

Standard Application Interface (SAI) Transmitters



METTLER TOLEDO

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1 SAI for Transmitters

1.1. Device Status Bits

The device status is a composite status word that contains individual bits to indicate the state of various scale or device-specific binary values. The 16 bits include the following information:

Bit	Device-specific Value	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
0	Sequence bit 0	Used as sequence toggle bits. When commands are sent by the control system, the device changes the value of the sequence bits as an indication that the command has been seen and acted on. Sequence bits are used during a sequence of commands to ensure that there have been no sequencing errors in the request and the response of data. They are updated on every new command.	X	X	X	X
1	Sequence bit 1					
2	Heart beat	Toggles between 0 and 1 (1 sec.) to ensure that the device is operational and updating data in Words 0, 1 and 2.	X	X	X	X

Bit	Device-specific Value	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
3	Data OK	<p>This bit gets set to 0 when the device is still operational, but the value being reported cannot be guaranteed to be valid.</p> <p>The following conditions cause the Data OK bit to be set to 0:</p> <ul style="list-style-type: none"> • Device is powering up • Device is in setup mode • Device is in test mode • Over capacity condition occurs <ul style="list-style-type: none"> ○ When the A/D converter is at its limit ○ Product dependent over capacity that occurs when the device determines it cannot trust the weight • Under capacity condition occurs <ul style="list-style-type: none"> ○ When the A/D converter is at its limit ○ Product dependent under capacity that occurs when the device determines it cannot trust the weight 	X	X	X	X
4	RedAlert Alarm condition	<p>The alarm condition indicates a system error. More information about the specific alarm can be found in the section 1.2, RedAlert Alarms.</p> <p>1 = Application fault; predictive diagnostics alarm triggered or command cannot be executed as requested.</p>	X	X	X	X
5	Center of zero	1 = Gross weight value is at a value of zero +/- one quarter of a weight and measures verification interval denoted as "e".	X	X	X	
6	Motion	1 = Weight is unstable.	X	X	X	X
7	Net Mode	1 = Net weight instead of gross weight is reported.	X	X	X	X
8	Alternate weight unit	1 = An alternate weight unit, other than the primary unit is in use.				

Bit	Device-specific Value	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
9	Device-specific bit 1	These bits are used to provide device-specific status information e.g. I/O or application status. Refer to section 1.1.1, Device-Specific Bits to see how different devices utilize these bits.			X	
10	Device-specific bit 2					
11	Device-specific bit 3					
12	Device-specific bit 4					
13	Device-specific bit 5					
14	Device-specific bit 6					
15	Device-specific bit 7					

1.1.1. Device-Specific Bits

Device-specific Bit	ACT350POWERCELL	
1	Runflat	0 = not triggered, 1 = triggered
2	--	
3	--	
4	--	
5	--	
6	--	
7	--	

1.2. RedAlert Alarms

Bit	Red Alert	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
0	Calibration error	1 = Weight data can no longer be trusted due to loss of calibration data or an algorithm running in the product to detect weighing irregularities.				
1	Out of A/D range over/under	1 = Weight data can no longer be trusted due to loss of data or mechanical damage of the weigh module.	X	X		

Bit	Red Alert	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
2	Checksum failure	1 = A checksum analysis of memory does not yield the expected result.	X	X	X	X
3	Weight blocked	1 = Weight data does not change appreciably over a defined period of time.	X	X	X	
4	Single sensor communication failure (LC missing)	1 = One or more of the connected sensors are not working properly.			X	X
5	Customer defined overload	1 = Weight is equal to or greater than the maximum load allowed. Although overload is a conditional limit, it can lead to bigger errors such as mechanical breakage or personal injury.	X	X	X	
6	Customer defined underload	1 = Weight is equal or less than the minimum load allowed.	X	X	X	
7	Network failure (all cells)	Applicable only on multi-cell networks. 1 = Failure of the entire network. No cells are responding.				
8	Zero out of range	1 = A control system attempted a zero command but the device did not accept the command because the weight is outside the specified limits or the weights and measure limits.	X	X	X	X
9	Symmetry errors	Applicable only for products with TraxDSP function which detects significant errors between load cells and their peers. 1 = A symmetry error has been detected.				
10	Temperature errors (LC temperature out of normal temperature)	1 = Sensor is outside of the allowed temperature range. The weight value can be affected or the components can prematurely fail.				
11	Weights and measures failure	1 = The product is no longer in compliance with weights and measure regulations.	X	X	X	
12	Foreign device detected	1 = A foreign device is attached to the system or any similar algorithm limits.				
13	Test mode	1 = Device is in a mode in which live data is being replaced with special test data.	X	X	X	
14	LC temperature outside	1 = Temperature for at least one loadcell is			X	

Bit	Red Alert	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
	operation range	outside the operation temperature range				
15	LC parameters block checksum error	1 = Checksum error occurred with loadcell parameters block			X	

1.3. Scale Group 2

These status bits are sent as part of the default status block when a status block command 0 is sent. If the control system does not place any data in the command word (write), the device will send this data in scale status group. The 16 bits include the following information:

Bit	Scale Status Group	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
0	Unit Bit 1	Unit bits are used to indicate the weight unit. Refer to "Unit Bits" table below for more information.	X	X	X	X
1	Unit Bit 2					
2	Unit Bit 3					
3	Unit Bit 4					
4	MinWeigh Error	1 = Scale is below acceptable minimum weighing range.				
5	Range bit 1	Range bits are used to indicate weight range or interval based on the values shown. See "Range Bits" table below for more information.				
6	Range bit 2					
7	In Set Up	1 = Sensor is in setup mode.	X	X	X	X
8	Power Up Zero Failure	1 = Scale has not been able to complete its power-up restore / reset of zero.	X	X	X	
9	GWP out of Tolerance	1 = Scale has a GWP out of tolerance error.				
10	Selected Scale	1 = Scale is selected and therefore in focus or seen on the device display.	X	X	X	
11	Open	Unused (always 0).				
12	Open					
13	Open					

