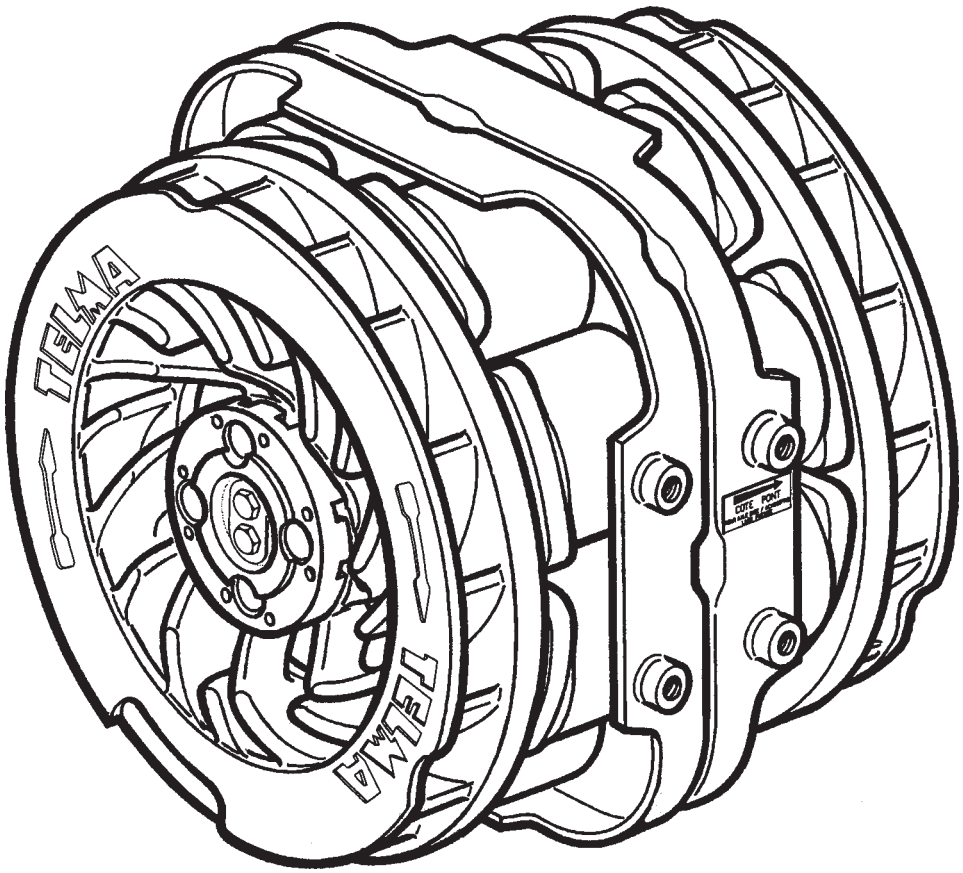
Telma

TECHNICAL SPECIFICATIONS



AC 50 – 80 Retarder

Identification

Code N° : C P 2 3 ☐ ☐ ☐ ☐

- AC 50–80
- Variant
  - 23 : insulated earth return
- Voltage index : 1 = 12 V, 2 = 24 V
- Coupling index (see on page 5)

Specifications

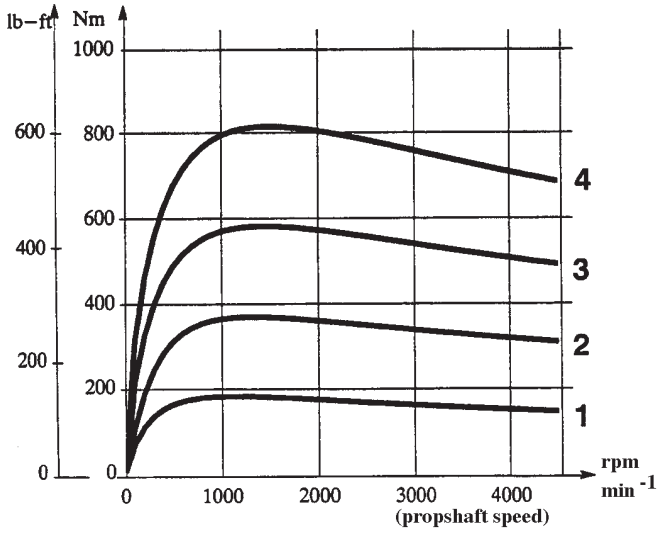
MASS	Total : 134 kg *295 lb*	Rotors : 34 kg *75 lb*	Stator : 100 kg *220 lb*
RANGE of application * G.C.W.	6 / 9 metric tons		
Maximum BRAKING TORQUE	800 Nm / *589 lb–ft*		
Rotors INERTIA	0,59 kgm ^{2} / *14 lb–ft* ^{2}		
Maximum ROTATIONAL SPEED	4500 min $^{-1}$		
Maximum TRANSMISSIBLE TORQUE	10000 Nm / *7369 lb–ft*		

