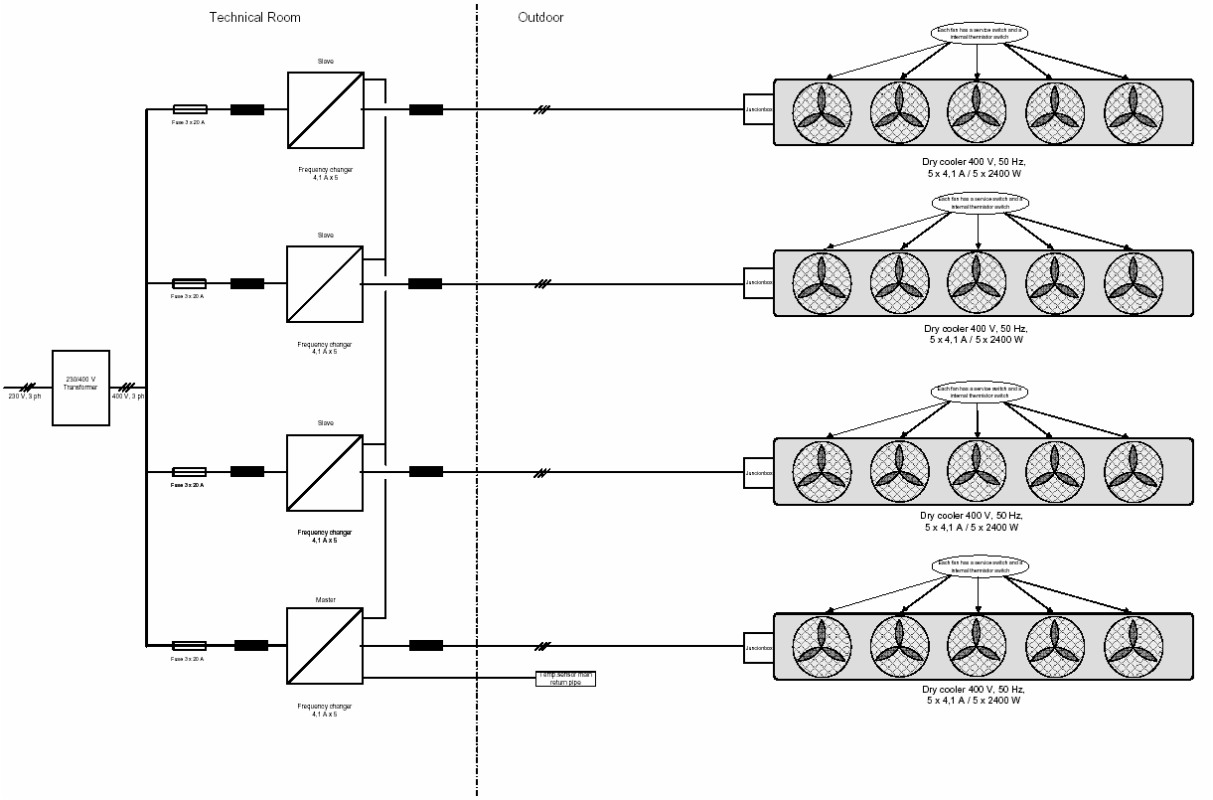
heat exchanger fan drive with
TOSHIBA frequency inverter series VF-S11

