D.C. Contactors for Electrical Traction-TECNO Series

D.C. Contactors
TECNO 6 Series - Single Pole
Types T 106 - T 156 - T 206

Main features of the range

The range of TECNO series - T type contactors, compact but powerful, has been produced in compliance with the safety criteria required by EEC EUROPEAN DIRECTIVE 89/392, CEI EN 60947-4-1 and EN 1175-1 Norms.

Coils

The d.c. coils feature 6mm spade connections for the TECNO 6 series and screw connections for the TECNO 4 series.
Standard duty is:

- T-106 80% intermittent or 100% permanent mode (T-106P)
- T-156 and T-206 80% intermittent mode
- T-154 and T-204 80% intermittent mode

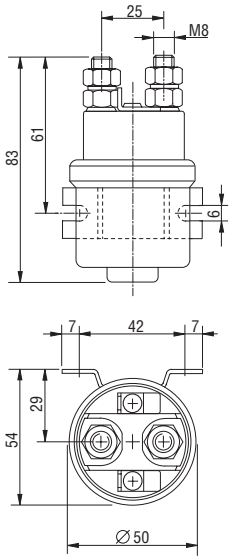
Main contacts

These contactors have double breaking contacts, in Ag-CdO special alloy, arc resistant and suitable for heavy duty.

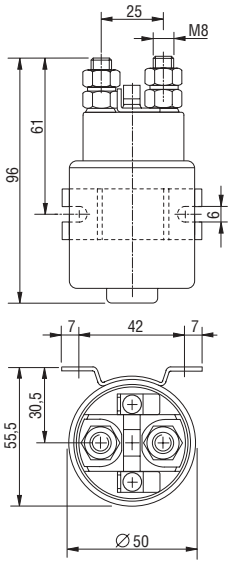
Integral protection

The contactor casing fully protects the contacts from oil, water and dust.

Recommended working position: either horizontal, or vertical with the poles at the top.



T 106



T 156 - T 206

PERFORMANCES

Contactor		T-106	T-156	T-206
Nominal operating current at 50% intermittent duty, 300 op/h	I_e	120A	150A	180A
Thermal current rating, permanent duty	I_{th}	80A	100A	150A
Nominal voltage	U_e	12V 24V	12V 24V	12V 24V
Breaking capacity with 15 ms time constant		480A	600A	720A
Category of usage		DC5	DC5	DC5
Working voltage limits		0,7-1,1Vn	0,7-1,1Vn	0,7-1,1Vn
Coil power dissipation	80% 100%	12W 8W	16W	20W
Operating time	pull-in time drop-out time	≤ 30ms ≤ 10ms	≤ 30ms ≤ 10ms	≤ 30ms ≤ 10ms
Max. torque at terminal board		60 kgcm	60 kgcm	60 kgcm
Mechanical life	op.n.	$2x10^6$	$2x10^6$	$2x10^6$
Contact material		AgCdO	AgCdO	AgCdO
Main contacts		1NO	1NO	1NO
Codes		***E T106A***	***E T156A***	***E T206A***

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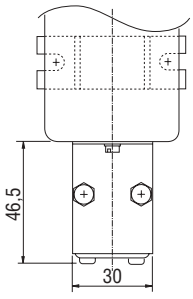
D.C. Changeovers
TECNO 6 Series
Types T 106C - T 156C - T 206C

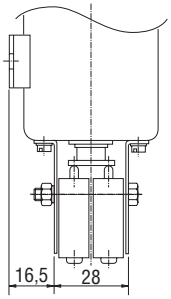
Main features

Type T 106C, T 156C and T 206C changeovers have 1NO 1NC main contacts.
The d.c. coils have 6 mm. spade connections.
Standard duty for these contactors and for the corresponding motor reversers is 50% intermittent, with maximum operating time 15 mins. (temporary duty).
The NC contacts are not suitable for interrupting or switching-on current.

Auxiliary contact blocks

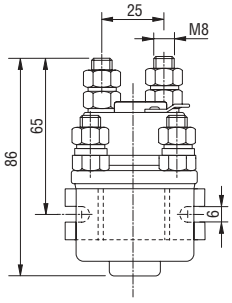
Upon request, auxiliary contact blocks can be mounted on types T 156, T 206, T 156C, T206C, as well as on the relative motor reversers of the TECNO 6 series.

