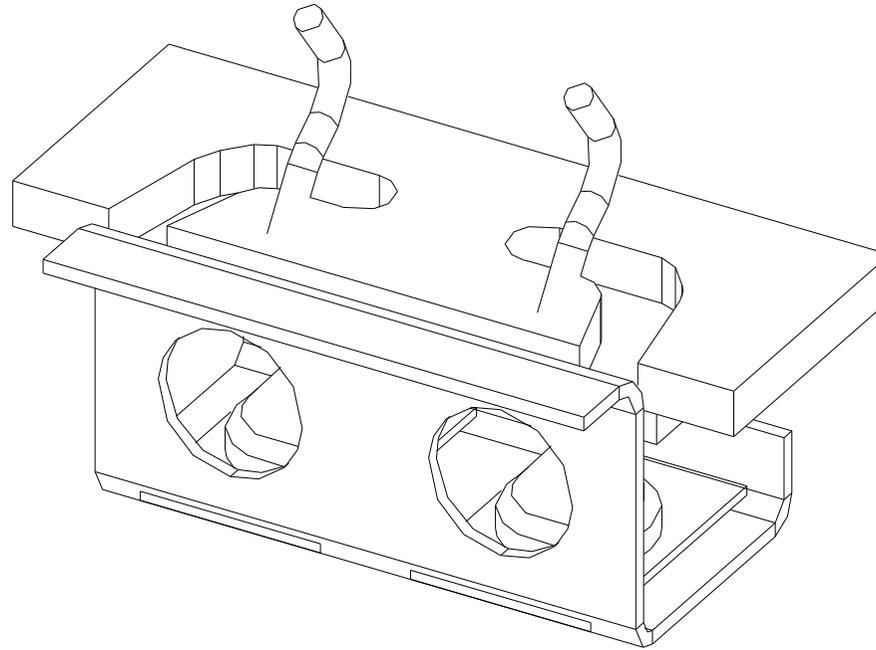
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HVAC System

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**Figure 2-6-1: Thermostat**



Name	Pos in the part list(Table 2-2)	Drawing number	Vehicle manufacturer part number	Comment
Thermostat	1	Emerson 36TMH21		

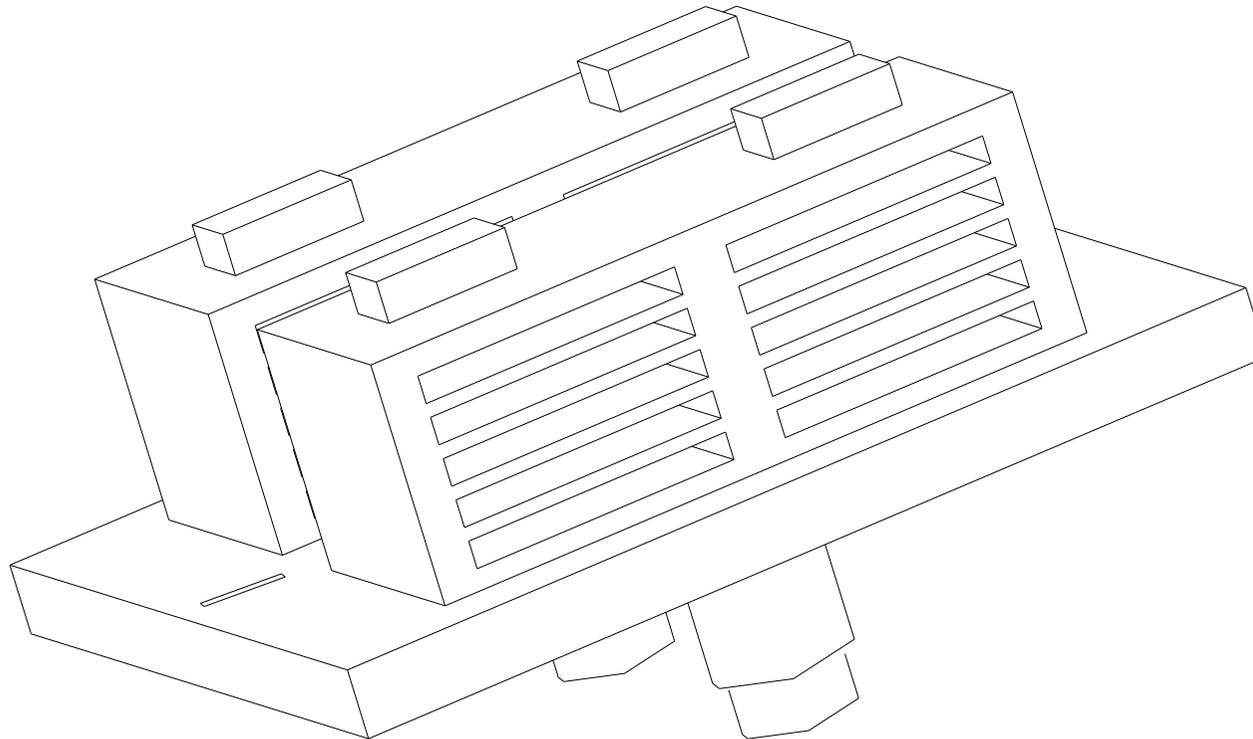
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## Rolling stock

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**Figure 2-6-2:** Thermal breaker



Name	Pos in the part list(Table 2-2)	Drawing number	Vehicle manufacturer part number	Comment
Thermal breaker	2	Emerson WQB139B		

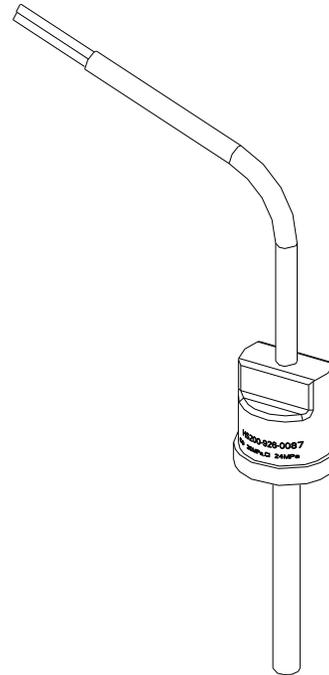
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## Rolling stock

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**Figure 2-7:** High pressure switch



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
High pressure switch	7	HS200-926-0087_TRD		

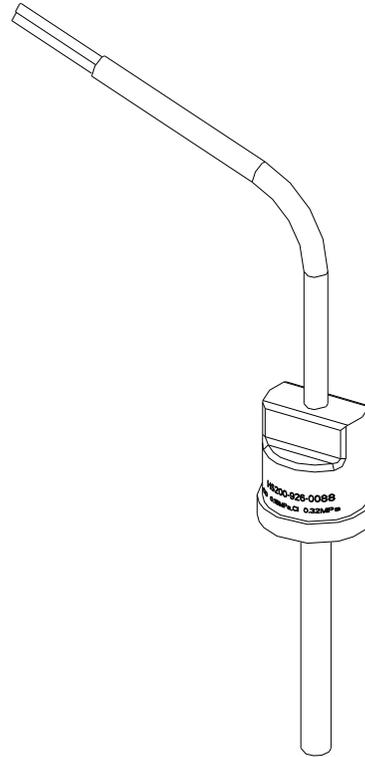
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## Rolling stock

