MOTOR PROTECTION & CONTROL TECHNOLOGY

NewFeed-PROFINET
Internal Communication Module

User Manual

NE-NewFeed PROFINET
Version 1A-02
(NE_NewFeed-PROFINET_MAN_01_23_A-02)

NewElec (Pty) Ltd

Head Office
c/o Soutter & Maltzan Street
Pretoria-West
Gauteng
South-Africa

PROFINET®

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1 Definitions, Conventions and Terminology

Acyclic	Input or output message from the PLC that only happens on request in the PLC program.
Cyclic	Input and output messages from the PLC that happens at a set interval every main cycle of the PLC program cycle.
GSD	General station description. A description file that provides an open configuration tool to automatically get the device characteristics.
LED	Light emitting diode (It is used as visual indicators)
Motor protection relay	It is an intelligent (computerized) unit monitoring an electric motor's current and voltage supply. In case of overloading, phase lost etc. the power supply of the motor will be interrupted by the protection relay to prevent damage to the motor.
NewFeed	NewFeed Relay.
NewFeed PROFINET	NewFeed PROFINET communication module.
PLC	Programmable Logic Controller.
PROFINET	PROFINET communication control protocol.
PNIO	PROFINET IO device.
SCADA	Supervisory control and data acquisition.

Table 1: Definitions, Conventions and Terminology.

2 Overview

The NewFeed PROFINET acts as a translator between the PROFINET SCADA and the NewFeed. It is advisable to read the NewFeed user manual, as some of the topics will require knowledge on the NewFeed. It is also advisable to have knowledge on PROFINET. PROFINET specification document can be found on the web from https://www.profibus.com/.

The communication protocol between the NewFeed PROFINET and SCADA is PROFINET. Communication protocol between the NewFeed PROFINET and the NewFeed is a NewElec proprietary protocol. Enabling the PLC to communicate with the NewFeed via PROFINET.

When NewFeed communication module PROFINET is selected, the PLC bits will then be controlled from the internal communication module unless the external module is selected then the PLC bits are controlled via external module and no longer from the internal communication module.

3 Technical Specifications

PROFINET	Protocol	• PROFINET
	Switch	• 2 ports • Switch DOES NOT allow traffic through when auxiliary supply is off
	Baud Rate	• 10Mbps • 100Mbps
Indication Lights	Type	• Light Emitting Diode (LED)
	LED Indications	• Addr LED (Last Byte of IP Address) ◦ Green Flash = 1 ◦ Red Flash = 10 ◦ Orange Flash = 100 ◦ Red Solid = No communication with NC ◦ Off = Awaiting IP Address from PLC • Data LED ◦ Red = No communication. ◦ Green = Communication with PLC. ◦ Orange = Setup mode active. • MAC Read Error ◦ Both Addr Red & Data Red LED will Flash.

Table 2: Technical specifications

4 Dimensions

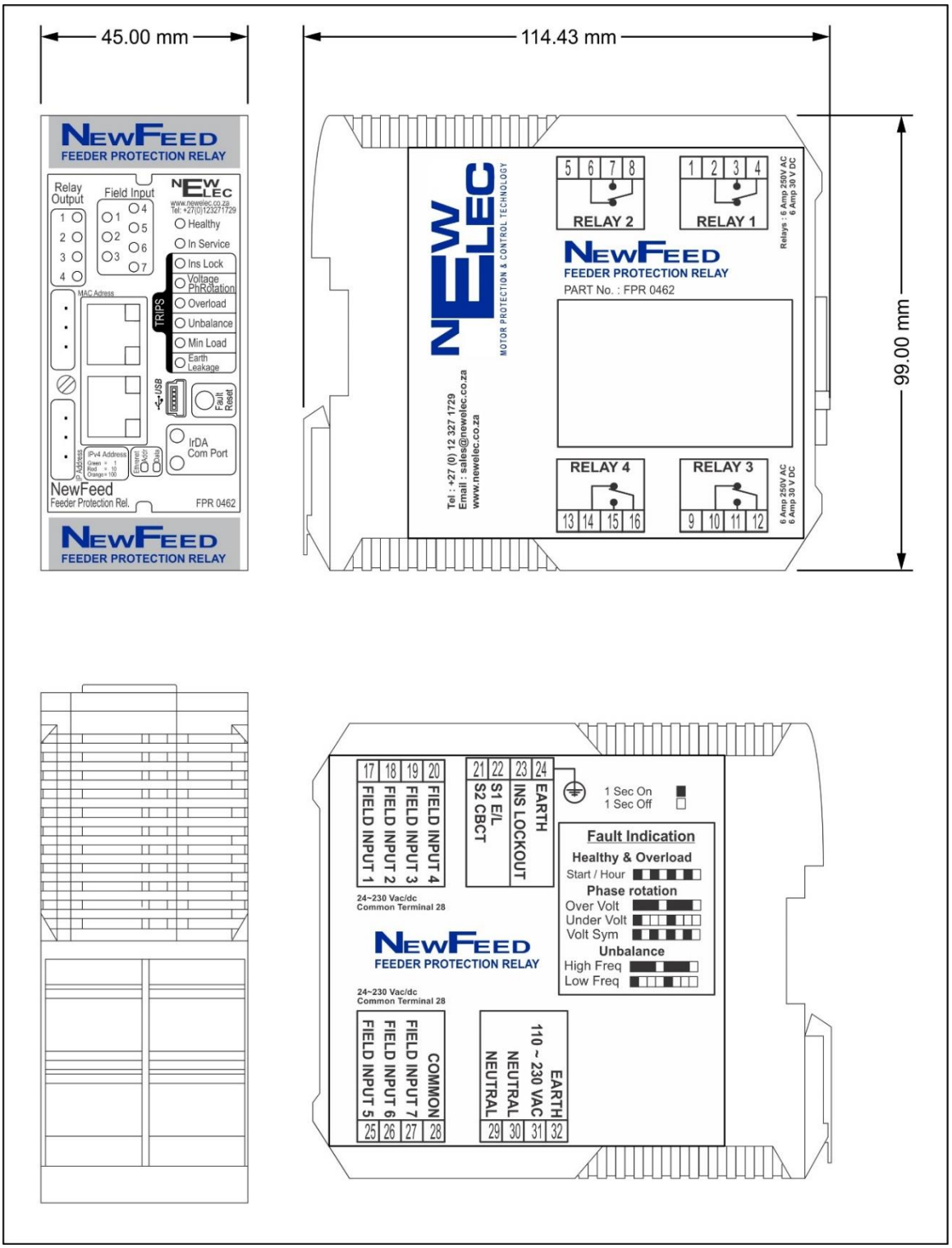


Figure 4: NewFeed dimensional drawing

5 Parameterization

NewFeed PROFINET does not support a parameterization telegram. The PLC will not send a parameterization telegram to the NewFeed PROFINET device.

The only way to change the device's settings is through the acyclic slot map. (See chapter 8).

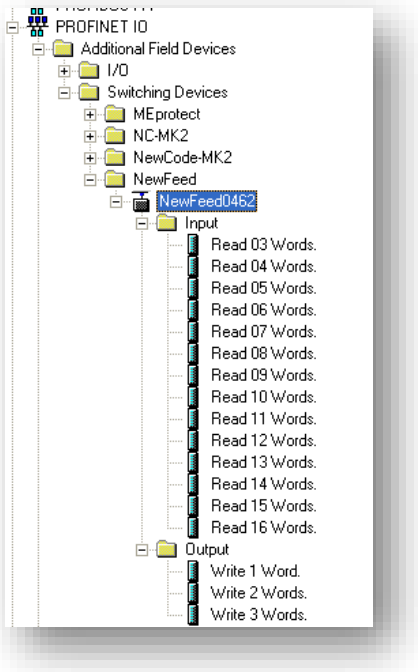
6 Cyclic data

NewFeed PROFINET has the following available on the PLC for cyclic messages:

- Inputs selectable (NewFeed to PLC).
  - Read 03 Words.
  - Read 04 Words.
  - Read 05 Words.
  - Read 06 Words.
  - Read 07 Words.
  - Read 08 Words.
  - Read 09 Words.
  - Read 10 Words.
  - Read 11 Words.
  - Read 12 Words.
  - Read 13 Words.
  - Read 14 Words.
  - Read 15 Words.
  - Read 16 Words.

- Outputs selectable (PLC to NewFeed).
  - Write 1 Word.
  - Write 2 Words.
  - Write 3 Words.

Below is the Catalog view of the NewFeed Relay in Step7.



6.1 Cyclic Input

13 Cyclic input words from the NewFeed PROFINET to the PLC is layout in the following structure:

Word Number	Description
0	A 16-bit count generated by a free running counter. The PLC must read a unique count on every read cycle to indicate that the communication between the slave device and PLC are healthy. (Heart Beat)
1	Status code
2	Warning codes
3 – 5	Bit Assignable word 3-5 on NewFeed PROFINET internal or external communication configuration tab. These words are bit assignable **(See chapter 7.1)**
6 – 15	Assignable word 6-15 on NewFeed PROFINET internal or external communication configuration tab. **(See chapter 7.2)**

Table 6.2: Cyclic input word description.

6.2 Cyclic Output

The three cyclic output words from the PLC to the NewFeed PROFINET is layout in the following structure:

Word Number	Description
0	Contains 16 bits that is used trough out the NewFeed logic and starter map. These are referred to as **PLC control bits.**
1	Contains 16 bits that is used trough out the NewFeed logic and starter map. These are referred to as **PLC control bits.**
2	Contains 16 bits that is used trough out the NewFeed logic and starter map. These are referred to as **PLC control bits.**

Table 6.1: Cycle output word description.

When communication is lost with the PLC or the internal communication between the NewFeed and the NewFeed PROFINET module is lost then these three cyclic output words will be set to zero.

7 Assignable Configuration

Cyclic input words 0 to 12 are assignable. This configuration is configured with the NewFeed frontend under the ***"Internal communication module"*** or ***"External communication module"***.

7.1 Assignable Word (Bits) Configuration

Under the ***"Internal communication module"***, below the label ***"Configuration bits"*** is a table that displays a list of variables of the NewFeed that is assigned to the cyclic input word 0 to 2.

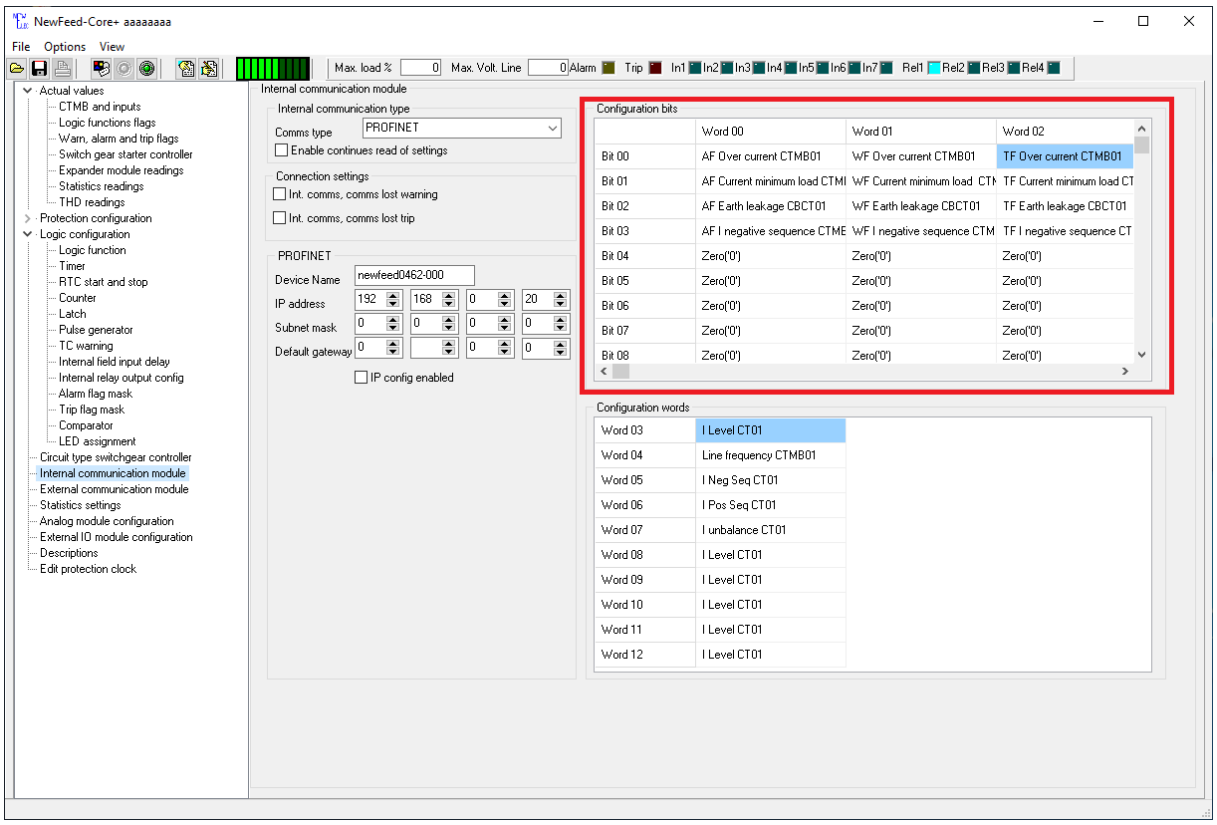


Figure 7.1.a: Assignable PLC input words (bits) configuration.

By double left clicking on the grid of the selected bit a popup box will appear (See figure 7.1.b). The box will contain a list of bits that can be selected.

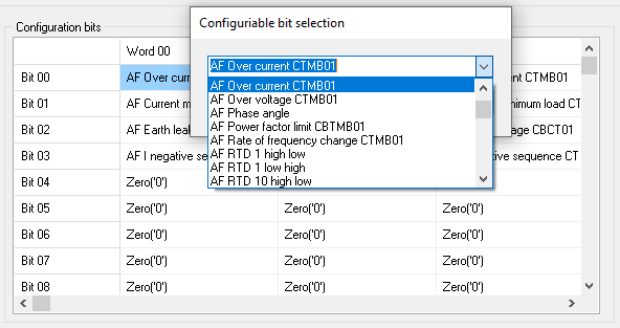


Figure 7.1.b: Assignable PLC input words (bits) drop down menu.

Below (Table 7.2.c) shows a list of bits that can be assigned to the bit selection.

Assignable bits	
Name	**Description**
00000	None
00002	IF In service
00003	IF Volt present
00007	IF Breaker fault warning
00008	IF Pre start warning
00009	IF Feedback forward active
00010	IF Feedback reverse active
00011	IF Run forward fast
00012	IF Run forward slow
00013	IF Run reverse slow
00014	IF Run reverse fast
00015	IF Stop active
00016	IF Interlock active
00017	IF Starter ready
00018	IF Masked alarm flag
00019	IF Masked trip flag
00020	IF Status reporter
00050	IF IL lag VL
00051	IF MCCB slug trip
00052	IF Main contact slug trip
00053	IF Motor start up
00054	IF Motor running
00055	IF Motor stopped
00066	IF IL1 sub-harmonic high
00067	IF IL1 1st harmonic high
00068	IF IL1 2nd harmonic high
00069	IF IL1 3rd harmonic high
00070	IF IL1 4th harmonic high
00071	IF IL1 5th harmonic high
00072	IF IL1 6th harmonic high
00073	IF IL1 7th harmonic high

Assignable bits	
Name	**Description**
00074	IF IL1 8th harmonic high
00075	IF IL1 9th harmonic high
00095	IF IL2 sub-harmonic high
00096	IF IL2 1st harmonic high
00097	IF IL2 2nd harmonic high
00098	IF IL2 3rd harmonic high
00099	IF IL2 4th harmonic high
00100	IF IL2 5th harmonic high
00101	IF IL2 6th harmonic high
00102	IF IL2 7th harmonic high
00103	IF IL2 8th harmonic high
00104	IF IL2 9th harmonic high
00124	IF IL3 sub-harmonic high
00125	IF IL3 1st harmonic high
00126	IF IL3 2nd harmonic high
00127	IF IL3 3rd harmonic high
00128	IF IL3 4th harmonic high
00129	IF IL3 5th harmonic high
00130	IF IL3 6th harmonic high
00131	IF IL3 7th harmonic high
00132	IF IL3 8th harmonic high
00133	IF IL3 9th harmonic high
00153	IF VL1 sub-harmonic high
00154	IF VL1 1st harmonic high
00155	IF VL1 2nd harmonic high
00156	IF VL1 3rd harmonic high
00157	IF VL1 4th harmonic high
00158	IF VL1 5th harmonic high
00159	IF VL1 6th harmonic high
00160	IF VL1 7th harmonic high
00161	IF VL1 8th harmonic high
00162	IF VL1 9th harmonic high
00182	IF VL2 sub-harmonic high
00183	IF VL2 1st harmonic high
00184	IF VL2 2nd harmonic high
00185	IF VL2 3rd harmonic high
00186	IF VL2 4th harmonic high
00187	IF VL2 5th harmonic high
00188	IF VL2 6th harmonic high
00189	IF VL2 7th harmonic high
00190	IF VL2 8th harmonic high
00191	IF VL2 9th harmonic high
00211	IF VL3 sub-harmonic high
00212	IF VL3 1st harmonic high

Assignable bits	
Name	**Description**
00213	IF VL3 2nd harmonic high
00214	IF VL3 3rd harmonic high
00215	IF VL3 4th harmonic high
00216	IF VL3 5th harmonic high
00217	IF VL3 6th harmonic high
00218	IF VL3 7th harmonic high
00219	IF VL3 8th harmonic high
00220	IF VL3 9th harmonic high
00240	WF Over current
00241	WF Current unbalance
00242	WF Current single phase
00243	WF I1 positive sequence
00244	WF I2 negative sequence
00245	WF I0 zero sequence
00247	WF Current THD magnitude
00248	WF Current minimum load
00249	WF Short circuit
00250	WF Running stall
00251	WF Current THD percentage
00252	WF Vectorial stall
00253	WF Unauthorized current
00264	WF Phase angle
00268	WF kWatt demand exceeded
00269	WF kVAr demand exceeded
00270	WF kVA demand exceeded
00271	WF Current demand exceeded
00272	WF Over voltage
00273	WF Under voltage
00274	WF Voltage symmetry
00275	WF Voltage line frequency low
00276	WF Voltage line frequency high
00277	WF Minimum Volts per Hz
00278	WF Maximum Volts per Hz
00279	WF Rate of frequency change
00280	WF Voltage phase rotation
00281	WF V1 positive sequence
00282	WF V2 negative sequence
00283	WF V0 zero sequence
00284	WF V THD percentage high
00285	WF V THD magnitude high
00297	WF Voltage not present
00299	WF kWatt peak demand exceeded
00300	WF kVAr peak demand exceeded
00301	WF kVA peak demand exceeded

Assignable bits	
Name	**Description**
00302	WF Current peak demand exceeded
00306	WF Earth leakage
00307	WF Earth fault
00308	WF Insulation lockout
00314	WF Power factor limit
00320	WF Speed 01 run or start up stall
00321	WF Speed 02 run or start up stall
00336	WF Trip monitor
00337	WF Breaker monitor
00338	WF IO expander communication lost
00339	WF RTD04 module communication lost
00340	WF Internal comms module communication lost
00341	WF 4 to 20mA communication lost
00343	WF External comms module communication lost
00344	WF CTMB connection failed
00345	WF Earth leakage CBCT connection lost
00347	WF Frozen contact
00348	WF Breaker wear
00349	WF Lockout active
00350	WF Emergency stop
00351	WF RTD08 module communication lost
00352	WF Analogue in 1 high low
00353	WF Analogue in 1 low high
00354	WF Analogue in 2 high low
00355	WF Analogue in 2 low high
00356	WF Analogue out 1 high low
00357	WF Analogue out 1 low high
00358	WF Analogue out 2 high low
00359	WF Analogue out 2 low high
00360	WF RTD 1 high low
00361	WF RTD 1 low high
00362	WF RTD 2 high low
00363	WF RTD 2 low high
00364	WF RTD 3 high low
00365	WF RTD 3 low high
00366	WF RTD 4 high low
00367	WF RTD 4 low high
00368	WF RTD 5 high low
00369	WF RTD 5 low high
00370	WF RTD 6 high low
00371	WF RTD 6 low high
00372	WF RTD 7 high low
00373	WF RTD 7 low high
00374	WF RTD 8 high low

Assignable bits	
Name	**Description**
00375	WF RTD 8 low high
00376	WF RTD 9 high low
00377	WF RTD 9 low high
00378	WF RTD 10 high low
00379	WF RTD 10 low high
00380	WF RTD 11 high low
00381	WF RTD 11 low high
00382	WF RTD 12 high low
00383	WF RTD 12 low high
00384	WF One or no start left
00385	WF Execution fault
00386	WF Feedback fault
00387	WF Load settings error
00388	WF User trip 1
00389	WF User trip 2
00390	WF User trip 3
00391	WF User trip 4
00433	AF Over current
00434	AF Current unbalance
00435	AF Current single phase
00436	AF I1 positive sequence
00437	AF I2 negative sequence
00438	AF I0 zero sequence
00440	AF Current THD magnitude
00441	AF Current minimum load
00442	AF Short circuit
00443	AF Running stall condition
00444	AF Current THD percentage
00445	AF Vectorial stall
00446	AF Unauthorized current
00457	AF Phase angle
00461	AF kWatt demand exceeded
00462	AF kVAr demand exceeded
00463	AF kVA demand exceeded
00464	AF Current demand exceeded
00465	AF Over voltage
00466	AF Under voltage
00467	AF Voltage symmetry
00468	AF Volt low line frequency
00469	AF Volt high line frequency
00470	AF Minimum Volts per Hz
00471	AF Maximum Volts per Hz
00472	AF Rate of frequency change
00473	AF Voltage phase rotation

Assignable bits	
Name	**Description**
00474	AF V1 positive sequence
00475	AF V2 negative sequence
00476	AF V0 zero sequence
00477	AF Voltage THD percentage
00478	AF Voltage THD magnitude
00490	AF Voltage not present
00492	AF kWatt peak demand exceeded
00493	AF kVAr peak demand exceeded
00494	AF kVA peak demand exceeded
00495	AF Current peak demand exceeded
00499	AF Earth leakage
00500	AF Earth fault
00501	AF Insulation lockout
00505	AF Apparent power limit
00507	AF Power factor limit
00508	AF Direction active power
00509	AF Direction reactive power
00513	AF Speed 01 run or start up stall
00514	AF Speed 02 run or start up stall
00529	AF Trip monitor
00530	AF Breaker monitor
00531	AF IO expander communication lost
00532	AF RTD04 module communication lost
00533	AF Internal comms module communication lost
00534	AF 4 to 20mA communication lost
00536	AF External comms module communication lost
00537	AF CTMB connection failed
00538	AF Earth leakage CBCT connection lost
00540	AF Frozen contact
00541	AF Breaker wear
00542	AF Lockout active
00543	AF Emergency stop
00544	AF RTD08 module communication lost
00545	AF Analogue input 1 high low
00546	AF Analogue input 1 low high
00547	AF Analogue input 2 high low
00548	AF Analogue input 2 low high
00549	AF Analogue output 1 high low
00550	AF Analogue output 1 low high
00551	AF Analogue output 2 high low
00552	AF Analogue output 2 low high
00553	AF RTD 1 high low
00554	AF RTD 1 low high
00555	AF RTD 2 high low

Assignable bits	
Name	**Description**
00556	AF RTD 2 low high
00557	AF RTD 3 high low
00558	AF RTD 3 low high
00559	AF RTD 4 high low
00560	AF RTD 4 low high
00561	AF RTD 5 high low
00562	AF RTD 5 low high
00563	AF RTD 6 high low
00564	AF RTD 6 low high
00565	AF RTD 7 high low
00566	AF RTD 7 low high
00567	AF RTD 8 high low
00568	AF RTD 8 low high
00569	AF RTD 9 high low
00570	AF RTD 9 low high
00571	AF RTD 10 high low
00572	AF RTD 10 low high
00573	AF RTD 11 high low
00574	AF RTD 11 low high
00575	AF RTD 12 high low
00576	AF RTD 12 low high
00577	AF One start left
00578	AF Execution fault
00579	AF Feedback fault
00580	AF Load settings error
00581	AF User trip 1
00582	AF User trip 2
00583	AF User trip 3
00584	AF User trip 4
00609	AF ANSI77O Ch1 high, high
00610	AF ANSI77U Ch1 low, low
00611	AF ANSI77O Ch2 high, high
00612	AF ANSI77U Ch2 low, low
00613	AF ANSI77O Ch3 high, high
00614	AF ANSI77U Ch3 low, low
00615	AF ANSI77O Ch4 high, high
00616	AF ANSI77U Ch4 low, low
00617	AF ANSI77O Ch5 high, high
00618	AF ANSI77U Ch5 low, low
00619	AF ANSI77O Ch6 high, high
00620	AF ANSI77U Ch6 low, low
00621	AF ANSI77O Ch7 high, high
00622	AF ANSI77U Ch7 low, low
00623	AF ANSI77O Ch8 high, high

Assignable bits	
Name	**Description**
00624	AF ANSI77U Ch8 low, low
00625	TF Over current
00626	TF Current unbalance
00627	TF Current single phase
00628	TF I1 positive sequence
00629	TF I2 negative sequence
00630	TF I0 zero sequence
00632	TF Current THD magnitude
00633	TF Current minimum load
00634	TF Short circuit
00635	TF Running stall
00636	TF Current THD percentage
00637	TF Vectorial stall
00638	TF Unauthorized current
00649	TF Phase angle
00653	TF kWatt demand exceeded
00654	TF kVAr demand exceeded
00655	TF kVA demand exceeded
00656	TF Current demand exceeded
00657	TF Over voltage
00658	TF Under voltage
00659	TF Voltage symmetry
00660	TF Volt low line frequency
00661	TF Volt high line frequency
00662	TF Minimum Volts per Hz
00663	TF Maximum Volts per Hz
00664	TF Rate of frequency change
00665	TF Voltage phase rotation
00666	TF V1 positive sequence
00667	TF V2 negative sequence
00668	TF V0 zero sequence
00669	TF Voltage THD percentage
00670	TF Voltage THD magnitude
00682	TF Voltage not present
00684	TF kWatt peak demand exceeded
00685	TF kVAr peak demand exceeded
00686	TF kVA peak demand exceeded
00687	TF Current peak demand exceeded
00691	TF Earth leakage
00692	TF Earth fault
00693	TF Insulation lockout
00697	TF Apparent power limit
00699	TF Power factor limit
00700	TF Direction active power

Assignable bits	
Name	**Description**
00701	TF Direction reactive power
00705	TF Speed 01 run or start up stall
00706	TF Speed 02 run or start up stall
00721	TF Trip monitor
00722	TF Breaker monitor
00723	TF IO expander communication lost
00724	TF RTD04 module communication lost
00725	TF Internal comms module communication lost
00726	TF 4 to 20mA communication lost
00728	TF External comms module communication lost
00729	TF CTMB connection failed
00730	TF Earth leakage CBCT connection lost
00732	TF Frozen contact
00733	TF Breaker wear
00734	TF Lockout active
00735	TF Emergency stop
00736	TF RTD08 module communication lost
00737	TF Analogue input 1 high high
00738	TF Analogue input 1 low low
00739	TF Analogue input 2 high high
00740	TF Analogue input 2 low low
00741	TF Analogue output 1 high high
00742	TF Analogue output 1 low low
00743	TF Analogue output 2 high high
00744	TF Analogue output 2 low low
00745	TF RTD 1 high high
00746	TF RTD 1 low low
00747	TF RTD 2 high high
00748	TF RTD 2 low low
00749	TF RTD 3 high high
00750	TF RTD 3 low low
00751	TF RTD 4 high high
00752	TF RTD 4 low low
00753	TF RTD 5 high high
00754	TF RTD 5 low low
00755	TF RTD 6 high high
00756	TF RTD 6 low low
00757	TF RTD 7 high high
00758	TF RTD 7 low low
00759	TF RTD 8 high high
00760	TF RTD 8 low low
00761	TF RTD 9 high high
00762	TF RTD 9 low low
00763	TF RTD 10 high high

Assignable bits	
Name	**Description**
00764	TF RTD 10 low low
00765	TF RTD 11 high high
00766	TF RTD 11 low low
00767	TF RTD 12 high high
00768	TF RTD 12 low low
00769	TF Starts per hour limit
00770	TF Execution fault
00771	TF Feedback fault
00772	TF Load settings error
00773	TF User trip 1
00774	TF User trip 2
00775	TF User trip 3
00776	TF User trip 4
00801	TF ANSI77O Ch1 high, high
00802	TF ANSI77U Ch1 low, low
00803	TF ANSI77O Ch2 high, high
00804	TF ANSI77U Ch2 low, low
00805	TF ANSI77O Ch3 high, high
00806	TF ANSI77U Ch3 low, low
00807	TF ANSI77O Ch4 high, high
00808	TF ANSI77U Ch4 low, low
00809	TF ANSI77O Ch5 high, high
00810	TF ANSI77U Ch5 low, low
00811	TF ANSI77O Ch6 high, high
00812	TF ANSI77U Ch6 low, low
00813	TF ANSI77O Ch7 high, high
00814	TF ANSI77U Ch7 low, low
00815	TF ANSI77O Ch8 high, high
00816	TF ANSI77U Ch8 low, low
00833	PLC Int input 00
00834	PLC Int input 01
00835	PLC Int input 02
00836	PLC Int input 03
00837	PLC Int input 04
00838	PLC Int input 05
00839	PLC Int input 06
00840	PLC Int input 07
00841	PLC Int input 08
00842	PLC Int input 09
00843	PLC Int input 10
00844	PLC Int input 11
00845	PLC Int input 12
00846	PLC Int input 13
00847	PLC Int input 14

Assignable bits	
Name	**Description**
00848	PLC Int input 15
00849	PLC Ext input 00
00850	PLC Ext input 01
00851	PLC Ext input 02
00852	PLC Ext input 03
00853	PLC Ext input 04
00854	PLC Ext input 05
00855	PLC Ext input 06
00856	PLC Ext input 07
00857	PLC Ext input 08
00858	PLC Ext input 09
00859	PLC Ext input 10
00860	PLC Ext input 11
00861	PLC Ext input 12
00862	PLC Ext input 13
00863	PLC Ext input 14
00864	PLC Ext input 15
00865	Digital field input 01
00866	Digital field input 02
00867	Digital field input 03
00868	Digital field input 04
00869	Digital field input 05
00870	Digital field input 06
00871	Digital field input 07
00872	External digital field input 08
00873	External digital field input 09
00874	External digital field input 10
00875	External digital field input 11
00876	External digital field input 12
00877	External digital field input 13
00878	External digital field input 14
00879	External digital field input 15
00880	Simulation active
00881	Relay output 01
00882	Relay output 02
00883	Relay output 03
00884	Relay output 04
00885	External relay output 05
00886	External relay output 06
00887	External relay output 07
00888	External relay output 08
00889	LF Table 1 output
00890	LF Table 2 output
00891	LF Table 3 output

Assignable bits	
Name	**Description**
00892	LF Table 4 output
00893	LF Table 5 output
00894	LF Table 6 output
00895	LF Latch A output
00896	LF Latch B output
00897	LF Counter A output
00898	LF Counter B output
00899	LF RTC output
00900	LF Status reporter
00902	LF Pulse generator output
00903	LF Timer A output
00905	LF Timer B output
00907	LF Ext Comms reset
00908	LF Int Comms reset
00909	LF Field reset
00910	LF Min Load restart flag
00911	LF Reset push button
00913	LF Comp 1 high high
00914	LF Comp 1 high
00915	LF Comp 1 high low
00916	LF Comp 1 between
00917	LF Comp 1 low high
00918	LF Comp 1 low
00919	LF Comp 1 low low
00920	LF TC high
00921	LF Comp 2 high high
00922	LF Comp 2 high
00923	LF Comp 2 high low
00924	LF Comp 2 between
00925	LF Comp 2 low high
00926	LF Comp 2 low
00927	LF Comp 2 low low
00928	LF TC high high
00945	SF Location selection bit lsb
00946	SF Location selection bit msb
00947	SF Feedback forward active
00948	SF Feedback reverse active
00949	SF Starter ready
00950	SF Pre start warning active
00951	SF Backspin timer active
00952	SF Transition timer active
00953	SF DC brake timer active
00954	SF Any stop active
00955	SF Any interlock active

Assignable bits	
Name	**Description**
00956	SF Emergency stop active
00957	SF Lockout active
00958	SF Pre start warning complete
00959	SF star timer active
00961	SF Local forward fast active
00962	SF Local forward slow active
00963	SF Local interlock active
00964	SF Local stop active
00965	SF Local reverse slow active
00966	SF Local reverse fast active
00967	SF Remote forward fast active
00968	SF Remote forward slow active
00969	SF Remote interlock active
00970	SF Remote stop active
00971	SF Remote reverse slow active
00972	SF Remote reverse fast active
00977	SF Auto forward fast active
00978	SF Auto forward slow active
00979	SF Auto interlock active
00980	SF Auto stop active
00981	SF Auto reverse slow active
00982	SF Auto reverse fast active
00993	SF Motor run 00
00994	SF Motor run 01
00995	SF Motor run 02
00996	SF Motor run 03
00997	SF Motor run 04
01025	Alarm flag mask
01026	Trip flag mask
01027	WF ANSI77O Ch1 high, high
01028	WF ANSI77O Ch1 high
01029	WF ANSI77U Ch1 low
01030	WF ANSI77U Ch1 low, low
01031	WF ANSI77O Ch2 high, high
01032	WF ANSI77O Ch2 high
01033	WF ANSI77U Ch2 low
01034	WF ANSI77U Ch2 low, low
01035	WF ANSI77O Ch3 high, high
01036	WF ANSI77O Ch3 high
01037	WF ANSI77U Ch3 low
01038	WF ANSI77U Ch3 low, low
01039	WF ANSI77O Ch4 high, high
01040	WF ANSI77O Ch4 high
01041	WF ANSI77U Ch4 low

Assignable bits	
Name	**Description**
01042	WF ANSI77U Ch4 low, low
01043	WF ANSI77O Ch5 high, high
01044	WF ANSI77O Ch5 high
01045	WF ANSI77U Ch5 low
01046	WF ANSI77U Ch5 low, low
01047	WF ANSI77O Ch6 high, high
01048	WF ANSI77O Ch6 high
01049	WF ANSI77U Ch6 low
01050	WF ANSI77U Ch6 low, low
01051	WF ANSI77O Ch7 high, high
01052	WF ANSI77O Ch7 high
01053	WF ANSI77U Ch7 low
01054	WF ANSI77U Ch7 low, low
01055	WF ANSI77O Ch8 high, high
01056	WF ANSI77O Ch8 high
01057	WF ANSI77U Ch8 low
01058	WF ANSI77U Ch8 low, low

Table 7.1.c: Assignable bit selection.