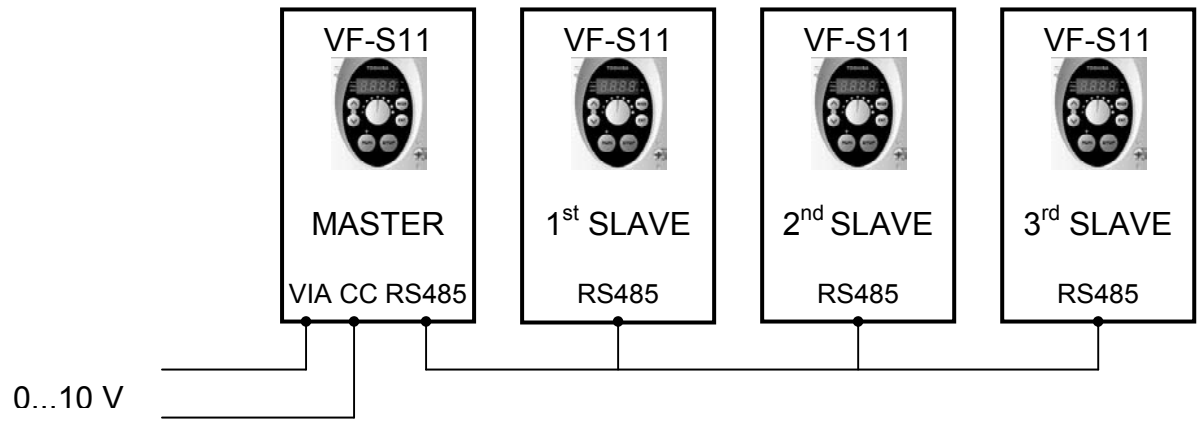
1.3



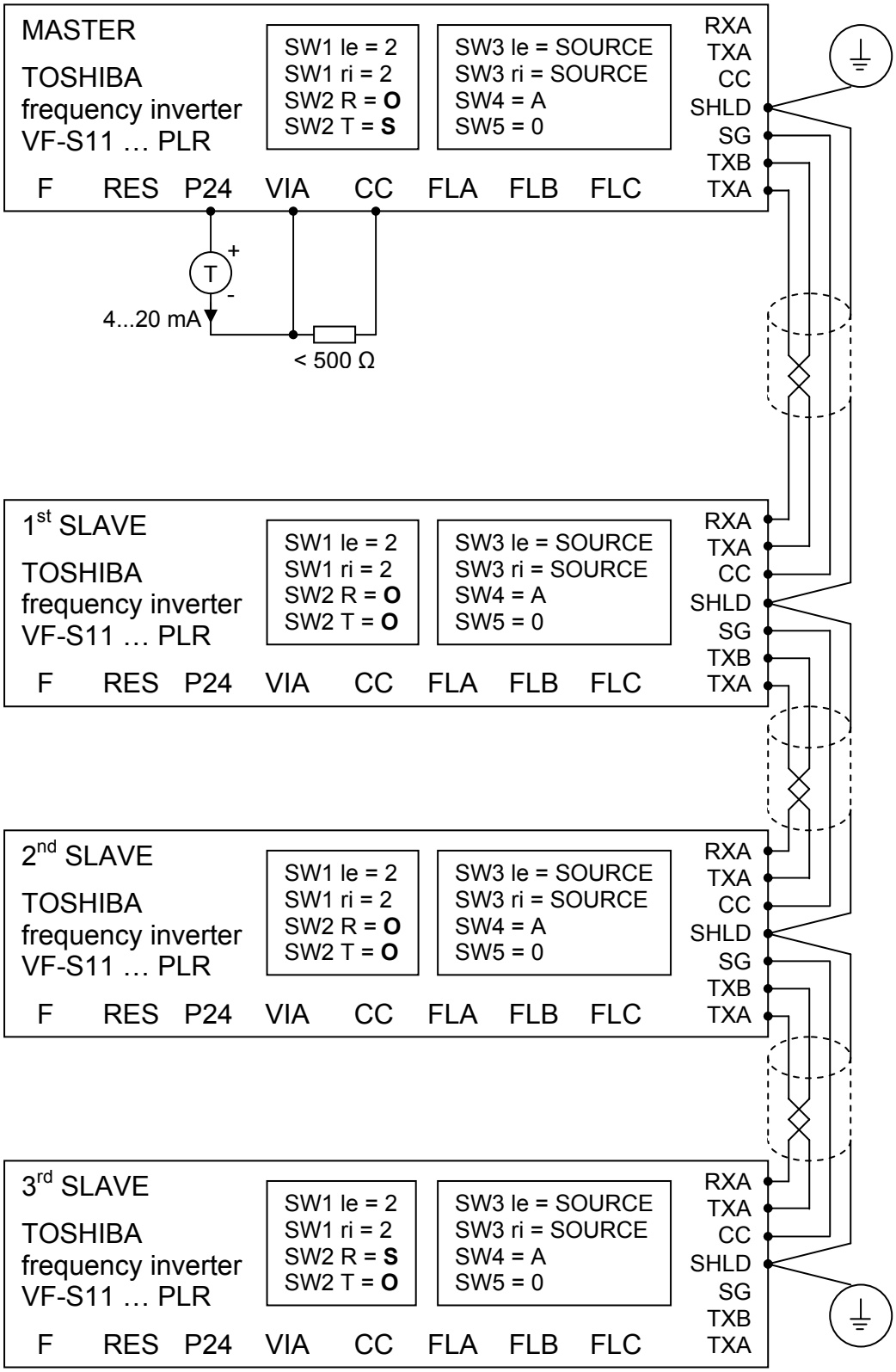
4 pcs.	VF-S11 4150 PLR-WP	TOSHIBA frequency inverter
4 pcs.	ULC 917/32/0,55	dv/dt output filter
4 pcs.	DWSM 00480	input reactor