HVAC System

7 Parts Catalogue

**Figure 2-8:** Low pressure switch



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Low pressure sensor	8	HS200-926-0088_TRD		

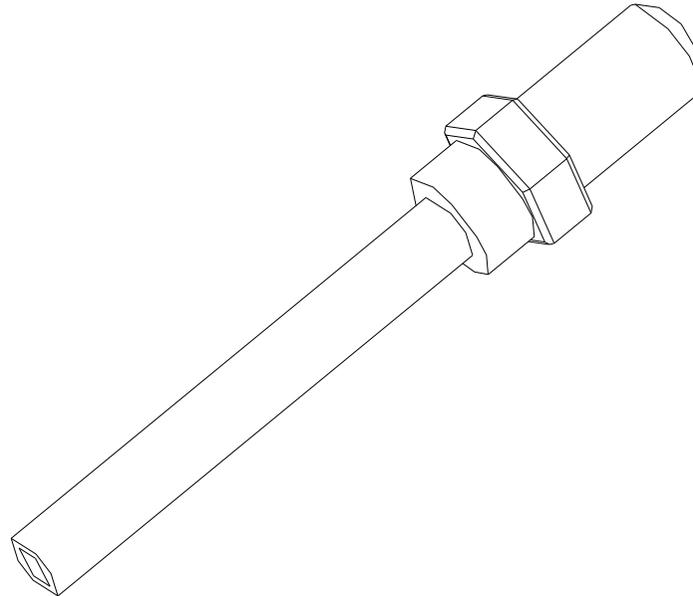
# AMSTERDAM (Alstom)

## Rolling stock

HVAC System

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**Figure 2-9:** Schrader valve JY6-Diam.6



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Schrader valve JY6-Diam.6	9	-		

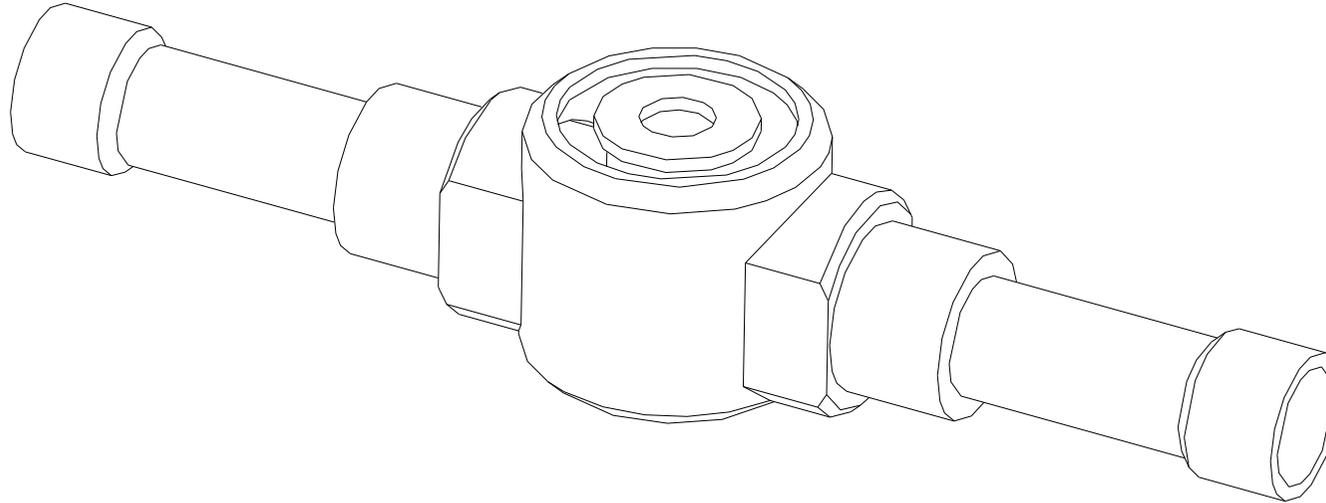
# AMSTERDAM (Alstom)

## Rolling stock

HVAC System

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**Figure 2-10:** Sight glass



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Sight glass	10	014-0182		

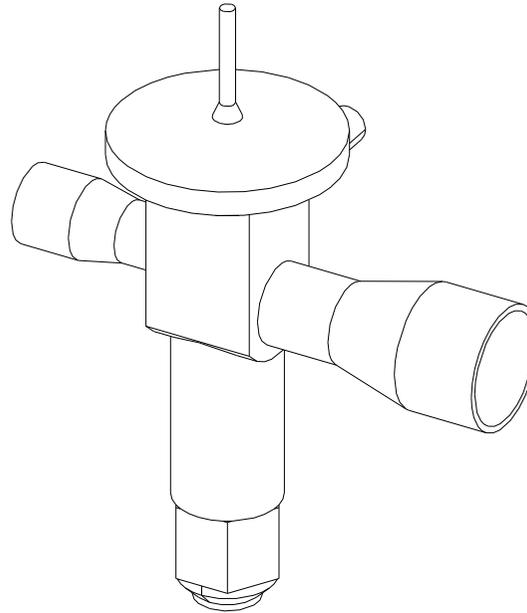
# AMSTERDAM (Alstom)

## Rolling stock

HVAC System

7 Parts Catalogue

**Figure 2-11:** Expansion valve



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Expansion valve	11	068U1916_TRD		

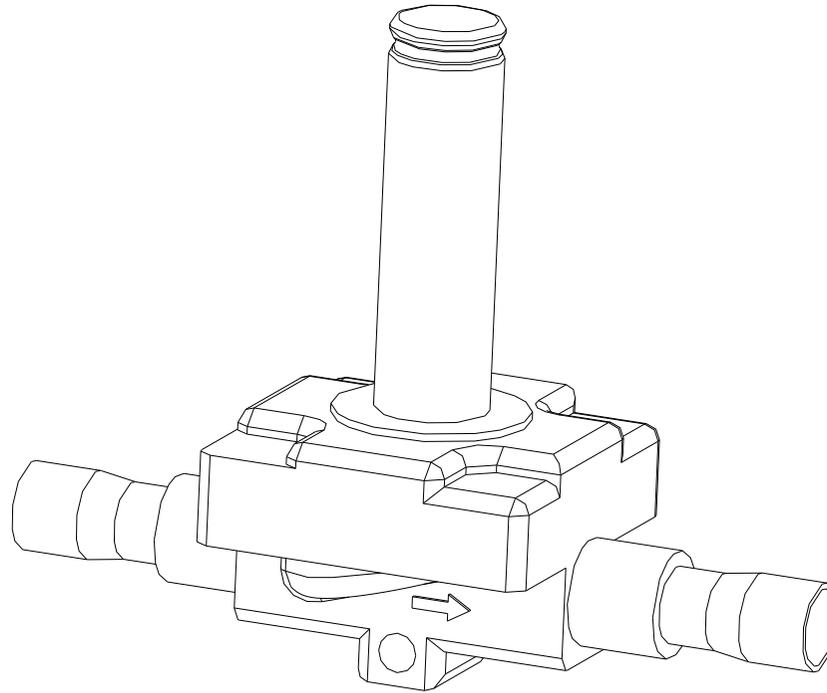
# AMSTERDAM (Alstom)

## Rolling stock

HVAC System

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**Figure 2-12:** Solenoid valve in liquid line