Bit	Scale Status Group	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
14	Open					
15	Open					

1.3.1. Unit Bits

Unit Bit 1	Unit Bit 2	Unit Bit 3	Unit Bit 4	Value
0	0	0	0	g
0	0	0	1	kg
0	0	1	0	lb
0	0	1	1	t
0	1	0	0	ton
0/1	1	0	1	Reserved
0	1	1	0	Reserved
0	1	1	1	Custom
1000-1111				Unused

1.3.2. Range Bits

Range bit 1	Range bit 2	Value
0	0	Range/Interval 1
0	1	Range/Interval 2
1	0	Range/Interval 3
1	1	Reserved

1.4. Status Group 2 – Alarms

The application alarm status bits are set if the status block command "21" is sent. Otherwise, scale status group 2 information will be displayed.

Bit	Soft Alarm	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
0	Rate of change	Product, application or customer defines a weight / time scenario as a method of assurance that the scale is detecting weight				
1	Communication errors	1 = The communication of a device which is connected to a sensor is not working according to specification.				
2	Over and under voltage (s)	1 = A device which supports dynamic measurements of system power has over or under voltage.				
3	Weight drift	1 = A strain gauge sensor has either a broken bridge or is damaged by water or lightning.				
4	Breach	1 = The enclosure of the sensor has been compromised and is therefore vulnerable to environmental influences, e.g. moisture or water. In most cases, a failure will occur if the breach is not corrected or if the sensor is not replaced.				
5	Calibration expired	1 = The maximum number of transactions or a time limit before a preventive service or recalibration has been reached. The alarm will toggle on N+1 weighing transactions.				
6	Application defined 0	Refer to section 1.4.1, Application-Specific Soft Alarms for more information			X	
7	Application defined 1				X	
8	Application defined 2				X	
9	Application defined 3				X	
10	Application defined 4				X	
11	Application defined 5					
12	Application defined 6					
13	Application defined 7					
14	Application defined 8					
15	Application defined 9					

1.4.1. Application-Specific Soft Alarms

ACT350 POWERCELL	
Application Defined 0	Over current – network current > 1A
Application Defined 1	LC overload weight between 101% and 150%
Application Defined 2	LC overload weight >150%
Application Defined 3	Load cells are not the same type
Application Defined 4	LC temperature out of operation range
Application Defined 5	None
Application Defined 6	None
Application Defined 7	None
Application Defined 8	None
Application Defined 9	None

1.5. Target Status Group

These status bits are target application bits sent when a status block command that contains this status word in its combination is sent in the Write Status command word. Please note that no devices covered by this manual currently support the target status group.

Bit	Data	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
0	Feed	Turns ON when target feed is active (before final cutoff)				
1	Fast Feed	Turns ON when target fast feed is active				
2	Coarse Feed	Optional 3rd speed, turns ON when coarse feed is active (prior to fast feed)				
3	Feed Stage 2					
4	Feed Stage 1					
5	Tolerance OK	Turns ON when weight value is within tolerance of target				
6	Over Zone	Turns ON when weight value is in Over Zone (too high) or optionally when weight value is outside of + TOL				
7	Under Zone	Turns ON when weight value is in Under Zone (too low) or optionally when weight value is outside of – TOL				
8	Heavy Zone	Turns ON when weight value is in Heavy Zone (acceptable high)				
9	Light Zone	Turns ON when weight value is in Light Zone (acceptable low)				

Bit	Data	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
10	Open	Unused				
11	Open	Unused				
12	Open	Unused				
13	Open	Unused				
14	Open	Unused				
15	Open	Unused				

1.6. Custom Application Group 2

The custom application group 2 status bits are used to display critical errors for individual attached devices such as POWERCELL load cells.

Bit	Data	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
0	Error on attached device 1			X	
1	Error on attached device 2			X	
2	Error on attached device 3			X	
3	Error on attached device 4			X	
4	Error on attached device 5			X	
5	Error on attached device 6			X	
6	Error on attached device 7			X	
7	Error on attached device 8			X	
8	Error on attached device 9			X	
9	Error on attached device 10			X	
10	Error on attached device 11			X	
11	Error on attached device 12			X	
12	Error on attached device 13			X	
13	Error on attached device 14			X	

Bit	Data	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
14	Error on attached device 15				
15	Error on attached device 16				

1.7. Last Error Message Status Group

No devices covered in this manual currently support this group.

1.8. Custom Application Status Group 1

The custom application status bits are sent only if the status block command "23" is issued. For more information on how to use the custom application for the ACT350 DIO, please refer to the user manual for that product.

Bit	Custom application status bits, group 1	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
0	Application defined 0	None	New Data Available 1 = triggered weight is available	None	None
1	Application defined 1	None	OK (ready for next object) Finished last weighing process, can start next process	None	None
2	Application defined 2	None	Up Scale Weighing object is coming onto the scale	None	None
3	Application defined 3	None	On scale Weighing object is on the scale	None	None
4	Application defined 4	None	Weighing start Start the weighing or calibration process	None	None
5	Application defined 5	None	Weighing over End the weighing or calibration process	None	None
6	Application defined 6	None	OK (no error) No error in weighing process	None	None

Bit	Custom application status bits, group 1	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
7	Application defined 7	None	Long object Object is too long and cannot be weighed	None	None
8	Application defined 8	None	Short Distance Distance between objects is too small and cannot be weighed	None	None
9	Application defined 9	None	Photo Occlusion Front Front light barrier is blocked. The process should be stopped and the light barrier should be cleared	None	None
10	Application defined 10	None	Flag of update zero 1 = PLC can send zero command to clear the zero	None	None
11	Application defined 11	None	None	None	None
12	Application defined 12	None	None	None	None
13	Application defined 13	None	None	None	None
14	Application defined 14	None	None	None	None
15	Application defined 15	None	None	None	None

1.9. I/O Status Groups

On devices which support physical I/O, the status groups contain a combination of input and output status bits for I/O.

