SYMBOLS.

a   120º operator.

$i_{ri}(t)$ Rotor current per phase.

$\bar{i}_r$ Space phasor of the rotor current expressed in the rotor reference frame.

$\bar{i}_r'$ Space phasor of the rotor current expressed in the stator reference frame.

$i_{si}(t)$ Stator current per phase.

$\bar{i}_s$ Space phasor of the stator current expressed in the stator reference frame.

$\bar{i}_s'$ Space phasor of the stator current expressed in the rotor reference frame.

L_m Three phase magnetising inductance.

L_r Total three phase rotor inductance.

$\overline{Lr}$ Rotor self-inductance.

L_{rl} Leakage rotor inductance.

L_{rm} Rotor magnetising inductance.

L_s Total three phase stator inductance.

$\overline{L}_s$ Stator self-inductance.

L_{sm} Stator magnetising inductance.

L_{sl} Leakage stator inductance.

$\overline{M}_r$ Mutual inductance between rotor windings.

$\overline{M}_s$ Mutual inductance between stator windings.

$\overline{M}_{sr}$ Maximal value of the stator- rotor mutual inductance.

p   Derivation operator.

P   Pair of poles.

R_r Rotor Resistance.

R_s Stator Resistance.

s   Slip.

1/s   Integration operator.

Te   Instantaneous value of the electromagnetic torque.

T_{pc} Instant torque referred to the nominal torque and in percentage.

Ts = Tz   Sampling time.

$u_{ri}(t)$ Rotor voltage per phase.

$\overline{u}_r$ Space phasor of the rotor voltage expressed in the rotor reference frame.

$\overline{u}_r'$ Space phasor of the rotor voltage expressed in the stator reference frame.

$u_{si}(t)$ Stator voltage per phase.

$\overline{u}_s$ Space phasor of the stator voltage expressed in the stator reference frame.

$\overline{u}_s'$ Space phasor of the stator voltage expressed in the rotor reference frame.

wm   Mechanical speed.

w_{pc} Instant torque referred to the nominal torque and in percentage.

wr   Rotor pulsation.

ws   Stator pulsation.

Symbols.

ρr	Phase angle of the rotor flux linkage space phasor with respect to the direct-axis of the stator reference frame.
ρs	Phase angle of the stator flux linkage space phasor with respect to the direct-axis of the stator reference frame.
θm	Stator to rotor angle.
θr	Rotor angle.
θs	Stator angle.
$\Psi_{ri}(t)$	Flux linkage per rotor winding.
$\overline{\psi}_r$	Space phasor of the rotor flux linkage expressed in the rotor reference frame.
$\overline{\psi}_r'$	Space phasor of the rotor flux linkage expressed in the stator reference frame.
$\Psi_{si}(t)$	Flux linkage per stator winding.
$\overline{\psi}_s$	Space phasor of the stator flux linkage expressed in the stator reference frame.
$\overline{\psi}_s'$	Space phasor of the stator flux linkage expressed in the rotor reference frame.

Subscripts.

α/β	Direct- and quadrature-axis components in the rotor reference frame.
d/q	Rotor direct- and quadrature-axis components in the stator reference frame.
D/Q	Stator direct and quadrature-axis components in the stator reference frame.
g	General reference frame.
m	Magnetizing.
r	Rotor.
ra, rb, rc	Rotor phases.
Ref	Reference.
s	Stator.
sA, sB, sC	Stator phases.
x/y	Direct- and quadrature-axis components in general reference frame or in special reference frames.

Mathematical symbols.

x	Cross vector product.
*	Complex conjugate.