*** for specific applications, consult our Technical Department**

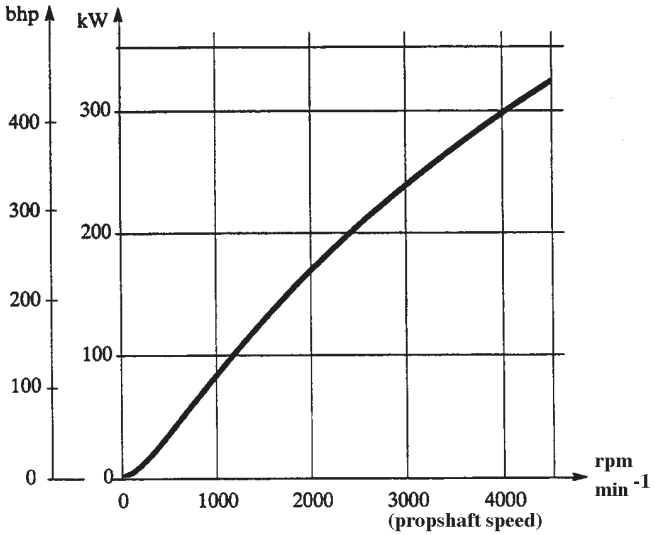
Curves

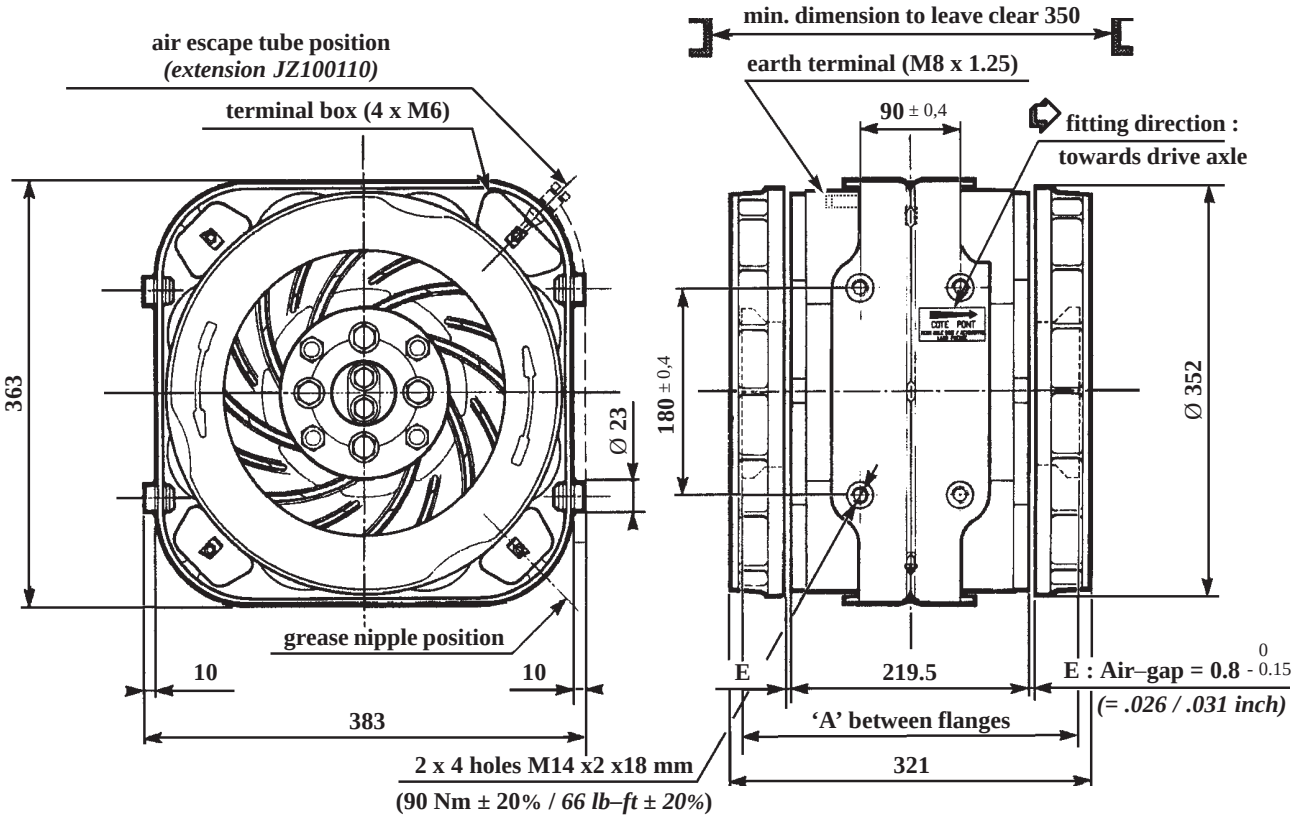
TORQUE

1–2–3–4 : control stages



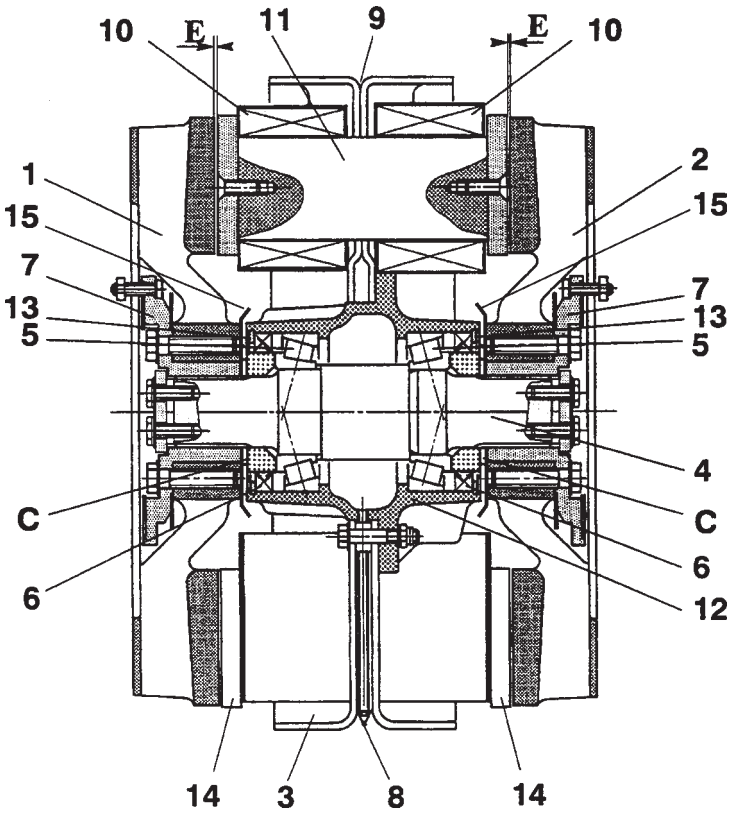
POWER





NOTE : all the dimensions are given in millimeters 1 mm = .039 inch

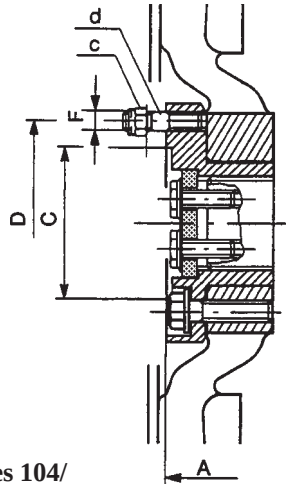
Cross–section view



E – Air–gap
C – Air–gap adjusting shims

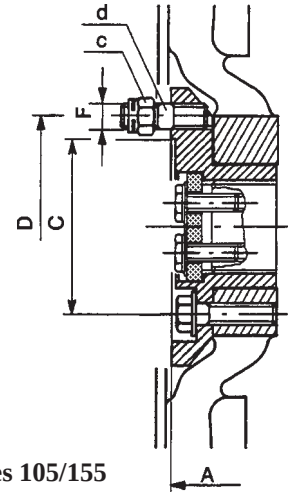
1 – Front rotor
2 – Rear rotor (axle side)
3 – Stator
4 – Shaft
5 – Bearing
6 – Seal with double lip
7 – Coupling flange
8 – Grease nipple
9 – Air escape tube
Air escape tube extension JZ100110
(to be ordered separately)
10 – Coil
11 – Pole
12 – Hub
13 – Circlips
14 – Pole shoe
15 – Deflector