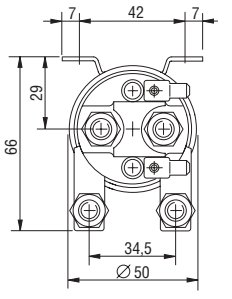




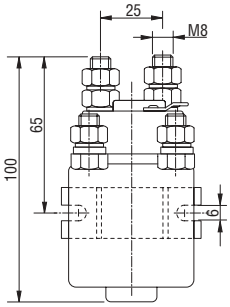
Usage limits

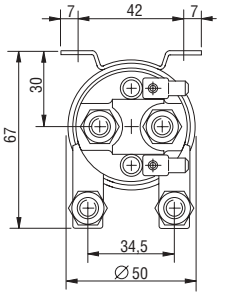
AC 15	250 V	-	10A/3A
DC 13	24V	-	5A





T 106C





T 156C - T 206C

PERFORMANCES

Contactor		T-106 C	T-156 C	T-206 C
Nominal operating current at 50% intermittent duty, 300 op/h	I_e	120A	150A	180A
Thermal current rating, permanent duty	I_{th}	80A	100A	150A
Nominal voltage	U_e	12V 24V	12V 24V	12V 24V
Breaking capacity with 15 ms time constant		480A	600A	720A
Category of usage (for NO contact)		DC5	DC5	DC5
Working voltage limits		0,7-1,1Vn	0,7-1,1Vn	0,7-1,1Vn
Coil power dissipation		22W	22W	22W
Operating time	pull-in time drop-out time	≤ 25ms ≤ 8ms	≤ 25ms ≤ 8ms	≤ 25ms ≤ 8ms
Max. torque at terminal board		60 kgcm	60 kgcm	60 kgcm
Mechanical life	op n	$2x10^6$	$2x10^6$	$2x10^6$
Contact material		AgCdO	AgCdO	AgCdO
Main contacts		1NO 1NC	1NO 1NC	1NO 1NC
Codes		***E T 106C***	***E T 156C***	***E T 206C***

D.C. Motor Reversers
TECNO 6 Series
Types 2T 106C - 2T 156C - 2T 206C

Main features

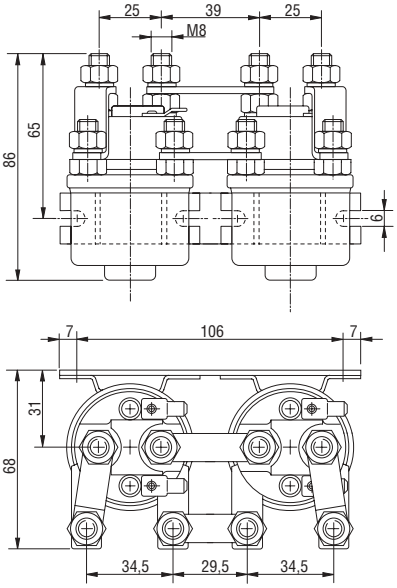
The joining of two contactors of the type T 106C, T 156C and T 206C makes the construction of corresponding motor reversers possible, and these are supplied with electrical connections and with a common bracket.
Main contacts: 2x1NO 1NC
Performances: see page 3

Correct use of the motor reverser

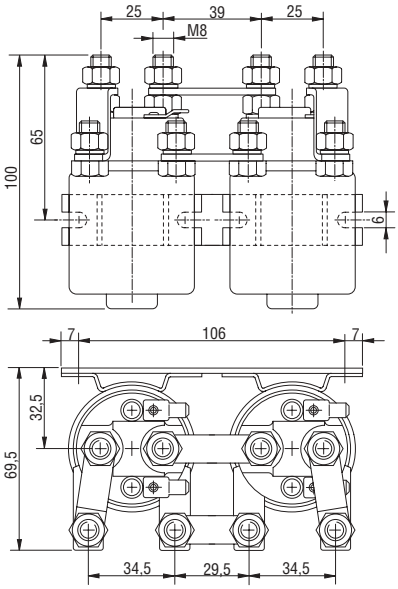
The used contactors have fast drop-out times (8 msec) and relatively long pull-in times (approx. 25 msec).
In this way, safe reversals can be carried out without the risk of the contacts being closed at the same time.
The use of suppressor diodes, however, increases drop-out times, and therefore it is important to choose the most suitable type of suppressor (diode+resistor).