7.2 Assignable Word Configuration

Under the ***"Internal communication module"***, below the label ***"Configuration words"*** is a table that displays a list of variables of the NewFeed that is assigned to the cyclic input word 3 to 12.

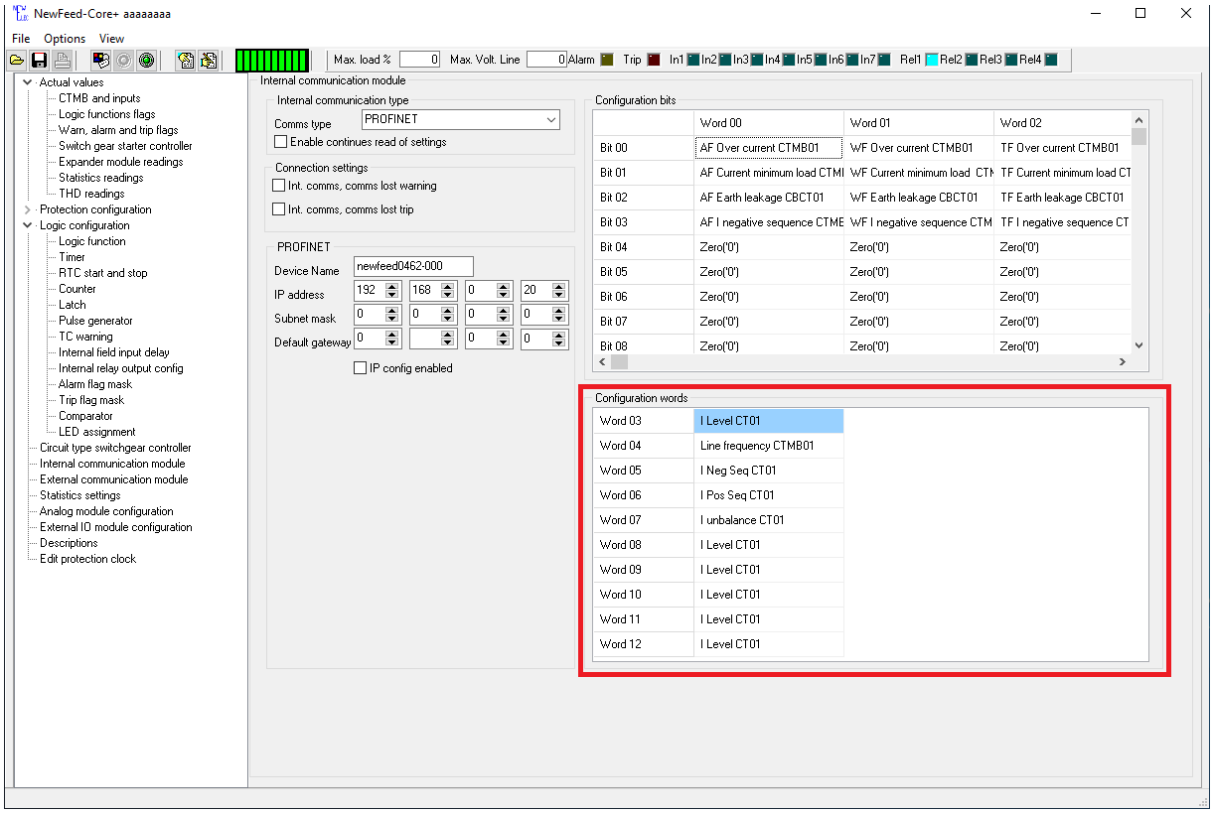


Figure 7.2.a: Configurable assignable word configuration.

By double left clicking on the grid of the selected word a popup box will appear (See figure 7.2.b). The box will contain a list of words that can be selected.

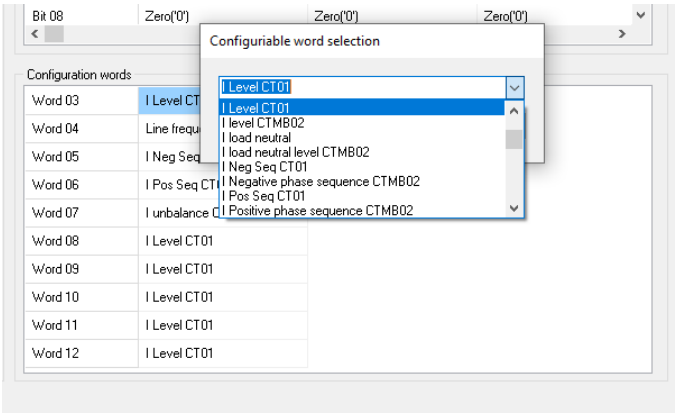


Figure 7.2.b: Configurable assignable words selection.

Below is a list of assignable words that can be assigned (Table 7.2.c) to the assignable word.

Assignable words		
Name	**Description**	**Unit**
00002	Int Comms Word 01	
00003	Int Comms Word 02	
00004	Ext Comms Word 01	
00005	Ext Comms Word 02	
00006	I Level	%
00007	IL1 Current Level	%
00008	IL2 Current Level	%
00009	IL3 Current Level	%
00010	I unbalance	%
00011	TC level remain	%
00012	I load neutral	%
00013	Thermal curve active	
00014	Maximum load current	%
00015	CT model number	
00016	CT secondary	
00017	CT primary	
00018	I Pos Seq	%
00019	I Neg Seq	%
00020	I Zero Seq	%
00021	IL1 to IL2 angle	Deg
00022	IL2 to IL3 angle	Deg
00023	IL3 to IL1 angle	Deg
00024	VL1 to IL1 angle	Deg
00025	VL2 to IL2 angle	Deg
00026	VL3 to IL3 angle	Deg
00027	IL1 differential current	%
00028	IL2 differential current	%
00029	IL3 differential current	%
00051	Phase voltage maximum level	V
00052	Phase voltage L1	V
00053	Phase voltage L2	V
00054	Phase voltage L3	V
00055	Reserved.	
00056	Voltage symmetry	%
00057	Line frequency	Hz
00058	Line voltage selection	
00059	VL1 to VL2 angle	Deg
00060	VL2 to VL3 angle	Deg

Assignable words		
Name	**Description**	**Unit**
00061	VL3 to VL1 angle	Deg
00062	V Positive phase sequence	%
00063	V Negative phase sequence	%
00064	V Zero sequence	%
00065	Volts per Hertz	V/Hz
00066	Rate of frequency change	Hz/s
00086	Power level	
00088	Earth leakage level	mA
00089	Earth leakage Detector level	mA
00090	Insulation level	Ohm
00095	Warning flags 0.	
	• b00 = Feedback Reverse Signal active	
	• b01 = Run forward fast.	
	• b02 = Run forward slow.	
	• b03 = Run reverse slow.	
	• b04 = Run reverse fast.	
	• b05 = Stop active.	
	• b06 = Interlock active.	
	• b07 = Starter ready.	
	• b08 = If IL Current > 10%.	
	• b09 = If VL > 40% of selected Vac.	
	• b10 = Reserved.	
	• b11 = Reserved.	
	• b12 = Record memory full.	
	• b13 = Breaker Fault.	
	• b14 = Pre-start warning.	
	• b15 = Feedback Forward Signal active.	
00095	Warning flags 1.	
	• b00 = RTD 1 temperature high.	
	• b01 = RTD 1 temperature low.	
	• b02 = RTD 2 temperature high.	
	• b03 = RTD 2 temperature low.	
	• b04 = RTD 3 temperature high.	
	• b05 = RTD 3 temperature low.	
	• b06 = RTD 4 temperature high.	
	• b07 = RTD 4 temperature low.	
	• b08 = 4 - 20mA in 1 high.	
	• b09 = 4 - 20mA in 1 low.	
	• b10 = 4 - 20mA in 2 high.	
	• b11 = 4 - 20mA in 2 low.	

Assignable words		
Name	**Description**	**Unit**
	• b12 = 4 - 20mA out 1 high.	
	• b13 = 4 - 20mA out 1 low.	
	• b14 = 4 - 20mA out 2 high.	
	• b15 = 4 - 20mA out 2 low.	
00093	Warning flags 2.	
	• b00 = RTD 9 temperature high.	
	• b01 = RTD 9 temperature low.	
	• b02 = RTD 10 temperature high.	
	• b03 = RTD 10 temperature low.	
	• b04 = RTD 11 temperature high.	
	• b05 = RTD 11 temperature low.	
	• b06 = RTD 12 temperature high.	
	• b07 = RTD 12 temperature low.	
	• b08 = RTD 5 temperature high.	
	• b09 = RTD 5 temperature low.	
	• b10 = RTD 6 temperature high.	
	• b11 = RTD 6 temperature low.	
	• b12 = RTD 7 temperature high.	
	• b13 = RTD 7 temperature low.	
	• b14 = RTD 8 temperature high.	
	• b15 = RTD 8 temperature low.	
00094	Warning flags 3.	
	• b00 = Reserved.	
	• b01 = Reserved.	
	• b02 = Reserved.	
	• b03 = Reserved.	
	• b04 = Reserved.	
	• b05 = Reserved.	
	• b06 = Reserved.	
	• b07 = Reserved.	
	• b08 = V lead I.	
	• b09 = Reserved.	
	• b10 = Reserved.	
	• b11 = Motor start-up.	
	• b12 = Motor running.	
	• b13 = Motor stopped.	
	• b14 = Reserved.	
	• b15 = Reserved.	
00095	Warning flags 4.	
	• b00 = IL1 8th Harmonic high.	

Assignable words		
Name	**Description**	**Unit**
	• b01 = IL1 9th Harmonic high.	
	• b02 = IL1 10th Harmonic high.	
	• b03 = IL1 11th Harmonic high.	
	• b04 = IL1 12th Harmonic high.	
	• b05 = IL1 13th Harmonic high.	
	• b06 = IL1 14th Harmonic high.	
	• b07 = IL1 15th Harmonic high.	
	• b08 = IL1 Sub-harmonics high.	
	• b09 = IL1 1st Harmonic high.	
	• b10 = IL1 2nd Harmonic high.	
	• b11 = IL1 3rd Harmonic high.	
	• b12 = IL1 4th Harmonic high.	
	• b13 = IL1 5th Harmonic high.	
	• b14 = IL1 6th Harmonic high.	
	• b15 = IL1 7th Harmonic high.	
00096	Warning flags 5.	
	• b00 = IL1 24th Harmonic high.	
	• b01 = IL1 25th Harmonic high.	
	• b02 = IL1 26th Harmonic high.	
	• b03 = IL1 27th Harmonic high.	
	• b04 = IL1 28th Harmonic high.	
	• b05 = IL1 29th Harmonic high.	
	• b06 = IL1 30th Harmonic high.	
	• b07 = IL1 31st Harmonic high.	
	• b08 = IL1 16th Harmonic high.	
	• b09 = IL1 17th Harmonic high.	
	• b10 = IL1 18th Harmonic high.	
	• b11 = IL1 19th Harmonic high.	
	• b12 = IL1 20th Harmonic high.	
	• b13 = IL1 21st Harmonic high.	
	• b14 = IL1 22nd Harmonic high.	
	• b15 = IL1 23rd Harmonic high.	
00097	Warning flags 6.	
	• b00 = IL2 8th Harmonic high.	
	• b01 = IL2 9th Harmonic high.	
	• b02 = IL2 10th Harmonic high.	
	• b03 = IL2 11th Harmonic high.	
	• b04 = IL2 12th Harmonic high.	
	• b05 = IL2 13th Harmonic high.	
	• b06 = IL2 14th Harmonic high.	

Assignable words		
Name	**Description**	**Unit**
	• b07 = IL2 15th Harmonic high.	
	• b08 = IL2 Sub-harmonics high.	
	• b09 = IL2 1st Harmonic high.	
	• b10 = IL2 2nd Harmonic high.	
	• b11 = IL2 3rd Harmonic high.	
	• b12 = IL2 4th Harmonic high.	
	• b13 = IL2 5th Harmonic high.	
	• b14 = IL2 6th Harmonic high.	
	• b15 = IL2 7th Harmonic high.	
00098	Warning flags 7.	
	• b00 = IL2 24th Harmonic high.	
	• b01 = IL2 25th Harmonic high.	
	• b02 = IL2 26th Harmonic high.	
	• b03 = IL2 27th Harmonic high.	
	• b04 = IL2 28th Harmonic high.	
	• b05 = IL2 29th Harmonic high.	
	• b06 = IL2 30th Harmonic high.	
	• b07 = IL2 31st Harmonic high.	
	• b08 = IL2 16th Harmonic high.	
	• b09 = IL2 17th Harmonic high.	
	• b10 = IL2 18th Harmonic high.	
	• b11 = IL2 19th Harmonic high.	
	• b12 = IL2 20th Harmonic high.	
	• b13 = IL2 21st Harmonic high.	
	• b14 = IL2 22nd Harmonic high.	
	• b15 = IL2 23rd Harmonic high.	
00099	Warning flags 8.	
	• b00 = IL3 8th Harmonic high.	
	• b01 = IL3 9th Harmonic high.	
	• b02 = IL3 10th Harmonic high.	
	• b03 = IL3 11th Harmonic high.	
	• b04 = IL3 12th Harmonic high.	
	• b05 = IL3 13th Harmonic high.	
	• b06 = IL3 14th Harmonic high.	
	• b07 = IL3 15th Harmonic high.	
	• b08 = IL3 Sub-harmonics high.	
	• b09 = IL3 1st Harmonic high.	
	• b10 = IL3 2nd Harmonic high.	
	• b11 = IL3 3rd Harmonic high.	
	• b12 = IL3 4th Harmonic high.	

Assignable words		
Name	**Description**	**Unit**
	• b13 = IL3 5th Harmonic high.	
	• b14 = IL3 6th Harmonic high.	
	• b15 = IL3 7th Harmonic high.	
00100	Warning flags 9.	
	• b00 = IL3 24th Harmonic high.	
	• b01 = IL3 25th Harmonic high.	
	• b02 = IL3 26th Harmonic high.	
	• b03 = IL3 27th Harmonic high.	
	• b04 = IL3 28th Harmonic high.	
	• b05 = IL3 29th Harmonic high.	
	• b06 = IL3 30th Harmonic high.	
	• b07 = IL3 31st Harmonic high.	
	• b08 = IL3 16th Harmonic high.	
	• b09 = IL3 17th Harmonic high.	
	• b10 = IL3 18th Harmonic high.	
	• b11 = IL3 19th Harmonic high.	
	• b12 = IL3 20th Harmonic high.	
	• b13 = IL3 21st Harmonic high.	
	• b14 = IL3 22nd Harmonic high.	
	• b15 = IL3 23rd Harmonic high.	
00101	Warning flags 10.	
	• b00 = VL1 8th Harmonic high.	
	• b01 = VL1 9th Harmonic high.	
	• b02 = VL1 10th Harmonic high.	
	• b03 = VL1 11th Harmonic high.	
	• b04 = VL1 12th Harmonic high.	
	• b05 = VL1 13th Harmonic high.	
	• b06 = VL1 14th Harmonic high.	
	• b07 = VL1 15th Harmonic high.	
	• b08 = VL1 Sub-harmonics high.	
	• b09 = VL1 1st Harmonic high.	
	• b10 = VL1 2nd Harmonic high.	
	• b11 = VL1 3rd Harmonic high.	
	• b12 = VL1 4th Harmonic high.	
	• b13 = VL1 5th Harmonic high.	
	• b14 = VL1 6th Harmonic high.	
	• b15 = VL1 7th Harmonic high.	
00102	Warning flags 11.	
	• b00 = VL1 24th Harmonic high.	
	• b01 = VL1 25th Harmonic high.	

Assignable words		
Name	**Description**	**Unit**
	• b02 = VL1 26th Harmonic high.	
	• b03 = VL1 27th Harmonic high.	
	• b04 = VL1 28th Harmonic high.	
	• b05 = VL1 29th Harmonic high.	
	• b06 = VL1 30th Harmonic high.	
	• b07 = VL1 31st Harmonic high.	
	• b08 = VL1 16th Harmonic high.	
	• b09 = VL1 17th Harmonic high.	
	• b10 = VL1 18th Harmonic high.	
	• b11 = VL1 19th Harmonic high.	
	• b12 = VL1 20th Harmonic high.	
	• b13 = VL1 21st Harmonic high.	
	• b14 = VL1 22nd Harmonic high.	
	• b15 = VL1 23rd Harmonic high.	
00103	Warning flags 12.	
	• b00 = VL2 8th Harmonic high.	
	• b01 = VL2 9th Harmonic high.	
	• b02 = VL2 10th Harmonic high.	
	• b03 = VL2 11th Harmonic high.	
	• b04 = VL2 12th Harmonic high.	
	• b05 = VL2 13th Harmonic high.	
	• b06 = VL2 14th Harmonic high.	
	• b07 = VL2 15th Harmonic high.	
	• b08 = VL2 Sub-harmonics high.	
	• b09 = VL2 1st Harmonic high.	
	• b10 = VL2 2nd Harmonic high.	
	• b11 = VL2 3rd Harmonic high.	
	• b12 = VL2 4th Harmonic high.	
	• b13 = VL2 5th Harmonic high.	
	• b14 = VL2 6th Harmonic high.	
	• b15 = VL2 7th Harmonic high.	
00104	Warning flags 13.	
	• b00 = VL2 24th Harmonic high.	
	• b01 = VL2 25th Harmonic high.	
	• b02 = VL2 26th Harmonic high.	
	• b03 = VL2 27th Harmonic high.	
	• b04 = VL2 28th Harmonic high.	
	• b05 = VL2 29th Harmonic high.	
	• b06 = VL2 30th Harmonic high.	
	• b07 = VL2 31st Harmonic high.	

Assignable words		
Name	**Description**	**Unit**
	• b08 = VL2 16th Harmonic high.	
	• b09 = VL2 17th Harmonic high.	
	• b10 = VL2 18th Harmonic high.	
	• b11 = VL2 19th Harmonic high.	
	• b12 = VL2 20th Harmonic high.	
	• b13 = VL2 21st Harmonic high.	
	• b14 = VL2 22nd Harmonic high.	
	• b15 = VL2 23rd Harmonic high.	
00105	Warning flags 14.	
	• b00 = VL3 8th Harmonic high.	
	• b01 = VL3 9th Harmonic high.	
	• b02 = VL3 10th Harmonic high.	
	• b03 = VL3 11th Harmonic high.	
	• b04 = VL3 12th Harmonic high.	
	• b05 = VL3 13th Harmonic high.	
	• b06 = VL3 14th Harmonic high.	
	• b07 = VL3 15th Harmonic high.	
	• b08 = VL3 Sub-harmonics high.	
	• b09 = VL3 1st Harmonic high.	
	• b10 = VL3 2nd Harmonic high.	
	• b11 = VL3 3rd Harmonic high.	
	• b12 = VL3 4th Harmonic high.	
	• b13 = VL3 5th Harmonic high.	
	• b14 = VL3 6th Harmonic high.	
	• b15 = VL3 7th Harmonic high.	
00106	Warning flags 15.	
	• b00 = VL3 24th Harmonic high.	
	• b01 = VL3 25th Harmonic high.	
	• b02 = VL3 26th Harmonic high.	
	• b03 = VL3 27th Harmonic high.	
	• b04 = VL3 28th Harmonic high.	
	• b05 = VL3 29th Harmonic high.	
	• b06 = VL3 30th Harmonic high.	
	• b07 = VL3 31st Harmonic high.	
	• b08 = VL3 16th Harmonic high.	
	• b09 = VL3 17th Harmonic high.	
	• b10 = VL3 18th Harmonic high.	
	• b11 = VL3 19th Harmonic high.	
	• b12 = VL3 20th Harmonic high.	
	• b13 = VL3 21st Harmonic high.	

Assignable words		
Name	**Description**	**Unit**
	• b14 = VL3 22nd Harmonic high.	
	• b15 = VL3 23rd Harmonic high.	
00107	Warning flags 16.	
	• b00 = Minimum load.	
	• b01 = Short circuit.	
	• b02 = Running stall condition.	
	• b03 = % THD current.	
	• b04 = Vectorial stall.	
	• b05 = Unauthorized current.	
	• b06 = Reserved.	
	• b07 = Reserved.	
	• b08 = Over current.	
	• b09 = Current unbalance.	
	• b10 = Current single phase.	
	• b11 = I Positive sequence.	
	• b12 = I Negative sequence.	
	• b13 = I Zero sequence warning.	
	• b14 = Neutral monitor.	
	• b15 = THD magnitude current.	
00108	Warning flags 17.	
	• b00 = Differential angle.	
	• b01 = Reserved.	
	• b02 = Reserved.	
	• b03 = Reserved.	
	• b04 = Watt demand exceeded.	
	• b05 = VAr demand exceeded.	
	• b06 = VA demand exceeded.	
	• b07 = Current demand exceeded.	
	• b08 = Reserved.	
	• b09 = Reserved.	
	• b10 = Reserved.	
	• b11 = Reserved.	
	• b12 = Reserved.	
	• b13 = Reserved.	
	• b14 = Reserved.	
	• b15 = Differential Current.	
00109	Warning flags 18.	
	• b00 = Voltage phase rotation.	
	• b01 = V Positive sequence.	
	• b02 = V Negative sequence.	

Assignable words		
Name	**Description**	**Unit**
	• b03 = V Zero sequence.	
	• b04 = % V THD high	
	• b05 = V THD magnitude high	
	• b06 = Differential Voltage.	
	• b07 = Reserved.	
	• b08 = Overvoltage.	
	• b09 = Undervoltage.	
	• b10 = Voltage symmetry.	
	• b11 = Low line voltage frequency.	
	• b12 = High line voltage frequency.	
	• b13 = Min. Volts/Hz.	
	• b14 = Max. Volts/Hz.	
	• b15 = Rate of frequency change.	
00110	Warning flags 19.	
	• b00 = Reserved.	
	• b01 = Voltage not present.	
	• b02 = Reserved.	
	• b03 = Reserved.	
	• b04 = Reserved.	
	• b05 = Reserved.	
	• b06 = Reserved.	
	• b07 = Reserved.	
	• b08 = Reserved.	
	• b09 = Reserved.	
	• b10 = Reserved.	
	• b11 = Reserved.	
	• b12 = Reserved.	
	• b13 = Reserved.	
	• b14 = Reserved.	
	• b15 = Reserved.	
00111	Warning flags 20.	
	• b00 = Reserved.	
	• b01 = Reserved.	
	• b02 = Reserved.	
	• b03 = Forward Direction active power.	
	• b04 = Forward Direction reactive power.	
	• b05 = Reserved.	
	• b06 = Reserved.	
	• b07 = Reserved.	
	• b08 = Auxiliary undervoltage.	

Assignable words		
Name	**Description**	**Unit**
	• b09 = Auxiliary overvoltage.	
	• b10 = Earth leakage >setpoint.	
	• b11 = Earth fault > setpoint.	
	• b12 = Insulation lockout < 20kOhm.	
	• b13 = Reserved.	
	• b14 = Earth detector.	
	• b15 = Reserved.	
00112	Warning flags 21.	
	• b00 = Overspeed 4-20mA input on Ch 02.	
	• b01 = Underspeed 4-20mA input on Ch 02.	
	• b02 = Reserved.	
	• b03 = Reserved.	
	• b04 = Reserved.	
	• b05 = Reserved.	
	• b06 = Reserved.	
	• b07 = Reserved.	
	• b08 = Speed switch 01 running or standstill	
	• b09 = Speed switch 02 running or standstill	
	• b10 = Overspeed pulse count high 01.	
	• b11 = Underspeed pulse count low 01.	
	• b12 = Overspeed pulse count high 02.	
	• b13 = Underspeed pulse count low 02.	
	• b14 = Overspeed 4-20mA input on Ch 01.	
	• b15 = Underspeed 4-20mA input on Ch 01.	
00113	Warning flags 22.	
	• b00 = CT and VT connection failed.	
	• b01 = EL CBCT connection failed.	
	• b02 = Reserved.	
	• b03 = Frozen contact.	
	• b04 = Breaker operation near end of life.	
	• b05 = Safety Maintenance Interlock active.	
	• b06 = Emergency stop active.	
	• b07 = RTD 8 module I2C communication lost.	
	• b08 = Main Contactor Trip Coil continuous.	
	• b09 = Breaker Fail warning.	
	• b10 = IO Expander I2C communication lost.	
	• b11 = RTD 4 module I2C communication lost.	
	• b12 = Internal communication module I2C communication lost.	
	• b13 = 4 - 20mA module I2C communication lost.	
	• b14 = MMI I2C communication lost.	

Assignable words		
Name	**Description**	**Unit**
	• b15 = Ext. communication module I2C communication lost.	
00114	Warning flags 23.	
	• b00 = RTD 1 temperature level high.	
	• b01 = RTD 1 temperature level low.	
	• b02 = RTD 2 temperature level high.	
	• b03 = RTD 2 temperature level low.	
	• b04 = RTD 3 temperature level high.	
	• b05 = RTD 3 temperature level low.	
	• b06 = RTD 4 temperature level high.	
	• b07 = RTD 4 temperature level low.	
	• b08 = 4 - 20mA input channel 1 high.	
	• b09 = 4 - 20mA input channel 1 low.	
	• b10 = 4 - 20mA input channel 2 high.	
	• b11 = 4 - 20mA input channel 2 low.	
	• b12 = 4 - 20mA output channel 1 high.	
	• b13 = 4 - 20mA output channel 1 low.	
	• b14 = 4 - 20mA output channel 2 high.	
	• b15 = 4 - 20mA output channel 2 low.	
00115	Warning flags 24.	
	• b00 = RTD 9 temperature level high.	
	• b01 = RTD 9 temperature level low.	
	• b02 = RTD 10 temperature level high.	
	• b03 = RTD 10 temperature level low.	
	• b04 = RTD 11 temperature level high.	
	• b05 = RTD 11 temperature level low.	
	• b06 = RTD 12 temperature level high.	
	• b07 = RTD 12 temperature level low.	
	• b08 = RTD 5 temperature level high.	
	• b09 = RTD 5 temperature level low.	
	• b10 = RTD 6 temperature level high.	
	• b11 = RTD 6 temperature level low.	
	• b12 = RTD 7 temperature level high.	
	• b13 = RTD 7 temperature level low.	
	• b14 = RTD 8 temperature level high.	
	• b15 = RTD 8 temperature level low.	
00116	Warning flags 25.	
	• b00 = Reserved.	
	• b01 = Reserved.	
	• b02 = Reserved.	
	• b03 = Reserved.	

Assignable words		
Name	**Description**	**Unit**
	• b04 = Reserved.	
	• b05 = Reserved.	
	• b06 = Reserved.	
	• b07 = Reserved.	
	• b08 = Starts per hour.	
	• b09 = Execution fault.	
	• b10 = Feedback fault.	
	• b11 = Load settings corruption error.	
	• b12 = Ext. configurable trip 01 active.	
	• b13 = Ext. configurable trip 02 active.	
	• b14 = Ext. configurable trip 03 active.	
	• b15 = Ext. configurable trip 04 active.	
00117	Warning flags 26.	
	• b00 – b15 = Reserved.	
00118	Warning flags 27.	
	• b00 – b15 = Reserved.	
00119	Alarm flags 0.	
	• b00 = Minimum load.	
	• b01 = Short circuit.	
	• b02 = Running stall condition.	
	• b03 = THD % current.	
	• b04 = Vectorial stall.	
	• b05 = Unauthorized current	
	• b06 = Reserved.	
	• b07 = Reserved.	
	• b08 = Over current.	
	• b09 = Current unbalance.	
	• b10 = Current single phase.	
	• b11 = I Positive sequence.	
	• b12 = I Negative sequence.	
	• b13 = I Zero sequence alarm.	
	• b14 = I Neutral monitor.	
	• b15 = THD magnitude current.	
00120	Alarm flags 1.	
	• b00 = Differential current phase.	
	• b01 = Reserved.	
	• b02 = Reserved.	
	• b03 = Reserved.	
	• b04 = Watt demand exceeded.	

Assignable words		
Name	**Description**	**Unit**
	• b05 = VAr demand exceeded.	
	• b06 = VA demand exceeded.	
	• b07 = Current demand exceeded.	
	• b08 = Reserved.	
	• b09 = Reserved.	
	• b10 = Reserved.	
	• b11 = Reserved.	
	• b12 = Reserved.	
	• b13 = Reserved.	
	• b14 = Reserved.	
	• b15 = Differential Current.	
00121	Alarm flags 2.	
	• b00 = Voltage phase on rotation.	
	• b01 = V Positive sequence.	
	• b02 = V Negative sequence.	
	• b03 = V Zero sequence.	
	• b04 = % V THD high	
	• b05 = V THD magnitude high	
	• b06 = Differential Voltage.	
	• b07 = Reserved.	
	• b08 = Overvoltage.	
	• b09 = Undervoltage.	
	• b10 = Voltage symmetry.	
	• b11 = Low line voltage frequency.	
	• b12 = High line voltage frequency.	
	• b13 = Min. Volts/Hz.	
	• b14 = Max. Volts/Hz.	
	• b15 = Rate of frequency change.	
00122	Alarm flags 3.	
	• b00 = Reserved.	
	• b01 = Voltage not present.	
	• b02 = Reserved.	
	• b03 = Reserved.	
	• b04 = Reserved.	
	• b05 = Reserved.	
	• b06 = Reserved.	
	• b07 = Reserved.	
	• b08 = Reserved.	
	• b09 = Reserved.	
	• b10 = Reserved.	

Assignable words		
Name	**Description**	**Unit**
	• b11 = Reserved.	
	• b12 = Reserved.	
	• b13 = Reserved.	
	• b14 = Reserved.	
	• b15 = Reserved.	
00123	Alarm flags 4.	
	• b00 = Apparent power limit.	
	• b01 = Reserved.	
	• b02 = Power factor limit.	
	• b03 = Forward Direction active power.	
	• b04 = Forward Direction reactive power.	
	• b05 = Reserved.	
	• b06 = Reserved.	
	• b07 = Reserved.	
	• b08 = Auxiliary undervoltage.	
	• b09 = Auxiliary overvoltage.	
	• b10 = Earth leakage.	
	• b11 = Earth fault.	
	• b12 = Insulation lockout < 20kOhm.	
	• b13 = Reserved.	
	• b14 = Earth detector.	
	• b15 = Reserved.	
00124	Alarm flags 5.	
	• b00 = Overspeed 4-20mA input on Ch 02.	
	• b01 = Underspeed 4-20mA input on Ch 02.	
	• b02 = Reserved.	
	• b03 = Reserved.	
	• b04 = Reserved.	
	• b05 = Reserved.	
	• b06 = Reserved.	
	• b07 = Reserved.	
	• b08 = Speed switch 01 running or standstill.	
	• b09 = Speed switch 02 running or standstill.	
	• b10 = Overspeed pulse count high 01.	
	• b11 = Underspeed pulse count low 01.	
	• b12 = Overspeed pulse count high 02.	
	• b13 = Underspeed pulse count low 02.	
	• b14 = Overspeed 4-20mA input on Ch 01.	
	• b15 = Underspeed 4-20mA input on Ch 01.	
00125	Alarm flags 6.	