- The temperature sensor output signal 4…20 mA is connected to the analog input VIA of the MASTER inverter.
- The speed reference signal is given with the integrated potentiometer of the MASTER inverter.

These two signals are processed in the integrated-PID controller of the MASTER. The calculated speed reference is given to all SLAVEs via RS485 serial communication.



Wiring:


MASTER
TOSHIBA
frequency inverter
VF-S11 … PLR
SW1 Ie = 2
SW1 ri = 2
SW2 R = O
SW2 T = S
SW3 Ie = SOURCE
SW3 ri = SOURCE
SW4 = A
SW5 = 0
F RES P24 VIA CC FLA FLB FLC
RXA TXA CC SHLD SG TXB TXA
T
+
-
4...20 mA
< 500 Ω
1st SLAVE
TOSHIBA
frequency inverter
VF-S11 … PLR
SW1 Ie = 2
SW1 ri = 2
SW2 R = O
SW2 T = O
SW3 Ie = SOURCE
SW3 ri = SOURCE
SW4 = A
SW5 = 0
F RES P24 VIA CC FLA FLB FLC
RXA TXA CC SHLD SG TXB TXA
2nd SLAVE
TOSHIBA
frequency inverter
VF-S11 … PLR
SW1 Ie = 2
SW1 ri = 2
SW2 R = O
SW2 T = O
SW3 Ie = SOURCE
SW3 ri = SOURCE
SW4 = A
SW5 = 0
F RES P24 VIA CC FLA FLB FLC
RXA TXA CC SHLD SG TXB TXA
3rd SLAVE
TOSHIBA
frequency inverter
VF-S11 … PLR
SW1 Ie = 2
SW1 ri = 2
SW2 R = S
SW2 T = O
SW3 Ie = SOURCE
SW3 ri = SOURCE
SW4 = A
SW5 = 0
F RES P24 VIA CC FLA FLB FLC
RXA TXA CC SHLD SG TXB TXA

Configuration:

Slide the DIP-switches SW1…5 on the terminal boards to their positions as noted in the wiring diagram. Program the following parameters:

parameter	setting MASTER	setting SLAVES	Function
CMOd	1		commands (start/stop) from operation panel
FMOd	0	4	frequency ref. from built in potentiometer / VIA
Pt	0		v/f control
uL	50.0		rated motor frequency
uLu	400		output voltage factor = rated voltage
FH	50.0		maximum frequency
UL	50.0		upper frequency limit
LL	0.0		lower frequency limit
ACC	30.0		acceleration time
dEC	30.0		deceleration time
tHr	62		rated capacity motor/inverter
OLM	2		motor protection functions enabled
F110	1		ST function always active
F201	20		VIA % setpoint #1
F202	0.0		frequency at F201
F203	100		VIA % setpoint #2
F204	50		frequency at F203
F241	20.0		operation starting frequency
F242	2.5		hysteresis: ± F241
F307	0		voltage compensation off
F360	1	0	PID control enabled
F362	0.30		P (use factory settings first)
F363	0.20		I (use factory settings first)
F366	0.00		D (use factory settings first)
F415	20.5		motor rated current
F417	716		motor rated speed
F800	3		communication speed
F806	4	0	MASTER / SLAVE setting
F829	0		TOSHIBA protocoll

- Power-cycle all inverters.
- Start all inverters with the “RUN” button on the operation panel.