



MACK
TRON

MKT
POWERED
BRUSHLESS
MOTOR



CANopen
EtherCAT

Modbus
RS 485 RTU

24-48 VDC	0.15-2.0 Nm	50-625 W
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P. N. : D.S. / 25.01.19 / MKT / 09

MODEL			MKTB42		MKTB60			MKTB80
SIZE	(Power refers to 3000 Rpm)		M (50 w)	L (100 w)	M (200 w)	L (314 w)	L (400 w)	M (625 w)
Mn	Rated torque at Nn (Δt=70°C)	Nm	0.15	0.3	0.6	1.0	1.2	2.0
Mpk	Peak Torque (x 2 sec.)	Nm	0.45	0.9	1.8	2.4	3.6	4.6

Power Supply grounded system only	24 ÷ 48 V _{DC} (9 V _{DC} min - 65 V _{DC} max)
Logic Supply (for back-up only)	9 - 30 V _{DC} - 200mA
grounded system only (for back-up + brake)	24 V _{DC} (±5%) - 800mA max
Battery Supply	3.6 ÷ 5 V _{DC} - 2μA

WINDING CODE		F32	F42	J30	J32	J40	J42	P32
Rated Speed 48 V_{DC} (Power Supply)	N _n (Rpm)	3000 (6000 max)	3000 (6000 max)	3000 (6000 max)	3000	3000 (6000 max)	3000	3000
	I _{DC} (A _{DC})	1.25	2.5	5	5	8	10	16
Rated Speed 24 V_{DC} (Power Supply)	N _n (Rpm)	3000	3000	3000	1500	3000	1500	1500
	I _{DC} (A _{DC})	2.5	5	10	5	16	10	16

J Rotor Inertia (with brake) (Kgm ²)·10 ⁻⁴	0.025 (0.026)	0.038 (0.381)	0.14 (0.15)	0.24 (0.25)	2.2 (2.4)
Brake stall Torque (Δt=100°C)	0.4 Nm		2 Nm		4.5 Nm
W weight (W1 with brake) kg	0.35 (0.44)	0.5 (0.59)	1.0 (1.4)	1.4 (1.8)	2.8 (3.1)

Mn : nominal speed - mounted on AL flange (300x300x6.5 mm, 65°C max) - no brake (with brake -5%)

STANDARD FEATURES

- ◆ Motor range up to **625W**, 8 poles sinusoidal B.E.M.F. and waveform current
- ◆ **EI1** Incremental Encoder 4096 P/rev feedback
- ◆ **CB** Can BUS
- ◆ Device status notification with LED bicolor
- ◆ **Speeder-One.2**[®] software interface
- ◆ **RS485** MODBUS-RTU for setting and monitoring
- ◆ **Mack PLC** integrated (ANSI C or C++) 1 ms Realtime
- ◆ Update rate : - Current loop = 8KHz - Position & Velocity = 4KHz
- ◆ Ambient temp.¹:..... - operating at rated data: 0°C / + 40°C(no derating)
- rated & pk current derating: + 40°C / + 55°C max (2.5% / °C)
- storage - 20 °C / + 55°C
- ◆ Ambient Humidity¹:..... - operating & storage 85% RH max
- ◆ Altitude (a.m.s.l.):..... - operating & storage 1000m
- rated & pk current derating: up to 2500m (1.5% / 100m)
- ◆ Protection rating:..... IP54
- ◆ Storage time:..... 1 year²

OPTIONS

- ◆ Holding brake
- ◆ Special flanges and shafts
- ◆ **EC** EtherCAT control mode
- ◆ **EA1** Absolute Multiturn Encoder 4096 P/rev feedback
- ◆ **STO** Safe Torque Off safety function
- ◆ Protection rating IP65
- ◆ **LS** limit switch input

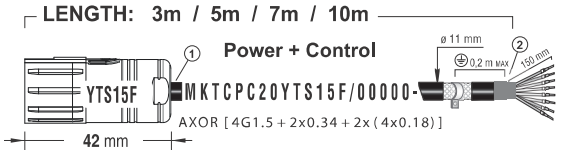
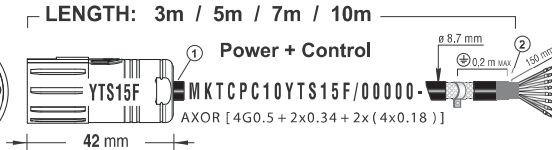
CABLE SPEC.

- ◆ Mobile usage for chain tracks, flame / oil resistance
- ◆ External sheathing: PUR polyurethane
- ◆ Cycles: 5 million
- ◆ MinimuWm bending radius: 7 x Ø
- ◆ Operating temperature: -25°C / +80°C
- ◆ Trail speed: 300m / min. max
- ◆ Acceleration: 20m / sec²
- ◆ UL RoHS CE DIN VDE

NOTE: ¹ Free from condensation ² After one year storage the electrolytic capacitors must be reformed. Contact AXOR for details.



