

# TW Size 5

05A03A.40.4, 05A06A.30.4, 05A09A.20.4



Reference data (winding independent)	Symbol	05A03A.40.4	05A06A.30.4	05A09A.20.4	Units
Nominal Torque, S1, low speed, free air <sup>1</sup>	$T_{nc}$	3.1	5.2	8.5	Nm
Continuous Torque, at low speed, flanged	$T_{nsw}$	2.9	5.2	8.4	Nm
Nominal Torque, S1, $\omega = \omega_n$ , flanged	$T_n$	2.4	5.1	8.4	Nm
Peak torque, S6 40% <sup>1</sup>	$T_{pk}$	8.8	12.9	20.7	Nm
Maximum Structural Speed	$\omega_p$	5500	4000	3000	rpm

Physical data (winding independent)	Symbol	05A03A.40.4	05A06A.30.4	05A09A.20.4	Units
Rotor inertia	$J_m$	$1.81 \cdot 10^{-4}$	$3.15 \cdot 10^{-4}$	$4.49 \cdot 10^{-4}$	kgm <sup>2</sup>
Acceleration at peak torque	$A_{pk}$	$7.99 \cdot 10^4$	$9.19 \cdot 10^4$	$9.66 \cdot 10^4$	rad/s <sup>2</sup>
Mass	$M_{sta}$	4.01	6.39	8.88	Kg
Insulation		Class H			
Class protection		IP 67			

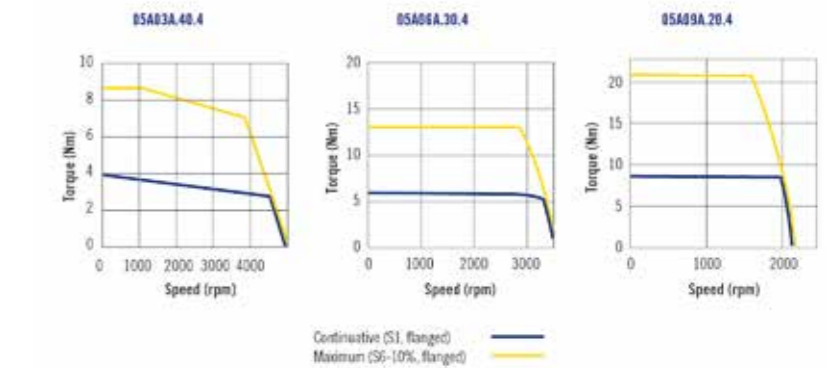
1) Motor in free still air (worst case), ambient 40 °C, copper 130 °C, frame 105 °C.  
2) Motor mounted on steel flange, temperature flange <= 60°C.

Thermal data (winding independent)	Symbol	05A03A.40.4	05A06A.30.4	05A09A.20.4	Units
Thermal time constant	$T_c$	706.52	847.69	939.68	sec
Motor loss at $T_{nc}$	$LO_c$	69.6	77.97	116.53	W
Threshold of built-in PTC	PTCt	130	130	130	°C
Drive thermal protection		120			°C
Module thermal protection		150			°C

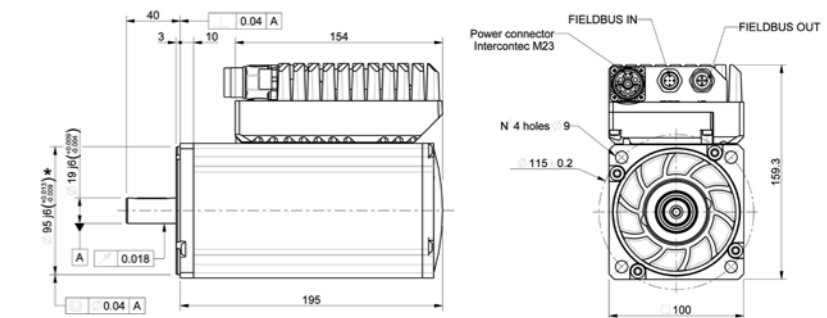
Electrical data (winding dependent)	Symbol	05A03A.40.4	05A06A.30.4	05A09A.20.4	Units
Power supply (typical)	$V_n$	310 - 700			Vdc
Digital power supply	$V_{supply}$	10 - 30			Vdc
Rated speed	$\omega_n$	4000	3000	2000	rpm
Maximum speed	$\omega_{max}$	5000	3500	2200	rpm
Peak current, $T=T_{pk}$	$I_{pk}$	8.0	8.0	8.0	Arms
Nominal current, $\omega=\omega_n, T=T_n$	$I_n$	2.1	3.1	3.1	Arms
Nominal power, $\omega=\omega_n$	$P_{nsw}$	1020	1600	1750	W
Torque constant	$K_t$	1.26	1.77	2.85	Nm/A

Brake Data (optional)	Symbol	05A03A.40.4	05A06A.30.4	05A09A.20.4	Units
Supply voltage	$U_n$	24			Vdc
Power consumption	P20	15			W
Stall braking torque (20°C)	$TB_k$	16			Nm
Rated torque	$TB_{kn}$	10			Nm
Additional Inertia	JBk	$0.107 \cdot 10^{-3}$			kgm <sup>2</sup>

## TW Servodrive Operational Area



## Overall Dimensions



Drawing referred to the TW05A03A model. For the other drawings model please visit our website [www.phase.eu](http://www.phase.eu)