DC MOTOR STARTING RELAYS

Ø 80 motors

Description	Assembly code	Spare part code
12V DC 150 Amp start relay + mounting kit	**S150T 12DC 80**	**M47TC0001+M47SK0801**
12V DC 150 Amp start relay + mounting kit + Faston optional connector	**S150 T 12DC 80 F**	**M47TC0001+M47SK0801+24556**
24V DC 150 Amp start relay + mounting kit	**S150T 24DC 80**	**M47TC0002+M47SK0801**
24V DC 150 Amp start relay + mounting kit + Faston optional connector	**S150 T 24DC 80 F**	**M47TC0002+M47SK0801+24556**
48V DC 150 Amp start relay + mounting kit	**S225T 48DC 80**	**M47TC0004+M47SK0801**
48V DC 150 Amp start relay + mounting kit + Faston optional connector	**S225 T 48DC 80 F**	**M47TC0004+M47SK0801+24556**

Ø 114 motors

Description	Assembly code	Spare part
12V DC 150 Amp start switch + mounting kit	**S150T 12DC 112**	**M47TC0001 + XACNH00001**
12V DC 150 Amp start relay + mounting kit + Faston optional connector	**S150T 12DC 112 F**	**M47TC0001+XACNH00001+2x24556**
24V DC 150 Amp start switch + mounting kit	**S150T 24DC 112**	**M47TC0002 + XACNH00001**
24V DC 150 Amp start relay + mounting kit+ Faston optional connector	**S150T 24DC 112 F**	**M47TC0002+XACNH00001+2x24556**
48V DC 150 Amp start relay + mounting kit	**S150T 48DC 112**	**M47TC0004+XACNH00001**
48V DC 150 Amp start relay + mounting kit+ Faston optional connector	**S150T 48DC 112 F**	**M47TC0004+XACNH00001+2x24556**
12V DC 300 Amp start switch + mounting kit	**S300T 12DC 112**	**MASRH00001 + XACNH00001**
12V DC 300 Amp start relay + mounting kit + Faston optional connector	**S300T 12DC 112F**	**MASRH00001+XACNH00001+x24556**

Ø 125-151 motors

Description	Assembly code	Spare part code
12V DC 300 Amp start switch + mounting kit	**S300T 12DC 125_151**	**MASRH00001**
12V DC 300 Amp start relay + mounting kit + Faston optional connector	**S300T 12DC 125_151 F**	**MASRH00001+2x24556**
24V DC 300 Amp start switch + mounting kit	**S300T 24DC 125_151**	**MASRH00002+ M47SK1121**
24V DC 300 Amp start relay + mounting kit + Faston optional connector	**S300T 24DC 125_151 F**	**MASRH00002+M47SK1121+x24556**

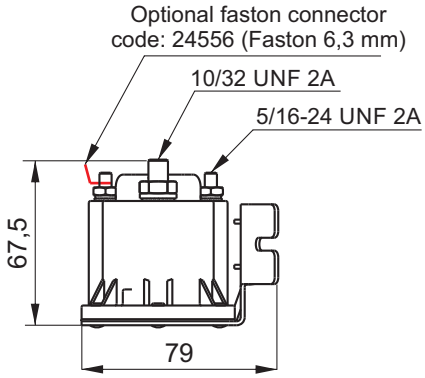
Notes: The starting switch mounting kit is provided when specifying the **/S150**T as motor option in the PPC assembly code. When ordering spare starting switches, they must be ordered separately (code: M47SK0801).
The coupling is already included when specifying the motor in the PPC assembly code. It is to be indicated only when ordering PPC with no motor but with a coupling. The reversible start switch cannot be mounted on the motor. It must be fixed on the machine.
For environment with humidity over 40%, motors with optional IP67 protection index are available and recommended. Please ask our sales office. The thermal switch is set at 110-120°C.
The motors indicated above in particular operating cycles can reach temperatures of 100-110 °C on the outher part of the housing, it is recommended to use the special protective cover (MACVH00001) to prevent burning injuries.