Assignable words		
Name	**Description**	**Unit**
	• b00 = CT and VT connection failed.	
	• b01 = EL CBCT connection failed.	
	• b02 = Reserved.	
	• b03 = Frozen contact.	
	• b04 = Breaker operation near end of life.	
	• b05 = Safety Maintenance Interlock active.	
	• b06 = Emergency stop active.	
	• b07 = RTD 08 module I2C communication lost.	
	• b08 = Main Contactor Trip Coil continuous.	
	• b09 = Breaker Fail warning.	
	• b10 = IO Expander I2C communication lost.	
	• b11 = RTD module I2C communication lost.	
	• b12 = Internal communication module I2C communication lost.	
	• b13 = 4 - 20mA module I2C communication module lost.	
	• b14 = MMI I2C communication lost.	
	• b15 = Ext. communication module I2C communication lost.	
00126	Alarm flags 7.	
	• b00 = RTD 1 temperature level high.	
	• b01 = RTD 1 temperature level low.	
	• b02 = RTD 2 temperature level high.	
	• b03 = RTD 2 temperature level low.	
	• b04 = RTD 3 temperature level high.	
	• b05 = RTD 3 temperature level low.	
	• b06 = RTD 4 temperature level high.	
	• b07 = RTD 4 temperature level low.	
	• b08 = 4 - 20mA input channel 1 high.	
	• b09 = 4 - 20mA input channel 1 low.	
	• b10 = 4 - 20mA input channel 2 high.	
	• b11 = 4 - 20mA input channel 2 low.	
	• b12 = 4 - 20mA output channel 1 high.	
	• b13 = 4 - 20mA output channel 1 low.	
	• b14 = 4 - 20mA output channel 2 high.	
	• b15 = 4 - 20mA output channel 2 low.	
00127	Alarm flags 8.	
	• b00 = RTD 9 temperature level high.	
	• b01 = RTD 9 temperature level low.	
	• b02 = RTD 10 temperature level high.	
	• b03 = RTD 10 temperature level low.	
	• b04 = RTD 11 temperature level high.	
	• b05 = RTD 11 temperature level low.	

Assignable words		
Name	**Description**	**Unit**
	• b06 = RTD 12 temperature level high.	
	• b07 = RTD 12 temperature level low.	
	• b08 = RTD 5 temperature level high.	
	• b09 = RTD 5 temperature level low.	
	• b10 = RTD 6 temperature level high.	
	• b11 = RTD 6 temperature level low.	
	• b12 = RTD 7 temperature level high.	
	• b13 = RTD 7 temperature level low.	
	• b14 = RTD 8 temperature level high.	
	• b15 = RTD 8 temperature level low.	
00128	Alarm flags 9.	
	• b00 = Reserved.	
	• b01 = Reserved.	
	• b02 = Reserved.	
	• b03 = Reserved.	
	• b04 = Reserved.	
	• b05 = Reserved.	
	• b06 = Reserved.	
	• b07 = Reserved.	
	• b08 = Starts per hour.	
	• b09 = Execution fault.	
	• b10 = Feedback fault.	
	• b11 = Load settings corruption error.	
	• b12 = Ext. configurable trip 01 active.	
	• b13 = Ext. configurable trip 02 active.	
	• b14 = Ext. configurable trip 03 active.	
	• b15 = Ext. configurable trip 04 active.	
00129	Alarm flags 10.	
	• b00 – b15 = Reserved.	
00130	Alarm flags 11.	
	• b00 = ANSI77O channel 5 high, high.	
	• b01 = ANSI77U channel 5 low, low.	
	• b02 = ANSI77O channel 6 high, high.	
	• b03 = ANSI77U channel 6 low, low.	
	• b04 = ANSI77O channel 7 high, high.	
	• b05 = ANSI77U channel 7 low, low.	
	• b06 = ANSI77O channel 8 high, high.	
	• b07 = ANSI77U channel 8 low, low.	
	• b08 = ANSI77O channel 1 high, high.	
	• b09 = ANSI77U channel 1 low, low.	

Assignable words		
Name	**Description**	**Unit**
	• b10 = ANSI77O channel 2 high, high.	
	• b11 = ANSI77U channel 2 low, low.	
	• b12 = ANSI77O channel 3 high, high.	
	• b13 = ANSI77U channel 3 low, low.	
	• b14 = ANSI77O channel 4 high, high.	
	• b15 = ANSI77U channel 4 low, low.	
00131	Trip flags 0.	
	• b00 = Minimum load.	
	• b01 = Short circuit.	
	• b02 = Running stall condition.	
	• b03 = % THD current.	
	• b04 = Vectorial stall.	
	• b05 = Unauthorized current	
	• b06 = Reserved.	
	• b07 = Reserved.	
	• b08 = Over current.	
	• b09 = Current unbalance.	
	• b10 = Current single phase.	
	• b11 = I Positive sequence.	
	• b12 = I Negative sequence.	
	• b13 = I Zero sequence alarm.	
	• b14 = I Neutral monitor.	
	• b15 = THD magnitude current.	
00132	Trip flags 1.	
	• b00 = Differential current angle.	
	• b01 = Reserved.	
	• b02 = Reserved.	
	• b03 = Reserved.	
	• b04 = Watt demand exceeded.	
	• b05 = VAr demand exceeded.	
	• b06 = VA demand exceeded.	
	• b07 = Current demand exceeded.	
	• b08 = Reserved.	
	• b09 = Reserved.	
	• b10 = Reserved.	
	• b11 = Reserved.	
	• b12 = Reserved.	
	• b13 = Reserved.	
	• b14 = Reserved.	
	• b15 = Reserved.	

Assignable words		
Name	**Description**	**Unit**
00133	Trip flags 2.	
	• b00 = Voltage phase rotation.	
	• b01 = V Positive sequence.	
	• b02 = V Negative sequence.	
	• b03 = V Zero sequence.	
	• b04 = % V THD high	
	• b05 = V THD magnitude high	
	• b06 = Differential Voltage.	
	• b07 = Reserved.	
	• b08 = Overvoltage.	
	• b09 = Undervoltage.	
	• b10 = Voltage symmetry.	
	• b11 = Low line voltage frequency.	
	• b12 = High line voltage frequency.	
	• b13 = Min. Volts/Hz.	
	• b14 = Max. Volts/Hz.	
	• b15 = Rate of frequency change.	
00134	Trip flags 3.	
	• b00 = Reserved.	
	• b01 = Voltage not present.	
	• b02 = Reserved.	
	• b03 = Reserved.	
	• b04 = Reserved.	
	• b05 = Reserved.	
	• b06 = Reserved.	
	• b07 = Reserved.	
	• b08 = Reserved.	
	• b09 = Reserved.	
	• b10 = Reserved.	
	• b11 = Reserved.	
	• b12 = Reserved.	
	• b13 = Reserved.	
	• b14 = Reserved.	
	• b15 = Reserved.	
00135	Trip flags 4.	
	• b00 = Apparent power limit.	
	• b01 = Reserved.	
	• b02 = Power factor limit.	
	• b03 = Forward Direction active power.	
	• b04 = Forward Direction reactive power.	

Assignable words		
Name	**Description**	**Unit**
	• b05 = Reserved.	
	• b06 = Reserved.	
	• b07 = Reserved.	
	• b08 = Auxiliary undervoltage.	
	• b09 = Auxiliary overvoltage.	
	• b10 = Earth leakage > setpoint.	
	• b11 = Earth fault > setpoint.	
	• b12 = Insulation lockout < 20kOhm.	
	• b13 = Reserved.	
	• b14 = Earth detector.	
	• b15 = Reserved.	
00136	Trip flags 5.	
	• b00 = Overspeed 4-20mA input on Ch 02.	
	• b01 = Underspeed 4-20mA input on Ch 02.	
	• b02 = Reserved.	
	• b03 = Reserved.	
	• b04 = Reserved.	
	• b05 = Reserved.	
	• b06 = Reserved.	
	• b07 = Reserved.	
	• b08 = Speed switch 01 running or standstill.	
	• b09 = Speed switch 02 running or standstill.	
	• b10 = Overspeed pulse count high 01.	
	• b11 = Underspeed pulse count low 01.	
	• b12 = Overspeed pulse count high 02.	
	• b13 = Underspeed pulse count low 02.	
	• b14 = Overspeed 4-20mA input on Ch 01.	
	• b15 = Underspeed 4-20mA input on Ch 01.	
00137	Trip flags 6.	
	• b00 = CT and VT 01 connection failed.	
	• b01 = EL CBCT connection failed.	
	• b02 = CT and VT 02 connection failed.	
	• b03 = Frozen contact.	
	• b04 = Breaker operation near end of life.	
	• b05 = Safety Maintenance Interlock active.	
	• b06 = Emergency stop active.	
	• b07 = RTD 08 module I2C communication lost.	
	• b08 = Main Contactor Trip Coil continuous.	
	• b09 = Breaker Fail warning.	
	• b10 = IO Expander I2C communication lost.	

Assignable words		
Name	**Description**	**Unit**
	• b11 = RTD module I2C communication lost.	
	• b12 = Internal communication module I2C communication lost.	
	• b13 = 4 - 20mAmodule I2C communication module lost.	
	• b14 = MMI I2C communication lost.	
	• b15 = Ext. communication module I2C communication lost.	
00138	Trip flags 7.	
	• b00 = RTD 1 temperature level high.	
	• b01 = RTD 1 temperature level low.	
	• b02 = RTD 2 temperature level high.	
	• b03 = RTD 2 temperature level low.	
	• b04 = RTD 3 temperature level high.	
	• b05 = RTD 3 temperature level low.	
	• b06 = RTD 4 temperature level high.	
	• b07 = RTD 4 temperature level low.	
	• b08 = 4 - 20mA input channel 1 high.	
	• b09 = 4 - 20mA input channel 1 low.	
	• b10 = 4 - 20mA input channel 2 high.	
	• b11 = 4 - 20mA input channel 2 low.	
	• b12 = 4 - 20mA output channel 1 high.	
	• b13 = 4 - 20mA output channel 1 low.	
	• b14 = 4 - 20mA output channel 2 high.	
	• b15 = 4 - 20mA output channel 2 low.	
00139	Trip flags 8.	
	• b00 = RTD 9 temperature level high.	
	• b01 = RTD 9 temperature level low.	
	• b02 = RTD 10 temperature level high.	
	• b03 = RTD 10 temperature level low.	
	• b04 = RTD 11 temperature level high.	
	• b05 = RTD 11 temperature level low.	
	• b06 = RTD 12 temperature level high.	
	• b07 = RTD 12 temperature level low.	
	• b08 = RTD 5 temperature level high.	
	• b09 = RTD 5 temperature level low.	
	• b10 = RTD 6 temperature level high.	
	• b11 = RTD 6 temperature level low.	
	• b12 = RTD 7 temperature level high.	
	• b13 = RTD 7 temperature level low.	
	• b14 = RTD 8 temperature level high.	
	• b15 = RTD 8 temperature level low.	
00140	Trip flags 9.	

Assignable words		
Name	**Description**	**Unit**
	• b00 = Reserved.	
	• b01 = Reserved.	
	• b02 = Reserved.	
	• b03 = Reserved.	
	• b04 = Reserved.	
	• b05 = Reserved.	
	• b06 = Reserved.	
	• b07 = Reserved.	
	• b08 = Starts per hour finished.	
	• b09 = Execution fault.	
	• b10 = Feedback fault.	
	• b11 = Load settings corruption error.	
	• b12 = Ext. configurable trip 01 active.	
	• b13 = Ext. configurable trip 02 active.	
	• b14 = Ext. configurable trip 03 active.	
	• b15 = Ext. configurable trip 04 active.	
00141	Trip flags 10.	
	• b00 – b15 = Reserved.	
00142	Trip flags 11.	
	• b00 = ANSI77O channel 5 high, high.	
	• b01 = ANSI77U channel 5 low, low.	
	• b02 = ANSI77O channel 6 high, high.	
	• b03 = ANSI77U channel 6 low, low.	
	• b04 = ANSI77O channel 7 high, high.	
	• b05 = ANSI77U channel 7 low, low.	
	• b06 = ANSI77O channel 8 high, high.	
	• b07 = ANSI77U channel 8 low, low.	
	• b08 = ANSI77O channel 1 high, high.	
	• b09 = ANSI77U channel 1 low, low.	
	• b10 = ANSI77O channel 2 high, high.	
	• b11 = ANSI77U channel 2 low, low.	
	• b12 = ANSI77O channel 3 high, high.	
	• b13 = ANSI77U channel 3 low, low.	
	• b14 = ANSI77O channel 4 high, high.	
	• b15 = ANSI77U channel 4 low, low.	
00143	Release time of control contactor	ms
00144	Release time of Shunt trip	ms
00145	Release total time to clear fault	ms
00146	Aux V level	VAC
00148	Breaker wear maximum number of operations w0	

Assignable words		
Name	**Description**	**Unit**
00149	Breaker wear maximum number of operations w1	
00162	Analogue input 1 level	x 0.1mA
00163	Analogue input 2 level	x 0.1mA
00164	Analogue output 1 level	x 0.1mA
00165	Analogue output 2 level	x 0.1mA
00166	RTD 1 level	^{0}C/Ω
00167	RTD 2 level	^{0}C/Ω
00168	RTD 3 level	^{0}C/Ω
00169	RTD 4 level	^{0}C/Ω
00170	RTD 5 level	^{0}C/Ω
00171	RTD 6 level	^{0}C/Ω
00172	RTD 7 level	^{0}C/Ω
00173	RTD 8 level	^{0}C/Ω
00174	RTD 9 level	^{0}C/Ω
00175	RTD 10 level	^{0}C/Ω
00176	RTD 11 level	^{0}C/Ω
00177	RTD 12 level	^{0}C/Ω
00178	Speed RPM 01	RPM
00179	Speed RPM 02	RPM
00180	Speed analogue 01	x 0.1mA
00181	Speed analogue 02	x 0.1mA
00182	Logic Function 00	
00183	Logic Function 01	
00184	Logic Function 02	
00185	Logic Function 03	
00186	Logic Function 04	
00187	Counter A	
00188	Counter B	
00189	Starter Function 00	
00190	Starter Function 01	
00191	Starter Function 02	
00192	Starter Function 03	
00193	Starter Function 04	
00194	Product PID	
00195	Product Software Revision	
00196	IL1 THD %	%
00197	IL2 THD %	%
00198	IL3 THD %	%
00199	I THD %	%
00200	I THD Magnitude - w0	

Assignable words		
Name	**Description**	**Unit**
00201	I THD Magnitude - w1	
00202	VL1 THD %	%
00203	VL2 THD %	%
00204	VL3 THD %	%
00205	V THD %	%
00206	V THD Magnitude - w0	
00207	V THD Magnitude - w1	
00208	Warning Flags 28	
00209	Warning Flags 29	
00210	Tele meter 1 level	
00211	Tele meter 2 level	
00212	Tele meter 3 level	
00213	Tele meter 4 level	
00214	Tele meter 5 level	
00215	Tele meter 6 level	
00216	Tele meter 7 level	
00217	Tele meter 8 level	

Table 7.2.c: Assignable word selection.

8 Acyclic slot map

In order to read or write the acyclic data from the NewFeed PROFINET the PLC must support read and write records.

In the case of STEP 7™ to read records will be SFC59 (See figure 8.a) and write record will be SFC58 (See figure 8.b).

```
CALL   "RD_REC"                                                    SFC59
 REQ     :=TRUE
 IOID    :=B#16#55                  //Point to PQ address
 LADDR   :=W#16#0                   //PQ address for NewCode
 RECNUM  :=B#16#2                   //Index 2
 RET_VAL:="SFC_59_RETVAL"                                          MW6
 BUSY    :="Set_Asc_Busy"                                          M0.3
 RECORD  :=P#DB1.DBX0.0 BYTE 22     //Structure were stored
```

Figure 8.a: PLC example code for reading acyclic data.

```
CALL   "WR_REC"                                                    SFC58
 REQ     :=TRUE
 IOID    :=B#16#55                  // Point to PQ
 LADDR   :=W#16#0                   // PQ address
 RECNUM  :=B#16#2                   // Index 2
 RECORD  :=P#DB1.DBX0.0 BYTE 8
 RET_VAL:="SFC_59_RETVAL"                                          MW6
 BUSY    :="Set_Asc_Send_Busy"                                     M0.5
```

Figure 8.b: PLC example code for writing acyclic data.

8.1 Slot 1 Settings

Slot 1 settings contain configuration settings for the NewFeed PROFINET.
These include:

- Protection setting.
- Logic settings.
- Starter logic settings.
- RTD Settings
- 4-20mA Settings
- IO Expander Settings

Slot 1 settings are available to PROFINET for class 1 and class 2 master:

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	2	0	Maximum load current 2.	B	RW
1 / #55	2	1	Maximum load current 1.	B	RW
1 / #55	2	2	CT secondary ratio.	B	RW
1 / #55	2	3	CT model selection.	B	RW
1 / #55	2	4 – 5	CT primary ratio.	W	RW
1 / #55	2	6 – 7	Thermal curve 1 curve time.	W	RW
1 / #55	2	8 – 9	Thermal curve 2 curve time.	W	RW
1 / #55	2	10	Thermal curve 1 reset type. 0 = Manual 1 = Instantaneous 2 = Delayed 3 = Curve	B	RW
1 / #55	2	11	Thermal curve 1 trip type. 0 = IEC60255-8 ANSI 49 1 = DEFT ANSI 51P 2 = IEC_NINV ANSI 51P 3 = IEC_VINV ANSI 51P 4 = IEC_LINV ANSI 51P 5 = IEC_EINV ANSI 51P 6 = ANSI_MINV ANSI 51P 7 = ANSI_VINV ANSI 51P 8 = ANSI_EINV ANSI 51P 9 = Thermal flat ANSI 51P 10 = IT ANSI 51P 11 = I2T ANSI 51P 12 = I4T ANSI 51P	B	RW
1 / #55	2	12 – 13	Thermal curve 1 reset time.	W	RW
1 / #55	2	14 – 15	Thermal curve 2 reset time.	W	RW
1 / #55	2	16	Reserved.	B	RW
1 / #55	2	17	Thermal curve 1 capacity used reset level.	B	RW
1 / #55	2	18	IL unbalance trip level.	B	RW
1 / #55	2	19	IL unbalance trip delay.	B	RW
1 / #55	2	20	IL negative sequence trip level.	B	RW
1 / #55	2	21	IL negative sequence trip delay.	B	RW
1 / #55	2	22 – 23	Short circuit high, high trip level.	W	RW
1 / #55	2	24 – 25	Short circuit high, high trip delay.	W	RW
1 / #55	2	26 – 27	Short circuit high trip level.	W	RW
1 / #55	2	28 – 29	Short circuit high trip delay.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	2	30 - 59	Reserved.		RW
1 / #55	3	0 – 1	Voltage line input.	W	RW
1 / #55	3	2 – 3	Voltage line primary ratio.	W	RW
1 / #55	3	4	VL frequency selection. 0 = 50 Hz. 1 = 60 Hz.	B	RW
1 / #55	3	5	Voltage line secondary ratio.	B	RW
1 / #55	3	6	VL frequency high trip limit.	B	RW
1 / #55	3	7	VL frequency low trip limit.	B	RW
1 / #55	3	8	VL high trip level.	B	RW
1 / #55	3	9	VL low trip level.	B	RW
1 / #55	3	10	Voltage symmetry trip delay.	B	RW
1 / #55	3	11	Voltage symmetry trip level.	B	RW
1 / #55	3	12	VL negative sequence trip level.	B	RW
1 / #55	3	13	VL negative sequence trip delay.	B	RW
1 / #55	3	14 – 15	Volts per hertz low trip level.	W	RW
1 / #55	3	16 – 17	Volts per hertz high trip level.	W	RW
1 / #55	3	18	Volts per hertz high trip delay.	B	RW
1 / #55	3	19	Volts per hertz low trip delay.	B	RW
1 / #55	3	20	ROFOC trip delay.	B	RW
1 / #55	3	21	ROFOC trip level.	B	RW
1 / #55	3	22	ROFOC change rate interval.	B	RW
1 / #55	3	23	ROFOC change selection. 0 = Positive incline. 1 = Negative incline. 2 = Absolute incline.	B	RW
1 / #55	3	24 – 59	Reserved		RW
1 / #55	4	0	Minimum load trip level.	B	RW
1 / #55	4	1	Minimum load trip delay.	B	RW
1 / #55	4	2	Minimum load start-up delay.	B	RW
1 / #55	4	3	Minimum power trip level.	B	RW
1 / #55	4	4 – 5	Minimum load reset delay.	W	RW
1 / #55	4	6	Reserved.	B	RW
1 / #55	4	7	Running stall hold off delay.	B	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	4	8 – 9	Running stall trip level.	W	RW
1 / #55	4	10 – 11	Running stall trip delay.	W	RW
1 / #55	4	12	Earth leakage reset type. 0 = Manual 1 = Instantaneous 2 = Timed 3 = Curve	B	RW
1 / #55	4	13	Earth leakage trip type. 0 = Instantaneous 1 = IDMT 2 = IEC_NINV 3 = IEC_VINV 4 = IEC_LINV 5 = IEC_EINV 6 = ANSI_MINV 7 = ANSI_VINV 8 = ANSI_EINV 9 = Thermal flat 10 = IT 11 = I2T 12 = I4T	B	RW
1 / #55	4	14 – 15	Earth leakage trip level.	W	RW
1 / #55	4	16 – 17	Earth leakage trip delay.	W	RW
1 / #55	4	18 – 19	Earth leakage reset delay.	W	RW
1 / #55	4	20 – 27	Reserved.		RW
1 / #55	4	28	IL I0 reset type. 0 = Manual 1 = Instantaneous 2 = Timed 3 = Curve	B	RW
1 / #55	4	29	IL I0 trip type. 0 = Instantaneous 1 = IDMT 2 = IEC_NINV 3 = IEC_VINV 4 = IEC_LINV 5 = IEC_EINV 6 = ANSI_MINV 7 = ANSI_VINV 8 = ANSI_EINV 9 = Thermal flat 10 = IT 11 = I2T 12 = I4T	B	RW
1 / #55	4	30 – 31	IL I0 trip level.	W	RW
1 / #55	4	32 – 33	IL I0 trip delay.	W	RW
1 / #55	4	34 – 35	IL I0 reset delay.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	4	36 – 47	Reserved.		RW
1 / #55	4	48	IL fundamental 1 trip level.	B	RW
1 / #55	4	49	IL fundamental 0 trip level.	B	RW
1 / #55	4	50	IL fundamental 3 trip level.	B	RW
1 / #55	4	51	IL fundamental 2 trip level.	B	RW
1 / #55	4	52	IL fundamental 5 trip level.	B	RW
1 / #55	4	53	IL fundamental 4 trip level.	B	RW
1 / #55	4	54	IL fundamental 7 trip level.	B	RW
1 / #55	4	55	IL fundamental 6 trip level.	B	RW
1 / #55	4	56	IL fundamental 9 trip level.	B	RW
1 / #55	4	57	IL fundamental 8 trip level.	B	RW
1 / #55	4	58	IL fundamental 11 trip level.	B	RW
1 / #55	4	59	IL fundamental 10 trip level.	B	RW
1 / #55	5	0	IL fundamental 13 trip level.	B	RW
1 / #55	5	1	IL fundamental 12 trip level.	B	RW
1 / #55	5	2	IL fundamental 15 trip level.	B	RW
1 / #55	5	3	IL fundamental 14 trip level.	B	RW
1 / #55	5	4	IL fundamental 17 trip level.	B	RW
1 / #55	5	5	IL fundamental 16 trip level.	B	RW
1 / #55	5	6	IL fundamental 19 trip level.	B	RW
1 / #55	5	7	IL fundamental 18 trip level.	B	RW
1 / #55	5	8	IL fundamental 21 trip level.	B	RW
1 / #55	5	9	IL fundamental 20 trip level.	B	RW
1 / #55	5	10	IL fundamental 23 trip level.	B	RW
1 / #55	5	11	IL fundamental 22 trip level.	B	RW
1 / #55	5	12	IL fundamental 25 trip level.	B	RW
1 / #55	5	13	IL fundamental 24 trip level.	B	RW
1 / #55	5	14	IL fundamental 27 trip level.	B	RW
1 / #55	5	15	IL fundamental 26 trip level.	B	RW
1 / #55	5	16	IL fundamental 29 trip level.	B	RW
1 / #55	5	17	IL fundamental 28 trip level.	B	RW
1 / #55	5	18	IL fundamental 31 trip level.	B	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	5	19	IL fundamental 30 trip level.	B	RW
1 / #55	5	20	VL fundamental 1 trip level.	B	RW
1 / #55	5	21	VL fundamental 0 trip level.	B	RW
1 / #55	5	22	VL fundamental 3 trip level.	B	RW
1 / #55	5	23	VL fundamental 2 trip level.	B	RW
1 / #55	5	24	VL fundamental 5 trip level.	B	RW
1 / #55	5	25	VL fundamental 4 trip level.	B	RW
1 / #55	5	26	VL fundamental 7 trip level.	B	RW
1 / #55	5	27	VL fundamental 6 trip level.	B	RW
1 / #55	5	28	VL fundamental 9 trip level.	B	RW
1 / #55	5	29	VL fundamental 8 trip level.	B	RW
1 / #55	5	30	VL fundamental 11 trip level.	B	RW
1 / #55	5	31	VL fundamental 10 trip level.	B	RW
1 / #55	5	32	VL fundamental 13 trip level.	B	RW
1 / #55	5	33	VL fundamental 12 trip level.	B	RW
1 / #55	5	34	VL fundamental 15 trip level.	B	RW
1 / #55	5	35	VL fundamental 14 trip level.	B	RW
1 / #55	5	36	VL fundamental 17 trip level.	B	RW
1 / #55	5	37	VL fundamental 16 trip level.	B	RW
1 / #55	5	38	VL fundamental 19 trip level.	B	RW
1 / #55	5	39	VL fundamental 18 trip level.	B	RW
1 / #55	5	40	VL fundamental 21 trip level.	B	RW
1 / #55	5	41	VL fundamental 20 trip level.	B	RW
1 / #55	5	42	VL fundamental 23 trip level.	B	RW
1 / #55	5	43	VL fundamental 22 trip level.	B	RW
1 / #55	5	44	VL fundamental 25 trip level.	B	RW
1 / #55	5	45	VL fundamental 24 trip level.	B	RW
1 / #55	5	46	VL fundamental 27 trip level.	B	RW
1 / #55	5	47	VL fundamental 26 trip level.	B	RW
1 / #55	5	48	VL fundamental 29 trip level.	B	RW
1 / #55	5	49	VL fundamental 28 trip level.	B	RW
1 / #55	5	50	VL fundamental 31 trip level.	B	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	5	51	VL fundamental 30 trip level.	B	RW
1 / #55	5	52	VL THD warning percentage.	B	RW
1 / #55	5	53	IL THD warning percentage.	B	RW
1 / #55	5	54	VL THD trip percentage level.	B	RW
1 / #55	5	55	IL THD trip percentage level.	B	RW
1 / #55	5	56 – 57	IL THD percentage trip delay.	W	RW
1 / #55	5	58 – 59	VL THD percentage trip delay.	W	RW
1 / #55	6	0 – 3	IL THD trip magnitude level.	DW	RW
1 / #55	6	4 – 5	IL THD trip magnitude delay.	W	RW
1 / #55	6	6 – 9	VL THD trip magnitude level.	DW	RW
1 / #55	6	10 – 11	VL THD trip magnitude delay.	W	RW
1 / #55	6	12 – 13	Trip circuit monitor input.	W	RW
1 / #55	6	14	Reserved.	B	RW
1 / #55	6	15	Trip circuit monitor trip delay.	B	RW
1 / #55	6	16 – 17	MCCB circuit monitor input.	W	RW
1 / #55	6	18	Reserved.	B	RW
1 / #55	6	19	MCCB circuit monitor trip delay.	B	RW
1 / #55	6	20 – 23	Breaker maximum number of normal operations.	DW	RW
1 / #55	6	24 – 25	Breaker maximum amps for normal operations.	W	RW
1 / #55	6	26 – 27	Breaker maximum number of rapture operations.	W	RW
1 / #55	6	28 – 31	Breaker maximum amps for rapture operations.	DW	RW
1 / #55	6	32	Breaker warning level.	B	RW
1 / #55	6	33	Breaker alarm level.	B	RW
1 / #55	6	34 – 35	Breaker trip level.	W	RW
1 / #55	6	36 – 37	MCCB auxiliary type. 0 = None 1 = N/O 2 = N/C 3 = Both	W	RW
1 / #55	6	38 – 39	MCCB auxiliary N/O input.	W	RW
1 / #55	6	40 – 41	MCCB auxiliary N/C input.	W	RW
1 / #55	6	42 – 43	MCCB time to clear limit.	W	RW
1 / #55	6	44 – 45	Trip circuit time to clear limit.	W	RW
1 / #55	6	46 – 47	Speed switch 1 input.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	6	48 – 49	Speed switch 1 type.	W	RW
1 / #55	6	50 – 51	Speed switch 2 input.	W	RW
1 / #55	6	52 – 53	Speed switch 2 type.	W	RW
1 / #55	6	54 – 55	Speed switch 1 trip time.	W	RW
1 / #55	6	56 – 57	Speed switch 2 trip time.	W	RW
1 / #55	6	58 – 59	Speed pulse 1 input.	W	RW
1 / #55	7	0 – 1	Speed pulse 1 PPR.	W	RW
1 / #55	7	2 – 3	Speed pulse 1 trip delay.	W	RW
1 / #55	7	4 – 5	Speed pulse 1 over speed trip level.	W	RW
1 / #55	7	6 – 7	Speed pulse 1 under speed trip level.	W	RW
1 / #55	7	8 – 9	Speed pulse 2 input.	W	RW
1 / #55	7	10 – 11	Speed pulse 2 PPR.	W	RW
1 / #55	7	12 – 13	Speed pulse 2 trip delay.	W	RW
1 / #55	7	14 – 15	Speed pulse 2 over speed trip level.	W	RW
1 / #55	7	16 – 17	Speed pulse 2 under speed trip level.	W	RW
1 / #55	7	18 – 19	Speed analog 1 input.	W	RW
1 / #55	7	20 – 21	Speed analog 1 trip delay.	W	RW
1 / #55	7	22 – 23	Speed analog 1 over speed trip level.	W	RW
1 / #55	7	24 – 25	Speed analog 1 under speed trip level.	W	RW
1 / #55	7	26 – 27	Speed analog 2 input.	W	RW
1 / #55	7	28 – 29	Speed analog 2 trip delay.	W	RW
1 / #55	7	30 – 31	Speed analog 2 over speed trip level.	W	RW
1 / #55	7	32 – 33	Speed analog 2 under speed trip level.	W	RW
1 / #55	7	34 – 37	Reserved.		RW
1 / #55	7	38	Power factor reset level.	B	RW
1 / #55	7	39	Power factor trip level.	B	RW
1 / #55	7	40 – 41	Power factor trip delay.	W	RW
1 / #55	7	42 – 43	Power factor reset delay.	W	RW
1 / #55	7	44 – 45	Apparent power trip level.	W	RW
1 / #55	7	46 – 47	Apparent power reset delay.	W	RW
1 / #55	7	48 – 49	Apparent power limit trip level.	W	RW
1 / #55	7	50 – 51	Apparent power limit reset delay.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	7	52 – 53	User trip 1 input.	W	RW
1 / #55	7	54 – 55	User trip 2 input.	W	RW
1 / #55	7	56 – 57	User trip 3 input.	W	RW
1 / #55	7	58 – 59	User trip 4 input.	W	RW
1 / #55	8	0	User trip 2 delay.	B	RW
1 / #55	8	1	User trip 1 delay.	B	RW
1 / #55	8	2	User trip 4 delay.	B	RW
1 / #55	8	3	User trip 3 delay.	B	RW
1 / #55	8	4 – 5	External reset input.	W	RW
1 / #55	8	6 – 7	Reset mask 0. b00 = Min. load. b01 = Short circuit. b02 = Running stall condition. b03 = % THD current. b04 = Vectorial stall. b05 = Unauthorized current. b06 = Reserved. b07 = Reserved. b08 = Over current. b09 = Current unbalance. b10 = Current single phase. b11 = I Positive sequence. b12 = I Negative sequence. b13 = I Zero sequence alarm. b14 = I Neutral monitor. b15 = THD magnitude current.	W	RW
1 / #55	8	8 – 9	Reset mask 1. b00 = Phase angle difference. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Watt demand exceeded. b05 = VAr demand exceeded. b06 = VA demand exceeded. b07 = Current demand exceeded. b08 = Reserved. b09 = Reserved. b10 = Reserved. b11 = Reserved. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Differential Current.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	8	10 – 11	Reset mask 2. b00 = Voltage phase on rotation. b01 = V Positive sequence. b02 = V Negative sequence. b03 = V Zero sequence. b04 = V THD % high b05 = V THD magnitude high b06 = Differential Voltage. b07 = Reserved. b08 = Overvoltage. b09 = Undervoltage. b10 = Voltage symmetry. b11 = Low line voltage frequency. b12 = High line voltage frequency. b13 = Min. Volts/Hz. b14 = Max. Volts/Hz. b15 = Rate of frequency change.	W	RW
1 / #55	8	12 – 13	Reset mask 3. b00 = Reserved. b01 = Voltage not present. b02 = Voltage not present. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Reserved. b09 = Reserved. b10 = Reserved. b11 = Reserved. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Reserved.	W	RW
1 / #55	8	14 – 15	Reset mask 4. b00 = Apparent power limit. b01 = Reserved. b02 = Power factor limit. b03 = Direction active power. b04 = Direction reactive power. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Auxiliary undervoltage. b09 = Auxiliary overvoltage. b10 = Earth leakage. b11 = Earth fault. b12 = Insulation lockout. b13 = Reserved. b14 = Earth detector. b15 = Reserved.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	8	16 – 17	Reset mask 5. b00 = Overspeed pulse count high 01. b01 = Overspeed pulse count high 02. b02 = Overspeed 4-20mA input on Ch 01. b03 = Overspeed 4-20mA input on Ch 02. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Speed 01 running or standstill. b09 = Speed 02 running or standstill. b10 = Underspeed pulse count low 01. b11 = Underspeed pulse count low 02. b12 = Underspeed 4-20mA input on Ch 01. b13 = Underspeed 4-20mA input on Ch 02. b14 = Speed switch zero 01. b15 = Speed switch zero 02.	W	RW
1 / #55	8	18 – 19	Reset mask 6. b00 = CT and VT connection failed. b01 = EL CBCT connection failed. b02 = Reserved. b03 = Frozen contact. b04 = Breaker operation near end of life. b05 = Safety Maintenance Interlock active. b06 = Emergency stop active. b07 = RTD 08 module I2C communication lost. b08 = Main Contactor Trip Coil continuous. b09 = Breaker Fail warning. b10 = IO Expander I2C communication lost. b11 = RTD module I2C communication lost. b12 = Internal communication module I2C communication lost. b13 = 4 - 20mAmodule I2C communication lost. b14 = MMI I2C communication lost. b15 = Ext. communication module I2C communication lost.	W	RW
1 / #55	8	20 – 21	Reset mask 7. b00 = RTD 1 temperature level high. b01 = RTD 1 temperature level low. b02 = RTD 2 temperature level high. b03 = RTD 2 temperature level low. b04 = RTD 3 temperature level high. b05 = RTD 3 temperature level low. b06 = RTD 4 temperature level high. b07 = RTD 4 temperature level low. b08 = 4 - 20mA input channel 1 high. b09 = 4 - 20mA input channel 1 low. b10 = 4 - 20mA input channel 2 high. b11 = 4 - 20mA input channel 2 low. b12 = 4 - 20mA output channel 1 high. b13 = 4 - 20mA output channel 1 low. b14 = 4 - 20mA output channel 2 high. b15 = 4 - 20mA output channel 2 low.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	8	22 – 23	Reset mask 8. b00 = RTD 9 temperature level high. b01 = RTD 9 temperature level low. b02 = RTD 10 temperature level high. b03 = RTD 10 temperature level low. b04 = RTD 11 temperature level high. b05 = RTD 11 temperature level low. b06 = RTD 12 temperature level high. b07 = RTD 12 temperature level low. b08 = RTD 5 temperature level high. b09 = RTD 5 temperature level low. b10 = RTD 6 temperature level high. b11 = RTD 6 temperature level low. b12 = RTD 7 temperature level high. b13 = RTD 7 temperature level low. b14 = RTD 8 temperature level high. b15 = RTD 8 temperature level low.	W	RW
1 / #55	8	24 – 25	Reset mask 9. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Starts per hour. b09 = Execution fault. b10 = Feedback fault. b11 = Load settings corruption error. b12 = Ext. configurable trip 01 active. b13 = Ext. configurable trip 02 active. b14 = Ext. configurable trip 03 active. b15 = Ext. configurable trip 04 active.	W	RW
1 / #55	8	26 – 27	Reset mask 10. b00 – b15 = Reserved.	W	RW
1 / #55	8	28 – 29	Reset mask 11. b00 = ANSI77O channel 5 high, high. b01 = ANSI77U channel 5 low, low. b02 = ANSI77O channel 6 high, high. b03 = ANSI77U channel 6 low, low. b04 = ANSI77O channel 7 high, high. b05 = ANSI77U channel 7 low, low. b06 = ANSI77O channel 8 high, high. b07 = ANSI77U channel 8 low, low. b08 = ANSI77O channel 1 high, high. b09 = ANSI77U channel 1 low, low. b10 = ANSI77O channel 2 high, high. b11 = ANSI77U channel 2 low, low. b12 = ANSI77O channel 3 high, high. b13 = ANSI77U channel 3 low, low. b14 = ANSI77O channel 4 high, high. b15 = ANSI77U channel 4 low, low.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	8	30 – 31	Control feature enabled. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Reserved. b09 = IO expander connected. b10 = MMI connected. b11 = 4 - 20mA connected. b12 = RTD 04 channel connected. b13 = RTD 08 channel connected. b14 = Reserved. b15 = Reserved.	W	RW
1 / #55	8	32 – 33	Features enabled 0. b00 = Power factor limit auto reset. b01 = Power factor limit leading or lagging trip. b02 = Power factor limit auto reset leading or lagging. b03 = Apparent power limit auto reset. b04 = Apparent power limit leading or lagging trip. b05 = Apparent power limit auto reset leading or lagging. b06 = Demand window 0 = sliding or 1 = fixed. b07 = Reserved. b08 = Auto calculate Thermal Capacity (TC) reset threshold. (100 - max. TC used in last 10 starts) b09 = Auto thermal reset enabled. b10 = Min. load source 0 = current or 1 = power. b11 = Reserved. b12 = Relay 1 fail safe enabled. (Relay 1 must be set as dedicated trip relay). b13 = Relay 1 configured as dedicated trip relay. b14 = Voltage phase 01 rotation direction. 0 = L1-2-3, 1 = L3-2-1. b15 = Voltage phase 02 rotation direction. 0 = L1-2-3, 1 = L3-2-1.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	8	34 – 35	Features enabled 1. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Ext. configurable trip 01 active high. b09 = Ext. configurable trip 02 active high. b10 = Ext. configurable trip 03 active high. b11 = Ext. configurable trip 04 active high. b12 = Reserved. b13 = Reserved. b14 = Warning without load. b15 = Trip without load.	W	RW
1 / #55	8	36 – 37	Warnings enabled 0. b00 = High, high short circuit. b01 = Running stall. b02 = % THD current. b03 = Vectorial stall, rate of change of Power Factor during start up low. b04 = Unauthorized current. b05 = Differential current. b06 = Phase angle. b07 = High short circuit. b08 = Current unbalance. b09 = Single phase. b10 = Positive sequence. b11 = I Negative sequence. b12 = I Zero sequence. b13 = Neutral over current. b14 = THD magnitude current. b15 = Min. load.	W	RW
1 / #55	8	38 – 39	Warnings enabled 1. b00 = VAr demand. b01 = VA demand. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Reserved. b09 = Reserved. b10 = Reserved. b11 = Reserved. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Watt demand.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	8	40 – 41	Warnings enabled 2. b00 = Voltage phase rotation. b01 = Voltage positive sequence. b02 = Voltage negative sequence. b03 = Voltage zero sequence. b04 = % THD voltage. b05 = THD magnitude voltage. b06 = Differential voltage. b07 = Reserved. b08 = Overvoltage. b09 = Undervoltage. b10 = Voltage symmetry. b11 = Voltage low frequency. b12 = Voltage high frequency. b13 = Min. Volts/Hz. b14 = Max. Volts/Hz. b15 = Rate of frequency change.	W	RW
1 / #55	8	42 – 43	Warnings enabled 3. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Voltage not present. b04 = Reserved. b05 = Directional active power. b06 = Directional reactive power. b07 = Reserved. b08 = Reserved. b09 = Reserved. b10 = Reserved. b11 = Reserved. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Reserved.	W	RW
1 / #55	8	44 – 45	Warnings enabled 4. b00 = Power factor limit. b01 = Protection ANSI 50/27. b02 = Reserved. b03 = Reserved. b04 = 4 - 20mA input 1 high low. b05 = 4 - 20mA input 2 high low. b06 = 4 - 20mA output 1 high low. b07 = 4 - 20mA output 2 high low. b08 = Auxiliary undervoltage. b09 = Auxiliary overvoltage. b10 = Earth leakage and earth fault. b11 = Insulation lockout. b12 = Reserved. b13 = Earth detector. b14 = Apparent power limit. b15 = Reserved.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	8	46 – 47	Warnings enabled 5. b00 = Overspeed 4-20mA input on Ch 02. b01 = Underspeed 4-20mA input on Ch 02. b02 = Main Contactor Trip monitor. b03 = Breaker monitor. b04 = Breaker wear. b05 = Starts per hour. b06 = Reserved. b07 = Reserved. b08 = Speed switch 01 running or standstill. b09 = Speed switch 02 running or standstill. b10 = Overspeed pulse count high 01. b11 = Underspeed pulse count low 01. b12 = Overspeed pulse count high 02. b13 = Underspeed pulse count low 02. b14 = Overspeed 4-20mA input on Ch 01. b15 = Underspeed 4-20mA input on Ch 01.	W	RW
1 / #55	8	48 – 49	Warnings enabled 6. b00 = RTD 3 Short Circuit trip. b01 = RTD 3 temperature low trip. b02 = RTD 3 temperature high trip. b03 = RTD 3 Open Circuit trip. b04 = RTD 4 Short Circuit trip. b05 = RTD 4 temperature low trip. b06 = RTD 4 temperature high trip. b07 = RTD 4 Open Circuit trip. b08 = RTD 1 Short Circuit trip. b09 = RTD 1 temperature low trip. b10 = RTD 1 temperature high trip. b11 = RTD 1 Open Circuit trip. b12 = RTD 2 Short Circuit trip. b13 = RTD 2 temperature low trip. b14 = RTD 2 temperature high trip. b15 = RTD 2 Open Circuit trip.	W	RW
1 / #55	8	50 – 51	Warnings enabled 7. b00 = RTD 7 Short Circuit trip. b01 = RTD 7 temperature low trip. b02 = RTD 7 temperature high trip. b03 = RTD 7 Open Circuit trip. b04 = RTD 8 Short Circuit trip. b05 = RTD 8 temperature low trip. b06 = RTD 8 temperature high trip. b07 = RTD 8 Open Circuit trip. b08 = RTD 5 Short Circuit trip. b09 = RTD 5 temperature low trip. b10 = RTD 5 temperature high trip. b11 = RTD 5 Open Circuit trip. b12 = RTD 6 Short Circuit trip. b13 = RTD 6 temperature low trip. b14 = RTD 6 temperature high trip. b15 = RTD 6 Open Circuit trip.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	8	52 – 53	Warnings enabled 8. b00 = RTD 11 Short Circuit trip. b01 = RTD 11 temperature low trip. b02 = RTD 11 temperature high trip. b03 = RTD 11 Open Circuit trip. b04 = RTD 12 Short Circuit trip. b05 = RTD 12 temperature low trip. b06 = RTD 12 temperature high trip. b07 = RTD 12 Open Circuit trip. b08 = RTD 9 Short Circuit trip. b09 = RTD 9 temperature low trip. b10 = RTD 9 temperature high trip. b11 = RTD 9 Open Circuit trip. b12 = RTD 10 Short Circuit trip. b13 = RTD 10 temperature low trip. b14 = RTD 10 temperature high trip. b15 = RTD 10 Open Circuit trip.	W	RW
1 / #55	8	54 – 55	Warnings enabled 9. b00 – b07 = Reserved. b08 = Ext. configurable trip 01. b09 = Ext. configurable trip 02. b10 = Ext. configurable trip 03. b11 = Ext. configurable trip 04. b12 – b15 = Reserved.	W	RW
1 / #55	8	56 – 57	Warnings enabled 10. b00 – b15 = Reserved.	W	RW
1 / #55	8	58 – 59	Trips enabled 0. b00 = High, high short circuit. b01 = Running stall. b02 = % THD current. b03 = Vectorial stall, rate of change of Power Factor during start up low. b04 = Unauthorized current. b05 = Differential current. b06 = Phase angle. b07 = High short circuit. b08 = Current unbalance. b09 = Single phase. b10 = I Positive sequence. b11 = I Negative sequence. b12 = I Zero sequence. b13 = Neutral over current. b14 = THD magnitude current. b15 = Min. load.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	9	0 – 1	Trips enabled 1. b00 = VAr demand. b01 = VA demand. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Reserved. b09 = Reserved. b10 = Reserved. b11 = Reserved. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Watt demand.	W	RW
1 / #55	9	2 – 3	Trips enabled 2. b00 = Voltage phase rotation. b01 = Voltage positive sequence. b02 = Voltage negative sequence. b03 = Voltage zero sequence. b04 = THD % voltage b05 = THD magnitude voltage. b06 = Differential voltage. b07 = Reserved. b08 = Overvoltage. b09 = Undervoltage. b10 = Voltage symmetry. b11 = Voltage low frequency. b12 = Voltage high frequency. b13 = Min. Volts/Hz. b14 = Max. Volts/Hz. b15 = Rate of frequency change.	W	RW
1 / #55	9	4 – 5	Trips enabled 3. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Voltage not present. b04 = Reserved. b05 = Forward Directional active power. b06 = Forward Directional reactive power. b07 = Reserved. b08 = Reserved. b09 = Reserved. b10 = Reserved. b11 = Reserved. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Reserved.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	9	6 – 7	Trips enabled 4. b00 = Reserved. b01 = Protection ANSI 50/27. b02 = Reserved. b03 = Reserved. b04 = 4 - 20mA input 1 high low. b05 = 4 - 20mA input 2 high low. b06 = 4 - 20mA output 1 high low. b07 = 4 - 20mA output 2 high low. b08 = Auxiliary undervoltage. b09 = Auxiliary overvoltage. b10 = Earth leakage and earth fault. b11 = Insulation lockout. b12 = Reserved. b13 = Earth detector. b14 = Apparent power limit. b15 = Reserved.	W	RW
1 / #55	9	8 – 9	Trips enabled 5. b00 = Overspeed 4-20mA input on Ch 02. b01 = Underspeed 4-20mA input on Ch 02. b02 = Main Contactor Trip monitor enabled. b03 = Breaker Fail monitor enabled. b04 = Breaker wear. b05 = Starts per hour. b06 = Reserved. b07 = RTD 4 Open Circuit trip. b08 = Speed switch 01 running or standstill. b09 = Speed switch 02 running or standstill. b10 = Overspeed pulse count high 01. b11 = Underspeed pulse count low 01. b12 = Overspeed pulse count high 02. b13 = Underspeed pulse count low 02. b14 = Overspeed 4-20mA input on Ch 01. b15 = Underspeed 4-20mA input on Ch 01.	W	RW
1 / #55	9	10 – 11	Trips enabled 6. b00 = RTD 3 Short Circuit trip. b01 = RTD 3 temperature low trip. b02 = RTD 3 temperature high trip. b03 = RTD 3 Open Circuit trip. b04 = RTD 4 Short Circuit trip. b05 = RTD 4 temperature low trip. b06 = RTD 4 temperature high trip. b07 = RTD 1 Short Circuit trip. b08 = RTD 1 temperature low trip. b09 = RTD 1 temperature high trip. b10 = RTD 1 Open Circuit trip. b11 = RTD 2 Short Circuit trip. b12 = RTD 2 temperature low trip. b13 = RTD 2 temperature high trip. b14 = RTD 2 Open Circuit trip.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	9	12 – 13	Trips enabled 7. b00 = RTD 7 Short Circuit trip. b01 = RTD 7 temperature low trip. b02 = RTD 7 temperature high trip. b03 = RTD 7 Open Circuit trip. b04 = RTD 8 Short Circuit trip. b05 = RTD 8 temperature low trip. b06 = RTD 8 temperature high trip. b07 = RTD 8 Open Circuit trip. b08 = RTD 5 Short Circuit trip. b09 = RTD 5 temperature low trip. b10 = RTD 5 temperature high trip. b11 = RTD 5 Open Circuit trip. b12 = RTD 6 Short Circuit trip. b13 = RTD 6 temperature low trip. b14 = RTD 6 temperature high trip. b15 = RTD 6 Open Circuit trip.	W	RW
1 / #55	9	14 – 15	Trips enabled 8. b00 = RTD 11 Short Circuit trip. b01 = RTD 11 temperature low trip. b02 = RTD 11 temperature high trip. b03 = RTD 11 Open Circuit trip. b04 = RTD 12 Short Circuit trip. b05 = RTD 12 temperature low trip. b06 = RTD 12 temperature high trip. b07 = RTD 12 Open Circuit trip. b08 = RTD 9 Short Circuit trip. b09 = RTD 9 temperature low trip. b10 = RTD 9 temperature high trip. b11 = RTD 9 Open Circuit trip. b12 = RTD 10 Short Circuit trip. b13 = RTD 10 temperature low trip. b14 = RTD 10 temperature high trip. b15 = RTD 10 Open Circuit trip.	W	RW
1 / #55	9	16 – 17	Trips enabled 9. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Ext. configurable trip 01. b09 = Ext. configurable trip 02. b10 = Ext. configurable trip 03. b11 = Ext. configurable trip 04. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Reserved.	W	RW
1 / #55	9	18 – 19	Trips enabled 10. b00 – b15 = Reserved.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	9	20 – 21	Lockout mask 0. b00 = Min. load < setpoint. b01 = Short circuit. b02 = Running stall condition. b03 = % THD current > setpoint. b04 = Vectorial stall, rate of change of Power Factor during start up too low. b05 = Unauthorized current b06 = Reserved. b07 = Reserved. b08 = Over current alarm, Load Current > 100% of setpoint. b09 = Current unbalance. b10 = Current single phase. b11 = I Positive sequence. b12 = I Negative sequence. b13 = I Zero sequence alarm. b14 = I Neutral monitor. b15 = THD magnitude current.	W	RW
1 / #55	9	22 – 23	Lockout mask 1. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Watt demand exceeded. b05 = VAr demand exceeded. b06 = VA demand exceeded. b07 = Current demand exceeded. b08 = Reserved. b09 = Reserved. b10 = Reserved. b11 = Reserved. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Reserved.	W	RW
1 / #55	9	24 – 25	Lockout mask 2. b00 = Voltage phase rotation. b01 = V Positive sequence. b02 = V Negative sequence. b03 = V Zero sequence. b04 = % V THD high b05 = V THD magnitude high b06 = Reserved. b07 = Reserved. b08 = Overvoltage. b09 = Undervoltage. b10 = Voltage symmetry. b11 = Low line voltage frequency. b12 = High line voltage frequency. b13 = Min. Volts/Hz. b14 = Max. Volts/Hz. b15 = Rate of frequency change.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	9	26 – 27	Lockout mask 3. b00 = Reserved. b01 = Voltage not present. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Reserved. b09 = Reserved. b10 = Reserved. b11 = Reserved. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Reserved.	W	RW
1 / #55	9	28 – 29	Lockout mask 4. b00 = Apparent power limit. b01 = Reserved. b02 = Power factor limit. b03 = Direction active power. b04 = Direction reactive power. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Auxiliary undervoltage. b09 = Auxiliary overvoltage. b10 = Earth leakage. b11 = Earth fault. b12 = Insulation lockout < 20kOhm. b13 = Reserved. b14 = Earth detector. b15 = Reserved.	W	RW
1 / #55	9	30 – 31	Lockout mask 5. b00 = Overspeed pulse count high 01. b01 = Overspeed pulse count high 02. b02 = Overspeed 4-20mA input on Ch 01. b03 = Overspeed 4-20mA input on Ch 02. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Speed 01 running or standstill. b09 = Speed 02 running or standstill. b10 = Underspeed pulse count low 01. b11 = Underspeed pulse count low 02. b12 = Underspeed 4-20mA input on Ch 01. b13 = Underspeed 4-20mA input on Ch 02. b14 = Speed switch zero 01. b15 = Speed switch zero 02.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	9	32 – 33	Lockout mask 6. b00 = CT and VT connection failed. b01 = EL CBCT connection failed. b02 = Reserved. b03 = Frozen contact (Main Contactor failed to open to clear fault). b04 = Breaker operation near end of life. b05 = Safety Maintenance Interlock active. b06 = Emergency stop active. b07 = RTD 08 module I2C communication lost. b08 = Main Contactor Trip Coil continuous. b09 = Breaker Fail warning. b10 = IO Expander I2C communication lost. b11 = RTD module I2C communication lost. b12 = Internal communication module I2C communication lost. b13 = 4 - 20mA module I2C communication lost. b14 = MMI I2C communication loss. b15 = Ext. communication module I2C communication lost.	W	RW
1 / #55	9	34 – 35	Lockout mask 7. b00 = RTD 1 temperature level high. b01 = RTD 1 temperature level low. b02 = RTD 2 temperature level high. b03 = RTD 2 temperature level low. b04 = RTD 3 temperature level high. b05 = RTD 3 temperature level low. b06 = RTD 4 temperature level high. b07 = RTD 4 temperature level low. b08 = 4 - 20mA input channel 1 high. b09 = 4 - 20mA input channel 1 low. b10 = 4 - 20mA input channel 2 high. b11 = 4 - 20mA input channel 2 low. b12 = 4 - 20mA output channel 1 high. b13 = 4 - 20mA output channel 1 low. b14 = 4 - 20mA output channel 2 high. b15 = 4 - 20mA output channel 2 low.	W	RW
1 / #55	9	36 – 37	Lockout mask 8. b00 = RTD 9 temperature level high. b01 = RTD 9 temperature level low. b02 = RTD 10 temperature level high. b03 = RTD 10 temperature level low. b04 = RTD 11 temperature level high. b05 = RTD 11 temperature level low. b06 = RTD 12 temperature level high. b07 = RTD 12 temperature level low. b08 = RTD 5 temperature level high. b09 = RTD 5 temperature level low. b10 = RTD 6 temperature level high. b11 = RTD 6 temperature level low. b12 = RTD 7 temperature level high. b13 = RTD 7 temperature level low. b14 = RTD 8 temperature level high. b15 = RTD 8 temperature level low.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	9	38 – 39	Lockout mask 9. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Starts per hour. b09 = Execution fault, failure of Main Contactor to close within Execution time. b10 = Feedback fault, Main contactor latching circuit failure within Feedback time. b11 = Load settings corruption error. b12 = Ext. configurable trip 01 active. b13 = Ext. configurable trip 02 active. b14 = Ext. configurable trip 03 active. b15 = Ext. configurable trip 04 active.	W	RW
1 / #55	9	40 – 41	Lockout mask 10. b00 – b15 = Reserved.	W	RW
1 / #55	9	42 – 43	Lockout mask 11. b00 = ANSI77O channel 5 high, high. b01 = ANSI77U channel 5 low, low. b02 = ANSI77O channel 6 high, high. b03 = ANSI77U channel 6 low, low. b04 = ANSI77O channel 7 high, high. b05 = ANSI77U channel 7 low, low. b06 = ANSI77O channel 8 high, high. b07 = ANSI77U channel 8 low, low. b08 = ANSI77O channel 1 high, high. b09 = ANSI77U channel 1 low, low. b10 = ANSI77O channel 2 high, high. b11 = ANSI77U channel 2 low, low. b12 = ANSI77O channel 3 high, high. b13 = ANSI77U channel 3 low, low. b14 = ANSI77O channel 4 high, high. b15 = ANSI77U channel 4 low, low.	W	RW
1 / #55	9	44 – 45	Reserved.	W	RW
1 / #55	9	46 – 47	Internal communication module reset input.	W	RW