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Solenoid valve in liquid line	12	032F1213_TRD		

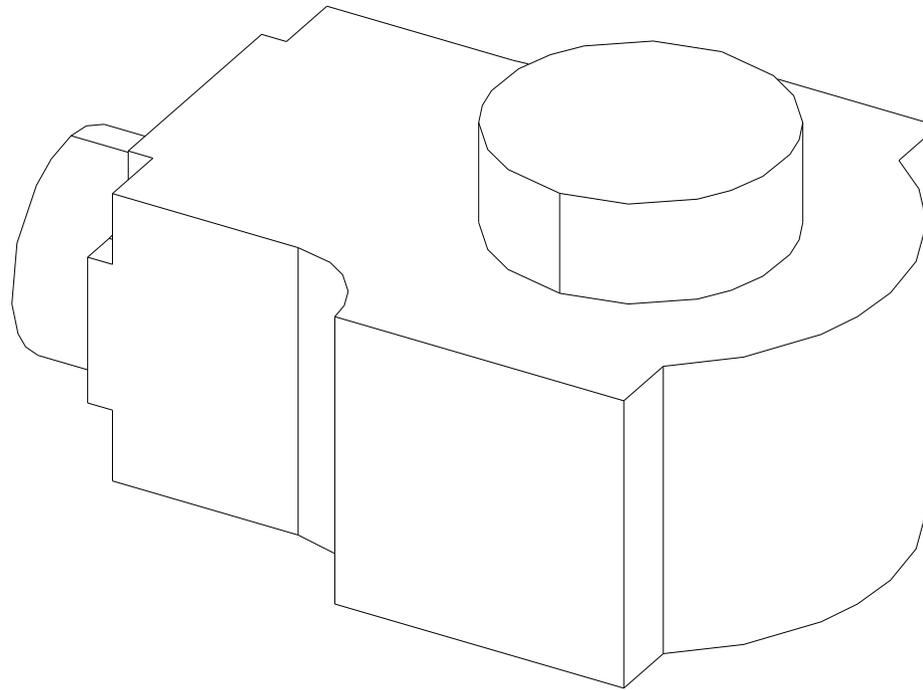
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**Figure 2-12:** Coil for solenoid valve



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Coil for solenoid valve	12	018F6860_TRD		

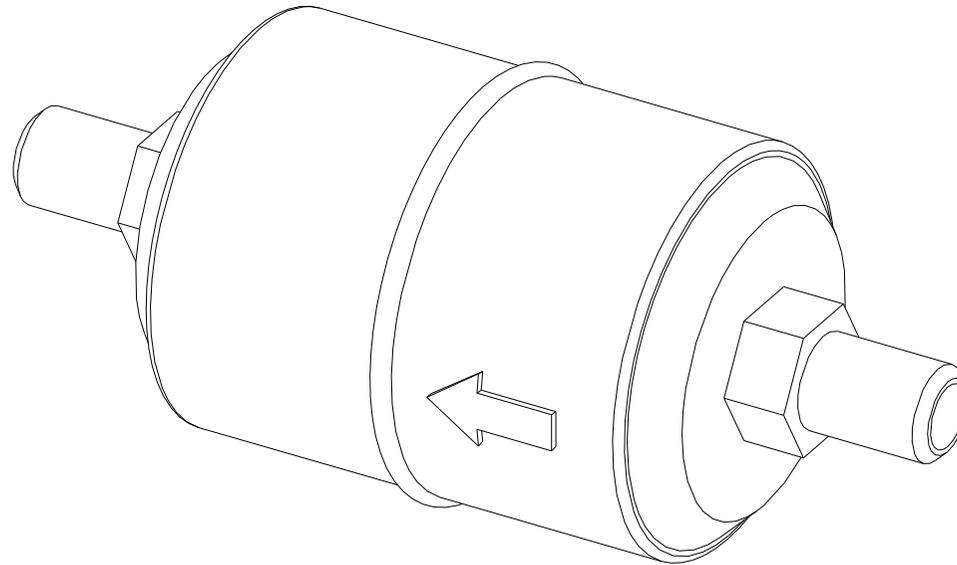
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**Figure 2-13:** Filter dryer



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Filter dryer	13	023Z5050		

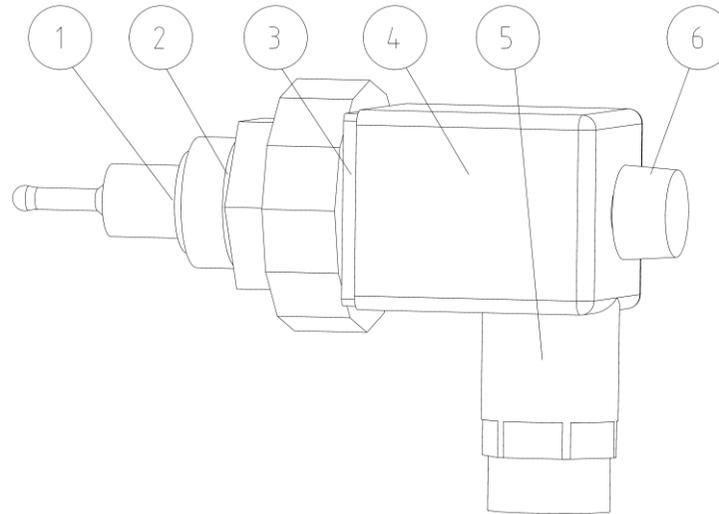
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**Figure 2-14:** Temperature sensor



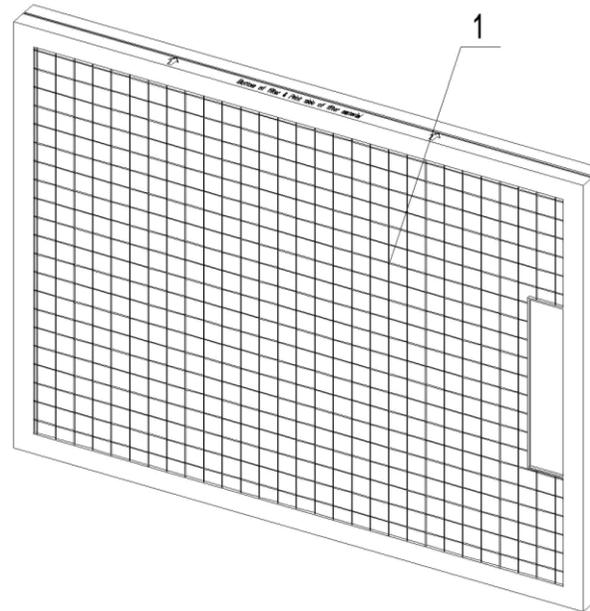
1 Temperature detector	2 O-ring M20*1.5
3 Flat gasket	4 Cable socket
5 Cable gland M16*1.5	6 Socket fixed screw

Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Temperature sensor	14	KT38A000.000-21A.Z4		

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**Figure 2-15: MA Filter**



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
MA Filter	15	KS97C100.000-03A.Z3		

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**Table 2-4: MA Filter**

SPP: Spare part/EWP: Easily worn part/FAP: fastening part/LRU: Line replaceable unit/SRU: secondary replaceable unit/ MRU: main replaceable unit