DC MOTOR STARTING RELAYS

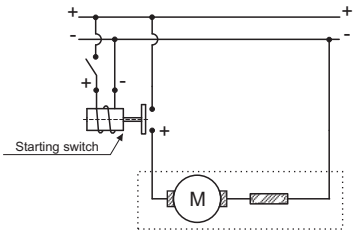


Starting relay 150A
for motors Ø80 - Ø114

Weight: 0,38kg
Protection degree: IP67
Max current draw: 2A@12VDC - 1A@24VDC - 0,5A@48VDC
Standard temperature range: -40°C to +82°C
Poles thread: 2 x 10-32 UNF 2A; 2 x 5/16-24 UNF 2A
UL starting relays available on request (add UL at the end of the code)



Electrical connection scheme



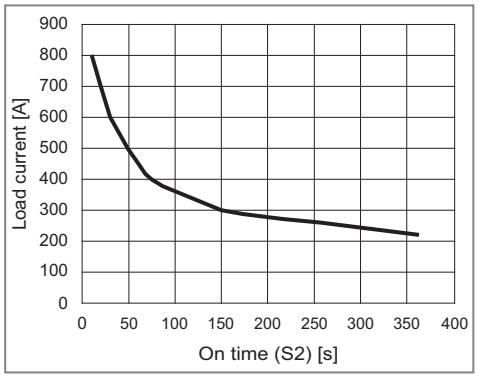
Nominal current	Peak Current (3ms) *	Spare part code
150A	800A	**M47TC0001 (12V DC)** **M47TC0002 (24V DC)**
200A	800A	**MASRH00004 (12V DC)** **MASRH00005 (24V DC)**
225A	600A	**M47TC0004 (48V DC)**
300A	1000A	**MASRH00001 (12V DC)** **MASRH00002 (24V DC)**

* on resistive load

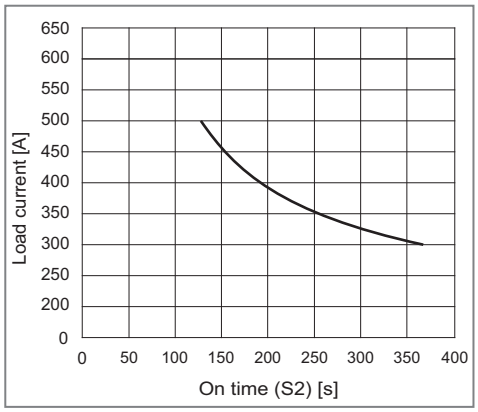
150 A	M47TC0001 12V DC	M47TC0002 24V DC	M47TC0004 48V DC
Max Sustained Duty Cycle (S3)	25%	25%	25%
Max On-Time (S2) @ 150A	6 min	6 min	6 min
Pull In Voltage at 25°C	7,6 V	15,5 V	33 V
Hold minimum Voltage at 25°C	3,5 V	7,0 V	14 V
Coil Resistance at 25°C [Ohms]	5,7 Ω	20,1 Ω	86 Ω

300 A	MASRH00001 12V DC	MASRH0002 24V DC
Max Sustained Duty Cycle (S3)	25%	25%
Max On-Time (S2) @ 300A	6 min	6 min
Pull In Voltage at 25°C	8,5 V	15 V
Hold minimum Voltage at 25°C	4,5 V	7,0 V
Coil Resistance at 25°C [Ohms]	5,37 Ω	20,1 Ω

Typical Intermittent Duty Unit Performance in a + 25°C Ambient using 2 foot lenght (0,6 m) of 2#AWG (33,6 mm^2) cable. ON time versus Load current reach 90°C temperature.



Typical Intermittent Duty Unit Performance in a + 25°C Ambient using 2 foot lenght (0,6 m) of 2#AWG (33,6 mm^2) cable. ON time versus Load current reach 110°C temperature.



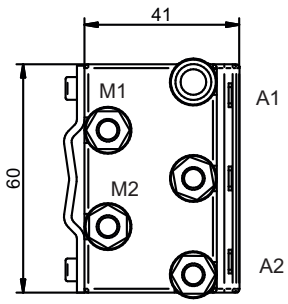
Recommended working position: either horizontal or vertical with poles set upwards.
Optional faston connector code: 24556.
All tests are made at environmental temperature of 25 °C.