TYPE	Mn	L	L1	B	D	V _{h9}	W	U	N	M	F	E	S	R
	Nm	mm												
MKTB 42 M	0.15	87	115	8 h7	25	3 x 12	9.2	M3 x 6	30 h6	45 ÷ 48	3.5	2.5	6	42
MKTB 42 L	0.3	101	129											
MKTB 60 M	0.6	86	120	14 h7	30	5 x 25	16	M4 x 10	50 h6	70	5.5	2.5	7	60
MKTB 60 L	1.0/1.2	100	135											
MKTB 80 M	2.0	129	162	19 h7	40	6 x 32	21.5	M6 x 16	70 h6	90	6.2	3	9	80

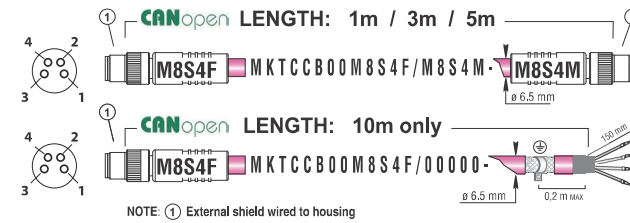
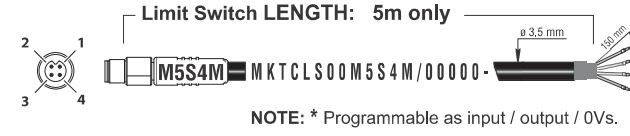
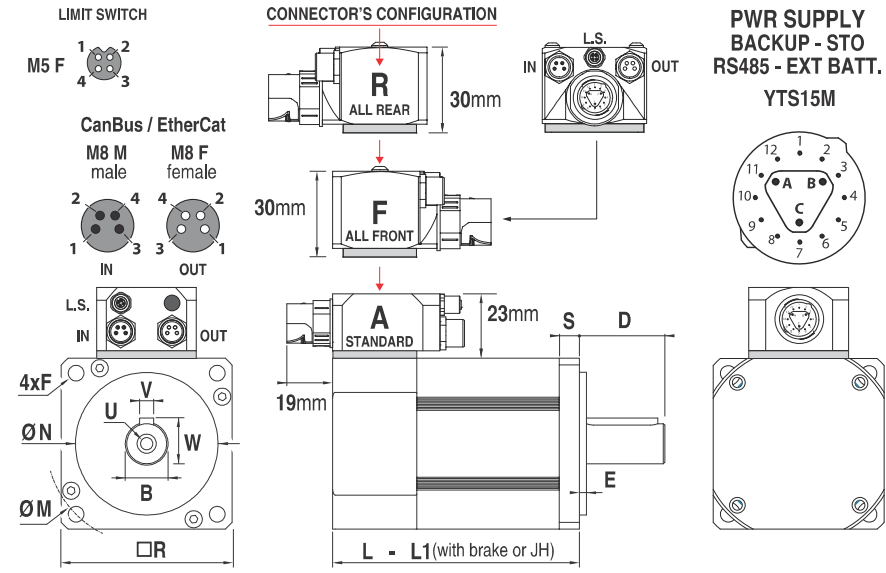


NOTE: ① All shields wired to housing ② Int. and ext. shields wrapped together

YT	DATA	WIRE	(MARK)	SIZE (mm ²)
A	+ Power	Brown	(+PW)	0.5
C	- Power	Blue	(-PW)	0.5
B	RESERVED	Black		0.5
1 / 2	+ / - Backup	Red / Black	(+BK/-BK)	0.34
3	+ V Ext. Battery	Brown		0.18
4	RESERVED	Red		0.18
5 / 6	A / B RS485	White / Blue		0.18
8 / 9	STO IN. 1 / 2	Yellow / Green		0.18
10 / 11	STO OUT.1 / 2	Pink / Gray		0.18
7 / 12	N.C.	-		-
HOUSING	PE	Green-Yellow		0.5

NOTE: ① All shields wired to housing ② Int. and ext. shields wrapped together

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1 / 2	+ / - Backup	Red / Black	(+BK/-BK)	0.34
3	+ V Ext. Battery	Brown		0.18
4	RESERVED	Red		0.18
5 / 6	A / B RS485	White / Blue		0.18
8 / 9	STO IN. 1 / 2	Yellow / Green		0.18
10 / 11	STO OUT.1 / 2	Pink / Gray		0.18
7 / 12	N.C.	-		-
HOUSING	PE	Green-Yellow		1.5



M5	DATA	WIRE	SIZE (mm ²)
1	+Vs OUT	Brown	0.14
2	IN.2	White	0.14
3 *	IN.3 / OUT.1	Blue	0.14
4	IN.1	Black	0.14

M8	DATA	WIRE	SIZE (AWG)
1	Can H	Brown	22
2	GND	Green	22
3	-	Yellow	22
4	Can L	White	22
Housing	Ext. Shield	-	-

M8	DATA	WIRE	SIZE (AWG)	RJ45
1	Tx+	White-Orange	24	1
2	Rx+	White-Green	24	3
3	Rx-	Green	24	6
4	Tx-	Orange	24	2
Housing	Ext. Shield	-	-	Housing

MACKTRON HW CODE SW CODE MACKTRON CABLE ORDERING CODE

MKT B 60M J32 - 0 D 0 X 0 E11 CB 0 0 A 1 X Sxxx (X000 / X000) **MKTC PC10 YTS15F / 00000 - 030 Sxxx**

