

Relays

Micro relays F

Characteristic quantities

Rated voltage	U_N	12 V
Test voltage	U_P	500 V _{-eff}
Sustained thermal load	P_θ	2,6 W
Upper limit temperature	ϑ_{\max}	155 °C
Thermal resistance	R_θ	50 K/W
Ambient temperature	ϑ_{amb}	-40 °C...+85 °C
Max. switching frequency	$f_{S\max}$	20 Hz
Graphical symbol		See connection diagram

Relays

Micro relays F

Normally open relay

BOSCH
Part number Tyco
BMW-Part number

0 986 332 061
V23073-B1005-X018
61 36-1 393 412

Technical data for contact side

Contact material		Ag
Minimum recommended current	$I_{Smin} (U_s = 13,5 V)$	1 A
Max. switching current ²⁾ - Make	I_{Smax} on ³⁾ / off	90 A / 30 A
Limiting continuous current - Make	I_{SN} at 23 °C / 85 °C	20 A / 15 A
Voltage drop - Make (typ.)	10 A contact current	30 mV
Increase in coil temperature (typ.)	10 A contact current	15 K
Mechanical endurance (without load)		> 1 x 10 ⁷ cycles
Electrical endurance - on NO ⁴⁾	20 A Laststrom	> 2 x 10 ⁵ cycles

²⁾ The values apply to a resistive or inductive load with suitable spark suppression. ³⁾ This current may flow for a maximum of 3 s for a make/break ratio of 1:10.

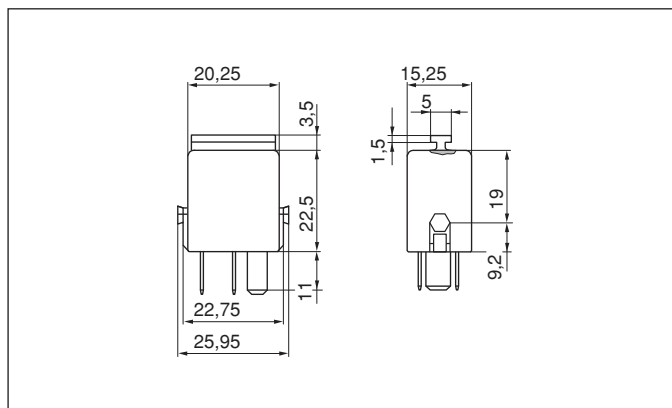
⁴⁾ $U_s = 13.5 V$ load voltage

Technical data for energizing side

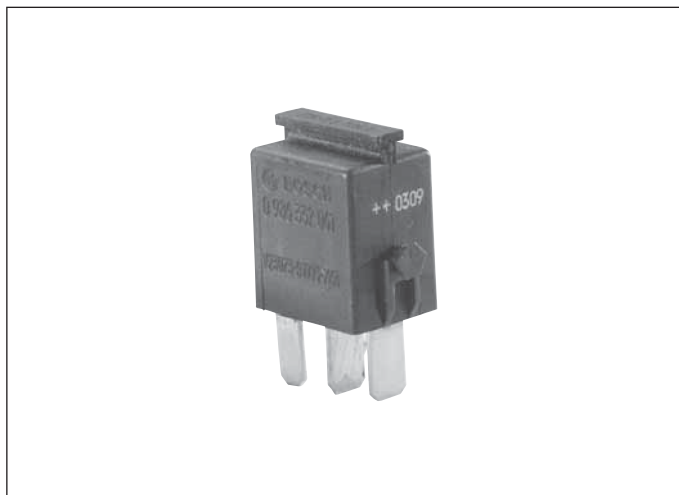
Operate voltage ¹⁾	$U_{85/86op}$	≤ 7,2 V
Release voltage ¹⁾	$U_{85/86r}$	≥ 2,0 V
Coil resistance ¹⁾	R_{Cu}	123 Ω ± 0 Ω
Parallel resistor	R_P	680 Ω
Total resistance	$R_{85/86}$	104 Ω ± 10 Ω
Nom. power consumption	P_N	1,4 W
Operate time (typ.)	t_{OP}	4,0 ms
Release time (typ.)	t_r	2,0 ms

¹⁾ At 23 °C coil temperature.