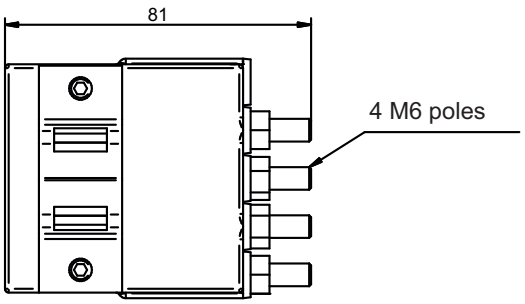
25-01

DC MOTOR STARTING RELAY FOR REVERSIBLE UNITS



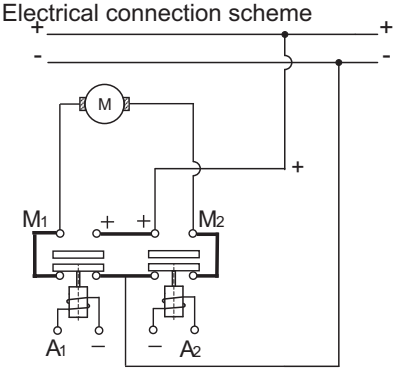
Starting relay (reversible) 100A
for reversible motors and pumps





Weight: 0,5kg
Protection degree: IP65
Max current draw: 1A@12VDC - 0,5A@24VDC
ED: 50%
Max environment temperature: 40°C
Poles thread: 4 x M6

Electrical connection scheme



Nominal current	Peak Current (40ms)	Spare part code
100A	400A	**M47NB1001 (12V DC)** **M47NB1002 (24V DC)**

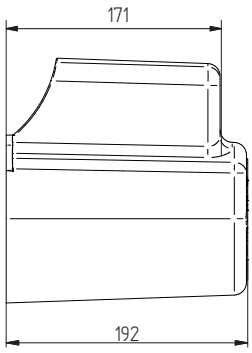
Recommended working position: either horizontal or vertical with poles set upwards.
All tests are made at environmental temperature of 25 °C.

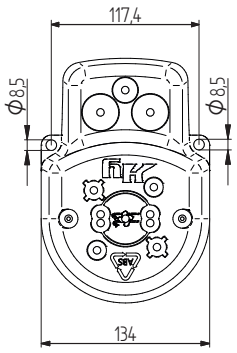
DC MOTOR OPTIONS



Plastic cover for DC motors Ø 114
Weight: 0,35 kg

Assembly code
MC
Spare part code
MACVH00003



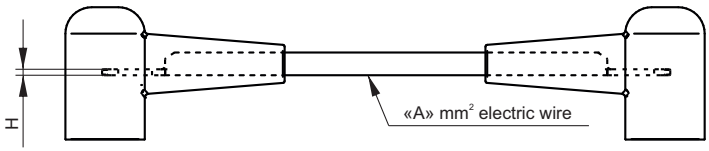


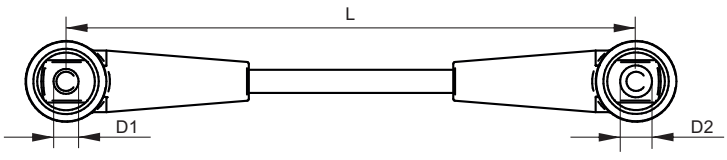
Note: this cover is not intended to improve IP grade but to avoid inadvertent contact with high temperature motor surface.
DC motors S2/S3 values as per the relevant tech tables must be downgraded due to reduced motor ventilation.



Mounting kit for DC motors

Motor Type	Mounting Kit code	Mounting kit sub-parts	
		Power cable	Fixing system
Ø 80 Flexible	M47SK0801	M47SK000A	Clamp band E60513080
Ø 114 Rigid	XACNH00001	MACNH00001	2xscrew TCEIM5X8 + 2xwasher WASHL05
Ø 125 Rigid	XACNH00001	MACNH00001	2xscrew TCEIM5X8 + 2xwasher WASHL05
Ø 114 Ø 125 Ø151 Flexible	M47SK1121	M47SK000C	2xscrew TCEIM5X8 + 2xwasher WASHL05
Ø151 12V DC Flexible	M47SK1151	M47SK000H	2xscrew TCEIM5X8 + 2xwasher WASHL05