Devices which do not support physical I/O may have variables and logic to virtually represent inputs and outputs within the device. If the device does not support I/O groups, an invalid command response is sent for any unsupported I/O groups.

The input and output status bits reflect the state of the associated inputs and outputs, 1 = on, 0 = off.

Bit	Data	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
0	In 1		X	X	X

Bit	Data	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
1	In 2		X	X	X
2	In 3		X	X	X
3	In 4				
4	In 5				
5	In 6				
6	In 7				
7	In 8				
8	Out 1		X	X	X
9	Out 2		X	X	X
10	Out 3		X	X	X
11	Out 4		X	X	X
12	Out 5		X	X	X
13	Out 6				
14	Out 7				
15	Out 8				

1.10. Comparator Status Groups

These status bits are comparator application bits sent when a status block command that contains this status word in its combination is sent in the Write Status command word.

Bit	Data	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
0	Comparator 1		X	X	X
1	Comparator 2		X	X	X
2	Comparator 3		X	X	X
3	Comparator 4		X	X	X
4	Comparator 5		X	X	X
5	Comparator 6				
6	Comparator 7				
7	Comparator 8				
8	Comparator 9				
9	Comparator 10				
10	Comparator 11				
11	Comparator 12				
12	Comparator 13				
13	Comparator 14				

Bit	Data	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
14	Comparator 15				
15	Comparator 16				

1.11. SAI Status Block Command List

Value	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
0	Report default status words	X	X	X	X
1	Report RedAlert alarm, scale group, I/O group	X	X	X	X
2	Report target / Comparator status	X	X	X	X
4	Report Target 1, I/O group 2, custom application group 2			X	
16	Report comparator mix 1	X	X	X	X
21	Report RedAlert alarms, alarms & scale group 2	X	X	X	X
23	Report alarm status, I/O status, custom application status 1		X		
100	Report last error code	X	X	X	X

1.12. Cyclic Command List for Floating Point Block

Value	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
0	Gross weight – rounded	X	X	X	X
1	Gross weight – rounded	X	X	X	X
2	Tare weight – rounded	X	X	X	X
3	Net weight – rounded	X	X	X	X
5	Gross weight - internal resolution	X	X	X	X
6	Tare weight - internal resolution	X	X	X	X
7	Net weight - internal resolution	X	X	X	X
14	Net weight - alternative weight path				

Value	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
20	Read target weight (display unit)				
83	Report general stability timeout [s] Parameter: 0 – 65535 seconds				
40	Report comparator 1 limit	X	X	X	X
42	Report comparator 2 limit	X	X	X	X
44	Report comparator 3 limit	X	X	X	X
46	Report comparator 4 limit	X	X	X	X
48	Report comparator 5 limit	X	X	X	X
84	Report observation time for zero Parameter: 0.1 – 4.0 Seconds				X
85	Report tolerance for zero Parameter: 0.25 – 1000 digits				X
86	Report observation time for tare Parameter: 0.1 – 4.0 Seconds				X
87	Report tolerance for tare Parameter: 0.25 – 1000 digits				X
88	Report observation time for weighing Parameter: 0.1 – 4.0 Seconds				X
89	Report tolerance for weighing Parameter: 0.25 – 1000 digits				X
90	Report weighing mode Parameter: 0 = Universal Weighing 2 = Fix Filter				X

Value	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
91	Report weighing environment Parameter: 0 = Very Stable 1 = Stable 2 = Standard 3 = Unstable 4 = Very Unstable				X
92	Report filter cut-off frequency Parameter: 0 = Predefined frequency used, changeable over weighing environment 0.001 Hz – 20.0 Hz = Cutoff Frequency				X
96	Report weight readability Parameter: 0 = 1 digit 1 = 10 digits 2 = 100 digits 3 = 1000 digits 4 = 2 digits 5 = 5 digits				
97	Internal temperature in °C				
98	Report filter cut-off frequency for dosing path				
201	Preset tare (display unit) Parameter: Pre-tare weight (float 32) placed in floating point value	X	X	X	X
220	Write target weight (display unit)				
240	Write comparator 1 limit	X	X	X	X
242	Write comparator 2 limit	X	X	X	X
244	Write comparator 3 limit	X	X	X	X
246	Write comparator 4 limit	X	X	X	X
248	Write comparator 5 limit	X	X	X	X
283	Write general stability timeout [s] Parameter: 0 – 65535 seconds				

Value	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
284	Write observation time for zero Parameter: 0.1 – 4.0 Seconds				X
285	Write tolerance for zero Parameter: 0.25 – 1000 digits				X
286	Write observation time for tare Parameter: 0.1 – 4.0 Seconds				X
287	Write tolerance for tare Parameter: 0.25 – 1000 digits				X
288	Write observation time for weighing Parameter: 0.1 – 4.0 Seconds				X
289	Write tolerance for weighing Parameter: 0.25 – 1000 digits				X
290	Write weighing mode Parameter: 0 = Universal Weighing 2 = Fix Filter				X
291	Write weighing environment Parameter: 0 = Very Stable 1 = Stable 2 = Standard 3 = Unstable 4 = Very Unstable				X
292	Write filter cut-off frequency Parameter: 0 = Predefined frequency used, changeable over weighing environment 0.001 Hz – 20.0 Hz = Cutoff Frequency				X