1	2	3				4	5	6	7	8	9	10	11	12
OSC	Pos	Quantity/car				Unit	Designation Specification & type	Manufacturer	Manufacturer No	Vehicle manufacturer Part No	SMC No	Drawing No	Category SPP EWP FAP	TRU LRU SRU MRU
		DT1	M1	M2	DT2									
	1					1	mixed air filter material (nonwoven)	SFRT	12.1201.0051				SPP	SRU

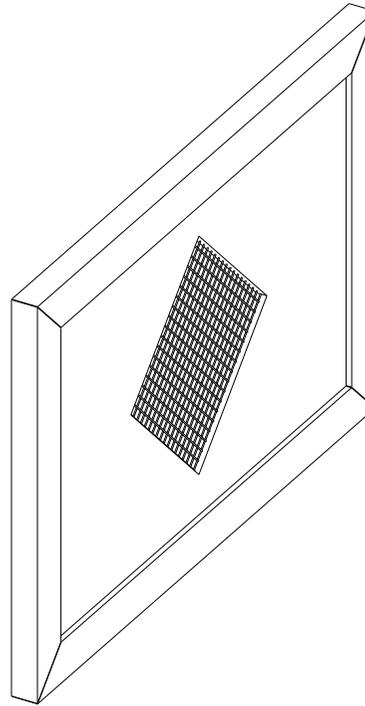
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**Figure 2-16:** FA Filter

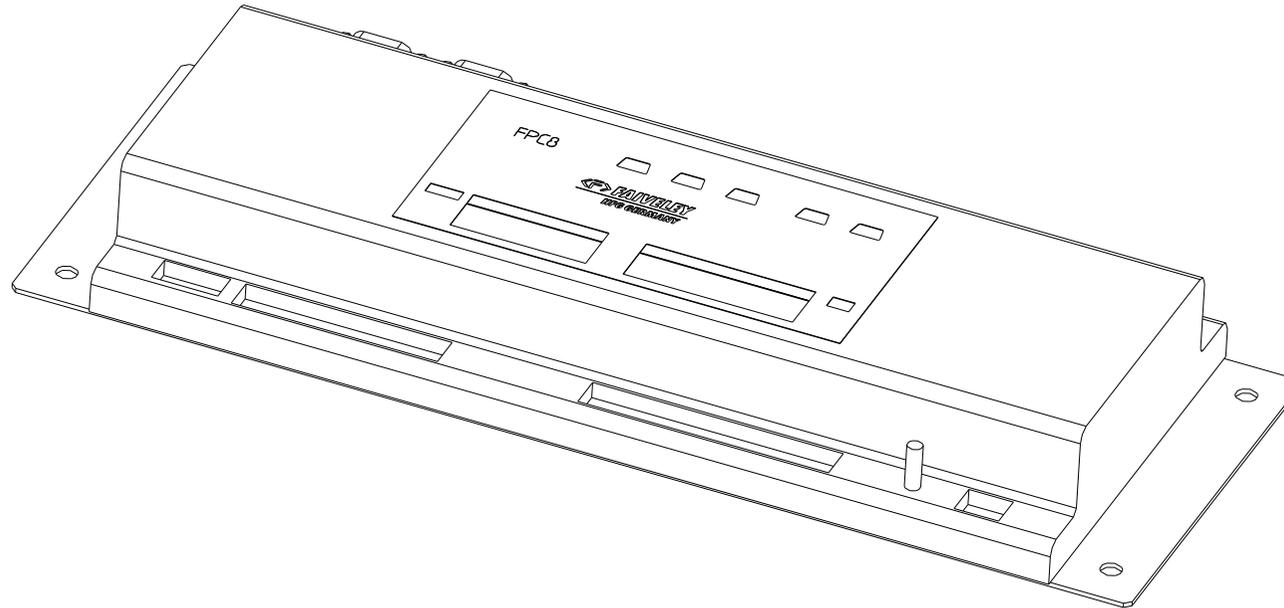


Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
FA Filter	16	KS97C100.000-06A.Z3		

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**Figure 2-17:** Programmed logical controller



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Programmed logical controller	17	FPC08 DC110V		

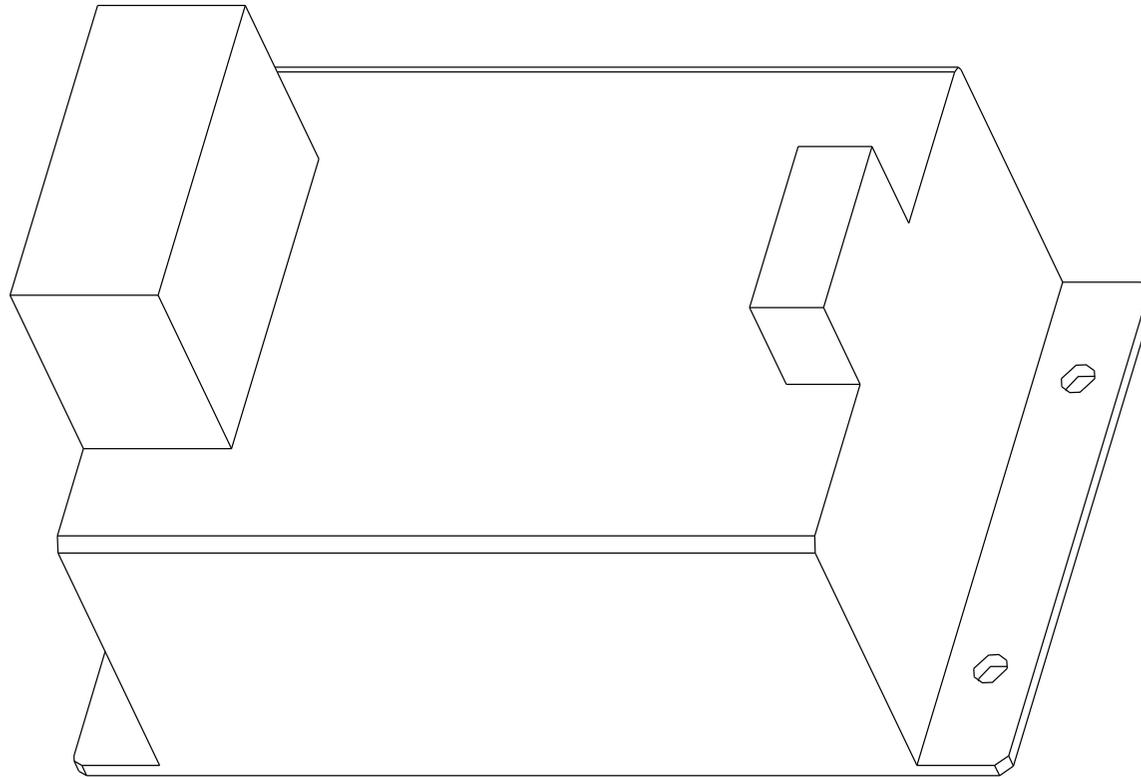
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**Figure 2-18:** H/L frequency Detector