1 / #55	9	48 – 49	External communication module reset input.	W	RW
1 / #55	9	50 – 51	Lockout protection input.	W	RW
1 / #55	20	0 – 1	Logic function 1 mask.	W	RW
1 / #55	20	2 – 3	Logic function 1 input A.	W	RW
1 / #55	20	4 – 5	Logic function 1 input B.	W	RW
1 / #55	20	6 – 7	Logic function 1 input C.	W	RW
1 / #55	20	8 – 9	Logic function 1 input D.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	20	10 – 11	Logic function 2 mask.	W	RW
1 / #55	20	12 – 13	Logic function 2 input A.	W	RW
1 / #55	20	14 – 15	Logic function 2 input B.	W	RW
1 / #55	20	16 – 17	Logic function 2 input C.	W	RW
1 / #55	20	18 – 19	Logic function 2 input D.	W	RW
1 / #55	20	20 – 21	Logic function 3 mask.	W	RW
1 / #55	20	22 – 23	Logic function 3 input A.	W	RW
1 / #55	20	24 – 25	Logic function 3 input B.	W	RW
1 / #55	20	26 – 27	Logic function 3 input C.	W	RW
1 / #55	20	28 – 29	Logic function 3 input D.	W	RW
1 / #55	20	30 – 31	Logic function 4 mask.	W	RW
1 / #55	20	32 – 33	Logic function 4 input A.	W	RW
1 / #55	20	34 – 35	Logic function 4 input B.	W	RW
1 / #55	20	36 – 37	Logic function 4 input C.	W	RW
1 / #55	20	38 – 39	Logic function 4 input D.	W	RW
1 / #55	20	40 – 41	Logic function 5 mask.	W	RW
1 / #55	20	42 – 43	Logic function 5 input A.	W	RW
1 / #55	20	44 – 45	Logic function 5 input B.	W	RW
1 / #55	20	46 – 47	Logic function 5 input C.	W	RW
1 / #55	20	48 – 49	Logic function 5 input D.	W	RW
1 / #55	20	50 – 51	Logic function 6 mask.	W	RW
1 / #55	20	52 – 53	Logic function 6 input A.	W	RW
1 / #55	20	54 – 55	Logic function 6 input B.	W	RW
1 / #55	20	56 – 57	Logic function 6 input C.	W	RW
1 / #55	20	58 – 59	Logic function 6 input D.	W	RW
1 / #55	21	0 – 1	Timer A start input.	W	RW
1 / #55	21	2 – 3	Timer A reset input.	W	RW
1 / #55	21	4 – 5	Timer A time out.	W	RW
1 / #55	21	6	Timer B type. ON delay. Latch ON delay. Latch OFF delay. ON pulse.	B	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	21	7	Timer A type. ON delay. Latch ON delay. Latch OFF delay. ON pulse.	B	RW
1 / #55	21	8 – 9	Timer B start input.	W	RW
1 / #55	21	10 – 11	Timer B reset input.	W	RW
1 / #55	21	12 – 13	Timer B time out.	W	RW
1 / #55	22	0	RTC start hours.	B	RW
1 / #55	22	1	RTC start minutes.	B	RW
1 / #55	22	2	RTC stop hours.	B	RW
1 / #55	22	3	RTC stop minutes.	B	RW
1 / #55	23	0 – 1	Counter A limit.	W	RW
1 / #55	23	2 – 3	Counter A up input.	W	RW
1 / #55	23	4 – 5	Counter A down input.	W	RW
1 / #55	23	6 – 7	Counter A reset input.	W	RW
1 / #55	23	8 – 9	Counter B limit.	W	RW
1 / #55	23	10 – 11	Counter B up input.	W	RW
1 / #55	23	12 – 13	Counter B down input.	W	RW
1 / #55	23	14 – 15	Counter B reset input.	W	RW
1 / #55	24	0 – 1	Latch A input.	W	RW
1 / #55	24	2 – 3	Latch A reset.	W	RW
1 / #55	24	4 – 5	Latch B input.	W	RW
1 / #55	24	6 – 7	Latch B reset.	W	RW
1 / #55	25	0 – 1	Pulse generator input.	W	RW
1 / #55	25	2	Pulse generator period.	B	RW
1 / #55	25	3	Pulse generator duty cycle.	B	RW
1 / #55	26	0	Reserved.	B	RW
1 / #55	26	1	Comparator 1 input.	B	RW
1 / #55	26	2 – 3	Comparator 1 high, high limit.	W	RW
1 / #55	26	4 – 5	Comparator 1 high, low limit.	W	RW
1 / #55	26	6 – 7	Comparator 1 low, high limit.	W	RW
1 / #55	26	8 – 9	Comparator 1 low, low limit.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	26	10	Reserved.	B	RW
1 / #55	26	11	Comparator 2 input.	B	RW
1 / #55	26	12 – 13	Comparator 2 high, high input.	W	RW
1 / #55	26	14 – 15	Comparator 2 high, low input.	W	RW
1 / #55	26	16 – 17	Comparator 2 low, high input.	W	RW
1 / #55	26	18 – 19	Comparator 2 low, low input.	W	RW
1 / #55	27	0	Thermal capacity high, high warning level.	B	RW
1 / #55	27	1	Thermal capacity high warning level.	B	RW
1 / #55	28	0 – 1	Digital field input 1 on delay.	W	RW
1 / #55	28	2 – 3	Digital field input 1 off delay.	W	RW
1 / #55	28	4 – 5	Digital field input 2 on delay.	W	RW
1 / #55	28	6 – 7	Digital field input 2 off delay.	W	RW
1 / #55	28	8 – 9	Digital field input 3 on delay.	W	RW
1 / #55	28	10 – 11	Digital field input 3 off delay.	W	RW
1 / #55	28	12 – 13	Digital field input 4 on delay.	W	RW
1 / #55	28	14 – 15	Digital field input 4 off delay.	W	RW
1 / #55	28	16 – 17	Digital field input 5 on delay.	W	RW
1 / #55	28	18 – 19	Digital field input 5 off delay.	W	RW
1 / #55	28	20 – 21	Digital field input 6 on delay.	W	RW
1 / #55	28	22 – 23	Digital field input 6 off delay.	W	RW
1 / #55	28	24 – 25	Digital field input 7 on delay.	W	RW
1 / #55	28	26 – 27	Digital field input 7 off delay.	W	RW
1 / #55	29	0 – 1	Relay 1 input.	W	RW
1 / #55	29	2 – 3	Relay 2 input.	W	RW
1 / #55	29	4 – 5	Relay 3 input.	W	RW
1 / #55	29	6 – 7	Relay 4 input.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	30	0 – 1	Alarm flag mask 0. b00 = Minimum load. b01 = Short circuit. b02 = Running stall condition. b03 = THD % current. b04 = Vectorial stall. b05 = Unauthorized current b06 = Reserved. b07 = Reserved. b08 = Over current. b09 = Current unbalance. b10 = Current single phase. b11 = I Positive sequence. b12 = I Negative sequence. b13 = I Zero sequence alarm. b14 = I Neutral monitor. b15 = THD magnitude current.	W	RW
1 / #55	30	2 – 3	Alarm flag mask 1. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Watt demand exceeded. b05 = VAr demand exceeded. b06 = VA demand exceeded. b07 = Current demand exceeded. b08 = Reserved. b09 = Reserved. b10 = Reserved. b11 = Reserved. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Reserved.	W	RW
1 / #55	30	4 – 5	Alarm flag mask 2. b00 = Voltage phase on rotation. b01 = V Positive sequence. b02 = V Negative sequence. b03 = V Zero sequence. b04 = % V THD high b05 = V THD magnitude high b06 = Differential Voltage. b07 = Reserved. b08 = Overvoltage. b09 = Undervoltage. b10 = Voltage symmetry. b11 = Low line voltage frequency. b12 = High line voltage frequency. b13 = Min. Volts/Hz. b14 = Max. Volts/Hz. b15 = Rate of frequency change.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	30	6 – 7	Alarm flag mask 3. b00 = Reserved. b01 = Voltage not present. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Reserved. b09 = Reserved. b10 = Reserved. b11 = Reserved. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Reserved.	W	RW
1 / #55	30	8 – 9	Alarm flag mask 4. b00 = Apparent power limit. b01 = Reserved. b02 = Power factor limit. b03 = Forward Direction active power. b04 = Forward Direction reactive power. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Auxiliary undervoltage. b09 = Auxiliary overvoltage. b10 = Earth leakage > setpoint. b11 = Earth fault > setpoint. b12 = Insulation lockout < 20kOhm. b13 = Reserved. b14 = Earth detector. b15 = Reserved.	W	RW
1 / #55	30	10 – 11	Alarm flag mask 5. b00 = Overspeed 4-20mA input on Ch 02. b01 = Underspeed 4-20mA input on Ch 02. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Speed switch 01 running or standstill. b09 = Speed switch 02 running or standstill. b10 = Overspeed pulse count high 01. b11 = Underspeed pulse count low 01. b12 = Overspeed pulse count high 02. b13 = Underspeed pulse count low 02. b14 = Overspeed 4-20mA input on Ch 01. b15 = Underspeed 4-20mA input on Ch 01.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	30	12 – 13	Alarm flag mask 6. b00 = CT and VT connection failed. b01 = EL CBCT connection failed. b02 = Reserved. b03 = Frozen contact (Main Contactor failed to open to clear fault). b04 = Breaker operation near end of life. b05 = Safety Maintenance Interlock active. b06 = Emergency stop active. b07 = RTD 08 module I2C communication lost. b08 = Main Contactor Trip Coil continuous. b09 = Breaker Fail warning. b10 = IO Expander I2C communication lost. b11 = RTD module I2C communication lost. b12 = Internal communication module I2C communication lost. b13 = 4 - 20mA module I2C communication module lost. b14 = MMI I2C communication lost. b15 = Ext. communication module I2C communication lost.	W	RW
1 / #55	30	14 – 15	Alarm flag mask 7. b00 = RTD 1 temperature level high. b01 = RTD 1 temperature level low. b02 = RTD 2 temperature level high. b03 = RTD 2 temperature level low. b04 = RTD 3 temperature level high. b05 = RTD 3 temperature level low. b06 = RTD 4 temperature level high. b07 = RTD 4 temperature level low. b08 = 4 - 20mA input channel 1 high. b09 = 4 - 20mA input channel 1 low. b10 = 4 - 20mA input channel 2 high. b11 = 4 - 20mA input channel 2 low. b12 = 4 - 20mA output channel 1 high. b13 = 4 - 20mA output channel 1 low. b14 = 4 - 20mA output channel 2 high. b15 = 4 - 20mA output channel 2 low.	W	RW
1 / #55	30	16 – 17	Alarm flag mask 8. b00 = RTD 9 temperature level high. b01 = RTD 9 temperature level low. b02 = RTD 10 temperature level high. b03 = RTD 10 temperature level low. b04 = RTD 11 temperature level high. b05 = RTD 11 temperature level low. b06 = RTD 12 temperature level high. b07 = RTD 12 temperature level low. b08 = RTD 5 temperature level high. b09 = RTD 5 temperature level low. b10 = RTD 6 temperature level high. b11 = RTD 6 temperature level low. b12 = RTD 7 temperature level high. b13 = RTD 7 temperature level low. b14 = RTD 8 temperature level high. b15 = RTD 8 temperature level low.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	30	18 – 19	Alarm flag mask 9. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Starts per hour. b09 = Execution fault. b10 = Feedback fault. b11 = Load settings corruption error. b12 = Ext. configurable trip 01 active. b13 = Ext. configurable trip 02 active. b14 = Ext. configurable trip 03 active. b15 = Ext. configurable trip 04 active.	W	RW
1 / #55	30	20 – 21	Alarm flag mask 10. b00 – b15 = Reserved.	W	RW
1 / #55	30	22 – 23	Alarm flag mask 11. b00 = ANSI77O channel 5 high, high. b01 = ANSI77U channel 5 low, low. b02 = ANSI77O channel 6 high, high. b03 = ANSI77U channel 6 low, low. b04 = ANSI77O channel 7 high, high. b05 = ANSI77U channel 7 low, low. b06 = ANSI77O channel 8 high, high. b07 = ANSI77U channel 8 low, low. b08 = ANSI77O channel 1 high, high. b09 = ANSI77U channel 1 low, low. b10 = ANSI77O channel 2 high, high. b11 = ANSI77U channel 2 low, low. b12 = ANSI77O channel 3 high, high. b13 = ANSI77U channel 3 low, low. b14 = ANSI77O channel 4 high, high. b15 = ANSI77U channel 4 low, low.	W	RW
1 / #55	31	0 – 1	Trip flag mask 0. b00 = Minimum load. b01 = Short circuit. b02 = Running stall condition. b03 = % THD current. b04 = Vectorial stall. b05 = Unauthorized current b06 = Reserved. b07 = Reserved. b08 = Over current. b09 = Current unbalance. b10 = Current single phase. b11 = I Positive sequence. b12 = I Negative sequence. b13 = I Zero sequence alarm. b14 = I Neutral monitor. b15 = THD magnitude current.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	31	2 – 3	Trip flag mask 1. b00 = Differential phase. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Watt demand exceeded. b05 = VAr demand exceeded. b06 = VA demand exceeded. b07 = Current demand exceeded. b08 = Reserved. b09 = Reserved. b10 = Reserved. b11 = Reserved. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Reserved.	W	RW
1 / #55	31	4 – 5	Trip flag mask 2. b00 = Voltage phase rotation. b01 = V Positive sequence. b02 = V Negative sequence. b03 = V Zero sequence. b04 = % V THD high b05 = V THD magnitude high b06 = Reserved. b07 = Reserved. b08 = Overvoltage. b09 = Undervoltage. b10 = Voltage symmetry. b11 = Low line voltage frequency. b12 = High line voltage frequency. b13 = Min. Volts/Hz. b14 = Max. Volts/Hz. b15 = Rate of frequency change.	W	RW
1 / #55	31	6 – 7	Trip flag mask 3. b00 = Reserved. b01 = Voltage not present. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Reserved. b09 = Reserved. b10 = Reserved. b11 = Reserved. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Reserved.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	31	8 – 9	Trip flag mask 4. b00 = Apparent power limit. b01 = Reserved. b02 = Power factor limit. b03 = Forward Direction active power. b04 = Forward Direction reactive power. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Auxiliary undervoltage. b09 = Auxiliary overvoltage. b10 = Earth leakage > setpoint. b11 = Earth fault > setpoint. b12 = Insulation lockout < 20kOhm. b13 = Reserved. b14 = Earth detector. b15 = Reserved.	W	RW
1 / #55	31	10 – 11	Trip flag mask 5. b00 = Overspeed 4-20mA input on Ch 02. b01 = Underspeed 4-20mA input on Ch 02. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Speed switch 01 running or standstill. b09 = Speed switch 02 running or standstill. b10 = Overspeed pulse count high 01. b11 = Underspeed pulse count low 01. b12 = Overspeed pulse count high 02. b13 = Underspeed pulse count low 02. b14 = Overspeed 4-20mA input on Ch 01. b15 = Underspeed 4-20mA input on Ch 01.	W	RW
1 / #55	31	12 – 13	Trip flag mask 6. b00 = CT and VT 01 connection failed. b01 = EL CBCT connection failed. b02 = CT and VT 02 connection failed. b03 = Frozen contact. b04 = Breaker operation near end of life. b05 = Safety Maintenance Interlock active. b06 = Emergency stop active. b07 = RTD 08 module I2C communication lost. b08 = Main Contactor Trip Coil continuous. b09 = Breaker Fail warning. b10 = IO Expander I2C communication lost. b11 = RTD module I2C communication lost. b12 = Internal communication module I2C communication lost. b13 = 4 - 20mAmodule I2C communication module lost. b14 = MMI I2C communication lost. b15 = Ext. communication module I2C communication lost.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	31	14 – 15	Trip flag mask 7. b00 = RTD 1 temperature level high. b01 = RTD 1 temperature level low. b02 = RTD 2 temperature level high. b03 = RTD 2 temperature level low. b04 = RTD 3 temperature level high. b05 = RTD 3 temperature level low. b06 = RTD 4 temperature level high. b07 = RTD 4 temperature level low. b08 = 4 - 20mA input channel 1 high. b09 = 4 - 20mA input channel 1 low. b10 = 4 - 20mA input channel 2 high. b11 = 4 - 20mA input channel 2 low. b12 = 4 - 20mA output channel 1 high. b13 = 4 - 20mA output channel 1 low. b14 = 4 - 20mA output channel 2 high. b15 = 4 - 20mA output channel 2 low.	W	RW
1 / #55	31	16 – 17	Trip flag mask 8. b00 = RTD 9 temperature level high. b01 = RTD 9 temperature level low. b02 = RTD 10 temperature level high. b03 = RTD 10 temperature level low. b04 = RTD 11 temperature level high. b05 = RTD 11 temperature level low. b06 = RTD 12 temperature level high. b07 = RTD 12 temperature level low. b08 = RTD 5 temperature level high. b09 = RTD 5 temperature level low. b10 = RTD 6 temperature level high. b11 = RTD 6 temperature level low. b12 = RTD 7 temperature level high. b13 = RTD 7 temperature level low. b14 = RTD 8 temperature level high. b15 = RTD 8 temperature level low.	W	RW
1 / #55	31	18 – 19	Trip flag mask 9. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Starts per hour. b09 = Execution fault. b10 = Feedback fault. b11 = Load settings corruption error. b12 = Ext. configurable trip 01 active. b13 = Ext. configurable trip 02 active. b14 = Ext. configurable trip 03 active. b15 = Ext. configurable trip 04 active.	W	RW
1 / #55	31	20 – 21	Trip flag mask 10. b00 – b15 = Reserved.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	31	22 – 23	Trip flag mask 11. b00 = ANSI77O channel 5 high, high. b01 = ANSI77U channel 5 low, low. b02 = ANSI77O channel 6 high, high. b03 = ANSI77U channel 6 low, low. b04 = ANSI77O channel 7 high, high. b05 = ANSI77U channel 7 low, low. b06 = ANSI77O channel 8 high, high. b07 = ANSI77U channel 8 low, low. b08 = ANSI77O channel 1 high, high. b09 = ANSI77U channel 1 low, low. b10 = ANSI77O channel 2 high, high. b11 = ANSI77U channel 2 low, low. b12 = ANSI77O channel 3 high, high. b13 = ANSI77U channel 3 low, low. b14 = ANSI77O channel 4 high, high. b15 = ANSI77U channel 4 low, low.	W	RW
1 / #55	32	0 – 1	User LED 1 input.	W	RW
1 / #55	32	2 – 3	User LED 2 input.	W	RW
1 / #55	32	4 – 5	User LED 3 input.	W	RW
1 / #55	32	6 – 7	User LED 4 input.	W	RW
1 / #55	32	8 – 9	User LED 5 input.	W	RW
1 / #55	32	10 – 11	User LED 6 input.	W	RW
1 / #55	50	0 – 1	Tele metering channel 1 in.	W	RW
1 / #55	50	2 – 3	Tele metering channel 2 in.	W	RW
1 / #55	50	4 – 5	Tele metering channel 3 in.	W	RW
1 / #55	50	6 – 7	Tele metering channel 4 in.	W	RW
1 / #55	50	8 – 9	Tele metering channel 5 in.	W	RW
1 / #55	50	10 – 11	Tele metering channel 6 in.	W	RW
1 / #55	50	12 – 13	Tele metering channel 7 in.	W	RW
1 / #55	50	14 – 15	Tele metering channel 8 in.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	51	0 – 1	Warning enabled 11. b00 = ANSI77O channel 3 high, high. b01 = ANSI77O channel 3 high. b02 = ANSI77U channel 3 low. b03 = ANSI77U channel 3 low, low. b04 = ANSI77O channel 4 high, high. b05 = ANSI77O channel 4 high. b06 = ANSI77U channel 4 low. b07 = ANSI77U channel 4 low, low. b08 = ANSI77O channel 1 high, high. b09 = ANSI77O channel 1 high. b10 = ANSI77U channel 1 low. b11 = ANSI77U channel 1 low, low. b12 = ANSI77O channel 2 high, high. b13 = ANSI77O channel 2 high. b14 = ANSI77U channel 2 low. b15 = ANSI77U channel 2 low, low.	W	RW
1 / #55	51	2 – 3	Warning enabled 12. b00 = ANSI77O channel 7 high, high. b01 = ANSI77O channel 7 high. b02 = ANSI77U channel 7 low. b03 = ANSI77U channel 7 low, low. b04 = ANSI77O channel 8 high, high. b05 = ANSI77O channel 8 high. b06 = ANSI77U channel 8 low. b07 = ANSI77U channel 8 low, low. b08 = ANSI77O channel 5 high, high. b09 = ANSI77O channel 5 high. b10 = ANSI77U channel 5 low. b11 = ANSI77U channel 5 low, low. b12 = ANSI77O channel 6 high, high. b13 = ANSI77O channel 6 high. b14 = ANSI77U channel 6 low. b15 = ANSI77U channel 6 low, low.	W	RW
1 / #55	51	4 – 5	Trip enabled 11. b00 = ANSI77O channel 5 high, high. b01 = ANSI77U channel 5 low, low. b02 = ANSI77O channel 6 high, high. b03 = ANSI77U channel 6 low, low. b04 = ANSI77O channel 7 high, high. b05 = ANSI77U channel 7 low, low. b06 = ANSI77O channel 8 high, high. b07 = ANSI77U channel 8 low, low. b08 = ANSI77O channel 1 high, high. b09 = ANSI77U channel 1 low, low. b10 = ANSI77O channel 2 high, high. b11 = ANSI77U channel 2 low, low. b12 = ANSI77O channel 3 high, high. b13 = ANSI77U channel 3 low, low. b14 = ANSI77O channel 4 high, high. b15 = ANSI77U channel 4 low, low.	W	RW
1 / #55	52	0 – 1	ANSI77O start-up delay.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	52	2 – 3	ANSI77U start-up delay.	W	RW
1 / #55	53	0 – 1	ANSI77O channel 1 high, high warning and trip threshold.	W	RW
1 / #55	53	2 – 3	ANSI77O channel 1 high, high warning and trip delay.	W	RW
1 / #55	53	4 – 5	ANSI77O channel 1 high warning threshold.	W	RW
1 / #55	53	6 – 7	ANSI77O channel 1 high warning delay.	W	RW
1 / #55	53	8 – 9	ANSI77U channel 1 low warning threshold.	W	RW
1 / #55	53	10 – 11	ANSI77U channel 1 low warning delay.	W	RW
1 / #55	53	12 – 13	ANSI77U channel 1 low, low warning and trip threshold.	W	RW
1 / #55	53	14 – 15	ANSI77U channel 1 low, low warning and trip delay.	W	RW
1 / #55	54	0 – 1	ANSI77O channel 2 high, high warning and trip threshold.	W	RW
1 / #55	54	2 – 3	ANSI77O channel 2 high, high warning and trip delay.	W	RW
1 / #55	54	4 – 5	ANSI77O channel 2 high warning threshold.	W	RW
1 / #55	54	6 – 7	ANSI77O channel 2 high warning delay.	W	RW
1 / #55	54	8 – 9	ANSI77U channel 2 low warning threshold.	W	RW
1 / #55	54	10 – 11	ANSI77U channel 2 low warning delay.	W	RW
1 / #55	54	12 – 13	ANSI77U channel 2 low, low warning and trip threshold.	W	RW
1 / #55	54	14 – 15	ANSI77U channel 2 low, low warning and trip delay.	W	RW
1 / #55	55	0 – 1	ANSI77O channel 3 high, high warning and trip threshold.	W	RW
1 / #55	55	2 – 3	ANSI77O channel 3 high, high warning and trip delay.	W	RW
1 / #55	55	4 – 5	ANSI77O channel 3 high warning threshold.	W	RW
1 / #55	55	6 – 7	ANSI77O channel 3 high warning delay.	W	RW
1 / #55	55	8 – 9	ANSI77U channel 3 low warning threshold.	W	RW
1 / #55	55	10 – 11	ANSI77U channel 3 low warning delay.	W	RW
1 / #55	55	12 – 13	ANSI77U channel 3 low, low warning and trip threshold.	W	RW
1 / #55	55	14 – 15	ANSI77U channel 3 low, low warning and trip delay.	W	RW
1 / #55	56	0 – 1	ANSI77O channel 4 high, high warning and trip threshold.	W	RW
1 / #55	56	2 – 3	ANSI77O channel 4 high, high warning and trip delay.	W	RW
1 / #55	56	4 – 5	ANSI77O channel 4 high warning threshold.	W	RW
1 / #55	56	6 – 7	ANSI77O channel 4 high warning delay.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	56	8 – 9	ANSI77U channel 4 low warning threshold.	W	RW
1 / #55	56	10 – 11	ANSI77U channel 4 low warning delay.	W	RW
1 / #55	56	12 – 13	ANSI77U channel 4 low, low warning and trip threshold.	W	RW
1 / #55	56	14 – 15	ANSI77U channel 4 low, low warning and trip delay.	W	RW
1 / #55	57	0 – 1	ANSI77O channel 5 high, high warning and trip threshold.	W	RW
1 / #55	57	2 – 3	ANSI77O channel 5 high, high warning and trip delay.	W	RW
1 / #55	57	4 – 5	ANSI77O channel 5 high warning threshold.	W	RW
1 / #55	57	6 – 7	ANSI77O channel 5 high warning delay.	W	RW
1 / #55	57	8 – 9	ANSI77U channel 5 low warning threshold.	W	RW
1 / #55	57	10 – 11	ANSI77U channel 5 low warning delay.	W	RW
1 / #55	57	12 – 13	ANSI77U channel 5 low, low warning and trip threshold.	W	RW
1 / #55	57	14 – 15	ANSI77U channel 5 low, low warning and trip delay.	W	RW
1 / #55	58	0 – 1	ANSI77O channel 6 high, high warning and trip threshold.	W	RW
1 / #55	58	2 – 3	ANSI77O channel 6 high, high warning and trip delay.	W	RW
1 / #55	58	4 – 5	ANSI77O channel 6 high warning threshold.	W	RW
1 / #55	58	6 – 7	ANSI77O channel 6 high warning delay.	W	RW
1 / #55	58	8 – 9	ANSI77U channel 6 low warning threshold.	W	RW
1 / #55	58	10 – 11	ANSI77U channel 6 low warning delay.	W	RW
1 / #55	58	12 – 13	ANSI77U channel 6 low, low warning and trip threshold.	W	RW
1 / #55	58	14 – 15	ANSI77U channel 6 low, low warning and trip delay.	W	RW
1 / #55	59	0 – 1	ANSI77O channel 7 high, high warning and trip threshold.	W	RW
1 / #55	59	2 – 3	ANSI77O channel 7 high, high warning and trip delay.	W	RW
1 / #55	59	4 – 5	ANSI77O channel 7 high warning threshold.	W	RW
1 / #55	59	6 – 7	ANSI77O channel 7 high warning delay.	W	RW
1 / #55	59	8 – 9	ANSI77U channel 7 low warning threshold.	W	RW
1 / #55	59	10 – 11	ANSI77U channel 7 low warning delay.	W	RW
1 / #55	59	12 – 13	ANSI77U channel 7 low, low warning and trip threshold.	W	RW
1 / #55	59	14 – 15	ANSI77U channel 7 low, low warning and trip delay.	W	RW
1 / #55	60	0 – 1	ANSI77O channel 8 high, high warning and trip threshold.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	60	2 – 3	ANSI77O channel 8 high, high warning and trip delay.	W	RW
1 / #55	60	4 – 5	ANSI77O channel 8 high warning threshold.	W	RW
1 / #55	60	6 – 7	ANSI77O channel 8 high warning delay.	W	RW
1 / #55	60	8 – 9	ANSI77U channel 8 low warning threshold.	W	RW
1 / #55	60	10 – 11	ANSI77U channel 8 low warning delay.	W	RW
1 / #55	60	12 – 13	ANSI77U channel 8 low, low warning and trip threshold.	W	RW
1 / #55	60	14 – 15	ANSI77U channel 8 low, low warning and trip delay.	W	RW
1 / #55	61	0 – 1	ANSI77 channel source.	W	RW
1 / #55	80	0 – 1	Reserved.	B	RW
1 / #55	80	1	Starter type selection. 0 = Protection relay. 1 = Direct online. 2 = Direct online reversal. 3 = Star delta. 4 = Star delta reversal. 5 = Dahlander. 6 = Dahlander reversal. 7 = Pole changing. 8 = Pole changing reversal. 9 = Soft starter. 10 = Reversal soft starter. 11 = OCBD.	B	RW
1 / #55	80	2 – 3	Starter input type selection. 0 = Push button. 1 = Hold till start. 2 = Latch button. b00 – b03 = Local. b04 – b07 = Remote. b08 – b11 = Auto.	W	RW
1 / #55	81	0	Consecutive start limit.	B	RW
1 / #55	81	1	Starts per hour limit.	B	RW
1 / #55	82	0 – 1	ESTOP input.	W	RW
1 / #55	82	2 – 3	Lockout input.	W	RW
1 / #55	83	0 – 1	Feedback signal FWD input.	W	RW
1 / #55	83	2 – 3	Feedback signal REV input.	W	RW
1 / #55	84	0 – 1	Unauthorized load trip delay.	W	RW
1 / #55	85	0 – 1	Local, remote or auto input selection lsb input.	W	RW
1 / #55	85	2 – 3	Local, remote or auto input selection msb input.	W	RW
1 / #55	86	0 – 1	Local start fast forward input.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	86	2 – 3	Local start slow forward input.	W	RW
1 / #55	86	4 – 5	Local start fast reverse input.	W	RW
1 / #55	86	6 – 7	Local start slow reverse input.	W	RW
1 / #55	86	8 – 9	Local interlock input.	W	RW
1 / #55	86	10 – 11	Local stop input.	W	RW
1 / #55	87	0 – 1	Remote start fast forward input.	W	RW
1 / #55	87	2 – 3	Remote start slow forward input.	W	RW
1 / #55	87	4 – 5	Remote start fast reverse input.	W	RW
1 / #55	87	6 – 7	Remote start slow reverse input.	W	RW
1 / #55	87	8 – 9	Remote interlock input.	W	RW
1 / #55	87	10 – 11	Remote stop input.	W	RW
1 / #55	88	0 – 1	Auto start fast forward input.	W	RW
1 / #55	88	2 – 3	Auto start slow forward input.	W	RW
1 / #55	88	4 – 5	Auto start fast reverse input.	W	RW
1 / #55	88	6 – 7	Auto start slow reverse input.	W	RW
1 / #55	88	8 – 9	Auto start interlock input.	W	RW
1 / #55	88	10 – 11	Auto start stop input.	W	RW
1 / #55	89	0 – 1	Pre-start warning time limit.	W	RW
1 / #55	89	2 – 3	Execution time limit.	W	RW
1 / #55	89	4 – 5	Feedback time limit.	W	RW
1 / #55	89	6 – 7	Back spin time limit.	W	RW
1 / #55	89	8 – 9	DC brake time limit.	W	RW
1 / #55	89	10 – 11	Restart time limit.	W	RW
1 / #55	89	12	Reserved.	B	RW
1 / #55	89	13	Star to delta maximum time limit.	B	RW
1 / #55	90	0	Feeder Frequency Difference Limit.	B	RW
1 / #55	90	1	Feeder Voltage Difference Limit.	B	RW
1 / #55	90	2	Reserved.	B	RW
1 / #55	90	3	Feeder Phase Angle Difference Limit.	B	RW
1 / #55	91	0 – 1	Transition time limit.	W	RW
1 / #55	92	0 – 1	Slider far open limit input.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	92	2 – 3	Slider open limit input.	W	RW
1 / #55	92	4 – 5	Slider far close limit input.	W	RW
1 / #55	92	6 – 7	Slider close limit input.	W	RW
1 / #55	92	8 – 9	Slider open maximum time limit.	W	RW
1 / #55	92	10 – 11	Slider close maximum time limit.	W	RW
1 / #55	110	0 – 1	RTD 4 channel type. b09 – b08 = RTD 1. 00b = PT100. 01b = PT1000. 10b = PTC. 11b = NTC. b11 – b10 = RTD 2. 00b = PT100. 01b = PT1000. 10b = PTC. 11b = NTC. b13 – b12 = RTD 3. 00b = PT100. 01b = PT1000. 10b = PTC. 11b = NTC. b15 – b14 = RTD 4. 00b = PT100. 01b = PT1000. 10b = PTC. 11b = NTC.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	110	2 – 3	RTD 8 channel type. b01 – b00 = RTD 9. 00b = PT100. 01b = PT1000. 10b = PTC. 11b = NTC. b03 – b02 = RTD 10. 00b = PT100. 01b = PT1000. 10b = PTC. 11b = NTC. b05 – b04 = RTD 11. 00b = PT100. 01b = PT1000. 10b = PTC. 11b = NTC. b07 – b06 = RTD 12. 00b = PT100. 01b = PT1000. 10b = PTC. 11b = NTC. b09 – b08 = RTD 5. 00b = PT100. 01b = PT1000. 10b = PTC. 11b = NTC. b11 – b10 = RTD 6. 00b = PT100. 01b = PT1000. 10b = PTC. 11b = NTC. b13 – b12 = RTD 7. 00b = PT100. 01b = PT1000. 10b = PTC. 11b = NTC. b15 – b14 = RTD 8. 00b = PT100. 01b = PT1000. 10b = PTC. 11b = NTC.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	110	4 – 5	RTD 4 channel connection type. b09 – b08 = RTD 1. 00b = Motor winding. 01b = Motor winding & pre load. 10b = Bearing. 11b = Thermostat. b11 – b10 = RTD 2. 00b = Motor winding. 01b = Motor winding & pre load. 10b = Bearing. 11b = Thermostat. b13 – b12 = RTD 3. 00b = Motor winding. 01b = Motor winding & pre load. 10b = Bearing. 11b = Thermostat. b15 – b14 = RTD 4. 00b = Motor winding. 01b = Motor winding & pre load. 10b = Bearing. 11b = Thermostat.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	110	6 – 7	RTD 8 channel connection type. b01 – b00 = RTD 9. 00b = Motor winding. 01b = Motor winding & pre load. 10b = Bearing. 11b = Thermostat. b03 – b02 = RTD 10. 00b = Motor winding. 01b = Motor winding & pre load. 10b = Bearing. 11b = Thermostat. b05 – b04 = RTD 11. 00b = Motor winding. 01b = Motor winding & pre load. 10b = Bearing. 11b = Thermostat. b07 – b06 = RTD 12. 00b = Motor winding. 01b = Motor winding & pre load. 10b = Bearing. 11b = Thermostat. b09 – b08 = RTD 5. 00b = Motor winding. 01b = Motor winding & pre load. 10b = Bearing. 11b = Thermostat. b11 – b10 = RTD 6. 00b = Motor winding. 01b = Motor winding & pre load. 10b = Bearing. 11b = Thermostat. b13 – b12 = RTD 7. 00b = Motor winding. 01b = Motor winding & pre load. 10b = Bearing. 11b = Thermostat. b15 – b14 = RTD 8. 00b = Motor winding. 01b = Motor winding & pre load. 10b = Bearing. 11b = Thermostat.	W	RW
1 / #55	110	8	RTD 1 high trip level.	B	RW
1 / #55	110	9	RTD 1 high warning level.	B	RW
1 / #55	110	10	RTD 1 low warning level.	B	RW
1 / #55	110	11	RTD 1 low trip level.	B	RW
1 / #55	110	12	RTD 2 high trip level.	B	RW
1 / #55	110	13	RTD 2 high warning level.	B	RW
1 / #55	110	14	RTD 2 low warning level.	B	RW
1 / #55	110	15	RTD 2 low trip level.	B	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	110	16	RTD 3 high trip level.	B	RW
1 / #55	110	17	RTD 3 high warning level.	B	RW
1 / #55	110	18	RTD 3 low warning level.	B	RW
1 / #55	110	19	RTD 3 low trip level.	B	RW
1 / #55	110	20	RTD 4 high trip level.	B	RW
1 / #55	110	21	RTD 4 high warning level.	B	RW
1 / #55	110	22	RTD 4 low warning level.	B	RW
1 / #55	110	23	RTD 4 low trip level.	B	RW
1 / #55	110	24	RTD 5 high trip level.	B	RW
1 / #55	110	25	RTD 5 high warning level.	B	RW
1 / #55	110	26	RTD 5 low warning level.	B	RW
1 / #55	110	27	RTD 5 low trip level.	B	RW
1 / #55	110	28	RTD 6 high trip level.	B	RW
1 / #55	110	29	RTD 6 high warning level.	B	RW
1 / #55	110	30	RTD 6 low warning level.	B	RW
1 / #55	110	31	RTD 6 low trip level.	B	RW
1 / #55	110	32	RTD 7 high trip level.	B	RW
1 / #55	110	33	RTD 7 high warning level.	B	RW
1 / #55	110	34	RTD 7 low warning level.	B	RW
1 / #55	110	35	RTD 7 low trip level.	B	RW
1 / #55	110	36	RTD 8 high trip level.	B	RW
1 / #55	110	37	RTD 8 high warning level.	B	RW
1 / #55	110	38	RTD 8 low warning level.	B	RW
1 / #55	110	39	RTD 8 low trip level.	B	RW
1 / #55	110	40	RTD 9 high trip level.	B	RW
1 / #55	110	41	RTD 9 high warning level.	B	RW
1 / #55	110	42	RTD 9 low warning level.	B	RW
1 / #55	110	43	RTD 9 low trip level.	B	RW
1 / #55	110	44	RTD 10 high trip level.	B	RW
1 / #55	110	45	RTD 10 high warning level.	B	RW
1 / #55	110	46	RTD 10 low warning level.	B	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	110	47	RTD 10 low trip level.	B	RW
1 / #55	110	48	RTD 11 high trip level.	B	RW
1 / #55	110	49	RTD 11 high warning level.	B	RW
1 / #55	110	50	RTD 11 low warning level.	B	RW
1 / #55	110	51	RTD 11 low trip level.	B	RW
1 / #55	110	52	RTD 12 high trip level.	B	RW
1 / #55	110	53	RTD 12 high warning level.	B	RW
1 / #55	110	54	RTD 12 low warning level.	B	RW
1 / #55	110	55	RTD 12 low trip level.	B	RW
1 / #55	110	56	RTD 2 trip delay.	B	RW
1 / #55	110	57	RTD 1 trip delay.	B	RW
1 / #55	110	58	RTD 4 trip delay.	B	RW
1 / #55	110	59	RTD 3 trip delay.	B	RW
1 / #55	111	0	RTD 6 trip delay.	B	RW
1 / #55	111	1	RTD 5 trip delay.	B	RW
1 / #55	111	2	RTD 8 trip delay.	B	RW
1 / #55	111	3	RTD 7 trip delay.	B	RW
1 / #55	111	4	RTD 10 trip delay.	B	RW
1 / #55	111	5	RTD 9 trip delay.	B	RW
1 / #55	111	6	RTD 12 trip delay.	B	RW
1 / #55	111	7	RTD 11 trip delay.	B	RW
1 / #55	115	0	4 to 20 mA input 1 high trip level.	B	RW
1 / #55	115	1	4 to 20 mA input 1 high warning level.	B	RW
1 / #55	115	2	4 to 20 mA input 1 low warning level.	B	RW
1 / #55	115	3	4 to 20 mA input 1 low trip level.	B	RW
1 / #55	115	4 – 5	4 to 20 mA input 1 trip delay.	W	RW
1 / #55	115	6	4 to 20 mA input 2 high trip level.	B	RW
1 / #55	115	7	4 to 20 mA input 2 high warning level.	B	RW
1 / #55	115	8	4 to 20 mA input 2 low warning level.	B	RW
1 / #55	115	9	4 to 20 mA input 2 low trip level.	B	RW
1 / #55	115	10 – 11	4 to 20 mA input 2 trip delay.	W	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	115	12	4 to 20 mA output 1 high trip level.	B	RW
1 / #55	115	13	4 to 20 mA output 1 high warning level.	B	RW
1 / #55	115	14	4 to 20 mA output 1 low warning level.	B	RW
1 / #55	115	15	4 to 20 mA output 1 low trip level.	B	RW
1 / #55	115	16 – 17	4 to 20 mA output 1 trip delay.	W	RW
1 / #55	115	18	4 to 20 mA output 2 high trip level.	B	RW
1 / #55	115	19	4 to 20 mA output 2 high warning level.	B	RW
1 / #55	115	20	4 to 20 mA output 2 low warning level.	B	RW
1 / #55	115	21	4 to 20 mA output 2 low trip level.	B	RW
1 / #55	115	22 – 23	4 to 20 mA output 2 trip delay.	W	RW
1 / #55	115	24	4 to 20 mA output 1 signal source.	B	RW
1 / #55	115	25	4 to 20 mA output 1 signal type. 0 = 4 to 20 mA. 1 = 0 to 20 mA. 2 = Bypass.	B	RW
1 / #55	115	26 – 27	4 to 20 mA output 1 high limit.	W	RW
1 / #55	115	28 – 29	4 to 20 mA output 1 low limit.	W	RW
1 / #55	115	30 – 31	4 to 20 mA output 1 rate of change timer.	W	RW
1 / #55	115	32	Reserved.	B	RW
1 / #55	115	33	4 to 20 mA output 1 rate of change mA.	B	RW
1 / #55	115	34	4 to 20 mA output 2 signal source.	B	RW
1 / #55	115	35	4 to 20 mA output 2 signal type. 0 = 4 to 20 mA. 1 = 0 to 20 mA. 2 = Bypass.	B	RW
1 / #55	115	36 – 37	4 to 20 mA output 2 high limit.	W	RW
1 / #55	115	38 – 39	4 to 20 mA output 2 low limit.	W	RW
1 / #55	115	40 – 41	4 to 20 mA output 2 rate of change timer.	W	RW
1 / #55	115	42	Reserved.	B	RW
1 / #55	115	43	4 to 20 mA output 2 rate of change mA.	B	RW
1 / #55	115	44	4 to 20 mA input 2 offset.	B	RW
1 / #55	115	45	4 to 20 mA input 1 offset.	B	RW
1 / #55	115	46	4 to 20 mA output 2 offset.	B	RW
1 / #55	115	47	4 to 20 mA output 1 offset.	B	RW