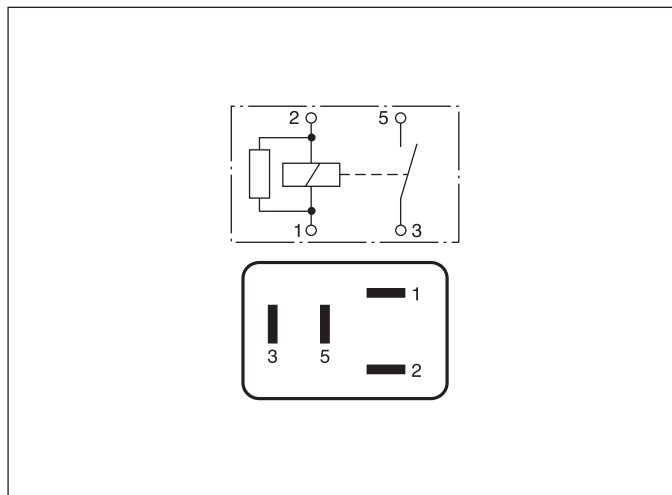
Dimensional drawing



Figure



Connection diagram



Relays

Micro relays F

Normally open relay

BOSCH
Part number Tyco
Rover-Part number

0 986 332 070
V23073-B1005-X012
YWB 10004

Technical data for contact side

Contact material		AgSnO ₂
Minimum recommended current	$I_{Smin} (U_s = 13,5 V)$	1 A
Max. switching current ²⁾ - Make	$I_{Smax} on^3) / off$	90 A / 30 A
Limiting continuous current - Make	$I_{SN} at 23 °C / 85 °C$	20 A / 15 A
Voltage drop - Make (typ.)	10 A contact current	20 mV
Increase in coil temperature (typ.)	10 A contact current	15 K
Mechanical endurance (without load)		> 1 x 10 ⁷ cycles
Electrical endurance - on NO ⁴⁾	20 A Laststrom	> 2 x 10 ⁵ cycles

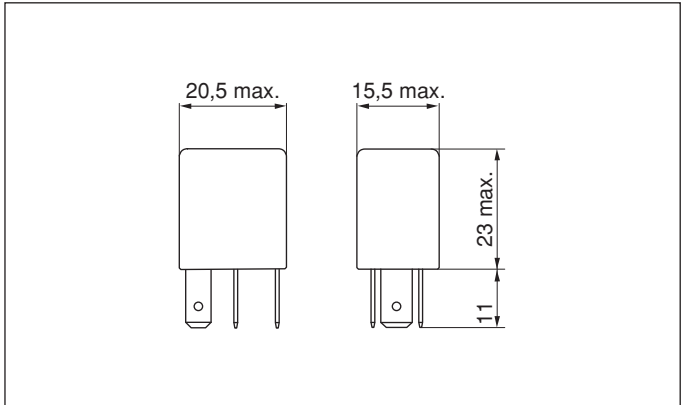
²⁾ The values apply to a resistive or inductive load with suitable spark suppression. ³⁾ This current may flow for a maximum of 3 s for a make/break ratio of 1:10.
⁴⁾ $U_s = 13.5 V$ load voltage

Technical data for energizing side

Operate voltage ¹⁾	$U_{85/86op}$	≤ 7,2 V
Release voltage ¹⁾	$U_{85/86r}$	≥ 1,3 V
Coil resistance ¹⁾	R_{Cu}	123 Ω±0 Ω
Parallel resistor	R_P	680 Ω
Total resistance	$R_{85/86}$	104 Ω±8 Ω
Nom. power consumption	P_N	1,4 W
Operate time (typ.)	t_{OP}	6,0 ms
Release time (typ.)	t_r	3,0 ms

¹⁾ At 23 °C coil temperature.