Value	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
296	Write weight readability Parameter: 0 = 1 digit 1 = 10 digits 2 = 100 digits 3 = 1000 digits 4 = 2 digits 5 = 5 digits				X
298	Write filter cut-off frequency for dosing path				
400	Tare when stable	X	X	X	X
401	Zero when stable	X	X	X	X
402	Clear tare	X	X	X	X
403	Tare immediately	X	X	X	X
404	Zero immediately	X	X	X	X
500	Run filling application				
501	Pause filling application				
502	Resume filling application				
510	Apply Comparators	X	X	X	X
1000	Turn all internal & external outputs OFF	X	X	X	X
1900	Alarm bit	X	X	X	X
1901	Motion bit	X	X	X	X
1902	Net mode bit	X	X	X	X
1903	Center of zero bit	X	X	X	X
1904	Alt weight bit	X	X	X	X
1905	Device bit 1	X	X	X	X
1906	Device bit 2	X	X	X	X
1907	Device bit 3	X	X	X	X
1908	Device bit 4	X	X	X	X
1909	Device bit 5	X	X	X	X
1910	Device bit 6	X	X	X	X
1911	Device bit 7	X	X	X	X
1912	Performance test value	X	X	X	X
2000	No operation command – used to test command	X	X	X	X
2002	Continue to next step in sequence				

Value	Description	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
2003	Continue to next step in sequence				
2004	Abort sequence ... response value means abort in process	X	X	X	X
2005	After step failure, retries previous step in sequence				
2006	After step failure, skips step and advances to next in sequence				
2045	Step successful, next value	X	X	X	X
2046	Step successful	X	X	X	X
2047	Command has been received and is being evaluated (in process)	X	X	X	X
8080h	Start cyclic test mode	X	X	X	X
8888h	Stop cyclic test mode	X	X	X	X

1.13. Acyclic Command List

Command	Description	Read/Write	Data Type	PROFIBUS slot	PROFIBUS Index	EIP Class Code	EIP Instance Values	EIP Attribute #	PROFINET slot + subslot	PROFINET Index	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
Gross weight - rounded	Gross weight data in defined resolution	read	Float 32	1	0x14	0x300	0x01	0x01	0, 1	0x2000	X	X	X	X
Gross weight - rounded	Gross weight data in defined resolution	read	Float 32	1	0x15	0x300	0x01	0x02	0, 1	0x2001	X	X	X	X
Tare weight - rounded	Tare weight data in defined resolution	read	Float 32	1	0x16	0x300	0x01	0x03	0, 1	0x2002	X	X	X	X
Net weight - rounded	Net weight data in defined resolution	read	Float 32	1	0x17	0x300	0x01	0x04	0, 1	0x2003	X	X	X	X
Gross weight - internal resolution	Gross weight data in internal resolution	read	Float 32	1	0x18	0x300	0x01	0x05	0, 1	0x2004	X	X	X	X
Tare weight - internal resolution	Tare weight data in internal resolution	read	Float 32	1	0x19	0x300	0x01	0x06	0, 1	0x2005	X	X	X	X
Net weight - internal resolution	Net weight data in internal resolution	read	Float 32	1	0x1A	0x300	0x01	0x07	0, 1	0x2006	X	X	X	X
Tare procedure status bits	Report Tare operation status (used when triggering tare from acyclic interface) Parameter: 0 = tare procedure complete 1 = tare procedure in process	read	UInt 16	1	0x1F	0x300	0x01	0x16	0, 1	0x2008	X	X	X	X
Zero procedure status bits	Report Zero operation status (used when triggering zero from acyclic interface) Parameter: 0 = zero procedure complete 1 = zero procedure in process	read	UInt 16	1	0x24	0x300	0x01	0x17	0, 1	0x2009	X	X	X	X
Weight Unit	Weight unit (number representing unit from Scale Status Group 2)	read/ write	byte, 1	1	0x99	0x300	0x01	0x18	0, 1	0x200A	X	X	X	
Tare when stable	Tare when within motion limit	write	UInt 8	1	0x1C	0x300	0x01	0x09	0, 1	0x2010	X	X	X	X
Tare immediately	Motion not checked, tare executed	write	UInt 8	1	0x1E	0x300	0x01	0x10	0, 1	0x2011	X	X	X	X
Clear tare	Motion not checked, clear tare executed	write	UInt 8	1	0x1D	0x300	0x01	0x11	0, 1	0x2012	X	X	X	X
Zero when stable	Zero when within motion limit	write	UInt 8	1	0x22	0x300	0x01	0x14	0, 1	0x2013	X	X	X	X
Zero immediately	Motion not checked, zero executed	write	UInt 8	1	0x23	0x300	0x01	0x15	0, 1	0x2014	X	X	X	X
Preset tare (display unit)	Write tare register (Preset Tare) Parameter: Pre-tare weight (float 32)	write	Float 32	1	0x1B	0x300	0x01	0x08	0, 1	0x2020	X	X	X	X
Turn all internal & external outputs OFF	Forces all outputs OFF	write	byte, 1	1	0x26	0x301	0x01	0x02	0, 1	0x2031	X	X	X	X
Report scale status group	Scale status group according to specification in Section 3 of this document	read	UInt 16	1	0x27	0x302	0x01	0x01	0, 1	0x2040	X	X	X	X
Alarm status group	Application Specific Errors according to specification in Section 4 of this document	read	UInt 16	1	0x28	0x302	0x01	0x02	0, 1	0x2041	X	X	X	X
Report RedAlert group	RedAlert status according to specification in Section 2 of this document	read	UInt 16	1	0x29	0x302	0x01	0x03	0, 1	0x2042	X	X	X	X
Report scale status group	Scale Status Group 2 according to specification in Section 4 of this document	read	UInt 16	1	0x2A	0x302	0x01	0x04	0, 1	0x2043	X	X	X	X
Model type part 1	Identification (main ID)	read	String 160	1	0x2B	0x303	0x01	0x01	0, 1	0x2050	X	X	X	X
Model type part 2	Identification # 2	read	String 160	1	0x2C	0x303	0x01	0x02	0, 1	0x2051	X	X	X	X
Model type part 3	Identification # 3	read	String 160	1	0x2D	0x303	0x01	0x03	0, 1	0x2052	X	X	X	X

