Drive Parameters for the TR200

All AFD parameters must be set to known values in our Trane factory for every drive. The following steps describe that process. The pump drive will be configured to allow the water side to be trimmed using the operator interface at the customer's site. All of the parameters listed are as they appear in the operating manual and on the operator display. No adjustment has been made for conversion index. See appendix for the conversion index and the parameter type for each parameter if needed.

1. Perform an initialization of all parameters to factory settings using the parameter named Operation Mode. This will initialize the drive to a known state prior to setting the parameters in step 2.

ID	Name	Parameter	Units
14-22	Operating Mode	(2) Initialization	----

Procedure for initialization using parameter 14-22 - Operation Mode
1. Select *Operating Mode* and accept the selection (press OK).
2. Select "Initialization" (Press OK).
3. Disconnect (un-power) the AC line voltage and wait until the light in the display has disappeared.
4. Connect the AC line voltage (re-power) and the AFD is reset.
5. After reset, it is not unusual to have an Initialization fault. Clear the fault and proceed.

2. The following settings must set to assure proper operation of the drive Setup 1.

ID	Name	CGAM Parameters	Units
0-02	Motor Speed Unit	(1) Hz Set based on motor nameplate	---
0-03	Regional Settings	(0) International	---
0-10	Active Set-up	Set-up 1 See Note 1	---
1-03	Torque Characteristic	(1) Variable torque	---
1-20	Motor Power [kW]	Nameplate HP / Equivalent kW: 1.5 / 1.1; 3.0 / 2.2; 5.0 / 4.0; 7.5 / 5.5; 10.0 / 7.5; 15.0 / 11.0	kW
1-22	Motor Voltage	Set based on motor nameplate	V
1-23	Motor Frequency	Set based on motor nameplate	Hz
1-24	Motor Current	Set based on motor nameplate	A
1-25	Motor Nominal Speed	Set based on motor nameplate	RPM
1-71	Start Delay	2	s
1-73	Flying Start	(0) Disabled	---
1-90	Motor Thermal Protection	(4) ETR trip 1	---
3-02	Minimum Reference	25 for 50 Hz line power, 30 for 60 Hz line power See note 2	Hz
3-03	Maximum Reference	50 for 50 Hz line power, 60 for 60 Hz line power	Hz

3-13	Reference Site	(0) Linked to Hand/Auto	---
3-15	Reference 1 Source	(1) Analog input 53	---
3-41	Ramp 1 Ramp Up Time	5	s
3-42	Ramp 1 Ramp Down Time	20	s
3-51	Ramp 2 Ramp Up Time	5	s
3-52	Ramp 2 Ramp Down Time	20	s
4-12	Motor Speed Low Limit	25 for 50 Hz line power, 30 for 60 Hz line power See note 2	Hz
4-14	Motor Speed High Limit	50 for 50 Hz line power, 60 for 60 Hz line power	Hz
4-53	Warning Speed High	3600	RPM
5-10	Terminal 18 Digital Input	(8) Start	---
5-12	Terminal 27 Digital Input	(0) No Operation	
5-13	Terminal 29 Digital Input	(0) No Operation	---
5-40.0	Function Relay 1	(9) Alarm	---
5-40.1	Function Relay 2	(2) Drive ready	---
6-10	Terminal 53 Low Voltage	0.0	V
6-11	Terminal 53 High Voltage	10.0	V
6-14	Terminal 53 Low Ref	0.0 See Note 3	V
6-15	Terminal 53 High Ref	10.0 See Note 3	V
6-17	Terminal 53 Live Zero	(0) Disabled	---
6-50	Terminal 42 Output	(107) Speed 0 – High Lim	---
14-01	Switching Frequency	(4) 3.0	kHz
14-11	Mains Voltage at Mains Fault	Need to set at 85% of unit voltage	V
14-20	Reset Mode	(13) Infinite auto reset	---
14-21	Automatic Restart	30	s

1) Setup 1 is intended for Hand Operation using the removable operator display. See the Appendix for detail on how to use the remote display for hand operation.
2) The minimum frequency is not allowed to go below 0.50*(Motor Speed High Limit) to assure a high enough minimum flow. This parameter can be lower if the minimum flow is not violated.
3) Used as a reference not a feedback value.