TYPES AND CODES OF MOTOR REVERSERS

Type	2T-106C	2T-156C	2T-206C
Code	***E T106CC***	***E T156CC***	***E T206CC***



2T 106C



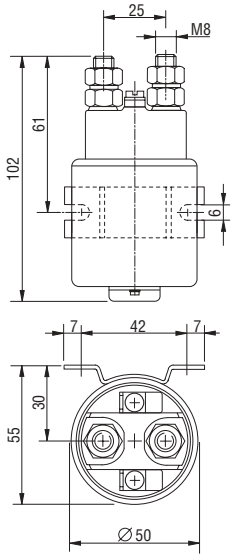
2T 156C - 2T 206C

D.C. Contactors
TECNO 4 Series - Single Pole
Types T 154 - T 204

Main features

All the contactors in the TECNO series are suitable for the traction and industrial material handling sectors using direct current, and are often used on lift trucks, industrial cleaning machines, duty on board ships and boats as well as road and rail transport vehicles.

The TECNO 4 series of contactors described here has been designed for heavy duty and strict conditions, such as for example in the presence of prolonged or high rush currents.
The TECNO 4 series coils feature screw connections.
Standard duty is 80% intermittent.



T 154 - T 204

PERFORMANCES

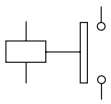
		T-154	T-204
Contactor			
Nominal operating current at 50% intermittent duty, 300 op/h	I_e	150A	180A
Thermal current rating, permanent duty	I_{th}	100A	150A
Nominal voltage	U_e	12V 24V	12V 24V
Breaking capacity with 15 ms. time constant		600A	720A
Category of usage		DC5	DC5
Working voltage limits		0,7-1,1Vn	0,7-1,1Vn
Coil power dissipation		22W	22W
Operating time	pull-in time drop-out time	≤ 45ms ≤ 10ms	≤ 45ms ≤ 10ms
Max. torque at terminal board		60 kgcm	60 kgcm
Mechanical life	op n	$2x10^6$	$2x10^6$
Contact material		AgCdO	AgCdO
Main contacts		1NO	1NO
Codes		***E T154A***	***E T204A***

Changing of nominal operating current based on U_e voltage

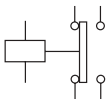
Types	U_e	12or24V	36V
T-106 T-106C (NO)	I_e	120A	75A
T-154 T-156 T-156C (NO)	I_e	150A	90A
T-204 T-206 T-206C (NO)	I_e	180A	100A

Diagrams of functioning

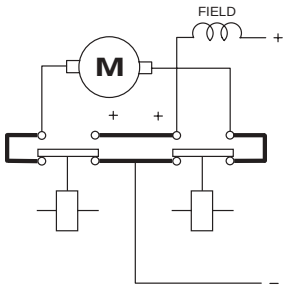
T 106 - T 156 - T 206 - T 154 - T 204



T 106C - T 156C - T 206C

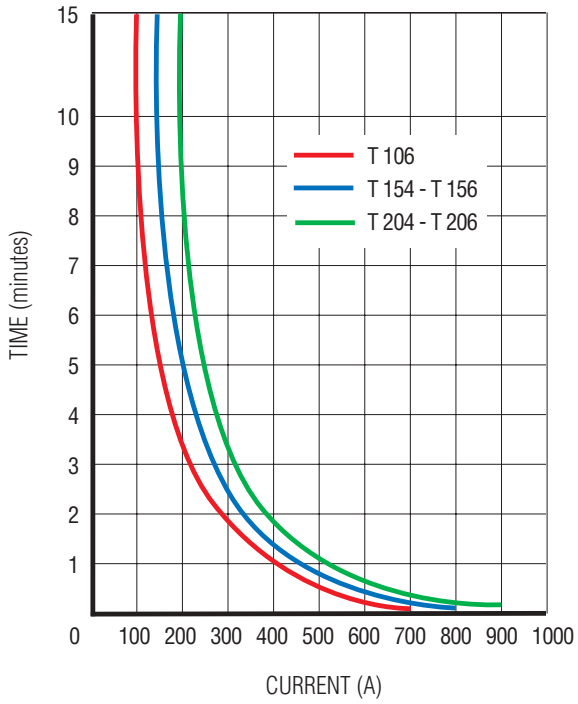


2T 106C - 2T 156C - 2T 206C



The lines ___ represent the links supplied with the motor reverser.

CONTACT PERFORMANCE



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