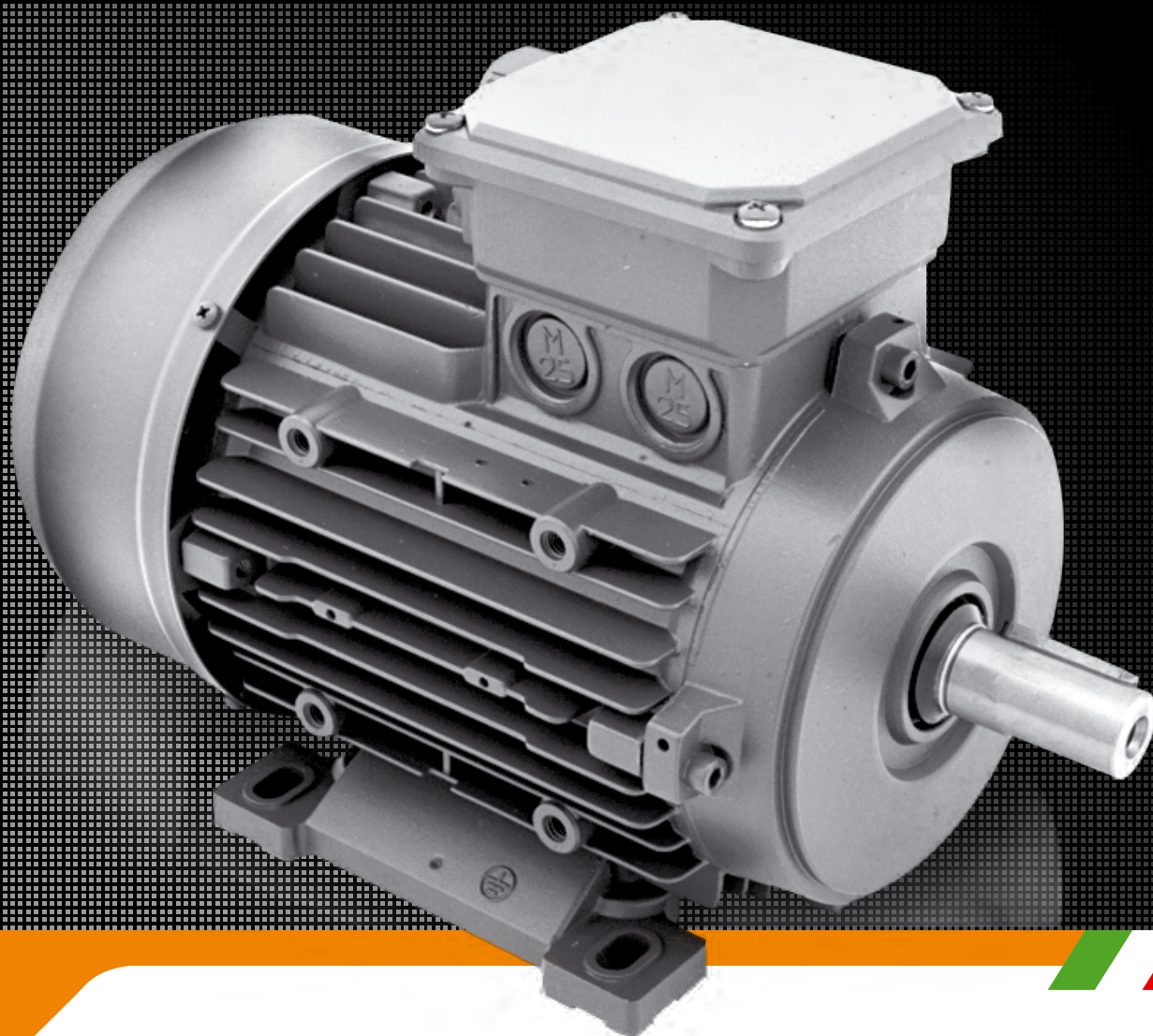




SICMEMOTORI
FROM HI-TECH TO PASSION



A.C. Motor for Railway

Auxiliary Application

EN



ORANGE1 HOLDING

A dynamic, strong and ambitious Group:

Orange1 Holding is an international renown Group, one of the most important European manufacturers of single-phase and three-phase asynchronous electric motors. It has an annual capacity of more than 1 million motors and 5 million electric stators with an annual turnover of approx 200 million euro and more than 1200 workers in 11 production facilities. The group, established in 1971 by Leone Donazzan, chaired today by his son Armando Donazzan, is strongly focused on technological innovation, performance and customization to meet individual clients requirements. As a group of 13 companies it has a powerful advantage: the strength in numbers.