Cross–section views



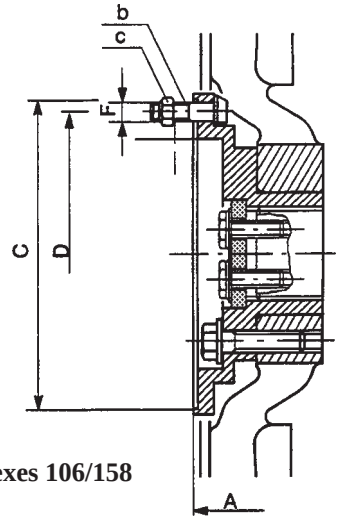
indexes 104/ 124/154

Figure 1



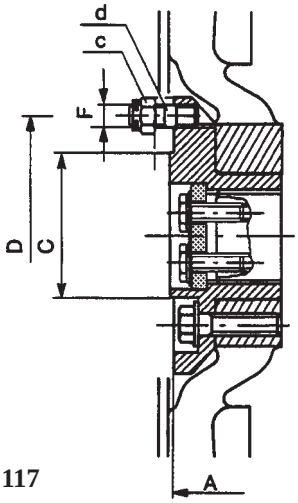
indexes 105/155

Figure 2



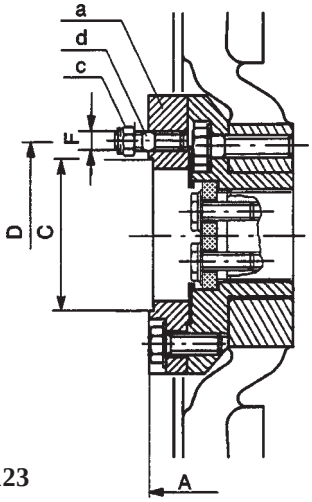
indexes 106/158

Figure 3



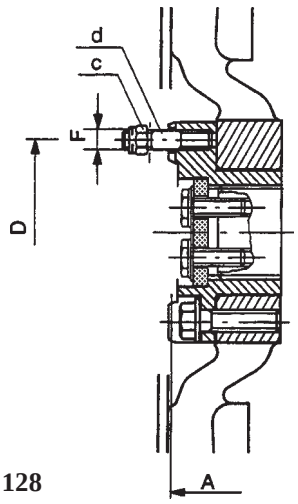
index 117

Figure 4



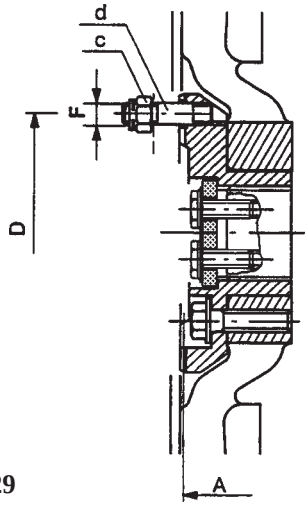
index 123

Figure 5



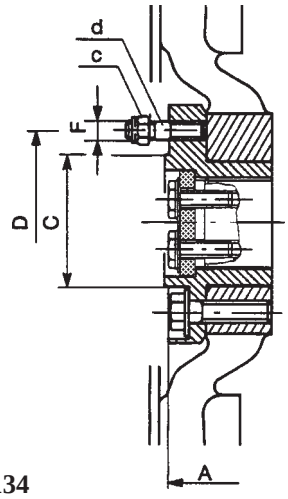
index 128

Figure 6



index 129

Figure 7



index 134

Figure 8

Specifications

A	C	D	E	F	SUPPLIED FASTENERS	Fig.	Rotor securing 4 screws	Rotor securing 5 screws
index 104 : SAE 1400 – metric thread					***Ref. 12 V : CP231104***	***Ref. 24 V : CP232104***		
304.1	69.85	95.27	4	M12x1.50	studs (d) nuts (c)	1	x	
index 105 : SAE 1500 – metric thread					***Ref. 12 V : CP231105***	***Ref. 24 V : CP232105***		
304.1	95.25	120.67	4	M14x1.50	studs (d) nuts (c)	2	x	
index 106 : SAE 1600 – metric thread						***Ref. 24 V : CP232106***		
323.1	168.22	155.52	8	M10x1.00	screws (b) nuts (c)	3	x	
index 117 : DIN Ø 150 mm						***Ref. 24 V : CP232117***		
304.1	90	130	8	M12x1.50	studs (d) nuts (c)	4	x	
index 123 : Mercedes – Benz Ø 120 mm					***Ref. 12 V : CP231123***	***Ref. 24 V : CP232123***		
346.1	82.5	101.6	6	M10x1.00	adapter (a) studs (d) nuts (c)	5	x	
index 124 : Mercedes – Benz Ø 130 mm					***Ref. 12 V : CP231124***	***Ref. 24 V : CP232124***		
304.1	82.56	112	8	M10x1.00	studs (d) nuts (c)	1	x	
index 128 : Ø 120 mm cross – serration						***Ref. 24 V : CP232128***		