Command	Description	Read/Write	Data Type	PROFIBUS slot	PROFIBUS Index	EIP Class Code	EIP Instance Values	EIP Attribute #	PROFINET slot + subslot	PROFINET Index	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
Software OS version	Software OS Version	read	String 160	1	0x2E	0x303	0x01	0x04	0, 1	0x2053	X	X	X	X
Fieldbus stack version	Fieldbus Stack version	read	String 160	1	0x2F	0x303	0x01	0x05	0, 1	0x2054	X	X	X	X
Software application version	Software Apps Version	read	String 160	1	0x30	0x303	0x01	0x06	0, 1	0x2055				X
SAI version	SAI specification version number	read	String 160	1	0x31	0x303	0x01	0x07	0, 1	0x2056	X	X	X	X
Serial number	Device main serial number	read	String 160	1	0x33	0x303	0x01	0x08	0, 1	0x2057				X
Device identification	user configurable ID	read	String 160	1	0x34	0x303	0x01	0x09	0, 1	0x2058				X
Query of the remaining weighing ranges	Remaining Weighing Ranges	read	Struct 128	1	0x35	0x303	0x01	0x10	0, 1	0x2059				X
Get initial zero information	Initial zero information	read	Struct 16	1	0x36	0x303	0x01	0x11	0, 1	0x205A				X
Start adjustment with internal weight	Start Internal Adjustment	write	Uint 8	1	0x80	0x410	0x01	0x01	0, 1	0x4001				X
Start adjustment with external weight	Start External Adjustment	write	Uint 8	1	0x81	0x410	0x01	0x02	0, 1	0x4002				X
Start customer standard calibration	Start User Standard Adjustment	write	Uint 8	1	0x82	0x410	0x01	0x03	0, 1	0x4003				X
Cancel adjustment / test (Abort Test Function / Adjustment)	Abort Test Function / Adjustment	write	Uint 8	1	0x83	0x410	0x01	0x04	0, 1	0x4004	X	X	X	X
Start test with internal weight	Start Test Function with internal weight	write	Uint 8	1	0x84	0x410	0x01	0x05	0, 1	0x4005				X
Start test with external weight	Start Test Function with external weight	write	Uint 8	1	0x85	0x410	0x01	0x06	0, 1	0x4006				X
Adjustment and test status Information	Adjustment / Test status	read	Uint 16	1	0x86	0x410	0x01	0x07	0, 1	0x4007	X	X	X	X
Test deviation	Adjustment / Test value	read	Float 32	1	0x87	0x410	0x01	0x08	0, 1	0x4008				X
External adjustment weight	Set external adjustment weight and start adjust Parameter: Weight in unit selected according to Scale Status Group 2	write	Float 32	1	0x88	0x410	0x01	0x09	0, 1	0x4009	X	X	X	X
Number of linearity ranges	Number of points of linearity to be used Parameter: 0 = None 1 = 3 points of linearity 2 = 4 points of linearity 3 = 5 points of linearity	read/ write	unsigned short, 2	1	0x89	0x410	0x01	0x0A	0, 1	0x400A	X	X	X	
Zero Adjustment	Resets the zero (absolute reference)	write	byte, 1	1	0x8A	0x410	0x01	0x0B	0, 1	0x400B	X	X	X	
Span Adjustment Value 1 xLow	Used in 5 point linearity adjustment	read/ write	float, 4	1	0x8C	0x410	0x01	0x0C	0, 1	0x400C	X	X	X	
Span Adjustment Value 2 Low	Used in 5 point and 4 point linearity adjustment	read/ write	float, 4	1	0x8D	0x410	0x01	0x0D	0, 1	0x400D	X	X	X	
Span Adjustment Value 3 Middle	Used in 5, 4 and 3 point linearity adjustment	read/ write	float, 4	1	0x8E	0x410	0x01	0x0E	0, 1	0x400E	X	X	X	
Span Adjustment Value 4 High	Used in all forms of span adjustment	read/ write	float, 4	1	0x8F	0x410	0x01	0x0F	0, 1	0x400F	X	X	X	
Validate (Confirm) Adjustment	Validate Adjustment	read/ write	byte, 1	1	0x90	0x410	0x01	0x10	0, 1	0x4010	X	X	X	
Requested weight	Get currently requested external calibration weight during ongoing adjustment or calibration procedure	read	Float 32	1	0x91	0x410	0x01	0x11	0, 1	0x4011				X
External test weight	Set external calibration test weight unless default shall be used Parameter: Weight in unit selected according to Scale Status Group 2	write	Float 32	1	0x92	0x410	0x01	0x12	0, 1	0x4012				X