SICMEMOTORI

FROM HI-TECH TO PASSION

Orange1 with Sicme Motori S.r.l. strenghtens its leadership in vectorial and synchronous motors. Sicme has been producing AC motors, variable speed and high quality DC motors for 50 years and it represents a benchmark of excellence for its technology providing the best economical solutions for many different applications. It produces asynchronous motors up to 3700 kW, synchronous motors up to 2700 kW, hydroelectric generators up to 3000 kW and mini-wind generators up to 200 kW. And among many other projects we have developed and built the motor wheels for the Rover which will land on Mars. This was made possible thanks to our high technology. Since 2002 it has been cooperating actively with the Institute of Electrical Engineering of the Polytechnic of Turin and it has been one of the world's largest producers of wind generators. In the mini-wind market it has developed a production of 20-25-50 kW and ready-to-use products for 60 to 200 kW. That's the reason why SICME is one of the most famous producers of wind generators. Since 2008, it has developed motors with ASR technology, the most revolutionary type of electric machine in the world, and in 2014 it has developed an innovative range of synchronous reluctance IE4 motors with a specific patent. In the last 5 years Sicme Motori, thanks to its experience on the synchronous motors technologies, extended the range of synchronous products with various permanent magnet motors (SQ series) and various synchronous reluctance motors (SR series).





www.imq.it

CERTIFICATO N. 9101.SMOT
CERTIFICATE N. 9101.SMOT

SI CERTIFICA CHE IL SISTEMA QUALITA' DI
WE HEREBY CERTIFY THAT THE QUALITY SYSTEM OPERATED BY

SICME MOTORI SRL

STRADA DEL FRANCESE 130 - 10156 TORINO (TO)

UNITA' OPERATIVE
OPERATIVE UNITS

STRADA DEL FRANCESE 130 - 10156 TORINO (TO)

E' CONFORME ALLA NORMA
IS IN COMPLIANCE WITH THE STANDARD

ISO 9001:2008

PER LE SEGUENTI ATTIVITA'
FOR THE FOLLOWING ACTIVITIES

Progettazione, produzione, commercializzazione e riparazione di motori e generatori elettrici a corrente continua, corrente alternata, sincroni a magneti permanenti, a riluttanza, trazione ed ausiliari ferroviari
Design, production, sale and service of direct current motors and generators alternate current, permanent magnets synchronous, reluctance, rail traction and auxiliary

Ulteriori informazioni riguardanti l'applicabilità dei requisiti ISO 9001:2008 possono essere ottenute consultando l'organizzazione
Further clarifications regarding the applicability of ISO 9001:2008 requirements may be obtained by consulting the organization

IL PRESENTE CERTIFICATO E' SOGGETTO AL RISPETTO DEL
REGOLAMENTO PER LA CERTIFICAZIONE DEI SISTEMI DI GESTIONE
THE USE AND THE VALIDITY OF THE CERTIFICATE SHALL SATISFY THE
REQUIREMENTS OF THE RULES FOR CERTIFICATION OF MANAGEMENT SYSTEMS

DATE: PRIMA CERTIFICAZIONE
FIRST CERTIFICATION
1991-05-16

IMQ S.p.A. - VIA QUINTILIANO, 43 - 20138 MILANO ITALY



IAF 19 29

REGOLAMENTO PER LA CERTIFICAZIONE DEI SISTEMI DI GESTIONE
REGULATIONS FOR THE CERTIFICATION OF MANAGEMENT SYSTEMS
L'validità del certificato è subordinata a sorveglianza annuale e a revisione completa del Sistema di Gestione di Gestione
The validity of the certificate is subjected to annual audit and a reassessment of the whole Management System



CISQ is a member of

www.iqnet-certification.com

IQNet, the association of the world's first class certification bodies, is the largest provider of management System Certification in the world. IQNet is composed of more than 33 bodies and counts over 100 subsidiaries all over the globe.