312.1		100	4	M10x1.00	studs (d) nuts (c)	6	x	
index 129 : Ø 150 mm cross – serration						***Ref. 24 V : CP232129***		
312.1		130	4	M12x1.50	studs (d) nuts (c)	7	x	
index 134 : DIN Ø 120 mm					***Ref. 12 V : CP231134***	***Ref. 24 V : CP232134***		
299.7	75	101.5	8	M10x1.00	studs (d) nuts (c)	8	x	
index 154 : SAE 1350/1410 – british/american thread					***Ref. 12 V : CP231154***	***Ref. 24 V : CP232154***		
304.1	69.85	95.27	4	11.1	7/16” 20 UNF studs (d) nuts (c)	1	x	
index 155 : SAE 1480/1550 – british/american thread					***Ref. 12 V : CP231155***	***Ref. 24 V : CP232155***		
304.1	95.25	120.67	4	12.7	1/2” 20 UNF studs (d) nuts (c)	2	x	
index 158 : SAE 1550/1610 – british/american thread					***Ref. 12 V : CP231158***	***Ref. 24 V : CP232158***		
323.1	168.22	155.52	8	9.52	3/8” 24 UNF screws (b) nuts (c)	3	x	

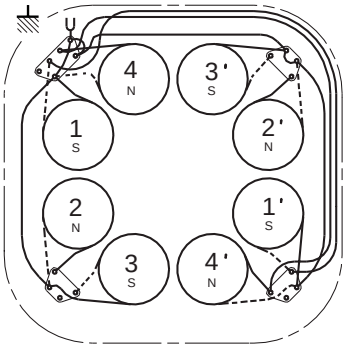
A – Distance between the 2 coupling flanges (see dimensions on page 3)
C – Centering diameter
D – Pitch circle diameter
E – Number of securing screws
F – Specifications of the securing screws

NOTE : For all other couplings, please consult our Technical Department.
All the dimensions are given in millimeters 1 mm = .039 inch

VOLTAGE (according to vehicle equipment)	12 V	24 V
Voltage INDEX	1	2
RESISTANCE per CIRCUIT (± 5 %) at 20 °C *(68 °F)*	0.3 Ω	1.19 Ω
RESISTANCE per COIL (± 5 %) at 20 °C *(68 °F)*	1.19 Ω	
INSULATION RESISTANCE	> 1 MΩ	
Nominal average AIR–GAP	$0.8\ ^{0}_{-0.15}$ mm *(.025 / .031 inch)*	