Command	Description	Read/Write	Data Type	PROFIBUS slot	PROFIBUS Index	EIP Class Code	EIP Instance Values	EIP Attribute #	PROFINET slot + subslot	PROFINET Index	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
Span Adjustment Counts 1 xLow	Used with Span adjustment value to read/write calibration	read/ write	long, 4	1	0x93	0x410	0x01	0x13	0, 1	0x4013	X	X	X	
Span Adjustment Counts 2 Low	Used with Span adjustment value to read/write calibration	read/ write	long, 4	1	0x94	0x410	0x01	0x14	0, 1	0x4014	X	X	X	
Span Adjustment Counts 3 Middle	Used with Span adjustment value to read/write calibration	read/ write	long, 4	1	0x95	0x410	0x01	0x15	0, 1	0x4015	X	X	X	
Span Adjustment Counts 4 High	Used with Span adjustment value to read/write calibration	read/ write	long, 4	1	0x96	0x410	0x01	0x16	0, 1	0x4016	X	X	X	
Set number of steps & begin step calibration	Set number of steps and begin step calibration	write	byte, 1	1	0x97	0x410	0x01	0x17	0, 1	0x4017	X	X	X	
Sets weight value for current step in calibration & starts step	Set weight value for current step in calibration and starts step	write	float, 4	1	0x98	0x410	0x01	0x18	0, 1	0x4018	X	X	X	
Calfree	triggers CalFree calibration start	write	byte, 1	1	0x9B	0x410	0x01	0x1A	0, 1	0x401A	X	X		
Calfree cell capacity	parameter for CalFree	read/ write	Float 32	1	0x9C	0x410	0x01	0x1B	0, 1	0x401B	X	X		
Calfree unit	parameter for CalFree	read/ write	Uint 8	1	0x9D	0x410	0x01	0x1C	0, 1	0x401C	X	X		
Calfree cell output	parameter for CalFree	read/ write	Float 32	1	0x9E	0x410	0x01	0x1D	0, 1	0x401D	X	X		
CalFree Plus	Trigger CalFree Plus calibration start	read/ write	unsigned short, 2	1	0x9F	0x410	0x01	0x1E	0, 1	0x401E			X	
Get temporary weight in step mode	Set weight value for current step in calibration and starts step	read	float, 4	1	0x8B	0x410	0x01	0x1F	0, 1	0x401F	X	X	X	
Enable / Disable step control C5		read	float, 4	1	0x8B	0x410	0x01	0x1F	0, 1	0x401F				X
Zero adjustment count	Resets the zero (absolute reference)	read/ write	long, 4	1	0xE5	0x410	0x01	0x20	0, 1	0x4020	X	X	X	
Sensitivity adjustment (Triggered) C8 1 -4		read/ write	long, 4	1	0xE5	0x410	0x01	0x20	0, 1	0x4020				X
Sensitivity adjustment (Display weight) C8 7	Sensitivity adjustment (displayed weight)	write	Struct 32	3	0x02	0x410	0x01	0x21	0, 1	0x4021				X
Comparator status group 1	Comparator status group 1	read	short, 2	1	0xD0	0x411	0x01	0x01	0, 1	0x4051	X	X	X	X
Report # of Comparator used	Read how many comparators are used	read	byte, 1	2	0x03	0x411	0x01	0x04	0, 1	0x4054	X	X	X	X
Write # of Comparator used	Write how many comparators are used	write	byte, 1	2	0x03	0x411	0x01	0x04	0, 1	0x4054	X	X	X	X
Report Comparator 1 Limit	Read value for comparator # 1	read	float, 4	2	0x04	0x411	0x01	0x05	0, 1	0x4055	X	X	X	X
Write Comparator 1 Limit	Write value for comparator # 1	write	float, 4	2	0x04	0x411	0x01	0x05	0, 1	0x4055	X	X	X	X
Report Comparator 2 Limit	Read value for comparator # 2	read	float, 4	2	0x05	0x411	0x01	0x06	0, 1	0x4056	X	X	X	X
Write Comparator 2 Limit	Write value for comparator # 2	write	float, 4	2	0x05	0x411	0x01	0x06	0, 1	0x4056	X	X	X	X
Report Comparator 3 Limit	Read value for comparator # 3	read	float, 4	2	0x06	0x411	0x01	0x07	0, 1	0x4057	X	X	X	X
Write Comparator 3 Limit	Write value for comparator # 3	write	float, 4	2	0x06	0x411	0x01	0x07	0, 1	0x4057	X	X	X	X
Report Comparator 4 Limit	Read value for comparator # 4	read	float, 4	2	0x07	0x411	0x01	0x08	0, 1	0x4058	X	X	X	X
Write Comparator 4 Limit	Write value for comparator # 4	write	float, 4	2	0x07	0x411	0x01	0x08	0, 1	0x4058	X	X	X	X
Report Comparator 5 Limit	Read value for comparator # 5	read	float, 4	2	0x08	0x411	0x01	0x09	0, 1	0x4059	X	X	X	X
Write Comparator 5 Limit	Write value for comparator # 5	write	float, 4	2	0x08	0x411	0x01	0x09	0, 1	0x4059	X	X	X	X
Apply Comparator trigger	Instructs device to use new comparator values	write	byte, 1	2	0x1E	0x411	0x01	0x1F	0, 1	0x406F	X	X	X	X
Voltage monitor channels	View voltage monitor channels	read	Struct 256	1	0xB0	0x413	0x01	0x11	0, 1	0x4161				
Load cycle monitor channels	view load cycle monitor channels	read	Struct 512	1	0xB1	0x413	0x01	0x12	0, 1	0x4162				
Zero deviation	Query zero deviation	read	Float 32	1	0xB2	0x413	0x01	0x13	0, 1	0x4163				