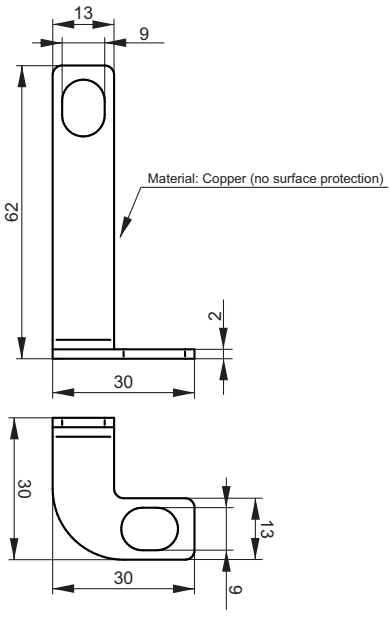




Power Cables

Spare part	L (mm)	A (mm²)	D1 (mm)	D2 (mm)	H (mm)
M47SK000A	148	10	6	8	1,5
M47SK000C	158	16	8	8	2
M47SK000H	163	25	8	8	2

Spare part code
MACNH00001



The use of the MACNH00001 component in marine environments is not recommended.

DC MOTOR OPTIONS

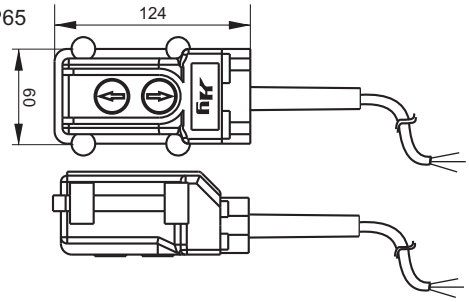


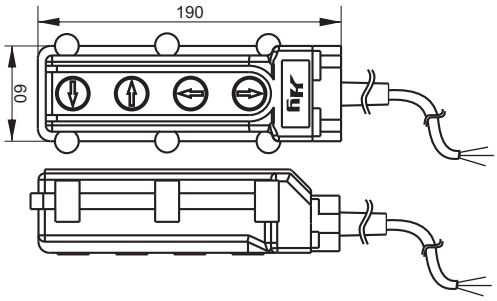
Description	Spare part code
Wired remote control with 2 buttons single/double acting 3 m lenght	**P0201**

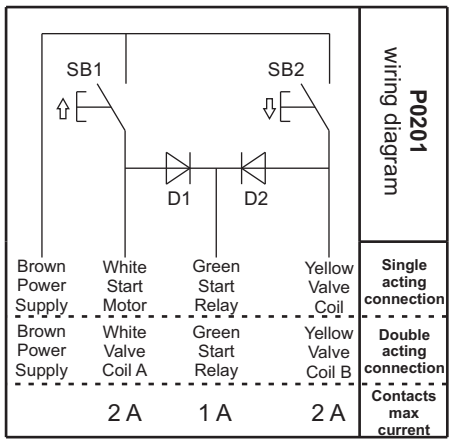
Description	Spare part code
Wired remote control with 4 buttons double acting 3 m lenght	**P0202**