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Diod Module	18	BTDT-01		

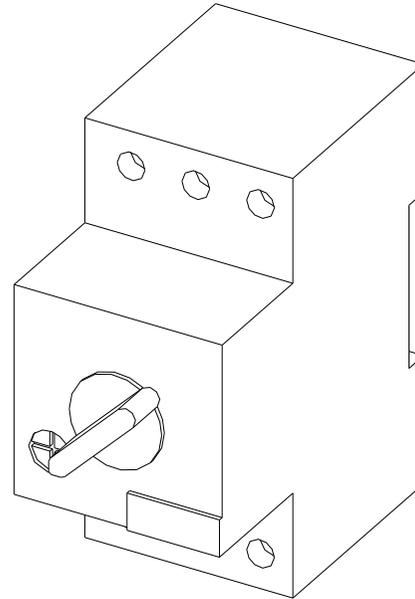
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**Figure 2-19:** Manual motor starter



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Manual motor starter	19	MS116-6.3		

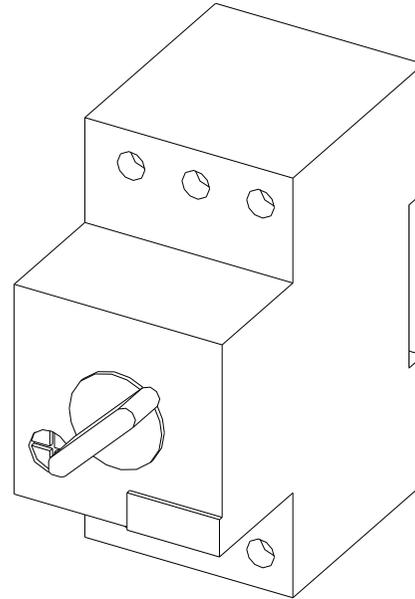
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**Figure 2-20:** Manual motor starter



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Manual motor starter	20	MS116-1.6		

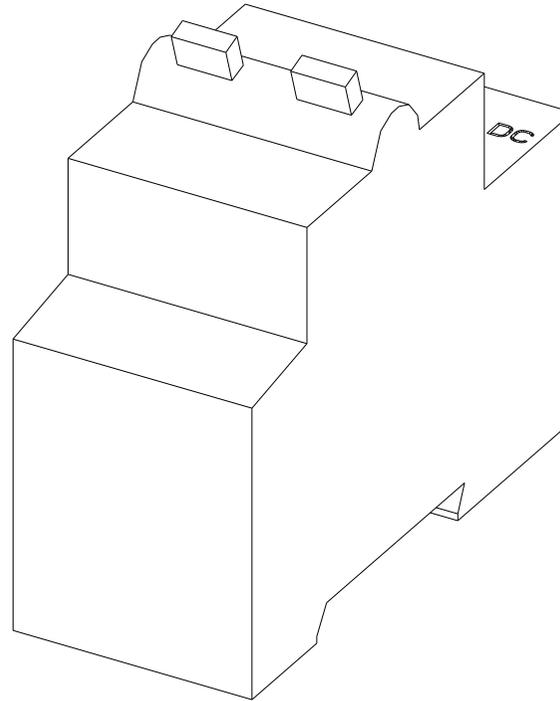
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**Figure 2-21:** Circuit breaker



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Circuit breaker(2phase)	21-22	S252S-C4		

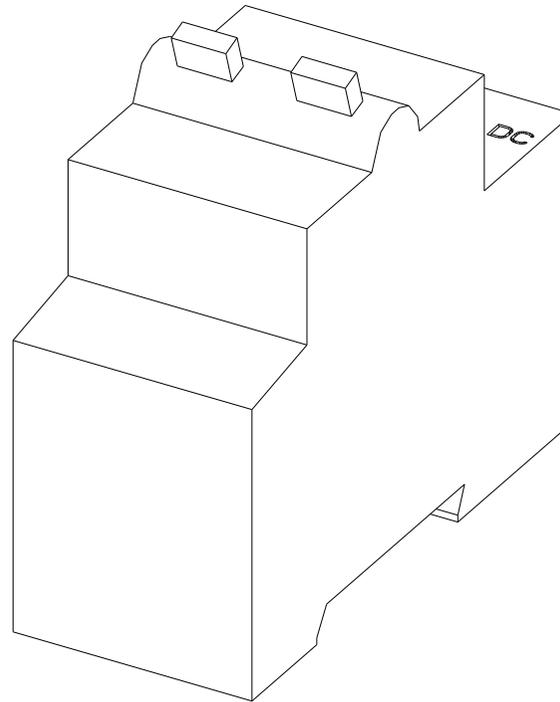
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**Figure 2-22:** Circuit breaker



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Circuit breaker(3phase)	23-24	S253S-C6		

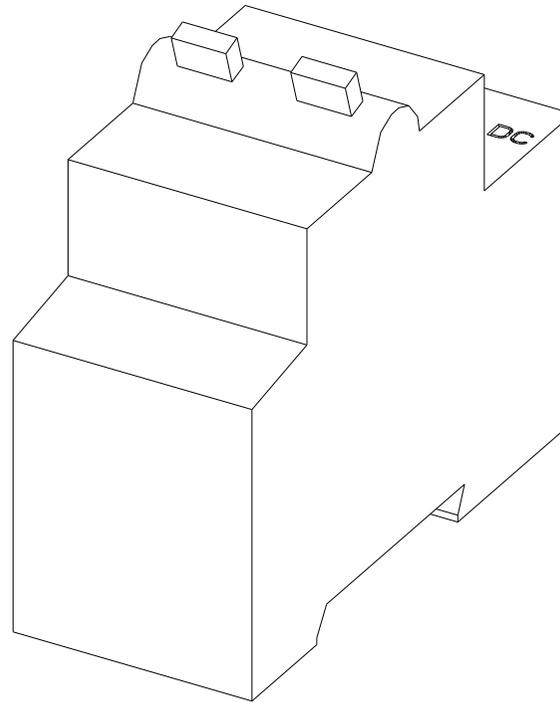
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**Figure 2-23:** Circuit breaker



Name	Pos in the part list(Table 1)	Drawing number	Vehicle manufacturer part number	Comment
Circuit breaker	25	S252S-C3 DC		

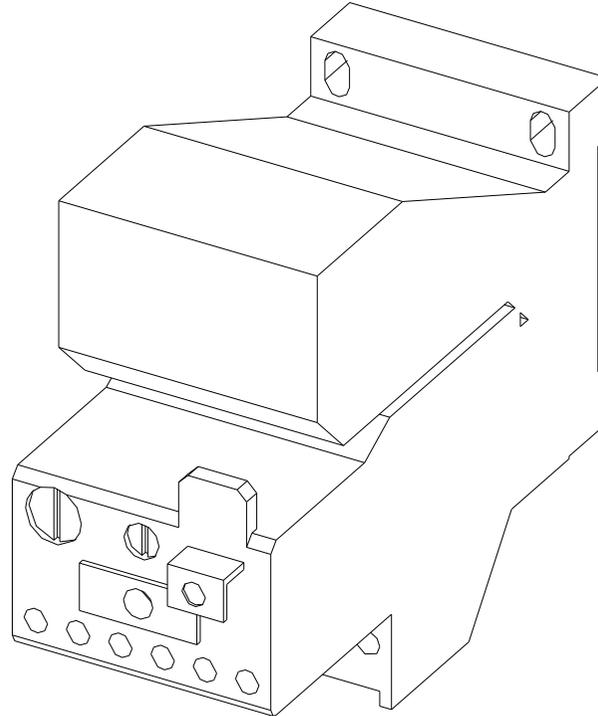
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**Figure 2-24:** Thermostat relay