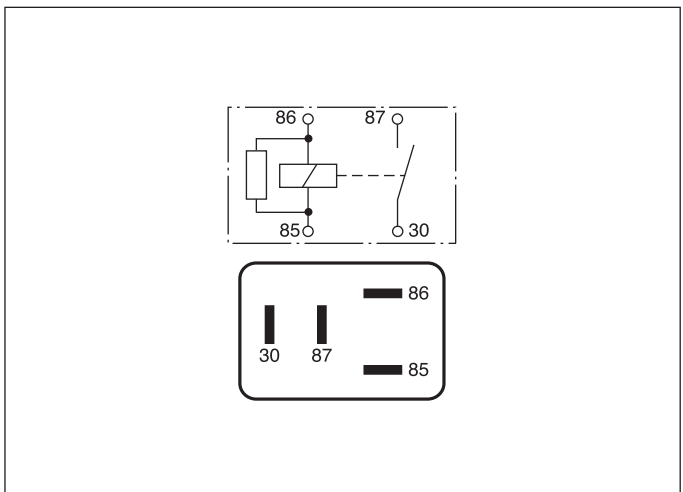
Dimensional drawing



Figure



Connection diagram



Relays

Micro relays F

Changeover relay

BOSCH
Part number Tyco
BMW-Part number

0 986 332 060
V23073-B1008-X019
61 36-4 939 415

Technical data for contact side

Contact material		Ag
Minimum recommended current	$I_{Smin} (U_s = 13,5 V)$	1 A
Max. switching current ²⁾ - Break	I_{Smax} on ³⁾ / off	20 A / 15 A
Max. switching current ²⁾ - Make	I_{Smax} on ³⁾ / off	90 A / 30 A
Limiting continuous current - Break	I_{SN} at 23 °C / 85 °C	15 A / 10 A
Limiting continuous current - Make	I_{SN} at 23 °C / 85 °C	20 A / 15 A
Voltage drop - Break (typ.)	10 A contact current	50 mV
Voltage drop - Make (typ.)	10 A contact current	30 mV
Increase in coil temperature (typ.)	10 A contact current	15 K
Mechanical endurance (without load)		> 1 x 10 ⁷ cycles
Electrical endurance - on NO ⁴⁾	20 A Laststrom	> 2 x 10 ⁵ cycles
Electrical endurance - on NC ⁴⁾	10 A Laststrom	> 1 x 10 ⁵ cycles

²⁾ The values apply to a resistive or inductive load with suitable spark suppression. ³⁾ This current may flow for a maximum of 3 s for a make/break ratio of 1:10.

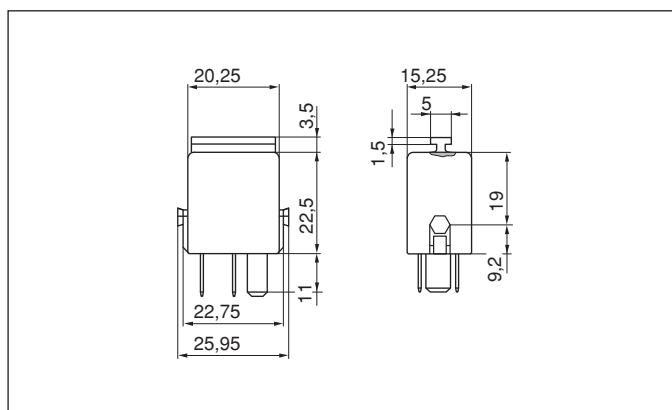
⁴⁾ $U_s = 13.5 V$ load voltage

Technical data for energizing side

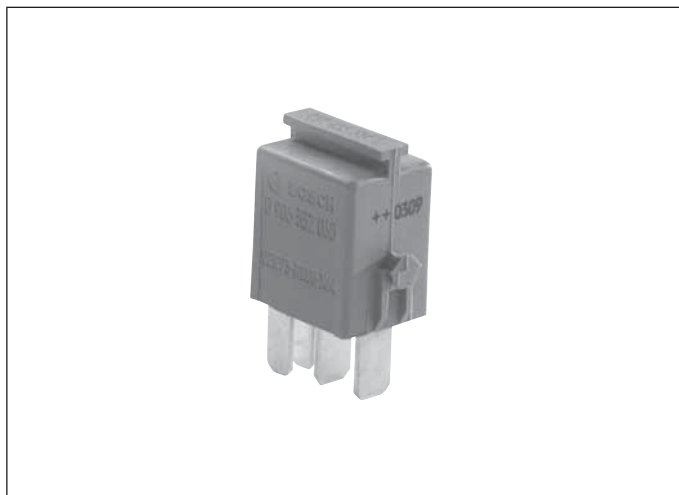
Operate voltage ¹⁾	$U_{85/86op}$	≤ 7,2 V
Release voltage ¹⁾	$U_{85/86r}$	≥ 2,0 V
Coil resistance ¹⁾	R_{Cu}	97 Ω±0 Ω
Parallel resistor	R_P	680 Ω
Total resistance	$R_{85/86}$	85 Ω±8 Ω
Nom. power consumption	P_N	1,7 W
Operate time (typ.)	t_{OP}	4,0 ms
Release time (typ.)	t_r	2,0 ms

¹⁾ At 23 °C coil temperature.

Dimensional drawing



Figure



Connection diagram