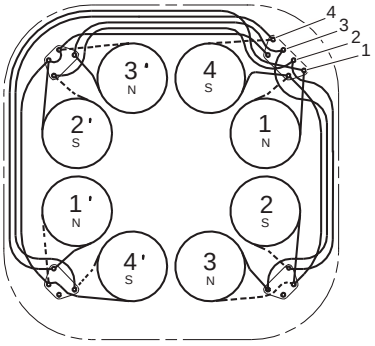
12 V specifications

FRONT SIDE



red sleeve
blue sleeve

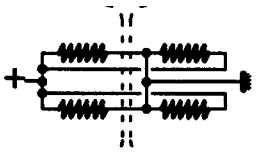
REAR SIDE



CURRENT CONSUMPTION
(at 20 °C *(68 °F)* according to control stage)

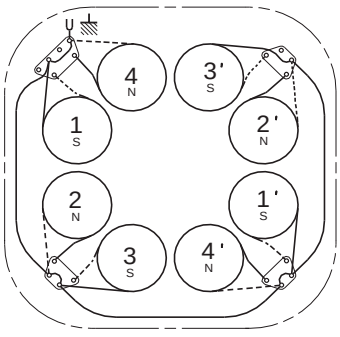
STAGE	1	2	3	4
CURRENT ± 5% (A)	40	81	121	161

LAYOUT OF ONE STAGE



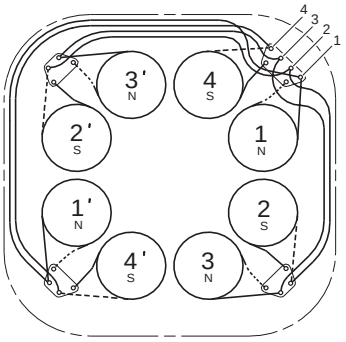
24 V specifications

FRONT SIDE



red sleeve
blue sleeve

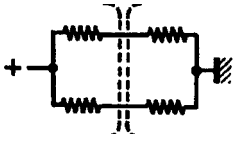
REAR SIDE



CURRENT CONSUMPTION
(at 20 °C *(68 °F)* according to control stage)

STAGE	1	2	3	4
CURRENT ± 5% (A)	20	40	60	81

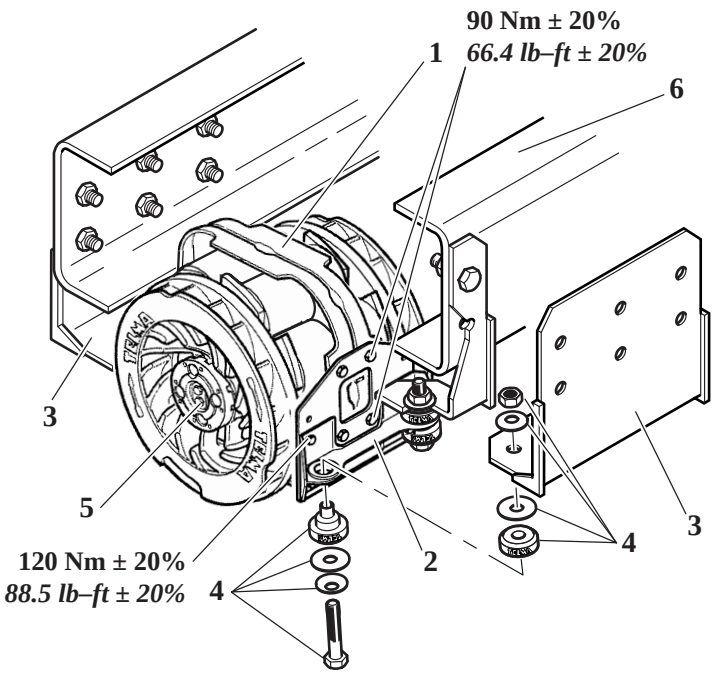
LAYOUT OF ONE STAGE



Fitting example

on chassis

External hanging securing



1 – Retarder

2 – Set of 2 side – plates

3 – Set of 2 consoles (JZ100743)