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Thermal overload relay	26-27	TA 25 DU 1.4(1.0-1.4A)		

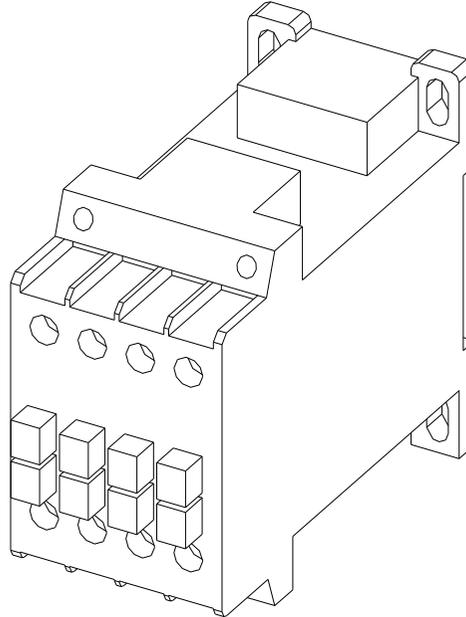
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**Figure 2-25:** Contactor(DC110V)



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Contactor(DC110V)	28-38	TAL9-30-10 DC110V		

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**Figure 2-26:** diode-Contactor(DC110V)

Diode of Contactor



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Contactora(DC110V)	28-38			

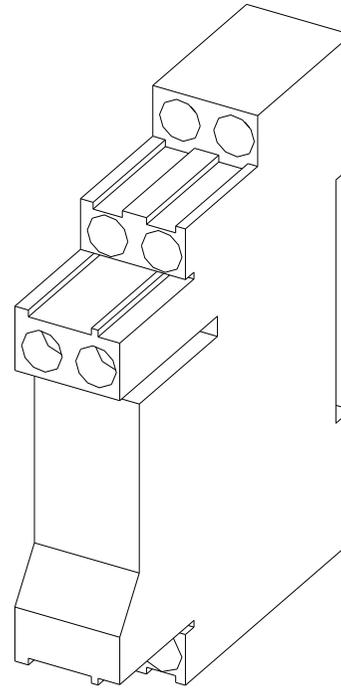
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**Figure 2-27:** Intermediate relay



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Thermal overload relay	39-43	CR-P110DC2-PSS/F		

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**Figure 2-28:**diode- Intermediate relay



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Thermal overload relay	39-43	CR-P/M22		

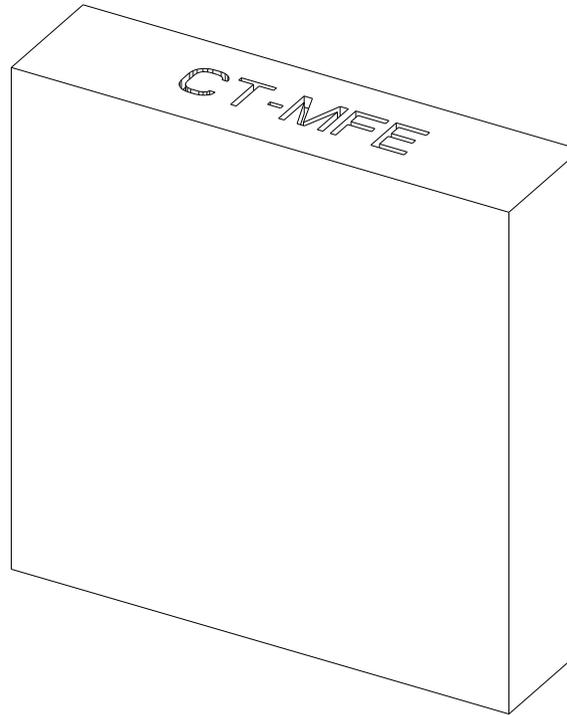
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**Figure 2-29:** Time relay



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Thermal overload relay	44	CT-MFE		

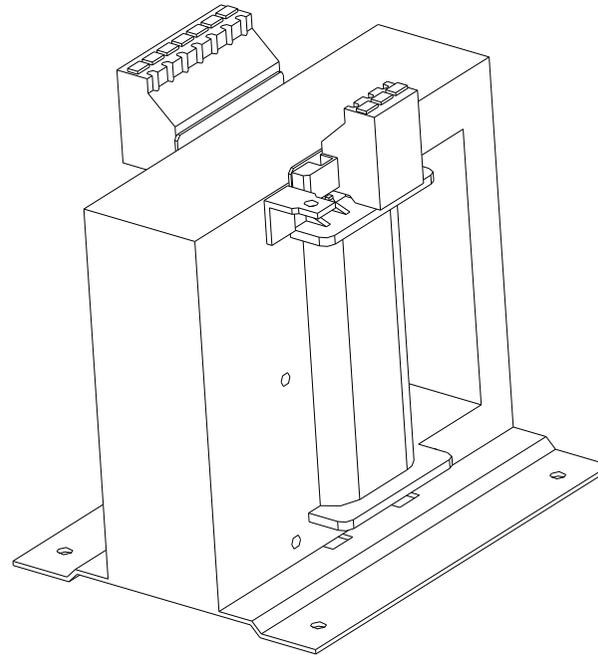
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**Figure 2-30:** single-pahse transformer



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
single-pahse transformer	45	MEHT-800-400/80-230		

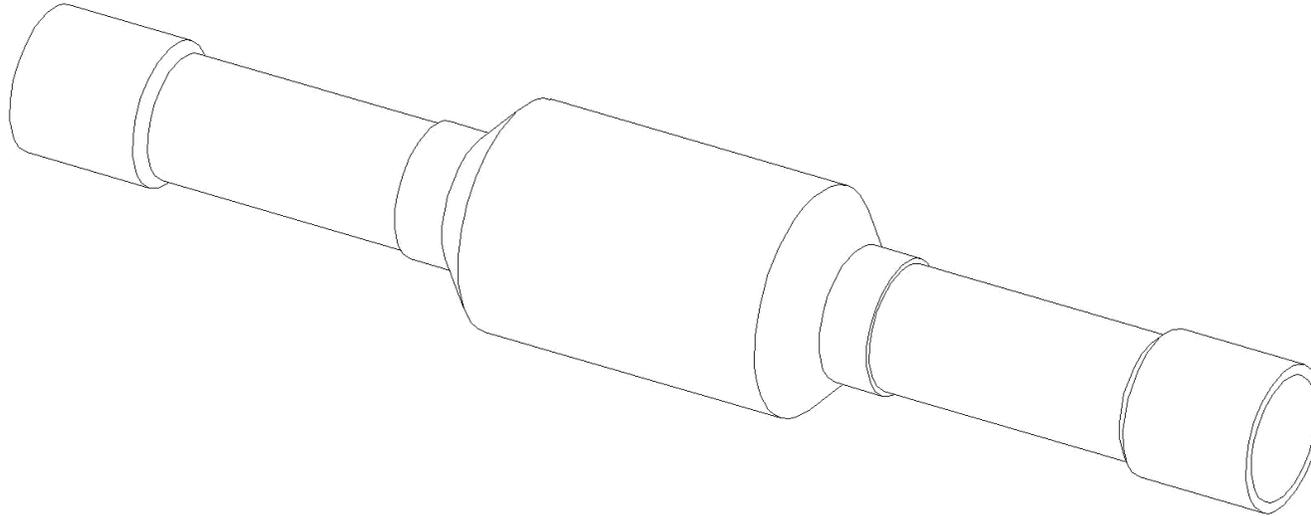
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**Figure 2-31:** check valve