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
1 / #55	120	0 – 1	Digital field input 8 on delay.	W	RW
1 / #55	120	2 – 3	Digital field input 8 off delay.	W	RW
1 / #55	120	4 – 5	Digital field input 9 on delay.	W	RW
1 / #55	120	6 – 7	Digital field input 9 off delay.	W	RW
1 / #55	120	8 – 9	Digital field input 10 on delay.	W	RW
1 / #55	120	10 – 11	Digital field input 10 off delay.	W	RW
1 / #55	120	12 – 13	Digital field input 11 on delay.	W	RW
1 / #55	120	14 – 15	Digital field input 11 off delay.	W	RW
1 / #55	120	16 – 17	Digital field input 12 on delay.	W	RW
1 / #55	120	18 – 19	Digital field input 12 off delay.	W	RW
1 / #55	120	20 – 21	Digital field input 13 on delay.	W	RW
1 / #55	120	22 – 23	Digital field input 13 off delay.	W	RW
1 / #55	120	24 – 25	Digital field input 14 on delay.	W	RW
1 / #55	120	26 – 27	Digital field input 14 off delay.	W	RW
1 / #55	120	28 – 29	Digital field input 15 on delay.	W	RW
1 / #55	120	30 – 31	Digital field input 15 off delay.	W	RW
1 / #55	120	32 – 33	Relay 5 input.	W	RW
1 / #55	120	34 – 35	Relay 6 input.	W	RW
1 / #55	120	36 – 37	Relay 7 input.	W	RW
1 / #55	120	38 – 39	Relay 8 input.	W	RW

8.2 Slot 2 Actual values

Slot 2 actual values contain actual values from the NewFeed relay.