SICMEMOTORI



THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

IQNet and its partner
CISQ/IMQ-CSQ
hereby certify that the organization

SICME MOTORI SRL
STRADA DEL FRANCESE 130 - 10156 TORINO (TO)

for the following field of activities

Design, production, sale and service of direct current motors and generators alternate current, permanent magnets synchronous, reluctance, rail traction and auxiliary

Further clarifications regarding the applicability of ISO 9001:2008 requirements may be obtained by consulting the organization

**has implemented and maintains a
Quality Management System**

which fulfills the requirements of the following standard

ISO 9001:2008

Registration Number: IT - 1088

The status of validity of the certificate can be verified at <http://www.cisq.com> or by e-mail to fedcisq@cisq.com



Michael Drechsel
President of IQNET



Ing. Claudio Provetti
President of CISQ

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A.C. Motor for Railway Auxiliary Application

The execution of different reparations carried out by Sicme Motori in the time, on the auxiliary system installed on board of locomotives, for the main producers and users of rolling stock, enabled the Orange 1 Group, of which Sicme motori is member, to study, design and construct a line of AC motors suitable for specific needs. This product line, available in classical configurations with flange, feet or PAD attachment sees its use in different applications.

The conception of the internal transmission mechanics and the protections applied, make this line of product perfectly suited to the principals technical requirements required in the field of rail applications. Possible applications on board of train:

- Resistor fan motor
- Traction motor ventilation
- Climatic system

The motors is available with fan or without fan of refreescing.



Execution

Protection IP55
Thermal class/Temperature rise H/F
Winding Suitable for inverter duty
Duty Time S1
Max ambient temperature 60°C
Housing Aluminium; removable feet
Shields Cast iron
Bearings: life 40.000h C3; permanent lubrication; electrical insulation
DE bearing locked: suitable for mounting B3 (IMV6-IM1031) B5 (IMV3-IM3031)
Execution vent holes; waterproof on the shaft
Terminal box in aluminium (two components); possibility to rotate
Fan: aluminium material
Fan cover: steel zinc-plated
Painting black RAL 9005

On demand

PT100 on the winding (thermal protection)
PT100 on the bearing side (thermal protection)
Bearings lubrication system
Accelerometer on the shield
Free wires, without terminal box
Certified power cables

Three phase motors for rail

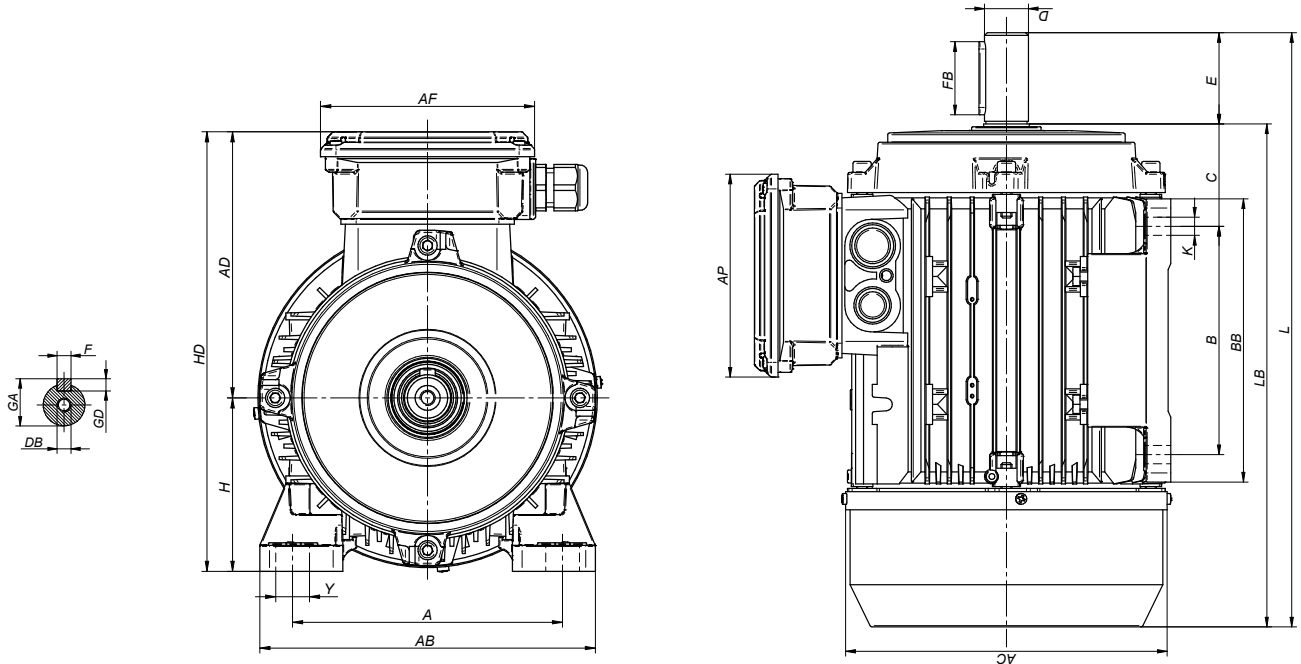


3600rpm -Single speed motors
450V - 60Hz - 2 poles - S1- Inverter duty
Insulation class H; Temperature rise B