Command	Description	Read/Write	Data Type	PROFIBUS slot	PROFIBUS Index	EIP Class Code	EIP Instance Values	EIP Attribute #	PROFINET slot + subslot	PROFINET Index	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
Zero deviation monitor channels	view zero deviation monitor channels	read	Struct 256	1	0xB3	0x413	0x01	0x14	0, 1	0x4164				
Temperature monitor channels	view temperature monitor channels	read	Struct 512	1	0xB4	0x413	0x01	0x15	0, 1	0x4165				
Temperature gradient	Query temperature gradient	read	Struct 96	1	0xB5	0x413	0x01	0x16	0, 1	0x4166				
Temperature gradient channels	view temperature gradient channels	read	Struct 128	1	0xB6	0x413	0x01	0x17	0, 1	0x4167				
Temperature values	Query temperature value (multiple channels)	read	Struct 128	1	0xB7	0x413	0x01	0x18	0, 1	0x4168				X
Internal temperature	Query the load cell temperature value	read	Float 32	1	0xB8	0x413	0x01	0x19	0, 1	0x4169				
Restart device	restart device - software restart	write	Uint 8	1	0xC9	0x413	0x01	0x2A	0, 1	0x417A				X
Update CANMaster power diagnosis	Send 1 command to update the voltage and current of CANMaster	write	byte, 1	1	0xCE	0x413	0x01	0x2E	0, 1	0x417E			X	
Maximum supply power for LCs	Inquire maximum supply voltage for LCs in history in mV	read	unsigned short, 2	1	0xCF	0x413	0x01	0x2F	0, 1	0x417F			X	
Maximum supply current for LCs	Inquire maximum supply voltage for LCs in history in mA	read	unsigned short, 2	1	0xEC	0x413	0x01	0x30	0, 1	0x4180			X	
Supply power error counts	Inquire supply power error counts. Once over current has occurred, the error counts would increase one. Int type, range 0~65535	read	unsigned short, 2	1	0xD1	0x413	0x01	0x31	0, 1	0x4181			X	
Supply current error counts	Inquire supply current error counts. Once over current has occurred, the error counts would increase one. Int type, range 0~65535	read	unsigned short, 2	1	0xD2	0x413	0x01	0x32	0, 1	0x4182			X	
Maximum voltage of CANH	Inquire maximum voltage of CANH in mv	read	short, 2	1	0xD3	0x413	0x01	0x33	0, 1	0x4183			X	
Minimum voltage of CANH	Inquire minimum voltage of CANH in mv	read	short, 2	1	0xD4	0x413	0x01	0x34	0, 1	0x4184			X	
Maximum voltage of CANL	Inquire maximum voltage of CANL in mv	read	short, 2	1	0xD5	0x413	0x01	0x35	0, 1	0x4185			X	
Minimum voltage of CANL	Inquire minimum voltage of CANL in mv	read	short, 2	1	0xD6	0x413	0x01	0x36	0, 1	0x4186			X	
Current supply power for LCs	Inquire the current supply power for LCs	read	short, 2	1	0xD7	0x413	0x01	0x37	0, 1	0x4187			X	
Current supply current for LCs	Inquire the current supply current for LCs	read	short, 2	1	0xD8	0x413	0x01	0x38	0, 1	0x4188			X	
Update LCs voltage diagnosis	Send 1 to update the current VIN_LC, VIN_COM, V_SHIELD voltage of LCs, every LC need one second to update data	write	byte, 1	1	0xD9	0x413	0x01	0x39	0, 1	0x4189			X	
VIN_LC of LCs	Inquire the current VIN_LC voltage of LCs in mV	read	long*1 4,56	1	0xDA	0x413	0x01	0x3A	0, 1	0x418A			X	
Temperature of LCs	Inquire the current temperature of every LC in °C	read	long*1 4,56	1	0xDB	0x413	0x01	0x3B	0, 1	0x418B			X	
VIN_COM of LCs	Inquire the current VIN_COM voltage of every LC in mV	read	long*1 4,56	1	0xDC	0x413	0x01	0x3C	0, 1	0x418C			X	
V_SHIELD of LCs	Inquire the current V_SHIELD voltage of every LC in mV	read	long*1 4,56	1	0xDD	0x413	0x01	0x3D	0, 1	0x418D			X	
Update LCs gas diagnosis	Send 1 to update the current gas sensor value of LCs, every LC need maximum six seconds to update data	write	byte, 1	1	0xDE	0x413	0x01	0x3E	0, 1	0x418E			X	
Gas concentration of LCs	Inquire the current gas sensor value of LCs as percentage	read	long*1 4,56	1	0xDF	0x413	0x01	0x3F	0, 1	0x418F			X	
Update LCs information	Send 1 to update the current capacity, unit & sw version of LCs. Every LC needs one second to update data	write	byte, 1	1	0xE0	0x413	0x01	0x40	0, 1	0x4190			X	
Communication error counts of LCs	Inquire the current communication error counts of every LC. If normal at first then LC communication error occurs, the error counts would increase one. Int type, range 0~65535	read	long*1 4,56	1	0xE1	0x413	0x01	0x41	0, 1	0x4191			X	