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	2	0 – 1	Status code.	W	R
2 / #54	2	2 – 3	Warning code.	W	R
2 / #54	2	4 – 5	User config word 0.	W	R
2 / #54	2	6 – 7	User config word 1.	W	R
2 / #54	2	8 – 9	User config word 2.	W	R
2 / #54	2	10 – 11	User config word 3.	W	R
2 / #54	2	12 – 13	User config word 4.	W	R
2 / #54	2	14 – 15	User config word 5.	W	R
2 / #54	2	16 – 17	User config word 6.	W	R
2 / #54	2	18 – 19	User config word 7.	W	R
2 / #54	2	20 – 21	User config word 8.	W	R
2 / #54	2	22 – 23	User config word 9.	W	R
2 / #54	2	24 – 25	User config word 10.	W	R
2 / #54	2	26 = 27	User config word 11.	W	R
2 / #54	2	28 – 29	User config word 12.	W	R
2 / #54	3	0 – 1	IL maximum level.	W	R
2 / #54	3	2 – 3	IL1 level.	W	R
2 / #54	3	4 – 5	IL2 level.	W	R
2 / #54	3	6 – 7	IL3 level.	W	R
2 / #54	3	8 – 9	IL unbalance level.	W	R
2 / #54	3	10 – 11	Thermal capacity remaining.	W	R
2 / #54	3	12 – 13	Reserved.	W	R
2 / #54	3	14 – 15	Thermal class curve active.	W	R
2 / #54	3	16 – 17	MLC setting active.	W	R
2 / #54	3	18 – 19	CTMB model.	W	R
2 / #54	3	20 – 21	CT secondary ratio.	W	R
2 / #54	3	22 – 23	CT primary ratio.	W	R
2 / #54	3	24 -25	IL positive sequence level.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	3	26 – 27	IL negative sequence level.	W	R
2 / #54	3	28 – 29	IL zero sequence level.	W	R
2 / #54	3	30 – 31	IL1 to IL2 phase angle.	W	R
2 / #54	3	32 – 33	IL2 to IL3 phase angle.	W	R
2 / #54	3	34 – 35	IL3 to IL1 phase angle.	W	R
2 / #54	3	36 – 37	VL1 to IL1 phase angle.	W	R
2 / #54	3	38 – 39	VL2 to IL2 phase angle.	W	R
2 / #54	3	40 – 41	VL3 to IL3 phase angle.	W	R
2 / #54	3	42 – 43	Reserved.	W	R
2 / #54	3	44 – 45	Reserved.	W	R
2 / #54	3	46 – 47	Reserved.	W	R
2 / #54	4	0 – 1	Reserved.	W	R
2 / #54	4	2 – 3	Reserved.	W	R
2 / #54	4	4 – 5	Reserved.	W	R
2 / #54	4	6 – 7	Reserved.	W	R
2 / #54	4	8 – 9	Reserved.	W	R
2 / #54	4	10 – 11	Reserved.	W	R
2 / #54	4	12 – 13	Reserved.	W	R
2 / #54	4	14 – 15	Reserved.	W	R
2 / #54	4	16 – 17	Reserved.	W	R
2 / #54	4	18 – 19	Reserved.	W	R
2 / #54	4	20 – 21	Reserved.	W	R
2 / #54	4	22 – 23	Reserved.	W	R
2 / #54	4	24 -25	Reserved.	W	R
2 / #54	4	26 – 27	Reserved.	W	R
2 / #54	4	28 – 29	Reserved.	W	R
2 / #54	4	30 – 31	Reserved.	W	R
2 / #54	4	32 – 33	Reserved.	W	R
2 / #54	4	34 – 35	Reserved.	W	R
2 / #54	4	36 – 37	Reserved.	W	R
2 / #54	4	38 – 39	Reserved.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	4	40 – 41	Reserved.	W	R
2 / #54	5	0 – 1	Voltage phase level maximum.	W	R
2 / #54	5	2 – 3	VL1 phase level.	W	R
2 / #54	5	4 – 5	VL2 phase level.	W	R
2 / #54	5	6 – 7	VL3 phase level.	W	R
2 / #54	5	8 – 9	Reserved.	W	R
2 / #54	5	10 – 11	VL symmetry.	W	R
2 / #54	5	12 – 13	VL frequency level.	W	R
2 / #54	5	14 – 15	Voltage line selection.	W	R
2 / #54	5	16 – 17	VL1 to VL2 angle.	W	R
2 / #54	5	18 – 19	VL2 to VL3 angle.	W	R
2 / #54	5	20 – 21	VL3 to VL1 angle.	W	R
2 / #54	5	22 - 23	VL positive sequence.	W	R
2 / #54	5	24 – 25	VL negative sequence.	W	R
2 / #54	5	26 – 27	VL zero sequence.	W	R
2 / #54	5	28 – 29	Volts per hertz.	W	R
2 / #54	5	30 – 31	Voltage rate of frequency change.	W	R
2 / #54	5	32 – 33	Reserved.	W	R
2 / #54	5	34 – 35	Reserved.	W	R
2 / #54	5	36 – 37	Reserved.	W	R
2 / #54	6	0 – 1	Reserved.	W	R
2 / #54	6	2 – 3	Reserved.	W	R
2 / #54	6	4 – 5	Reserved.	W	R
2 / #54	6	6 – 7	Reserved.	W	R
2 / #54	6	8 – 9	Reserved.	W	R
2 / #54	6	10 – 11	Reserved.	W	R
2 / #54	6	12 – 13	Reserved.	W	R
2 / #54	6	14 – 15	Reserved.	W	R
2 / #54	6	16 – 17	Reserved.	W	R
2 / #54	6	18 – 19	Reserved.	W	R
2 / #54	6	20 – 21	Reserved.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	6	22 – 23	Reserved.	W	R
2 / #54	6	24 -25	Reserved.	W	R
2 / #54	6	26 – 27	Reserved.	W	R
2 / #54	6	28 – 29	Reserved.	W	R
2 / #54	6	30 – 31	Reserved.	W	R
2 / #54	7	0 – 1	Power level.	W	R
2 / #54	7	2 – 3	Reserved.	W	R
2 / #54	7	4 – 5	Earth leakage level.	W	R
2 / #54	7	6 – 7	Reserved.	W	R
2 / #54	7	8 – 9	Insulation level.	W	R
2 / #54	8	0 – 1	Warning flags 0. b00 = Feedback Reverse Signal active b01 = Run forward fast. b02 = Run forward slow. b03 = Run reverse slow. b04 = Run reverse fast. b05 = Stop active. b06 = Interlock active. b07 = Starter ready. b08 = If IL Current > 10%. b09 = If VL > 40% of selected Vac Voltage present measured b10 = Reserved. b11 = Reserved. b12 = Record memory full. b13 = Breaker Fault b14 = Pre-start warning. b15 = Feedback Forward Signal active.	W	R
2 / #54	8	2 – 3	Warning flags 1. b00 = RTD 1 temperature high. b01 = RTD 1 temperature low. b02 = RTD 2 temperature high. b03 = RTD 2 temperature low. b04 = RTD 3 temperature high. b05 = RTD 3 temperature low. b06 = RTD 4 temperature high. b07 = RTD 4 temperature low. b08 = 4 - 20mA in 1 high. b09 = 4 - 20mA in 1 low. b10 = 4 - 20mA in 2 high. b11 = 4 - 20mA in 2 low. b12 = 4 - 20mA out 1 high. b13 = 4 - 20mA out 1 low. b14 = 4 - 20mA out 2 high. b15 = 4 - 20mA out 2 low.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	8	4 – 5	Warning flags 2. b00 = RTD 9 temperature high. b01 = RTD 9 temperature low. b02 = RTD 10 temperature high. b03 = RTD 10 temperature low. b04 = RTD 11 temperature high. b05 = RTD 11 temperature low. b06 = RTD 12 temperature high. b07 = RTD 12 temperature low. b08 = RTD 5 temperature high. b09 = RTD 5 temperature low. b10 = RTD 6 temperature high. b11 = RTD 6 temperature low. b12 = RTD 7 temperature high. b13 = RTD 7 temperature low. b14 = RTD 8 temperature high. b15 = RTD 8 temperature low.	W	R
2 / #54	8	6 – 7	Warning flags 3. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = V lead I. b09 = Reserved. b10 = Reserved. b11 = Motor start-up. b12 = Motor running. b13 = Motor stopped. b14 = Reserved. b15 = Reserved.	W	R
2 / #54	8	8 – 9	Warning flags 4. b00 = IL1 8th Harmonic high. b01 = IL1 9th Harmonic high. b02 = IL1 10th Harmonic high. b03 = IL1 11th Harmonic high. b04 = IL1 12th Harmonic high. b05 = IL1 13th Harmonic high. b06 = IL1 14th Harmonic high. b07 = IL1 15th Harmonic high. b08 = IL1 Sub-harmonics high. b09 = IL1 1st Harmonic high. b10 = IL1 2nd Harmonic high. b11 = IL1 3rd Harmonic high. b12 = IL1 4th Harmonic high. b13 = IL1 5th Harmonic high. b14 = IL1 6th Harmonic high. b15 = IL1 7th Harmonic high.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	8	10 – 11	Warning flags 5. b00 = IL1 24th Harmonic high. b01 = IL1 25th Harmonic high. b02 = IL1 26th Harmonic high. b03 = IL1 27th Harmonic high. b04 = IL1 28th Harmonic high. b05 = IL1 29th Harmonic high. b06 = IL1 30th Harmonic high. b07 = IL1 31st Harmonic high. b08 = IL1 16th Harmonic high. b09 = IL1 17th Harmonic high. b10 = IL1 18th Harmonic high. b11 = IL1 19th Harmonic high. b12 = IL1 20th Harmonic high. b13 = IL1 21st Harmonic high. b14 = IL1 22nd Harmonic high. b15 = IL1 23rd Harmonic high.	W	R
2 / #54	8	12 – 13	Warning flags 6. b00 = IL2 8th Harmonic high. b01 = IL2 9th Harmonic high. b02 = IL2 10th Harmonic high. b03 = IL2 11th Harmonic high. b04 = IL2 12th Harmonic high. b05 = IL2 13th Harmonic high. b06 = IL2 14th Harmonic high. b07 = IL2 15th Harmonic high. b08 = IL2 Sub-harmonics high. b09 = IL2 1st Harmonic high. b10 = IL2 2nd Harmonic high. b11 = IL2 3rd Harmonic high. b12 = IL2 4th Harmonic high. b13 = IL2 5th Harmonic high. b14 = IL2 6th Harmonic high. b15 = IL2 7th Harmonic high.	W	R
2 / #54	8	14 – 15	Warning flags 7. b00 = IL2 24th Harmonic high. b01 = IL2 25th Harmonic high. b02 = IL2 26th Harmonic high. b03 = IL2 27th Harmonic high. b04 = IL2 28th Harmonic high. b05 = IL2 29th Harmonic high. b06 = IL2 30th Harmonic high. b07 = IL2 31st Harmonic high. b08 = IL2 16th Harmonic high. b09 = IL2 17th Harmonic high. b10 = IL2 18th Harmonic high. b11 = IL2 19th Harmonic high. b12 = IL2 20th Harmonic high. b13 = IL2 21st Harmonic high. b14 = IL2 22nd Harmonic high. b15 = IL2 23rd Harmonic high.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	8	16 – 17	Warning flags 8. b00 = IL3 8th Harmonic high. b01 = IL3 9th Harmonic high. b02 = IL3 10th Harmonic high. b03 = IL3 11th Harmonic high. b04 = IL3 12th Harmonic high. b05 = IL3 13th Harmonic high. b06 = IL3 14th Harmonic high. b07 = IL3 15th Harmonic high. b08 = IL3 Sub-harmonics high. b09 = IL3 1st Harmonic high. b10 = IL3 2nd Harmonic high. b11 = IL3 3rd Harmonic high. b12 = IL3 4th Harmonic high. b13 = IL3 5th Harmonic high. b14 = IL3 6th Harmonic high. b15 = IL3 7th Harmonic high.	W	R
2 / #54	8	18 – 19	Warning flags 9. b00 = IL3 24th Harmonic high. b01 = IL3 25th Harmonic high. b02 = IL3 26th Harmonic high. b03 = IL3 27th Harmonic high. b04 = IL3 28th Harmonic high. b05 = IL3 29th Harmonic high. b06 = IL3 30th Harmonic high. b07 = IL3 31st Harmonic high. b08 = IL3 16th Harmonic high. b09 = IL3 17th Harmonic high. b10 = IL3 18th Harmonic high. b11 = IL3 19th Harmonic high. b12 = IL3 20th Harmonic high. b13 = IL3 21st Harmonic high. b14 = IL3 22nd Harmonic high. b15 = IL3 23rd Harmonic high.	W	R
2 / #54	8	20 – 21	Warning flags 10. b00 = VL1 8th Harmonic high. b01 = VL1 9th Harmonic high. b02 = VL1 10th Harmonic high. b03 = VL1 11th Harmonic high. b04 = VL1 12th Harmonic high. b05 = VL1 13th Harmonic high. b06 = VL1 14th Harmonic high. b07 = VL1 15th Harmonic high. b08 = VL1 Sub-harmonics high. b09 = VL1 1st Harmonic high. b10 = VL1 2nd Harmonic high. b11 = VL1 3rd Harmonic high. b12 = VL1 4th Harmonic high. b13 = VL1 5th Harmonic high. b14 = VL1 6th Harmonic high. b15 = VL1 7th Harmonic high.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	8	22 – 23	Warning flags 11. b00 = VL1 24th Harmonic high. b01 = VL1 25th Harmonic high. b02 = VL1 26th Harmonic high. b03 = VL1 27th Harmonic high. b04 = VL1 28th Harmonic high. b05 = VL1 29th Harmonic high. b06 = VL1 30th Harmonic high. b07 = VL1 31st Harmonic high. b08 = VL1 16th Harmonic high. b09 = VL1 17th Harmonic high. b10 = VL1 18th Harmonic high. b11 = VL1 19th Harmonic high. b12 = VL1 20th Harmonic high. b13 = VL1 21st Harmonic high. b14 = VL1 22nd Harmonic high. b15 = VL1 23rd Harmonic high.	W	R
2 / #54	8	24 – 25	Warning flags 12. b00 = VL2 8th Harmonic high. b01 = VL2 9th Harmonic high. b02 = VL2 10th Harmonic high. b03 = VL2 11th Harmonic high. b04 = VL2 12th Harmonic high. b05 = VL2 13th Harmonic high. b06 = VL2 14th Harmonic high. b07 = VL2 15th Harmonic high. b08 = VL2 Sub-harmonics high. b09 = VL2 1st Harmonic high. b10 = VL2 2nd Harmonic high. b11 = VL2 3rd Harmonic high. b12 = VL2 4th Harmonic high. b13 = VL2 5th Harmonic high. b14 = VL2 6th Harmonic high. b15 = VL2 7th Harmonic high.	W	R
2 / #54	8	26 – 27	Warning flags 13. b00 = VL2 24th Harmonic high. b01 = VL2 25th Harmonic high. b02 = VL2 26th Harmonic high. b03 = VL2 27th Harmonic high. b04 = VL2 28th Harmonic high. b05 = VL2 29th Harmonic high. b06 = VL2 30th Harmonic high. b07 = VL2 31st Harmonic high. b08 = VL2 16th Harmonic high. b09 = VL2 17th Harmonic high. b10 = VL2 18th Harmonic high. b11 = VL2 19th Harmonic high. b12 = VL2 20th Harmonic high. b13 = VL2 21st Harmonic high. b14 = VL2 22nd Harmonic high. b15 = VL2 23rd Harmonic high.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	8	28 – 29	Warning flags 14. b00 = VL3 8th Harmonic high. b01 = VL3 9th Harmonic high. b02 = VL3 10th Harmonic high. b03 = VL3 11th Harmonic high. b04 = VL3 12th Harmonic high. b05 = VL3 13th Harmonic high. b06 = VL3 14th Harmonic high. b07 = VL3 15th Harmonic high. b08 = VL3 Sub-harmonics high. b09 = VL3 1st Harmonic high. b10 = VL3 2nd Harmonic high. b11 = VL3 3rd Harmonic high. b12 = VL3 4th Harmonic high. b13 = VL3 5th Harmonic high. b14 = VL3 6th Harmonic high. b15 = VL3 7th Harmonic high.	W	R
2 / #54	8	30 – 31	Warning flags 15. b00 = VL3 24th Harmonic high. b01 = VL3 25th Harmonic high. b02 = VL3 26th Harmonic high. b03 = VL3 27th Harmonic high. b04 = VL3 28th Harmonic high. b05 = VL3 29th Harmonic high. b06 = VL3 30th Harmonic high. b07 = VL3 31st Harmonic high. b08 = VL3 16th Harmonic high. b09 = VL3 17th Harmonic high. b10 = VL3 18th Harmonic high. b11 = VL3 19th Harmonic high. b12 = VL3 20th Harmonic high. b13 = VL3 21st Harmonic high. b14 = VL3 22nd Harmonic high. b15 = VL3 23rd Harmonic high.	W	R
2 / #54	8	32 – 33	Warning flags 16. b00 = Minimum load. b01 = Short circuit. b02 = Running stall condition. b03 = % THD current. b04 = Vectorial stall. b05 = Unauthorized current. b06 = Reserved. b07 = Reserved. b08 = Over current. b09 = Current unbalance. b10 = Current single phase. b11 = I Positive sequence. b12 = I Negative sequence. b13 = I Zero sequence warning. b14 = Neutral monitor. b15 = THD magnitude current.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	8	34 – 35	Warning flags 17. b00 = Differential angle. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Watt demand exceeded. b05 = VAr demand exceeded. b06 = VA demand exceeded. b07 = Current demand exceeded. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved.	W	R
2 / #54	8	36 – 37	Warning flags 18. b00 = Voltage phase rotation. b01 = V Positive sequence. b02 = V Negative sequence. b03 = V Zero sequence. b04 = % V THD high b05 = V THD magnitude high b06 = Differential Voltage. b07 = Reserved. b08 = Overvoltage. b09 = Undervoltage. b10 = Voltage symmetry. b11 = Low line voltage frequency. b12 = High line voltage frequency. b13 = Min. Volts/Hz. b14 = Max. Volts/Hz. b15 = Rate of frequency change.	W	R
2 / #54	8	38 – 39	Warning flags 19. b00 = Reserved. b01 = Voltage not present. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Reserved. b09 = Reserved. b10 = Reserved. b11 = Reserved. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Reserved.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	8	40 – 41	Warning flags 20. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Forward Direction active power. b04 = Forward Direction reactive power. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Auxiliary undervoltage. b09 = Auxiliary overvoltage. b10 = Earth leakage >setpoint. b11 = Earth fault > setpoint. b12 = Insulation lockout < 20kOhm. b13 = Reserved. b14 = Earth detector. b15 = Reserved.	W	R
2 / #54	8	42 – 43	Warning flags 21. b00 = Overspeed 4-20mA input on Ch 02. b01 = Underspeed 4-20mA input on Ch 02. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Speed switch 01 running or standstill b09 = Speed switch 02 running or standstill b10 = Overspeed pulse count high 01. b11 = Underspeed pulse count low 01. b12 = Overspeed pulse count high 02. b13 = Underspeed pulse count low 02. b14 = Overspeed 4-20mA input on Ch 01. b15 = Underspeed 4-20mA input on Ch 01.	W	R
2 / #54	8	44 – 45	Warning flags 22. b00 = CT and VT connection failed. b01 = EL CBCT connection failed. b02 = Reserved. b03 = Frozen contact. b04 = Breaker operation near end of life. b05 = Safety Maintenance Interlock active. b06 = Emergency stop active. b07 = RTD 8 module I2C communication lost. b08 = Main Contactor Trip Coil continuous. b09 = Breaker Fail warning. b10 = IO Expander I2C communication lost. b11 = RTD 4 module I2C communication lost. b12 = Internal communication module I2C communication lost. b13 = 4 - 20mA module I2C communication lost. b14 = MMI I2C communication lost. b15 = Ext. communication module I2C communication lost.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	8	46 – 47	Warning flags 23. b00 = RTD 1 temperature level high. b01 = RTD 1 temperature level low. b02 = RTD 2 temperature level high. b03 = RTD 2 temperature level low. b04 = RTD 3 temperature level high. b05 = RTD 3 temperature level low. b06 = RTD 4 temperature level high. b07 = RTD 4 temperature level low. b08 = 4 - 20mA input channel 1 high. b09 = 4 - 20mA input channel 1 low. b10 = 4 - 20mA input channel 2 high. b11 = 4 - 20mA input channel 2 low. b12 = 4 - 20mA output channel 1 high. b13 = 4 - 20mA output channel 1 low. b14 = 4 - 20mA output channel 2 high. b15 = 4 - 20mA output channel 2 low.	W	R
2 / #54	8	48 – 49	Warning flags 24. b00 = RTD 9 temperature level high. b01 = RTD 9 temperature level low. b02 = RTD 10 temperature level high. b03 = RTD 10 temperature level low. b04 = RTD 11 temperature level high. b05 = RTD 11 temperature level low. b06 = RTD 12 temperature level high. b07 = RTD 12 temperature level low. b08 = RTD 5 temperature level high. b09 = RTD 5 temperature level low. b10 = RTD 6 temperature level high. b11 = RTD 6 temperature level low. b12 = RTD 7 temperature level high. b13 = RTD 7 temperature level low. b14 = RTD 8 temperature level high. b15 = RTD 8 temperature level low.	W	R
2 / #54	8	50 – 51	Warning flags 25. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Starts per hour. b09 = Execution fault. b10 = Feedback fault. b11 = Load settings corruption error. b12 = Ext. configurable trip 01 active. b13 = Ext. configurable trip 02 active. b14 = Ext. configurable trip 03 active. b15 = Ext. configurable trip 04 active.	W	R
2 / #54	8	52 – 53	Warning flags 26. b00 – b15 = Reserved.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	8	54 – 55	Warning flags 27. b00 – b15 = Reserved.	W	R
2 / #54	9	0 – 1	Alarm flags 0. b00 = Minimum load. b01 = Short circuit. b02 = Running stall condition. b03 = THD % current. b04 = Vectorial stall. b05 = Unauthorized current b06 = Reserved. b07 = Reserved. b08 = Over current. b09 = Current unbalance. b10 = Current single phase. b11 = I Positive sequence. b12 = I Negative sequence. b13 = I Zero sequence alarm. b14 = I Neutral monitor. b15 = THD magnitude current.	W	R
2 / #54	9	2 – 3	Alarm flags 1. b00 = Differential current phase. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Watt demand exceeded. b05 = VAr demand exceeded. b06 = VA demand exceeded. b07 = Current demand exceeded. b08 = Reserved. b09 = Reserved. b10 = Reserved. b11 = Reserved. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Reserved.	W	R
2 / #54	9	4 – 5	Alarm flags 2. b00 = Voltage phase on rotation b01 = V Positive sequence. b02 = V Negative sequence. b03 = V Zero sequence. b04 = % V THD high b05 = V THD magnitude high b06 = Differential Voltage. b07 = Reserved. b08 = Overvoltage. b09 = Undervoltage. b10 = Voltage symmetry. b11 = Low line voltage frequency. b12 = High line voltage frequency. b13 = Min. Volts/Hz. b14 = Max. Volts/Hz. b15 = Rate of frequency change.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	9	6 – 7	Alarm flags 3. b00 = Reserved. b01 = Voltage not present. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Reserved. b09 = Reserved. b10 = Reserved. b11 = Reserved. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Reserved.	W	R
2 / #54	9	8 – 9	Alarm flags 4. b00 = Apparent power limit. b01 = Reserved. b02 = Power factor limit. b03 = Forward Direction active power. b04 = Forward Direction reactive power. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Auxiliary undervoltage. b09 = Auxiliary overvoltage. b10 = Earth leakage. b11 = Earth fault. b12 = Insulation lockout < 20kOhm. b13 = Reserved. b14 = Earth detector. b15 = Reserved.	W	R
2 / #54	9	10 – 11	Alarm flags 5. b00 = Overspeed 4-20mA input on Ch 02. b01 = Underspeed 4-20mA input on Ch 02. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Speed switch 01 running or standstill. b09 = Speed switch 02 running or standstill. b10 = Overspeed pulse count high 01. b11 = Underspeed pulse count low 01. b12 = Overspeed pulse count high 02. b13 = Underspeed pulse count low 02. b14 = Overspeed 4-20mA input on Ch 01. b15 = Underspeed 4-20mA input on Ch 01.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	9	12 – 13	Alarm flags 6. b00 = CT and VT connection failed. b01 = EL CBCT connection failed. b02 = Reserved. b03 = Frozen contact. b04 = Breaker operation near end of life. b05 = Safety Maintenance Interlock active. b06 = Emergency stop active. b07 = RTD 08 module I2C communication lost. b08 = Main Contactor Trip Coil continuous. b09 = Breaker Fail warning. b10 = IO Expander I2C communication lost. b11 = RTD module I2C communication lost. b12 = Internal communication module I2C communication lost. b13 = 4 - 20mA module I2C communication module lost. b14 = MMI I2C communication lost. b15 = Ext. communication module I2C communication lost.	W	R
2 / #54	9	14 – 15	Alarm flags 7. b00 = RTD 1 temperature level high. b01 = RTD 1 temperature level low. b02 = RTD 2 temperature level high. b03 = RTD 2 temperature level low. b04 = RTD 3 temperature level high. b05 = RTD 3 temperature level low. b06 = RTD 4 temperature level high. b07 = RTD 4 temperature level low. b08 = 4 - 20mA input channel 1 high. b09 = 4 - 20mA input channel 1 low. b10 = 4 - 20mA input channel 2 high. b11 = 4 - 20mA input channel 2 low. b12 = 4 - 20mA output channel 1 high. b13 = 4 - 20mA output channel 1 low. b14 = 4 - 20mA output channel 2 high. b15 = 4 - 20mA output channel 2 low.	W	R
2 / #54	9	16 – 17	Alarm flags 8. b00 = RTD 9 temperature level high. b01 = RTD 9 temperature level low. b02 = RTD 10 temperature level high. b03 = RTD 10 temperature level low. b04 = RTD 11 temperature level high. b05 = RTD 11 temperature level low. b06 = RTD 12 temperature level high. b07 = RTD 12 temperature level low. b08 = RTD 5 temperature level high. b09 = RTD 5 temperature level low. b10 = RTD 6 temperature level high. b11 = RTD 6 temperature level low. b12 = RTD 7 temperature level high. b13 = RTD 7 temperature level low. b14 = RTD 8 temperature level high. b15 = RTD 8 temperature level low.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	9	18 – 19	Alarm flags 9. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Starts per hour. b09 = Execution fault. b10 = Feedback fault. b11 = Load settings corruption error. b12 = Ext. configurable trip 01 active. b13 = Ext. configurable trip 02 active. b14 = Ext. configurable trip 03 active. b15 = Ext. configurable trip 04 active.	W	R
2 / #54	9	20 – 21	Alarm flags 10. b00 – b15 = Reserved.	W	R
2 / #54	9	22 – 23	Alarm flags 11. b00 = ANSI77O channel 5 high, high. b01 = ANSI77U channel 5 low, low. b02 = ANSI77O channel 6 high, high. b03 = ANSI77U channel 6 low, low. b04 = ANSI77O channel 7 high, high. b05 = ANSI77U channel 7 low, low. b06 = ANSI77O channel 8 high, high. b07 = ANSI77U channel 8 low, low. b08 = ANSI77O channel 1 high, high. b09 = ANSI77U channel 1 low, low. b10 = ANSI77O channel 2 high, high. b11 = ANSI77U channel 2 low, low. b12 = ANSI77O channel 3 high, high. b13 = ANSI77U channel 3 low, low. b14 = ANSI77O channel 4 high, high. b15 = ANSI77U channel 4 low, low.	W	R
2 / #54	10	0 – 1	Trip flags 0. b00 = Minimum load. b01 = Short circuit. b02 = Running stall condition. b03 = % THD current. b04 = Vectorial stall. b05 = Unauthorized current b06 = Reserved. b07 = Reserved. b08 = Over current. b09 = Current unbalance. b10 = Current single phase. b11 = I Positive sequence. b12 = I Negative sequence. b13 = I Zero sequence alarm. b14 = I Neutral monitor b15 = THD magnitude current.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	10	2 – 3	Trip flags 1. b00 = Differential current angle. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Watt demand exceeded. b05 = VAr demand exceeded. b06 = VA demand exceeded. b07 = Current demand exceeded. b08 = Reserved. b09 = Reserved. b10 = Reserved. b11 = Reserved. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Reserved.	W	R
2 / #54	10	4 – 5	Trip flags 2. b00 = Voltage phase rotation. b01 = V Positive sequence. b02 = V Negative sequence. b03 = V Zero sequence. b04 = % V THD high b05 = V THD magnitude high b06 = Differential Voltage. b07 = Reserved. b08 = Overvoltage. b09 = Undervoltage. b10 = Voltage symmetry. b11 = Low line voltage frequency. b12 = High line voltage frequency. b13 = Min. Volts/Hz. b14 = Max. Volts/Hz. b15 = Rate of frequency change.	W	R
2 / #54	10	6 – 7	Trip flags 3. b00 = Reserved. b01 = Voltage not present. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Reserved. b09 = Reserved. b10 = Reserved. b11 = Reserved. b12 = Reserved. b13 = Reserved. b14 = Reserved. b15 = Reserved.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	10	8 – 9	Trip flags 4. b00 = Apparent power limit. b01 = Reserved. b02 = Power factor limit. b03 = Forward Direction active power. b04 = Forward Direction reactive power. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Auxiliary undervoltage. b09 = Auxiliary overvoltage. b10 = Earth leakage > setpoint. b11 = Earth fault > setpoint. b12 = Insulation lockout < 20kOhm. b13 = Reserved. b14 = Earth detector. b15 = Reserved.	W	R
2 / #54	10	10 – 11	Trip flags 5. b00 = Overspeed 4-20mA input on Ch 02. b01 = Underspeed 4-20mA input on Ch 02. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Speed switch 01 running or standstill. b09 = Speed switch 02 running or standstill. b10 = Overspeed pulse count high 01. b11 = Underspeed pulse count low 01. b12 = Overspeed pulse count high 02. b13 = Underspeed pulse count low 02. b14 = Overspeed 4-20mA input on Ch 01. b15 = Underspeed 4-20mA input on Ch 01.	W	R
2 / #54	10	12 – 13	Trip flags 6. b00 = CT and VT 01 connection failed. b01 = EL CBCT connection failed. b02 = CT and VT 02 connection failed. b03 = Frozen contact. b04 = Breaker operation near end of life. b05 = Safety Maintenance Interlock active. b06 = Emergency stop active. b07 = RTD 08 module I2C communication lost. b08 = Main Contactor Trip Coil continuous. b09 = Breaker Fail warning. b10 = IO Expander I2C communication lost. b11 = RTD module I2C communication lost. b12 = Internal communication module I2C communication lost. b13 = 4 - 20mAmodule I2C communication module lost. b14 = MMI I2C communication lost. b15 = Ext. communication module I2C communication lost.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	10	14 – 15	Trip flags 7. b00 = RTD 1 temperature level high. b01 = RTD 1 temperature level low. b02 = RTD 2 temperature level high. b03 = RTD 2 temperature level low. b04 = RTD 3 temperature level high. b05 = RTD 3 temperature level low. b06 = RTD 4 temperature level high. b07 = RTD 4 temperature level low. b08 = 4 - 20mA input channel 1 high. b09 = 4 - 20mA input channel 1 low. b10 = 4 - 20mA input channel 2 high. b11 = 4 - 20mA input channel 2 low. b12 = 4 - 20mA output channel 1 high. b13 = 4 - 20mA output channel 1 low. b14 = 4 - 20mA output channel 2 high. b15 = 4 - 20mA output channel 2 low.	W	R
2 / #54	10	16 – 17	Trip flags 8. b00 = RTD 9 temperature level high. b01 = RTD 9 temperature level low. b02 = RTD 10 temperature level high. b03 = RTD 10 temperature level low. b04 = RTD 11 temperature level high. b05 = RTD 11 temperature level low. b06 = RTD 12 temperature level high. b07 = RTD 12 temperature level low. b08 = RTD 5 temperature level high. b09 = RTD 5 temperature level low. b10 = RTD 6 temperature level high. b11 = RTD 6 temperature level low. b12 = RTD 7 temperature level high. b13 = RTD 7 temperature level low. b14 = RTD 8 temperature level high. b15 = RTD 8 temperature level low.	W	R
2 / #54	10	18 – 19	Trip flags 9. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Starts per hour finished. b09 = Execution fault. b10 = Feedback fault. b11 = Load settings corruption error. b12 = Ext. configurable trip 01 active. b13 = Ext. configurable trip 02 active. b14 = Ext. configurable trip 03 active. b15 = Ext. configurable trip 04 active.	W	R
2 / #54	10	20 – 21	Trip flags 10. b00 – b15 = Reserved.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	10	22 – 23	Trip flags 11. b00 = ANSI77O channel 5 high, high. b01 = ANSI77U channel 5 low, low. b02 = ANSI77O channel 6 high, high. b03 = ANSI77U channel 6 low, low. b04 = ANSI77O channel 7 high, high. b05 = ANSI77U channel 7 low, low. b06 = ANSI77O channel 8 high, high. b07 = ANSI77U channel 8 low, low. b08 = ANSI77O channel 1 high, high. b09 = ANSI77U channel 1 low, low. b10 = ANSI77O channel 2 high, high. b11 = ANSI77U channel 2 low, low. b12 = ANSI77O channel 3 high, high. b13 = ANSI77U channel 3 low, low. b14 = ANSI77O channel 4 high, high. b15 = ANSI77U channel 4 low, low.	W	R
2 / #54	11	0 – 1	Time to clear main contactor.	W	R
2 / #54	11	2 – 3	Time to clear shunt.	W	R
2 / #54	11	4 – 5	Time to clear fault.	W	R
2 / #54	11	6 – 7	Reserved.	W	R
2 / #54	11	8 – 9	Reserved.	W	R
2 / #54	11	10 – 13	Breaker wear operations left.	DW	R
2 / #54	12	0 – 1	4 to 20 mA input 1 level.	W	R
2 / #54	12	2 – 3	4 to 20 mA input 2 level.	W	R
2 / #54	12	4 – 5	4 to 20 mA output 1 level.	W	R
2 / #54	12	6 – 7	4 to 20 mA output 2 level.	W	R
2 / #54	13	0 – 1	RTD 1 level.	W	R
2 / #54	13	2 – 3	RTD 2 level.	W	R
2 / #54`	13	4 – 5	RTD 3 level.	W	R
2 / #54	13	6 – 7	RTD 4 level.	W	R
2 / #54	13	8 – 9	RTD 5 level.	W	R
2 / #54	13	10 – 11	RTD 6 level.	W	R
2 / #54	13	12 – 13	RTD 7 level.	W	R
2 / #54	13	14 – 15	RTD 8 level.	W	R
2 / #54	13	16 – 17	RTD 9 level.	W	R
2 / #54	13	18 – 19	RTD 10 level.	W	R
2 / #54	13	20 – 21	RTD 11 level.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	13	22 – 23	RTD 12 level.	W	R
2 / #54	14	0 – 1	Speed RPM 1.	W	R
2 / #54	14	2 – 3	Speed RPM 2.	W	R
2 / #54	14	4 – 5	Speed analog Channel 1.	W	R
2 / #54	14	6 – 7	Speed analog Channel 2.	W	R
2 / #54	15	0 – 1	Reserved.	W	R
2 / #54	15	2 – 3	Reserved.	W	R
2 / #54	15	4 – 5	Reserved.	W	R
2 / #54	15	6 – 7	PLC INT Word 0.	W	R
2 / #54	15	8 – 9	PLC INT Word 1.	W	R
2 / #54	15	10 – 11	PLC INT Word 2.	W	R
2 / #54	15	12 – 13	PLC EXT Word 0.	W	R
2 / #54	15	14 – 15	PLC EXT Word 1.	W	R
2 / #54	15	16 – 17	PLC EXT Word 2.	W	R
2 / #54	16	0 – 1	Logic function flags 0. b00 = Ext. Dig. input 09. b01 = Ext. Dig. input 10. b02 = Ext. Dig. input 11. b03 = Ext. Dig. input 12. b04 = Ext. Dig. input 13. b05 = Ext. Dig. input 14. b06 = Ext. Dig. input 15. b07 = Simulation active. b08 = Dig. input 01. b09 = Dig. input 02. b10 = Dig. input 03. b11 = Dig. input 04. b12 = Dig. input 05. b13 = Dig. input 06. b14 = Dig. input 07. b15 = Ext. Dig. input 08.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	16	2 – 3	Logic function flags 1. b00 = Logic function 1 output. b01 = Logic function 2 output. b02 = Logic function 3 output. b03 = Logic function 4 output. b04 = Logic function 5 output. b05 = Logic function 6 output. b06 = Latch A. b07 = Latch B. b08 = Relay output 01. b09 = Relay output 02. b10 = Relay output 03. b11 = Relay output 04. b12 = Ext. relay output 05. b13 = Ext. relay output 06. b14 = Ext. relay output 07. b15 = Ext. relay output 08.	W	R
2 / #54	16	4 – 5	Logic function flags 2. b00 = Timer B output. b01 = Reserved. b02 = Ext. reset. b03 = Internal reset. b04 = Field reset. b05 = Min. Load restart flag. b06 = Reserved. b07 = Reserved. b08 = Counter A output. b09 = Counter B output. b10 = RTC output. b11 = Status reporter. b12 = Reserved. b13 = Pulse generator output. b14 = Timer A output. b15 = Reserved.	W	R
2 / #54	16	6 – 7	Logic function flags 3. b00 = Comparator 2 high, high. b01 = Comparator 2 high. b02 = Comparator 2 high low. b03 = Comparator 2 between. b04 = Comparator 2 low high. b05 = Comparator 2 low. b06 = Comparator 2 low, low. b07 = TC high, high b08 = Comparator 1 high, high. b09 = Comparator 1 high. b10 = Comparator 1 high low. b11 = Comparator 1 between. b12 = Comparator 1 low high. b13 = Comparator 1 low. b14 = Comparator 1 low, low. b15 = Thermal Capacity (TC) high.	W	R
2 / #54	16	8 – 9	Logic function flags 4. b00 – b15 = Reserved.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	16	10 – 11	Counter A.	W	R
2 / #54	16	12 – 13	Counter B.	W	R
2 / #54	17	0 – 1	Starter function flags 0. b00 = DC brake timer active. b01 = Any stop active. b02 = Any interlock active. b03 = Emergency stop active. b04 = Lockout active. b05 = Pre-start warning complete. b06 = Star timer active. b07 = Reserved. b08 = Local selection bit lsb. b09 = Local selection bit msb. b10 = Feedback Forward signal active. b11 = Feedback Reverse signal active. b12 = Starter ready. b13 = Pre-start warning active. b14 = Backspin timer active. b15 = Transition timer active.	W	R
2 / #54	17	2 – 3	Starter function flags 1. b00 = Remote interlock. b01 = Remote stop. b02 = Remote reverse slow. b03 = Remote reverse fast. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Local forward fast. b09 = Local forward slow. b10 = Local interlock. b11 = Local stop. b12 = Local reverse slow. b13 = Local reverse fast. b14 = Remote forward fast. b15 = Remote forward slow.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	17	4 – 5	Starter function flags 2. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Auto forward fast. b09 = Auto forward slow. b10 = Auto interlock. b11 = Auto stop. b12 = Auto reverse slow. b13 = Auto reverse fast. b14 = Reserved. b15 = Reserved.	W	R
2 / #54	17	6 – 7	Starter function flags 3. b00 = Reserved. b01 = Reserved. b02 = Reserved. b03 = Reserved. b04 = Reserved. b05 = Reserved. b06 = Reserved. b07 = Reserved. b08 = Starter Flag MotorRun00 b09 = Starter Flag MotorRun01. b10 = Starter Flag MotorRun02. b11 = Starter Flag MotorRun03. b12 = Starter Flag MotorRun04. b13 = Reserved. b14 = Reserved. b15 = Reserved.	W	R
2 / #54	17	8 – 9	Starter function flags 4. b00 – b15 = Reserved.	W	R
2 / #54	18	0 – 1	Product PID. 19 = MEprotect Core, 20 = MEprotect Essence, 21 = MEprotect Pro, 22 = MEprotect Core ADE9078, 23 = MEprotect Essence ADE9078, 24 = MEprotect Pro ADE9078	W	R
2 / #54	18	2 – 3	Product software revision. Lower Byte Bit00–Bit03 = Minor revisions 0=A, 1=B.., Lower Byte Bit04–Bit07 = Major revision is decimal number. 01, 02 etc. Together makes up revision number 01A	W	R
2 / #54	19	0 – 1	RTC date.	W	R
2 / #54	19	2 – 3	RTC month.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	19	4 – 5	RTC year.	W	R
2 / #54	19	6 – 7	RTC seconds.	W	R
2 / #54	19	8 – 9	RTC minutes.	W	R
2 / #54	19	10 – 11	RTC hours.	W	R
2 / #54	30	0 – 1	IL1 THD percentage.	W	R
2 / #54	30	2 – 3	IL2 THD percentage.	W	R
2 / #54	30	4 – 5	IL3 THD percentage.	W	R
2 / #54	30	6 – 7	IL THD percentage.	W	R
2 / #54	30	8 – 11	IL THD magnitude.	DW	R
2 / #54	30	12 – 13	VL1 THD percentage.	W	R
2 / #54	30	14 – 15	VL2 THD percentage.	W	R
2 / #54	30	16 – 17	VL3 THD percentage.	W	R
2 / #54	30	18 – 19	VL THD percentage.	W	R
2 / #54	30	20 – 23	VL THD magnitude.	DW	R
2 / #54	31	0 – 1	IL1 THD Fundamental 0.	W	R
2 / #54	31	2 – 3	IL1 THD Fundamental 1.	W	R
2 / #54	31	4 – 5	IL1 THD Fundamental 2.	W	R
2 / #54	31	6 – 7	IL1 THD Fundamental 3.	W	R
2 / #54	31	8 – 9	IL1 THD Fundamental 4.	W	R
2 / #54	31	10 – 11	IL1 THD Fundamental 5.	W	R
2 / #54	31	12 – 13	IL1 THD Fundamental 6.	W	R
2 / #54	31	14 – 15	IL1 THD Fundamental 7.	W	R
2 / #54	31	16 – 17	IL1 THD Fundamental 8.	W	R
2 / #54	31	18 – 19	IL1 THD Fundamental 9.	W	R
2 / #54	31	20 – 21	IL1 THD Fundamental 10.	W	R
2 / #54	31	22 – 23	IL1 THD Fundamental 11.	W	R
2 / #54	31	24 – 25	IL1 THD Fundamental 12.	W	R
2 / #54	31	26 – 27	IL1 THD Fundamental 13.	W	R
2 / #54	31	28 – 29	IL1 THD Fundamental 14.	W	R
2 / #54	31	30 – 31	IL1 THD Fundamental 15.	W	R
2 / #54	31	32 – 33	IL1 THD Fundamental 16.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	31	34 – 35	IL1 THD Fundamental 17.	W	R
2 / #54	31	36 – 37	IL1 THD Fundamental 18.	W	R
2 / #54	31	38 – 39	IL1 THD Fundamental 19.	W	R
2 / #54	31	40 – 41	IL1 THD Fundamental 20.	W	R
2 / #54	31	42 – 43	IL1 THD Fundamental 21.	W	R
2 / #54	31	44 – 45	IL1 THD Fundamental 22.	W	R
2 / #54	31	46 – 47	IL1 THD Fundamental 23.	W	R
2 / #54	31	48 – 49	IL1 THD Fundamental 24.	W	R
2 / #54	31	50 – 51	IL1 THD Fundamental 25.	W	R
2 / #54	31	52 – 53	IL1 THD Fundamental 26.	W	R
2 / #54	31	54 – 55	IL1 THD Fundamental 27.	W	R
2 / #54	31	56 – 57	IL1 THD Fundamental 28.	W	R
2 / #54	31	58 – 59	IL1 THD Fundamental 29.	W	R
2 / #54	31	60 – 61	IL1 THD Fundamental 30.	W	R
2 / #54	31	62 – 63	IL1 THD Fundamental 31.	W	R
2 / #54	32	0 – 1	IL2 THD Fundamental 0.	W	R
2 / #54	32	2 – 3	IL2 THD Fundamental 1.	W	R
2 / #54	32	4 – 5	IL2 THD Fundamental 2.	W	R
2 / #54	32	6 – 7	IL2 THD Fundamental 3.	W	R
2 / #54	32	8 – 9	IL2 THD Fundamental 4.	W	R
2 / #54	32	10 – 11	IL2 THD Fundamental 5.	W	R
2 / #54	32	12 – 13	IL2 THD Fundamental 6.	W	R
2 / #54	32	14 – 15	IL2 THD Fundamental 7.	W	R
2 / #54	32	16 – 17	IL2 THD Fundamental 8.	W	R
2 / #54	32	18 – 19	IL2 THD Fundamental 9.	W	R
2 / #54	32	20 – 21	IL2 THD Fundamental 10.	W	R
2 / #54	32	22 – 23	IL2 THD Fundamental 11.	W	R
2 / #54	32	24 – 25	IL2 THD Fundamental 12.	W	R
2 / #54	32	26 – 27	IL2 THD Fundamental 13.	W	R
2 / #54	32	28 – 29	IL2 THD Fundamental 14.	W	R
2 / #54	32	30 – 31	IL2 THD Fundamental 15.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	32	32 – 33	IL2 THD Fundamental 16.	W	R
2 / #54	32	34 – 35	IL2 THD Fundamental 17.	W	R
2 / #54	32	36 – 37	IL2 THD Fundamental 18.	W	R
2 / #54	32	38 – 39	IL2 THD Fundamental 19.	W	R
2 / #54	32	40 – 41	IL2 THD Fundamental 20.	W	R
2 / #54	32	42 – 43	IL2 THD Fundamental 21.	W	R
2 / #54	32	44 – 45	IL2 THD Fundamental 22.	W	R
2 / #54	32	46 – 47	IL2 THD Fundamental 23.	W	R
2 / #54	32	48 – 49	IL2 THD Fundamental 24.	W	R
2 / #54	32	50 – 51	IL2 THD Fundamental 25.	W	R
2 / #54	32	52 – 53	IL2 THD Fundamental 26.	W	R
2 / #54	32	54 – 55	IL2 THD Fundamental 27.	W	R
2 / #54	32	56 – 57	IL2 THD Fundamental 28.	W	R
2 / #54	32	58 – 59	IL2 THD Fundamental 29.	W	R
2 / #54	32	60 – 61	IL2 THD Fundamental 30.	W	R
2 / #54	32	62 – 63	IL2 THD Fundamental 31.	W	R
2 / #54	33	0 – 1	IL3 THD Fundamental 0.	W	R
2 / #54	33	2 – 3	IL3 THD Fundamental 1.	W	R
2 / #54	33	4 – 5	IL3 THD Fundamental 2.	W	R
2 / #54	33	6 – 7	IL3 THD Fundamental 3.	W	R
2 / #54	33	8 – 9	IL3 THD Fundamental 4.	W	R
2 / #54	33	10 – 11	IL3 THD Fundamental 5.	W	R
2 / #54	33	12 – 13	IL3 THD Fundamental 6.	W	R
2 / #54	33	14 – 15	IL3 THD Fundamental 7.	W	R
2 / #54	33	16 – 17	IL3 THD Fundamental 8.	W	R
2 / #54	33	18 – 19	IL3 THD Fundamental 9.	W	R
2 / #54	33	20 – 21	IL3 THD Fundamental 10.	W	R
2 / #54	33	22 – 23	IL3 THD Fundamental 11.	W	R
2 / #54	33	24 – 25	IL3 THD Fundamental 12.	W	R
2 / #54	33	26 – 27	IL3 THD Fundamental 13.	W	R
2 / #54	33	28 – 29	IL3 THD Fundamental 14.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	33	30 – 31	IL3 THD Fundamental 15.	W	R
2 / #54	33	32 – 33	IL3 THD Fundamental 16.	W	R
2 / #54	33	34 – 35	IL3 THD Fundamental 17.	W	R
2 / #54	33	36 – 37	IL3 THD Fundamental 18.	W	R
2 / #54	33	38 – 39	IL3 THD Fundamental 19.	W	R
2 / #54	33	40 – 41	IL3 THD Fundamental 20.	W	R
2 / #54	33	42 – 43	IL3 THD Fundamental 21.	W	R
2 / #54	33	44 – 45	IL3 THD Fundamental 22.	W	R
2 / #54	33	46 – 47	IL3 THD Fundamental 23.	W	R
2 / #54	33	48 – 49	IL3 THD Fundamental 24.	W	R
2 / #54	33	50 – 51	IL3 THD Fundamental 25.	W	R
2 / #54	33	52 – 53	IL3 THD Fundamental 26.	W	R
2 / #54	33	54 – 55	IL3 THD Fundamental 27.	W	R
2 / #54	33	56 – 57	IL3 THD Fundamental 28.	W	R
2 / #54	33	58 – 59	IL3 THD Fundamental 29.	W	R
2 / #54	33	60 – 61	IL3 THD Fundamental 30.	W	R
2 / #54	33	62 – 63	IL3 THD Fundamental 31.	W	R
2 / #54	34	0 – 1	VL1 THD Fundamental 0.	W	R
2 / #54	34	2 – 3	VL1 THD Fundamental 1.	W	R
2 / #54	34	4 – 5	VL1 THD Fundamental 2.	W	R
2 / #54	34	6 – 7	VL1 THD Fundamental 3.	W	R
2 / #54	34	8 – 9	VL1 THD Fundamental 4.	W	R
2 / #54	34	10 – 11	VL1 THD Fundamental 5.	W	R
2 / #54	34	12 – 13	VL1 THD Fundamental 6.	W	R
2 / #54	34	14 – 15	VL1 THD Fundamental 7.	W	R
2 / #54	34	16 – 17	VL1 THD Fundamental 8.	W	R
2 / #54	34	18 – 19	VL1 THD Fundamental 9.	W	R
2 / #54	34	20 – 21	VL1 THD Fundamental 10.	W	R
2 / #54	34	22 – 23	VL1 THD Fundamental 11.	W	R
2 / #54	34	24 – 25	VL1 THD Fundamental 12.	W	R
2 / #54	34	26 – 27	VL1 THD Fundamental 13.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	34	28 – 29	VL1 THD Fundamental 14.	W	R
2 / #54	34	30 – 31	VL1 THD Fundamental 15.	W	R
2 / #54	34	32 – 33	VL1 THD Fundamental 16.	W	R
2 / #54	34	34 – 35	VL1 THD Fundamental 17.	W	R
2 / #54	34	36 – 37	VL1 THD Fundamental 18.	W	R
2 / #54	34	38 – 39	VL1 THD Fundamental 19.	W	R
2 / #54	34	40 – 41	VL1 THD Fundamental 20.	W	R
2 / #54	34	42 – 43	VL1 THD Fundamental 21.	W	R
2 / #54	34	44 – 45	VL1 THD Fundamental 22.	W	R
2 / #54	34	46 – 47	VL1 THD Fundamental 23.	W	R
2 / #54	34	48 – 49	VL1 THD Fundamental 24.	W	R
2 / #54	34	50 – 51	VL1 THD Fundamental 25.	W	R
2 / #54	34	52 – 53	VL1 THD Fundamental 26.	W	R
2 / #54	34	54 – 55	VL1 THD Fundamental 27.	W	R
2 / #54	34	56 – 57	VL1 THD Fundamental 28.	W	R
2 / #54	34	58 – 59	VL1 THD Fundamental 29.	W	R
2 / #54	34	60 – 61	VL1 THD Fundamental 30.	W	R
2 / #54	34	62 – 63	VL1 THD Fundamental 31.	W	R
2 / #54	35	0 – 1	VL2 THD Fundamental 0.	W	R
2 / #54	35	2 – 3	VL2 THD Fundamental 1.	W	R
2 / #54	35	4 – 5	VL2 THD Fundamental 2.	W	R
2 / #54	35	6 – 7	VL2 THD Fundamental 3.	W	R
2 / #54	35	8 – 9	VL2 THD Fundamental 4.	W	R
2 / #54	35	10 – 11	VL2 THD Fundamental 5.	W	R
2 / #54	35	12 – 13	VL2 THD Fundamental 6.	W	R
2 / #54	35	14 – 15	VL2 THD Fundamental 7.	W	R
2 / #54	35	16 – 17	VL2 THD Fundamental 8.	W	R
2 / #54	35	18 – 19	VL2 THD Fundamental 9.	W	R
2 / #54	35	20 – 21	VL2 THD Fundamental 10.	W	R
2 / #54	35	22 – 23	VL2 THD Fundamental 11.	W	R
2 / #54	35	24 – 25	VL2 THD Fundamental 12.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	35	26 – 27	VL2 THD Fundamental 13.	W	R
2 / #54	35	28 – 29	VL2 THD Fundamental 14.	W	R
2 / #54	35	30 – 31	VL2 THD Fundamental 15.	W	R
2 / #54	35	32 – 33	VL2 THD Fundamental 16.	W	R
2 / #54	35	34 – 35	VL2 THD Fundamental 17.	W	R
2 / #54	35	36 – 37	VL2 THD Fundamental 18.	W	R
2 / #54	35	38 – 39	VL2 THD Fundamental 19.	W	R
2 / #54	35	40 – 41	VL2 THD Fundamental 20.	W	R
2 / #54	35	42 – 43	VL2 THD Fundamental 21.	W	R
2 / #54	35	44 – 45	VL2 THD Fundamental 22.	W	R
2 / #54	35	46 – 47	VL2 THD Fundamental 23.	W	R
2 / #54	35	48 – 49	VL2 THD Fundamental 24.	W	R
2 / #54	35	50 – 51	VL2 THD Fundamental 25.	W	R
2 / #54	35	52 – 53	VL2 THD Fundamental 26.	W	R
2 / #54	35	54 – 55	VL2 THD Fundamental 27.	W	R
2 / #54	35	56 – 57	VL2 THD Fundamental 28.	W	R
2 / #54	35	58 – 59	VL2 THD Fundamental 29.	W	R
2 / #54	35	60 – 61	VL2 THD Fundamental 30.	W	R
2 / #54	35	62 – 63	VL2 THD Fundamental 31.	W	R
2 / #54	36	0 – 1	VL3 THD Fundamental 0.	W	R
2 / #54	36	2 – 3	VL3 THD Fundamental 1.	W	R
2 / #54	36	4 – 5	VL3 THD Fundamental 2.	W	R
2 / #54	36	6 – 7	VL3 THD Fundamental 3.	W	R
2 / #54	36	8 – 9	VL3 THD Fundamental 4.	W	R
2 / #54	36	10 – 11	VL3 THD Fundamental 5.	W	R
2 / #54	36	12 – 13	VL3 THD Fundamental 6.	W	R
2 / #54	36	14 – 15	VL3 THD Fundamental 7.	W	R
2 / #54	36	16 – 17	VL3 THD Fundamental 8.	W	R
2 / #54	36	18 – 19	VL3 THD Fundamental 9.	W	R
2 / #54	36	20 – 21	VL3 THD Fundamental 10.	W	R
2 / #54	36	22 – 23	VL3 THD Fundamental 11.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	36	24 – 25	VL3 THD Fundamental 12.	W	R
2 / #54	36	26 – 27	VL3 THD Fundamental 13.	W	R
2 / #54	36	28 – 29	VL3 THD Fundamental 14.	W	R
2 / #54	36	30 – 31	VL3 THD Fundamental 15.	W	R
2 / #54	36	32 – 33	VL3 THD Fundamental 16.	W	R
2 / #54	36	34 – 35	VL3 THD Fundamental 17.	W	R
2 / #54	36	36 – 37	VL3 THD Fundamental 18.	W	R
2 / #54	36	38 – 39	VL3 THD Fundamental 19.	W	R
2 / #54	36	40 – 41	VL3 THD Fundamental 20.	W	R
2 / #54	36	42 – 43	VL3 THD Fundamental 21.	W	R
2 / #54	36	44 – 45	VL3 THD Fundamental 22.	W	R
2 / #54	36	46 – 47	VL3 THD Fundamental 23.	W	R
2 / #54	36	48 – 49	VL3 THD Fundamental 24.	W	R
2 / #54	36	50 – 51	VL3 THD Fundamental 25.	W	R
2 / #54	36	52 – 53	VL3 THD Fundamental 26.	W	R
2 / #54	36	54 – 55	VL3 THD Fundamental 27.	W	R
2 / #54	36	56 – 57	VL3 THD Fundamental 28.	W	R
2 / #54	36	58 – 59	VL3 THD Fundamental 29.	W	R
2 / #54	36	60 – 61	VL3 THD Fundamental 30.	W	R
2 / #54	36	62 – 63	VL3 THD Fundamental 31.	W	R
2 / #54	40	0 – 1	Warning flags 28. b00 = ANSI77 Channel 3 High High Warn Flag. b01 = ANSI77 Channel 3 High Warn Flag. b02 = ANSI77 Channel 3 Low Warn Flag. b03 = ANSI77 Channel 3 Low Low Warn Flag. b04 = ANSI77 Channel 4 High High Warn Flag. b05 = ANSI77 Channel 4 High Warn Flag. b06 = ANSI77 Channel 4 Low Warn Flag. b07 = ANSI77 Channel 4 Low Low Warn Flag. b08 = ANSI77 Channel 1 High High Warn Flag. b09 = ANSI77 Channel 1 High Warn Flag. b10 = ANSI77 Channel 1 Low Warn Flag. b11 = ANSI77 Channel 1 Low Low Warn Flag. b12 = ANSI77 Channel 2 High High Warn Flag. b13 = ANSI77 Channel 2 High Warn Flag. b14 = ANSI77 Channel 2 Low Warn Flag. b15 = ANSI77 Channel 2 Low Low Warn Flag.	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	40	2 – 3	Warning flags 29. b00 = ANSI77 Channel 7 High High Warn Flag. b01 = ANSI77 Channel 7 High Warn Flag. b02 = ANSI77 Channel 7 Low Warn Flag. b03 = ANSI77 Channel 7 Low Low Warn Flag. b04 = ANSI77 Channel 8 High High Warn Flag. b05 = ANSI77 Channel 8 High Warn Flag. b06 = ANSI77 Channel 8 Low Warn Flag. b07 = ANSI77 Channel 8 Low Low Warn Flag. b08 = ANSI77 Channel 5 High High Warn Flag. b09 = ANSI77 Channel 5 High Warn Flag. b10 = ANSI77 Channel 5 Low Warn Flag. b11 = ANSI77 Channel 5 Low Low Warn Flag. b12 = ANSI77 Channel 6 High High Warn Flag. b13 = ANSI77 Channel 6 High Warn Flag. b14 = ANSI77 Channel 6 Low Warn Flag. b15 = ANSI77 Channel 6 Low Low Warn Flag.	W	R
2 / #54	40	4 – 5	Tele metering output 1 level.	W	R
2 / #54	40	6 – 7	Tele metering output 2 level.	W	R
2 / #54	40	8 – 9	Tele metering output 3 level.	W	R
2 / #54	40	10 – 11	Tele metering output 4 level.	W	R
2 / #54	40	12 – 13	Tele metering output 5 level.	W	R
2 / #54	40	14 – 15	Tele metering output 6 level.	W	R
2 / #54	40	16 – 17	Tele metering output 7 level.	W	R
2 / #54	40	18 – 19	Tele metering output 8 level.	W	R
2 / #54	50	0 – 1	Reserved	W	W
2 / #54	50	2 – 3	Reset bits – 1 (Refer to NewFeed User Manual)	W	W
2 / #54	50	4 – 5	Duration length of the recording window for Demand measurements 0 = 1 sec. 1 = 4 sec. 2 = 16 sec. 3 = 64 sec. 4 = 4 minutes. 5 = 17 Minutes. 6 = 1 hour. 7 = 4 hours. 8 = 18 hours. 9 = 3 Days. 10 = 12 Days. 11 = 48 Days.	W	R
2 / #54	50	6 – 7	Reserved	W	R
2 / #54	50	8 – 9	kWatt Demand warning level (1 – 400 000 000)	W	R
2 / #54	50	10 – 11		W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	50	12 – 13	kVAr Demand warning level (1 – 400 000 000)	W	R
2 / #54	50	14 – 15		W	R
2 / #54	50	16 – 17	kVA Demand warning level (1 – 400 000 000)	W	R
2 / #54	50	18 – 19		W	R
2 / #54	50	20 - 21	Current Demand warning level (1 – 400 000 000)	W	R
2 / #54	50	22 - 23		W	R
2 / #54	50	24 - 25	kWatt Peak Demand warning level (1 – 400 000 000)	W	R
2 / #54	50	26 - 27		W	R
2 / #54	50	28 - 29	kVAr Peak Demand warning level (1 – 400 000 000)	W	R
2 / #54	50	30 - 31		W	R
2 / #54	50	32 - 33	kVA Peak Demand warning level (1 – 400 000 000)	W	R
2 / #54	50	34 - 35		W	R
2 / #54	50	36 - 37	Current Peak Demand warning level (1 – 400 000 000)	W	R
2 / #54	50	38 - 39		W	R
2 / #54	50	40 - 41	kWatt Demand trip level (1 – 400 000 000)	W	R
2 / #54	50	42 - 43		W	R
2 / #54	50	44 - 45	kVAr Demand trip level (1 – 400 000 000)	W	R
2 / #54	50	46 - 47		W	R
2 / #54	50	48 - 49	kVA Demand trip level (1 – 400 000 000)	W	R
2 / #54	50	50 - 51		W	R
2 / #54	50	52 - 53	Current Demand trip level (1 – 400 000 000)	W	R
2 / #54	50	54 - 55		W	R
2 / #54	50	56 - 57	kWatt Peak Demand trip level (1 – 400 000 000)	W	R
2 / #54	50	58 - 59		W	R
2 / #54	50	60 - 61	kVAr Peak Demand trip level (1 – 400 000 000)	W	R
2 / #54	50	62 - 63		W	R
2 / #54	50	64 - 65	kVA Peak Demand trip level (1 – 400 000 000)	W	R
2 / #54	50	66 - 67		W	R
2 / #54	50	68 - 69	Current Peak Demand trip level (1 – 400 000 000)	W	R
2 / #54	50	70 - 71		W	R
2 / #54	50	72	kVAr Demand trip time (0 – 60 minutes)	B	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	50	73	kWatt Demand trip time (0 – 60 minutes)	B	R
2 / #54	50	74	Current Demand trip time (0 – 60 minutes)	B	R
2 / #54	50	75	kVA Demand trip time (0 – 60 minutes)	B	R
2 / #54	50	76	kVAr Peak Demand trip time (0 – 60 minutes)	B	R
2 / #54	50	77	kWatt Peak Demand trip time (0 – 60 minutes)	B	R
2 / #54	50	78	Current Peak Demand trip time (0 – 60 minutes)	B	R
2 / #54	50	79	kVA Peak Demand trip time (0 – 60 minutes)	B	R
2 / #54	51	0 - 1	Num of Starts	W	R
2 / #54	51	2 - 3	Num of Successful Starts	W	R
2 / #54	51	4	Average Start Time Hour	B	R
2 / #54	51	5	Average Start Time Minute	B	R
2 / #54	51	6 - 7	Maximum Thermal Capacity Used During Start	W	R
2 / #54	51	8 - 9	Maximum Load During Startup	W	R
2 / #54	51	10 - 11	Current Maximum Fundamental	W	R
2 / #54	51	12 - 13	Current Minimum Fundamental	W	R
2 / #54	51	14 - 15	Reserved.	W	R
2 / #54	51	16 - 17	Reserved.	W	R
2 / #54	51	18 - 19	Reserved	W	R
2 / #54	51	20 - 21	IL1 load current maximum (peak) load	W	R
2 / #54	51	22 - 23		W	R
2 / #54	51	24 - 25	IL1 load current average (demand) load	W	R
2 / #54	51	26 - 27		W	R
2 / #54	51	28 - 29	IL1 load current minimum load	W	R
2 / #54	51	30 - 31		W	R
2 / #54	51	32 - 33	IL2 load current maximum (peak) load	W	R
2 / #54	51	34 - 35		W	R
2 / #54	51	36 - 37	IL2 load current average (demand) load	W	R
2 / #54	51	38 - 39		W	R
2 / #54	51	40 - 41	IL2 load current minimum load	W	R
2 / #54	51	42 - 43		W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	51	44 - 45	IL3 load current maximum (peak) load	W	R
2 / #54	51	46 - 47		W	R
2 / #54	51	48 - 49	IL3 load current average (demand) load	W	R
2 / #54	51	50 - 51		W	R
2 / #54	51	52 - 53	IL3 load current minimum load	W	R
2 / #54	51	54 - 55		W	R
2 / #54	51	56 - 57	Reserved.	W	R
2 / #54	51	58 - 59	Reserved.	W	R
2 / #54	51	60 - 61	% (I2/I1) Maximum (Negative seq / Positive seq)	W	R
2 / #54	51	62 - 63	% (I2/I1) Minimum (Negative seq / Positive seq)	W	R
2 / #54	51	64 - 65	VL1 Maximum load	W	R
2 / #54	51	66 - 67	VL1 Minimum load	W	R
2 / #54	51	68 - 69	VL2 Maximum load	W	R
2 / #54	51	70 - 71	VL2 Minimum load	W	R
2 / #54	51	72 - 73	VL3 Maximum load	W	R
2 / #54	51	74 - 75	VL3 Minimum load	W	R
2 / #54	51	76 - 77	Reserved.	W	R
2 / #54	51	78 - 79	Reserved.	W	R
2 / #54	52	0 – 1	% (V2/V1) Maximum (Negative seq / Positive seq)	W	R
2 / #54	52	2 – 3	% (V2/V1) Minimum (Negative seq / Positive seq)	W	R
2 / #54	52	4 – 5	Voltage Max. freq	W	R
2 / #54	52	6 – 7	Voltage Min. freq	W	R
2 / #54	52	8 – 9	% V1 Max. Fundamental	W	R
2 / #54	52	10 – 11	% V1 Min. Fundamental	W	R
2 / #54	52	12 – 13	% V2 Max. Fundamental	W	R
2 / #54	52	14 – 15	% V2 Min. Fundamental	W	R
2 / #54	52	16 – 17	VX 3rd Harmonic level maximum	W	R
2 / #54	52	18 – 19	VX 3rd Harmonic level minimum	W	R
2 / #54	52	20 – 21	Volts per Hertz maximum	W	R
2 / #54	52	22 – 23	Volts per Hertz minimum	W	R
2 / #54	52	24 - 25	Trip counter	W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	52	26 - 27	Auxiliary power up counter	W	R
2 / #54	52	28 - 29	Displaced PF Max. (x 0.01)	W	R
2 / #54	52	30 - 31	Displaced PF Min. (x 0.01)	W	R
2 / #54	52	32 - 33	Reserved	W	R
2 / #54	52	34 - 35	Reserved	W	R
2 / #54	52	36 - 37	Reserved	W	R
2 / #54	52	38 - 39	Reserved	W	R
2 / #54	52	40 - 41	Reserved	W	R
2 / #54	52	42 - 43	Reserved	W	R
2 / #54	52	44 - 45	System kVA Maximum (peak)	W	R
2 / #54	52	46 - 47		W	R
2 / #54	52	48 - 49	System kVA Average (demand)	W	R
2 / #54	52	50 - 51		W	R
2 / #54	52	52 - 53	System kVA Minimum	W	R
2 / #54	52	54 - 55		W	R
2 / #54	52	56 - 57	System kW Maximum (peak)	W	R
2 / #54	52	58 - 59		W	R
2 / #54	52	60 - 61	System kW Average (demand)	W	R
2 / #54	52	62 - 63		W	R
2 / #54	52	64 - 65	System kW Minimum	W	R
2 / #54	52	66 - 67		W	R
2 / #54	52	68 - 69	System kVAr kW Maximum (peak)	W	R
2 / #54	52	70 - 71		W	R
2 / #54	52	72 - 73	System kVAr Average (demand)	W	R
2 / #54	52	74 - 75		W	R
2 / #54	52	76 - 77	System kVAr Minimum	W	R
2 / #54	52	78 - 79		W	R
2 / #54	53	0 – 1	Motor total running hours	W	R
2 / #54	53	2 – 3		W	R
2 / #54	53	4 – 5	Motor running on load	W	R
2 / #54	53	6 – 7		W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	53	8 – 9	Motor available counter	W	R
2 / #54	53	10 – 11		W	R
2 / #54	53	12 – 13	Apparent power (S) reactive power consumed	W	R
2 / #54	53	14 – 15		W	R
2 / #54	53	16 – 17	Real power (P) consumed	W	R
2 / #54	53	18 – 19		W	R
2 / #54	53	20 – 21	Positive power (Consumed).	W	R
2 / #54	53	22 – 23		W	R
2 / #54	53	24 - 25	Negative power (Generated)	W	R
2 / #54	53	26 - 27		W	R
2 / #54	53	28 - 29	Forward power consumed.	W	R
2 / #54	53	30 - 31		W	R
2 / #54	53	32 - 33	Reverse power consumed.	W	R
2 / #54	53	34 - 35		W	R
2 / #54	53	36 - 37	Reserved	W	R
2 / #54	53	38 - 39	Reserved	W	R
2 / #54	53	40 - 41	Reserved	W	R
2 / #54	53	42 - 43	Reserved	W	R
2 / #54	53	44 - 45	Reserved	W	R
2 / #54	53	46 - 47	Reserved	W	R
2 / #54	53	48 - 49	Reserved	W	R
2 / #54	53	50 - 51	Reserved	W	R
2 / #54	53	52 - 53	Reserved	W	R
2 / #54	53	54 - 55	Reserved	W	R
2 / #54	53	56 - 57	Reserved	W	R
2 / #54	53	58 - 59	Reserved	W	R
2 / #54	53	60 - 61	kWh Forward	W	R
2 / #54	53	62 - 63		W	R
2 / #54	53	64 - 65	kWh Reverse	W	R
2 / #54	53	66 - 67		W	R