Type	Rated Power		Rated current at 450V	Rated speed	Rated Torque	Efficiency full load	Efficiency 3/4 load	Efficiency 1/2 load	Power factor	Starting current Rated current	Starting torque Rated torque	Breakdown torque Rated torque	Moment of inertia
	Pn		In	n	Mn	η	η	η	COS ϕ	Is/In	Ms /Mn	Mb/Mn	J
	kW	HP	A	rpm	Nm	%	%	%					10 ⁻³ kgm ²
RM 90S A2	1,7	2,3	3,2	3462	4,7	84,8	85,4	84,1	0,81	7,9	3,8	3,9	4,90
RM 90L D2	2,5	3,4	4,8	3480	6,9	86,1	86,3	84,4	0,77	8,0	4,7	4,9	6,00
RM 100L A2	3,5	4,7	5,7	3474	9,6	87,9	88,8	88,1	0,90	8,4	4,0	4,0	11,58
RM 112M A2	4,6	6,2	7,4	3522	12,5	89,0	88,5	86,5	0,89	11,7	4,2	5,5	16,42
RM 112M C2	6,3	8,4	10,1	3510	17,1	89,2	89,0	87,6	0,89	10,4	3,6	5,0	19,00
RM 132S A2	6,3	8,4	10,6	3522	17,1	89,2	88,8	87,2	0,86	7,7	3,4	4,8	39,65
RM 132S B2	8,6	11,5	14,2	3522	23,3	90,1	89,7	88,5	0,86	7,9	2,9	3,9	54,83
RM 132M D2	10,5	14,1	17,0	3528	28,4	90,9	90,5	89,4	0,87	8,0	3,4	4,1	56,58
RM 132M E2	12,5	16,8	19,4	3534	33,8	91,2	91,7	91,4	0,91	8,0	3,2	3,9	60,16
RM 160M A2	12,5	16,8	19,4	3538	33,7	91,2	91,8	91,5	0,91	8,0	3,0	3,7	106,89
RM 160M B2	17,0	22,8	26,5	3538	45,9	91,9	91,4	90,1	0,90	10,3	4,7	4,6	142,51
RM 160L D2	21,5	28,8	32,8	3540	58,0	92,4	91,9	90,5	0,91	9,0	3,3	3,5	161,11
RM 160L E2	25,0	33,5	38,4	3546	67,3	92,7	92,1	91,2	0,90	8,0	3,5	3,7	161,11
RM 180M A2	25,0	33,5	37,6	3552	67,2	93,2	92,6	92,5	0,91	6,8	3,5	5,2	255,63
RM 180L D2	34,5	46,2	51,2	3552	92,8	93,4	93,1	92,3	0,93	6,1	3,1	4,5	280,92

Motors for Rail

With shields in cast iron



B3 (IMV6-IM1031)

Size	A	AB	B	BB	C	D	E	H	HD	L	K	Y	AC	AD	AF	AP	F	FB	GA	GD	DB	LB
90S	140	175	100	129	57	24	50	90	225	303	10	17,5	176	135	111	111	8	40	27	7	M8	253
90L	140	175	125	155	56	24	50	90	225	325	10	17,5	176	135	111	111	8	40	27	7	M8	275
100	156,5	192	140	175	63	28	60	100	246	380	12,5	22,5	194	146	111	111	8	50	31	7	M10	320
112M	190	223	140	176,5	70	28	60	112	270	398	12	22	220	158	111	111	8	50	31	7	M10	338
132S	216	260	140	180	89	38	80	132	328	460	12	28	264	196	133	133	10	70	41	8	M12	380
132M	216	260	178	218	89	38	80	132	328	500	12	28	264	196	133	133	10	70	41	8	M12	420
160M	254	318	210	260	108	42	110	160	403	610	15	30	317	243	185	185	12	90	45	8	M16	500
160L	254	318	254	304	108	42	110	160	403	650	15	30	317	243	185	185	12	90	45	8	M16	540
180M	279	345	241	291	121	48	110	180	440	720	13	38	352	260	185	185	14	90	51,5	9	M16	610
180L	279	345	279	330	121	48	110	180	440	720	13	38	352	260	185	185	14	90	51,5	9	M16	610

Dimension in mm



ORANGE1
HOLDING

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