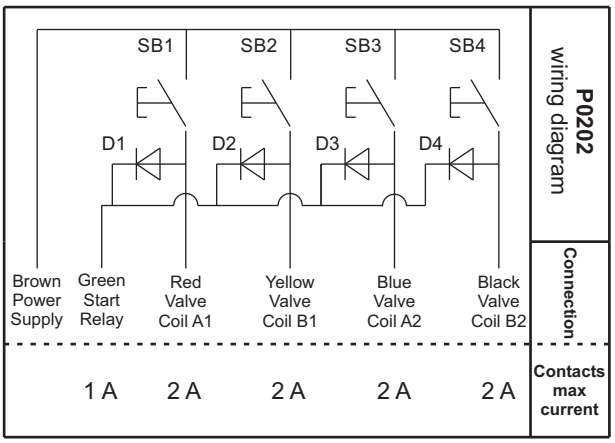
Wired remote control

Weight: 0,60 kg
Protection degree: IP65
DC only use

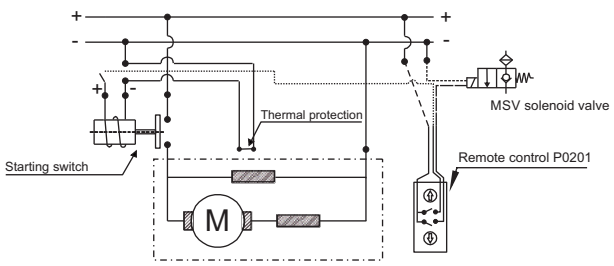




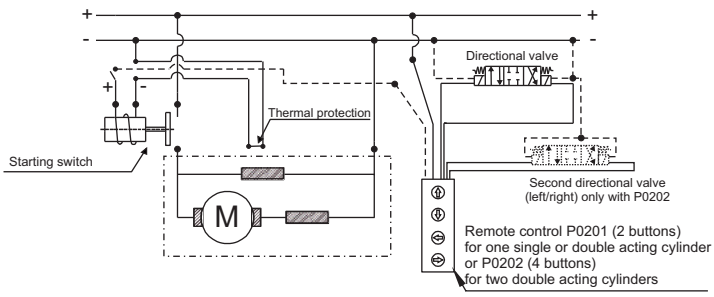




Single acting cylinder



Double acting cylinder



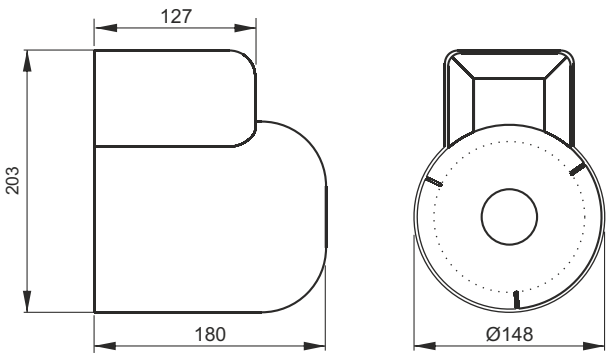
DC MOTOR OPTIONS



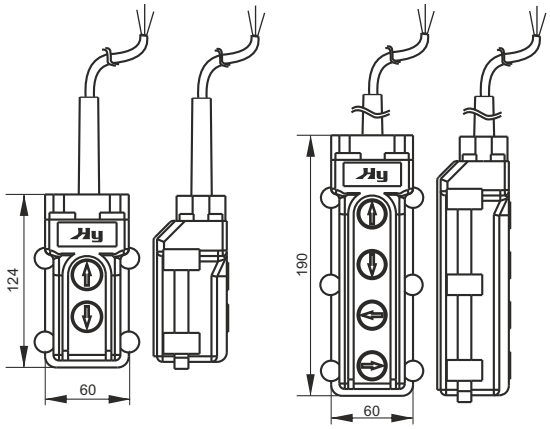
Plastic cover for DC motors Ø 114
Weight: 0,27 kg



Wired remote control
Weight: 0,60 kg
Protection degree: IP65
Max Current @ Voltage:
2A@400VAC; 5A@220VAC/24VDC/12VDC



Assembly code	Spare part code
MC	F16000001

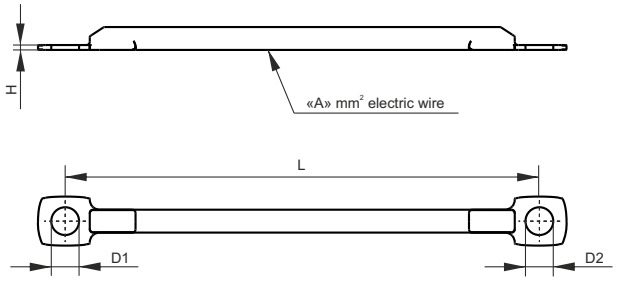


Description	Spare part code
Wired remote control with 2 buttons single/double acting	P0201
Wired remote control with 4 buttons double acting	P0202



Mounting kit for DC motors

Motor Type	Mounting Kit code	Mounting kit sub-parts	
		Power cable	Fixing system
Ø 80	M47SK0801	M47SK000A	Clamp band E60513080
Ø 114	M47SK1121	M47SK000C	Screws TCEIM5X10 + washer WASHL05
Ø 125 - 151	M47SK1251	M47SK000E	Screws TCEIM5X10 + washer WASHL05



Power Cables

Spare part	L (mm)	A (mm²)	D1 (mm)	D2 (mm)	H (mm)
M47SK000A	130	10	6	8	1,5
M47SK000B	130	2	6	5	1,5
M47SK000C	130	16	8	8	2
M47SK000D	130	2	8	5	1,5
M47SK000E	130	25	10	8	2
M47SK000F	130	2	10	Faston 6,3 mm	1,5