SLOT / IOID	INDEX	DATA BYTE	NAME	DATA TYPE	RW
2 / #54	53	68 - 69	kWh Net	W	R
2 / #54	53	70 - 71		W	R
2 / #54	53	72 - 73	kVAr Forward	W	R
2 / #54	53	74 - 75		W	R
2 / #54	53	76 - 77	kVAr Reverse	W	R
2 / #54	53	78 - 79		W	R
2 / #54	54	0 - 1	kVAr Net	W	R
2 / #54	54	2 - 3		W	R
2 / #54	54	4	Last feeder frequency difference.	B	R
2 / #54	54	5	% Last feeder Voltage difference .	B	R
2 / #54	54	6	Reserved.	B	R
2 / #54	54	7	Last feeder phase angle difference.	B	R
2 / #54	54	8 - 9	Last feeder voltage.	W	R
2 / #54	54	10 - 11	Reserved.	W	R
2 / #54	54	12 - 13	Last recorded frequency.	W	R
2 / #54	54	14 - 15	Reserved.	W	R
2 / #54	54	16 - 17	Last recorded phase angle.	W	R
2 / #54	54	18 - 19	Reserved.	W	R

9 Channel Diagnostic Message

The following Table 9 describes the channel diagnostic message being sent to the PLC when a Trip event occurs on the NewFeed Relay.

NewFeed channel diagnostic message structure	
Byte	**Description**
0	Channel Number Hi Byte:
1	Channel Number Lo Byte:
2	Channel Properties Hi Byte
3	Channel Properties Lo Byte
4	**Channel Error Type Hi Byte**
5	**Channel Error Type Lo Byte**

Table 9: NewFeed relay channel diagnostic message structure.

9.1 Channel Error Type Table

The channel diagnostic message can have the following **Channel Error Type** values:

Error Type	Error Text
4096	I2C_TimeOut
625	OC_CT01_tf
626	UnBalCT01_tf
627	SinglePhaseCT01_tf
629	NegSeqCT01_tf
630	ZeroSeq_tf
632	HarmonicTHD_LoadMag_tf
633	I_MinimumLoad_tf
634	CT01_ShortCircuit_tf
635	RunStall_tf
636	HarmonicTHD_LoadPer_tf
637	VectorStall_tf
638	UnauthCurrent_tf
653	WattDemandExceed_tf

Error Type	Error Text
654	VArDemandExceed_tf
655	VA_DemandExceed_tf
656	CurrentDemandExceed_tf
657	Volt01_OV_tf
658	Volt01_UV_tf
659	VoltSymmetry_tf
660	FreqUnder_tf
661	FreqOver_tf
662	VoltsPerHertzMin_tf
663	VoltsPerHertzMax_tf
664	ROFOC_tf
665	PhaseRot_tf
669	HarmonicTHD_VoltPer_tf
670	HarmonicTHD_VoltMag_tf
682	V_LOP_tf
684	WattPeakExceed_tf
685	VArPeakExceed_tf
686	VA_PeakExceed_tf
687	CurrentPeakExceed_tf
691	EL_tf
692	EF_tf
693	InsuLockOut_tf
705	Speed01StartUpOrRun_tf
706	Speed02StartUpOrRun_tf
721	TripMonitor_tf
722	MCCB_Monitor_tf
723	IOExp_IOExpDis_tf
725	IntCommsCommsLost_tf
728	ExtCommsCommsLost_tf
729	CT_Disconnect_tf
732	FrozenContact_tf
733	BreakerWear_tf
737	AnalogueInput01HiTripFlagStatus
738	AnalogueInput01LoTripFlagStatus
739	AnalogueInput02HiTripFlagStatus
740	AnalogueInput02LoTripFlagStatus
741	AnalogueOutput01HiTripFlagStatus
742	AnalogueOutput01LoTripFlagStatus
743	AnalogueOutput02HiTripFlagStatus

Error Type	Error Text
744	AnalogueOutput02LoTripFlagStatus
745	RTD_01_HighTf
746	RTD_01_LowTf
747	RTD_02_HighTf
748	RTD_02_LowTf
749	RTD_03_HighTf
750	RTD_03_LowTf
751	RTD_04_HighTf
752	RTD_04_LowTf
753	RTD_05_HighTf
754	RTD_05_LowTf
755	RTD_06_HighTf
756	RTD_06_LowTf
757	RTD_07_HighTf
758	RTD_07_LowTf
759	RTD_08_HighTf
760	RTD_08_LowTf
761	RTD_09_HighTf
762	RTD_09_LowTf
763	RTD_10_HighTf
764	RTD_10_LowTf
765	RTD_11_HighTf
766	RTD_11_LowTf
767	RTD_12_HighTf
768	RTD_12_LowTf
769	StartsPerHour_tf
770	Execution_tf
771	FeedBack_tf
772	RelInd_LoadSet_tf
773	User01_tf
774	User02_tf
775	User03_tf
776	User04_tf

Table 9.1: NewFeed channel error type messages.

10 Getting Started

10.1 Setting - Up the NewFeed-PROFINET

Following must be done via the NewFeed frontend.

- Connect the NewFeed frontend to the relay via the usb connector.
- Open the frontend.
- On the ***"Internal communication module"*** selection.
- Select the communication device as PROFINET.
  - The internal communication module will then control the PLC bits.*

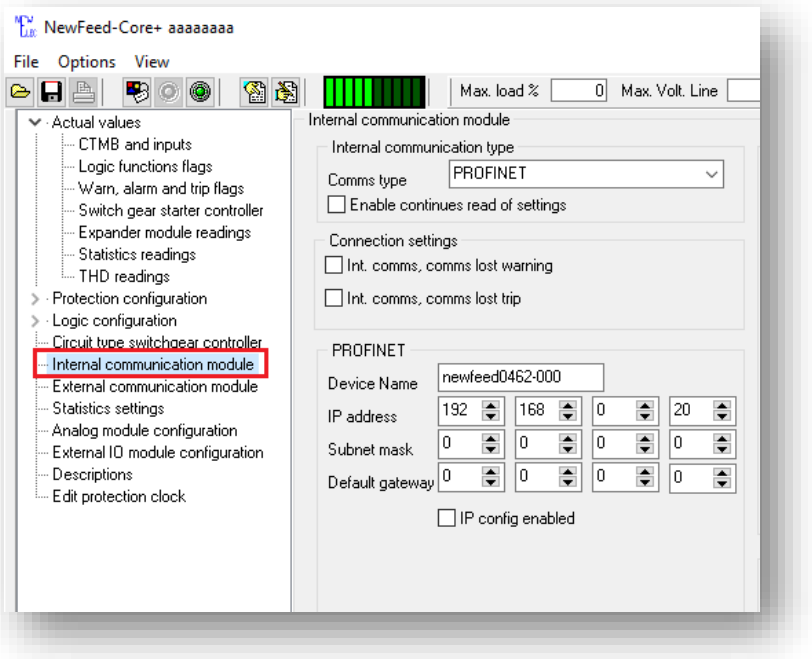


Figure 10.1.a: NewFeed frontend PROFINET configuration screen.

* Only if ***"External communication module"*** has **"NONE"** selected at Comms Type. If Ext Comms has any Comms Type selected other than **"None"**, then the PLC bits will be controlled by the Ext Comms module.

10.1.1 SET DEVICE IP ADDRESS

If the IP Address needs to be changed, check the checkbox on **“IP config enabled”**

- Set the IP address.
  - Settings below shows the IP address as 192.168.0.27 for the PROFINET module.
- Set the subnet mask.
- Set the gateway.
- DHCP is supported.
- Then press “Write settings to NewFeed”

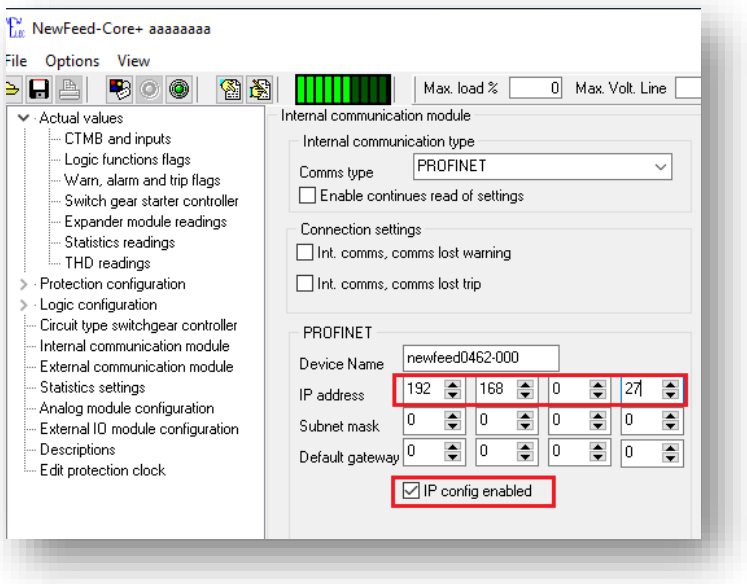


Figure 10.1.b: NewFeed frontend PROFINET configuration screen.

10.1.2 SET DEVICE NAME

If the Device Name needs to be changed.

- Set the Device name.
- Device Name below is “newfeed0462-000”
- Then press “Write settings to NewFeed”

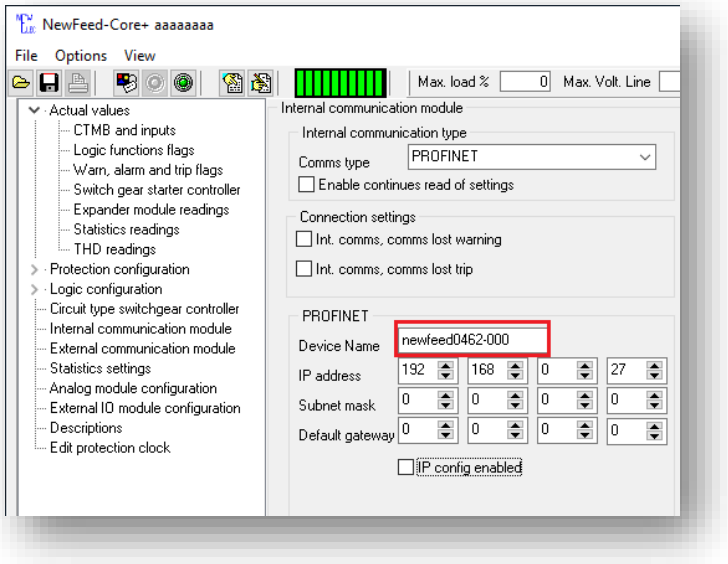


Figure 10.1.c: NewFeed frontend PROFINET configuration screen.

10.1.3 CONFIGURE CYCLIC WORDS AND BITS TO PLC

Configure the assignable bits and word structure as in chapter 7 in the NewFeed frontend.

10.1.4 ADDING GSDML TO PLC

The GSD file ”***GSDML-V2.42-NewElec-NewFeed-20230504.xml”*** need to be added to the catalog directory.

In STEP 7™.

1. Open the HW Config panel.
2. Select install GSD by ***“Options->Install GSD File…”***.

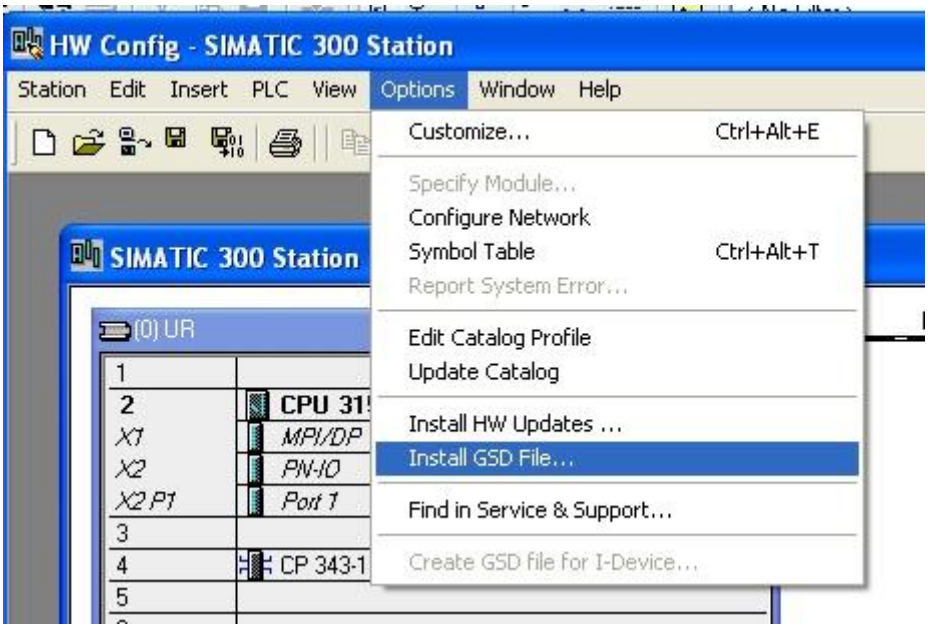


Figure 10.1.b: STEP 7 install GSD file selection.

3. An ***”Install GSD Files”*** dialog box will open.
4. Select the directory were the NewFeed PROFINET GSD file is located.
5. Select the NewFeed PROFINET GSD file and press the ***“Install”*** button.

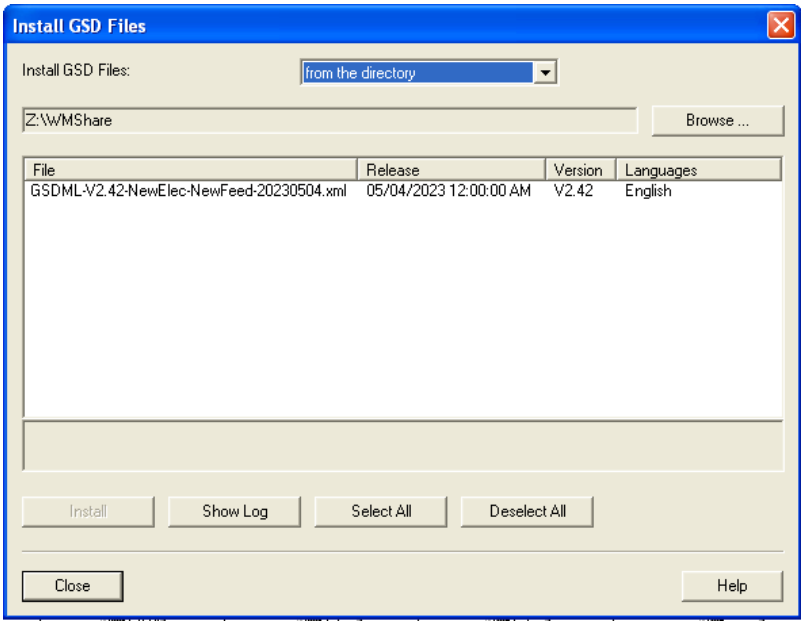


Figure 10.1.c: STEP 7 Install GSD file dialog.

6. The NewFeed PROFINET device should now be listed under the catalog selection page ***"PROFINET IO -> Additional Field Devices -> Switching Devices -> NewFeed -> NewFeed0462"***.

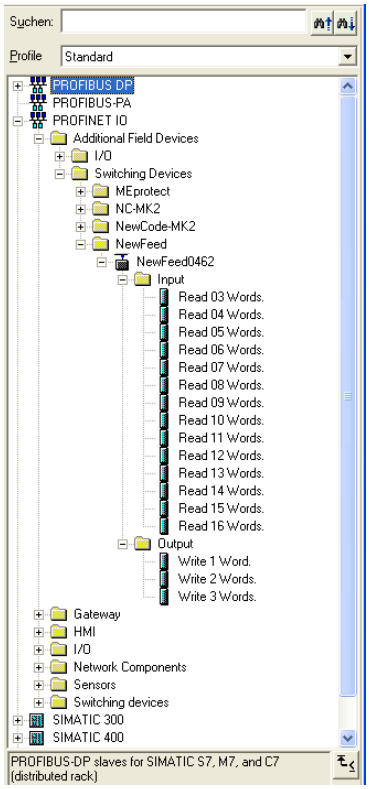


Figure 10.1.d: STEP 7 NewFeed PNIO GSD file location in catalog directory.

10.1.5 ADDING NEWFEED TO PROFINET BUS

When the NewFeed PROFINET GSD has been added to the catalog page, the NewFeed PROFINET can be added to the PLC Ethernet bus.

This can be done by left click and drag the ***"NewFeed0462"*** to the Ethernet bus of the PLC.

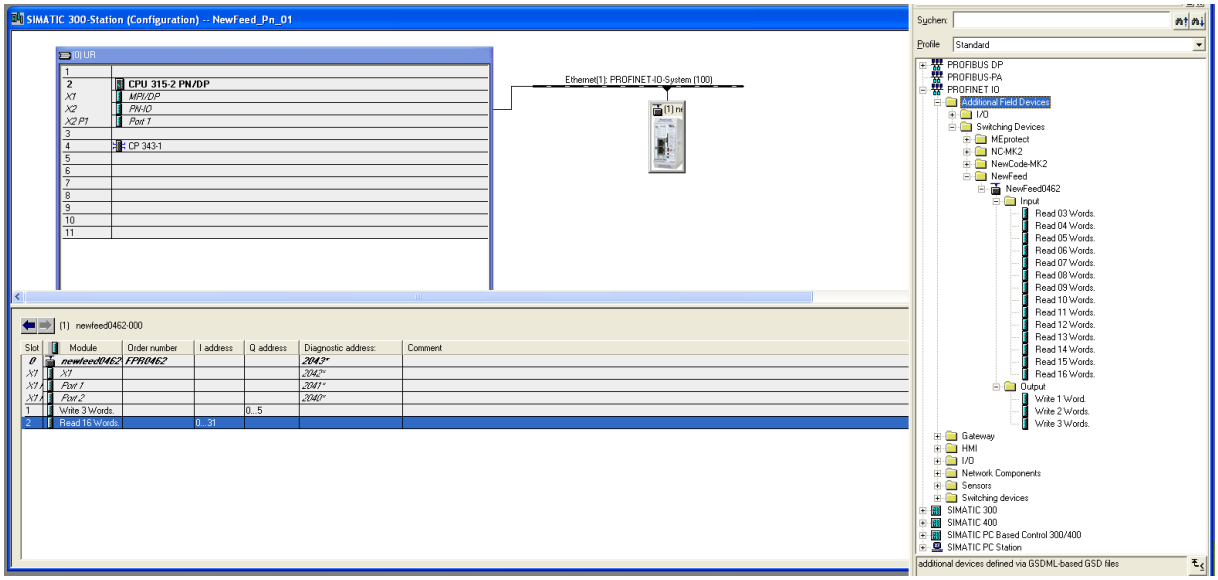


Figure 10.1.e: STEP 7 dragging NewFeed PROFINET on Ethernet bus of PLC.

10.1.6 SELECTING CONFIG SIZE

Next step is to select the cyclic input and output size for the NewFeed PROFINET cyclic messages.

Slot 1 will be the cyclic Words written from the PLC to the NewFeed. The output Words will be in the GSD catalog under ***"PROFINET IO -> Additional Field Devices -> Switching Devices -> NewFeed -> NewFeed0462 -> Output"***.
One of the following output sizes can be selected:

- Write 1 Word.
- Write 2 Words.
- Write 3 Words.

To add an output, left click and drag the selected input Words from the catalog page to where slot 1 is in the slot screen on the left of the catalog page.

Slot 2 will be the amount, of cyclic Words being written from the NewFeed to the PLC. The list input Words will be in the GSD catalog under ***"PROFINET IO -> Additional Field Devices -> Switching Devices -> NewFeed -> NewFeed0462 -> Input"***.
One of the following input sizes can be selected:

- Read 03 words.
- Read 04 words.
- Read 05 words.
- Read 06 words.
- Read 07 words.
- Read 08 words.
- Read 09 words.
- Read 10 words.
- Read 11 words.
- Read 12 words.
- Read 13 words.
- Read 14 words.
- Read 15 words.
- Read 16 words.

To add an input, left click and drag the selected output Words from the catalog page to where slot 2 is in the slot screen on the left of the catalog page.

Figure 11.1.f shows an example of **Write 3 Words** and **Read 16 Words** selected.

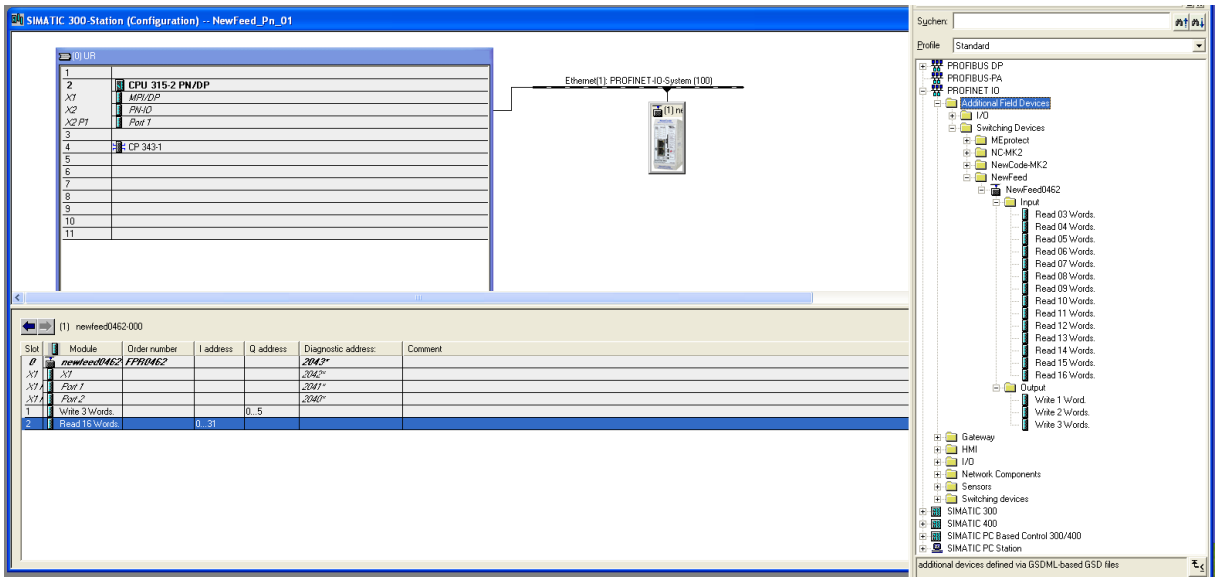


Figure 11.1.f: STEP 7 NewFeed PROFINET input and output cyclic size selected.

10.2 Monitoring Diagnostic on Front-End

To make the diagnostics visible on the frontend, select **"Enable continuous read of settings."**
The frontend will then show the following diagnostics under the ***"Internal communication module"*** tab:

MAC Address	:	MAC Address of PROFINET Device
Revision	:	Revision of Communication Software
Status	:	Indicate state of PROFINET Device

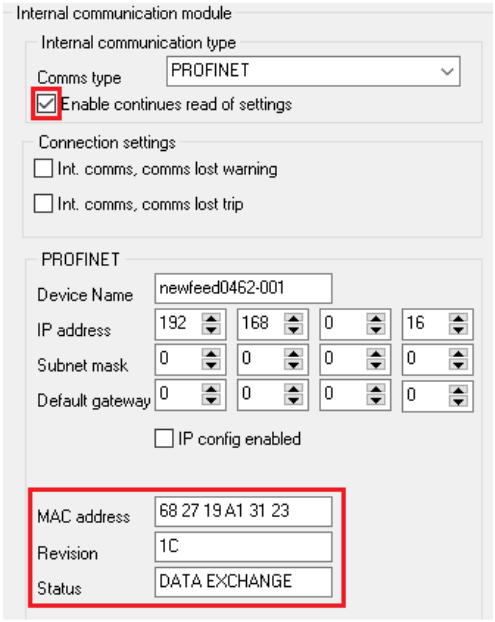


Figure 11.2: NewFeed PROFINET diagnostic screen.

11 DIAGRAMS

11.1 Block Diagram of NewFeed-PROFINET

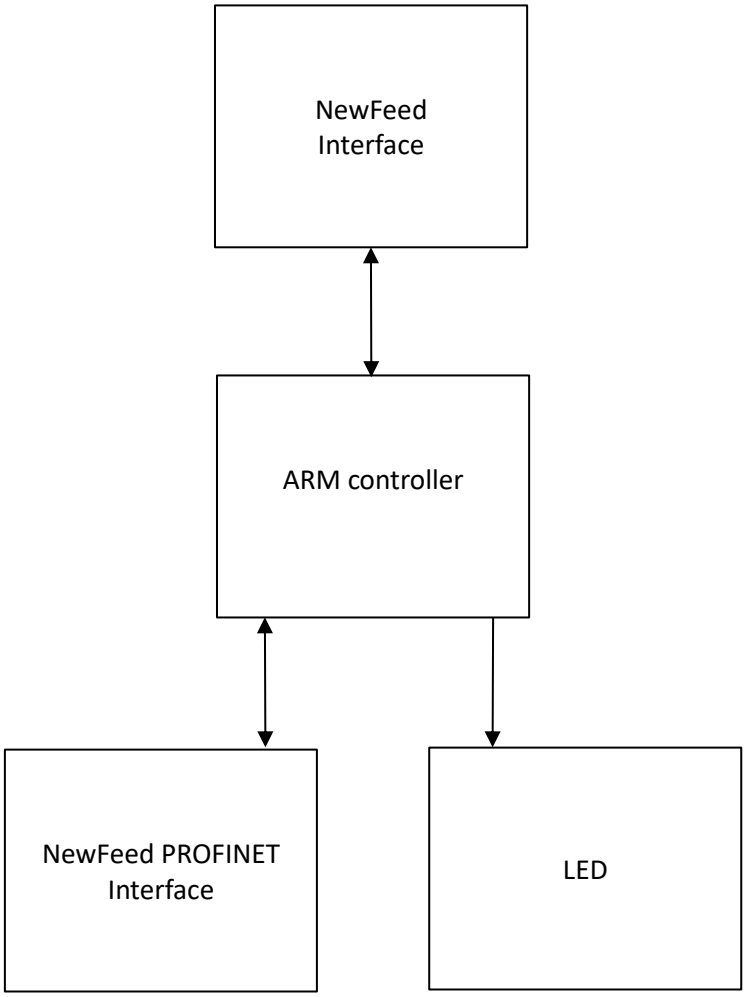


Figure 12.1: Functional block diagram.

11.2 Part Numbers

Description.	Part No	Bin No.
NewFeed with Ethernet module • Modbus/TCP & • PROFINET	FPR0462	

Table 12.2: Ordering information

12 Revision History

Revision History		
Date	**Revision**	**Description**
15 February 2023	1A-00	First Draft. ANSI77 explained how to work it, Add correct IN & OUT Cyclic structure.
10 May 2023	1A-01	Fix Slot 1 & Slot2 Content to align with 01D-00 ANTAIOS Code.
16 May 2023	1A-02	Write all PROFINET in Capital. Remove GOT reference. Remove CBCT01. Reserve CBCT02. Change Red Bullets to Blue Add Units to Assignable Words

Table 13: Revision History.

MOTOR PROTECTION & CONTROL TECHNOLOGY

Physical Address:
298 Soutter Street
Pretoria West
Pretoria
South Africa

Postal Address:
Postnet Suite #73
Private Bag X06
Quagga
0058

Tel: +27(0) 12 327 1729
Fax: +27(0) 12 327 1733