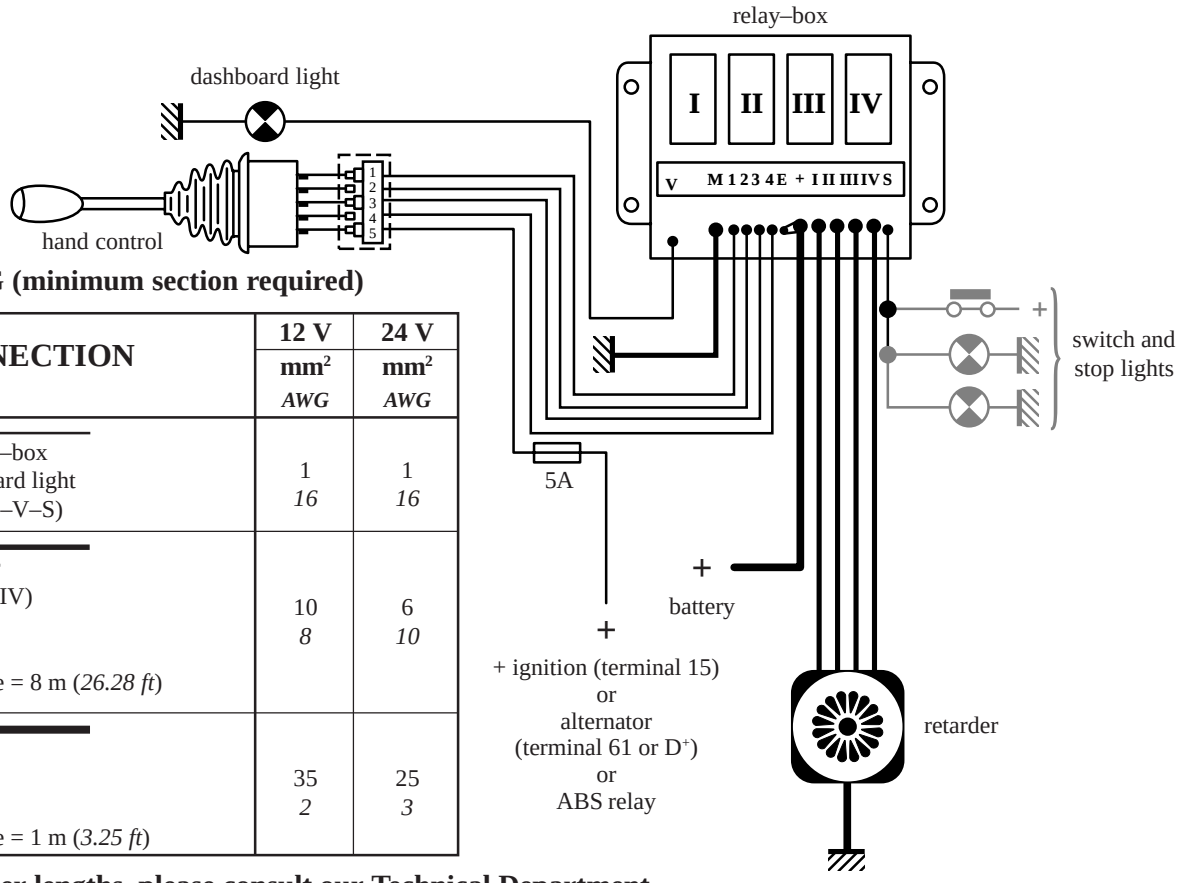
4 – Set of 4 rubber mounts with fasteners (230 Nm/*169.6 lb–ft*)

5 – Coupling flange

6 – Chassis

Wiring diagram (example with hand control)

Consult our Technical Department for automatic control and governing devices (ex. : ABS ...)



WIRING (minimum section required)

CONNECTION	12 V mm² *AWG*	24 V mm² *AWG*
hand control / relay–box relay–box / dashboard light (terminals 1–2–3–4–V–S)	1 *16*	1 *16*
relay–box / retarder (terminals I–II–III–IV) relay–box earth (terminal M) max length par wire = 8 m (*26.28 ft*)	10 *8*	6 *10*
retarder earth relay–box feeder (terminal +) max length par wire = 1 m (*3.25 ft*)	35 *2*	25 *3*

NOTE : for longer lengths, please consult our Technical Department.