Name	Pos in the part list(Table 2)	Drawing number	Vehicle manufacturer part number	Comment
Check valve	46			

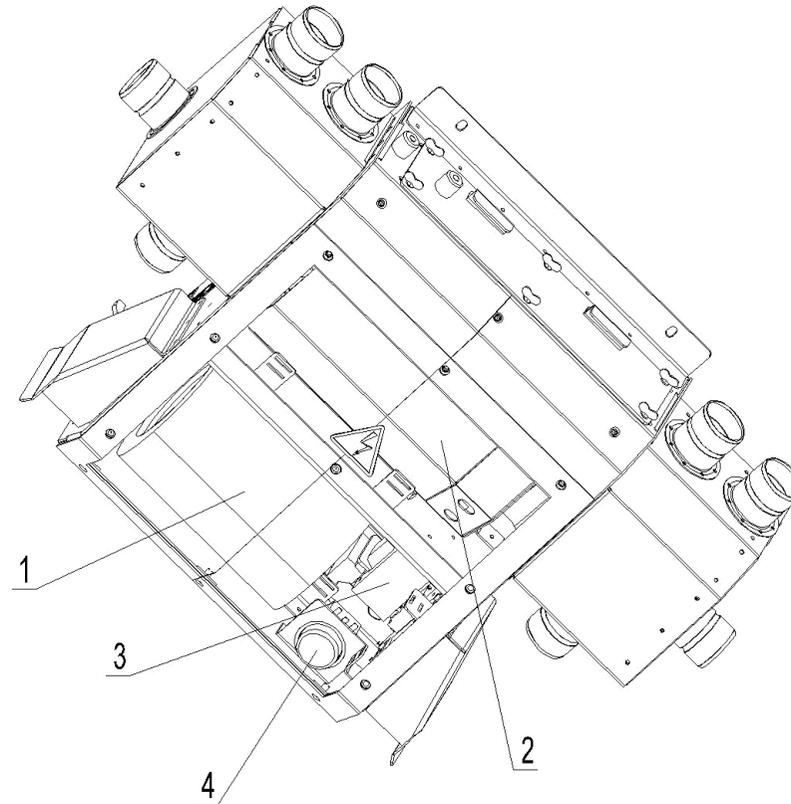
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HVAC System

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**Figure 3(1 of 2):** Cab aerotherm unit



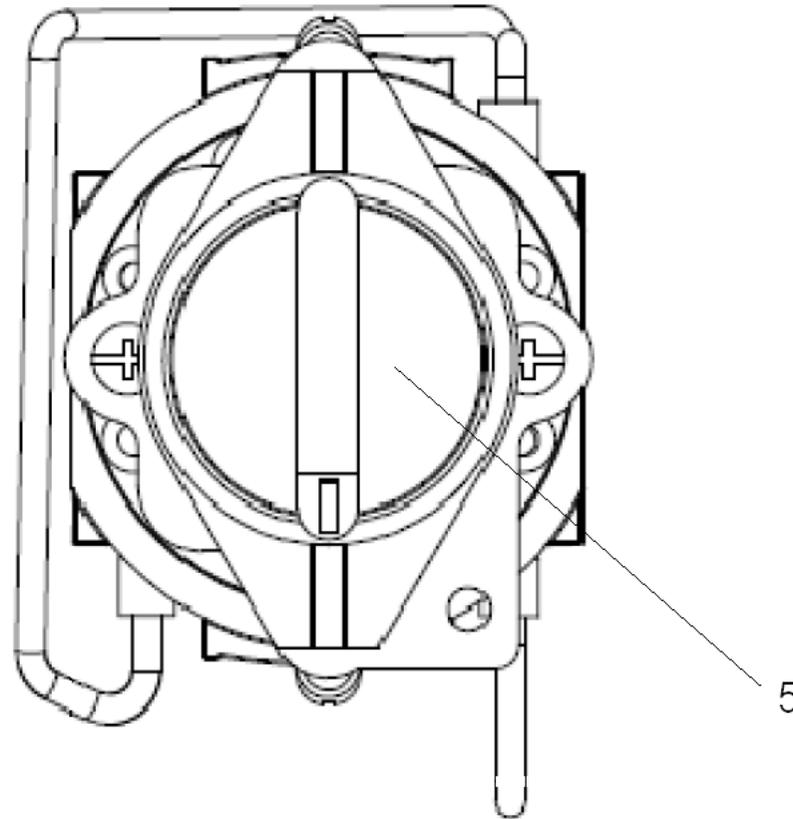
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HVAC System

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**Figure 3(2 of 2):** Cab aerotherm unit



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HVAC System

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**Table 3: Cab aerotherm unit**

SPP: Spare part/EWP: Easily worn part/FAP: fastening part/LRU: Line replaceable unit/SRU: secondary replaceable unit/ MRU: main replaceable unit

1	2	3				4	5	6	7	8	9	10	11	12
OSC	Pos	Quantity/car				Unit	Designation Specification & type	Manufacturer	Manufacturer No	Vehicle manufacturer Part No	SMC No	Drawing No	Category SPP EWP FAP	TRU LRU SRU MRU
		DT1	M1	M2	DT2									
	1	1			1	2	Supply air fan	EBM	12.0201.0073		D2E133-AM47-01	SPP	LRU	
	2	1			1	2	Electrical heater		12.0400.0109		KS97E100.000-04A.Z3	SPP	LRU	
	3	1			1	2	Single-phase transformer		12.0511.0010		MEOT-0300-400/80-230	SPP	LRU	
	4	1			1	2	thermostat		12.0601.0002					
	5	1			1	2	mode & fan speed switch_cab aerotherm		12.0509.0117					

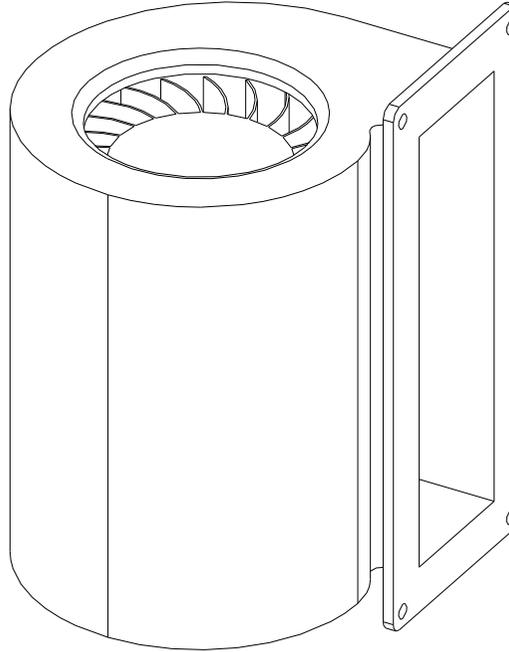
# AMSTERDAM (Alstom)

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**Figure 3-1:** Supply air fan



Name	Pos in the part list(Table 3)	Drawing number	Vehicle manufacturer part number	Comment
Supply air fan	1	D2E133-AM47-01		

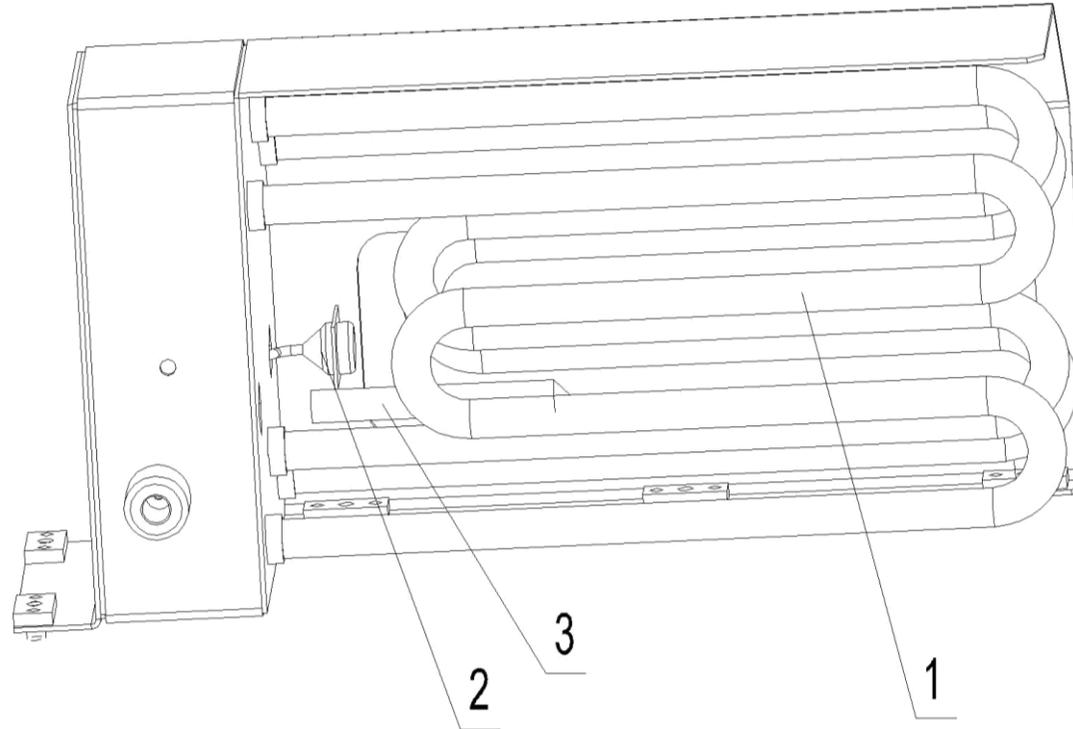
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**Figure 3-2:** Electrical heater



Name	Pos in the part list(Table 3)	Drawing number	Vehicle manufacturer part number	Comment
Electrical heater	2	KS97E100.000-04A.Z3		

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**Table 3-1: Electrical heater**

SPP: Spare part/EWP: Easily worn part/FAP: fastening part/LRU: Line replaceable unit/SRU: secondary replaceable unit/ MRU: main replaceable unit

1	2	3				4	5	6	7	8	9	10	11	12
OSC	Pos	Quantity/car				Unit	Designation Specification & type	Manufacturer	Manufacturer No	Vehicle manufacturer Part No	SMC No	Drawing No	Category SPP EWP FAP	TRU LRU SRU MRU
		DT1	M1	M2	DT2									
	1					1	heating rods	SFRT	12.0401.0007				SPP	SRU
	2					1	thermostat of heater		12.0601.0018				SPP	SRU
	3					1	thermal breaker		12.0601.0019				SPP	SRU

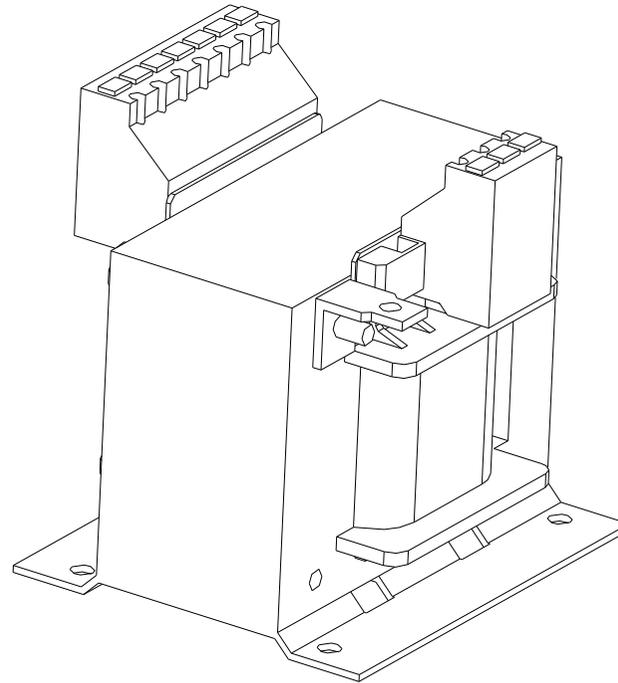
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**Figure 3-3:** Single-phase transformer



Name	Pos in the part list(Table 3)	Drawing number	Vehicle manufacturer part number	Comment
Single-phase transformer	3	MEOT-0300-400/80-230		

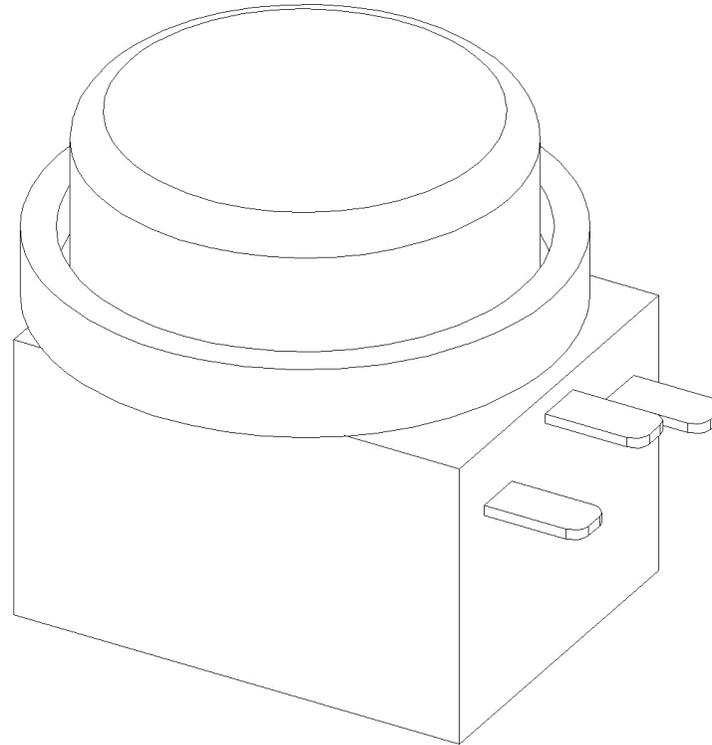
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**Figure 3-4:** thermostat



Name	Pos in the part list(Table 3)	Drawing number	Vehicle manufacturer part number	Comment
thermostat	4			