Command	Description	Read/Write	Data Type	PROFIBUS slot	PROFIBUS Index	EIP Class Code	EIP Instance Values	EIP Attribute #	PROFINET slot + subslot	PROFINET Index	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
Overload normal range counts of LCs	Inquire the current overload normal range counts of every LC. If weight is normal at first then overload between 101% ~ 150% of LC normal capacity occurs, the error counts would increase one. Int type, range 0~65535	read	long*1 4,56	1	0xE2	0x413	0x01	0x42	0, 1	0x4192			X	
Overload operate range counts of LCs	Inquire the current overload operate range counts of every LC. If weight is normal at first then overload larger than 150% of LC normal capacity occurs, the error counts would increase one. Int type, range 0~65535	read	long*1 4,56	1	0xE3	0x413	0x01	0x43	0, 1	0x4193			X	
Temperature beyond normal range counts of LCs	Inquire the current temperature beyond normal range counts of every LC. Once first normal then temperature beyond LC normal range happened, the error counts would increase one. Int type, range 0~65535	read	long*1 4,56	1	0xE4	0x413	0x01	0x44	0, 1	0x4194			X	
Temperature beyond operate range counts of LCs	Inquire the current temperature beyond operate range counts of every LC. If normal at first then temperature beyond LC operate range occurs, the error counts would increase one. Int type, range 0~65535	read	long*1 4,56	1	0xE5	0x413	0x01	0x45	0, 1	0x4195			X	
Temperature beyond operate range counts of LCs after temperature RunFlat trigger	Inquire the current temperature beyond operate range counts of every LC after temperature RunFlat trigger. If normal at first then temperature beyond LC operate range occurs, the error counts would increase one. Int type, range 0~65535. The operate ranges differ by LC type (index 736)	read	long*1 4,56	1	0xE6	0x413	0x01	0x46	0, 1	0x4196			X	
PLC communication failure count	Cable / PLC / Device failure. Each time fieldbus loses connection, count increases by one	read	unsigned short, 2	1	0xE7	0x413	0x01	0x47	0, 1	0x4197			X	
Scale overload count	Scale overload count	read	unsigned short, 4	1	0xE8	0x413	0x01	0x48	0, 1	0x4198			X	
Scale calibration count	Scale calibration count	read	unsigned short, 4	1	0xE9	0x413	0x01	0x49	0, 1	0x4199			X	
Scale zero command count	Scale zero command count	read	unsigned short, 4	1	0xEA	0x413	0x01	0x4A	0, 1	0x419A			X	
Scale zero command failed count	Scale zero command failed count	read	unsigned short, 4	1	0xEB	0x413	0x01	0x4B	0, 1	0x419B			X	
Automatic prefilling	Automatic prefilling configuration	read/write	Struct 32	1	0xEF	0x414	0x01	0x01	0, 1	0x4201				
Material filling duration	Material filling duration configuration	read/write	Uint 16	1	0xF0	0x414	0x01	0x02	0, 1	0x4202				
Automatic refilling	Automatic refilling configuration	read/write	Uint 8	1	0xF1	0x414	0x01	0x03	0, 1	0x4203				
Target weight	Target weight configuration	read/ write	Struct 128	1	0xF2	0x414	0x01	0x04	0, 1	0x4204				
Optimization function	Optimization function configuration	read/ write	Struct 24	1	0xF3	0x414	0x01	0x05	0, 1	0x4205				
Weight monitor function	Weight monitor function configuration	read/ write	Struct 480	1	0xF4	0x414	0x01	0x06	0, 1	0x4206				
Time monitor function	Time monitor function configuration	read/ write	Struct 320	1	0xF5	0x414	0x01	0x07	0, 1	0x4207				
Filter stability criteria	Filling stability criteria configuration	read/ write	Struct 64	1	0xF6	0x414	0x01	0x08	0, 1	0x4208				
Filing phase	Filling phase configuration	read/ write	Struct 480	1	0xF7	0x414	0x01	0x09	0, 1	0x4209				
Automatic tare	Automatic tare configuration	read/ write	Struct 192	1	0xF8	0x414	0x01	0x0A	0, 1	0x420A				
Digital output function	Digital output function configuration	read/ write	Struct 80	1	0xF9	0x414	0x01	0x0B	0, 1	0x420B				
Emptying function	Emptying function configuration	read/ write	Struct 48	1	0xFA	0x414	0x01	0x0C	0, 1	0x420C				
Filling statistics	Filling statistics	read	Struct 224	1	0xFB	0x414	0x01	0x0D	0, 1	0x420D				
Clear filling statistics	Clear filling statistics	write	Uint 8	1	0xFC	0x414	0x01	0x0E	0, 1	0x420E				
Filling application status	Filling application status	read	Uint 16	1	0xFD	0x414	0x01	0x0F	0, 1	0x420F				

Command	Description	Read/Write	Data Type	PROFIBUS slot	PROFIBUS Index	EIP Class Code	EIP Instance Values	EIP Attribute #	PROFINET slot + subslot	PROFINET Index	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
Report filling status	Report filling state	read	Uint 8	1	0xFE	0x414	0x01	0x10	0, 1	0x4210				
Control filling status	control filling	write	Uint 8	1	0xFF	0x414	0x01	0x11	0, 1	0x4211				
Weighing mode	weighing filter mode Parameter: 0 = Universal weighing 2 = Fix filter	read/ write	Float 32	1	0x41	0x415	0x01	0x06	0, 1	0x4256				X
Weighing environment	weighing filter level Parameter: 0 = Very stable 1 = Stable 2 = Standard 3 = Unstable 4 = Very unstable	read/ write	Float 32	1	0x42	0x415	0x01	0x07	0, 1	0x4257				X
Cut-off frequency	Configure / Read Cut-Off frequency Parameter: 0 = Pre-defined frequency used, changeable over weighing environment 0.001 Hz – 20.0 Hz = Cut-off frequency	read/ write	Float 32	1	0x43	0x415	0x01	0x08	0, 1	0x4258				X
Cut-off frequency for alternate weight path	Configure / Read Cut-off frequency for alternate weight path	read/ write	Float 32	1	0x69	0x415	0x01	0x0B	0, 1	0x4259				
Geo code	Offset of calibration for gravity influence Parameter: -1.0 – 31.0	read/ write	Float 32	1	0x70	0x416	0x01	0x01	0, 1	0x4301				
Disable weight display	1 = weight display disabled, 0 = weight display enabled	read/ write	Binary	1	0x71	0x416	0x01	0x02	0, 1	0x4302				
Report LFT State	Shows the status of the weights and measures switch position (LFT Y/N)	read	Binary	1	0x73	0x416	0x01	0x04	0, 1	0x4304				
Display - Energy Saving Mode	Time value for the display to turn off "Green MT feature"	read/ write	float, 4	1	0x78	0x416	0x01	0x09	0, 1	0x4309	X	X	X	
Factory reset	Factory Reset	write	Uint 16	1	0x79	0x416	0x01	0x0A	0, 1	0x430A				X
Readability	Change weight readability Parameter: 0 = 1 d 1 = 10 d 2 = 100 d 3 = 1000 d 4 = 2 d 5 = 5 d	read/ write	Float 32	1	0x7A	0x416	0x01	0x0B	0, 1	0x430B				X
Change Display Resolution (M110)	value from -6 to 6 which corresponds with different display resolutions	read/ write	signed int 8	1	0x7B	0x416	0x01	0x0C	0, 1	0x430C				X
Signal output frequency settings	reads/sets output frequency signal	read/ write	Float 32	1	0x7C	0x416	0x01	0x0D	0, 1	0x430D				
Reverse weighing mode	sets weighing mode for loss in weight	read/ write	Binary	1	0x7D	0x416	0x01	0x0E	0, 1	0x430E				
Sets electrical termination of RS422/RS485 lines	sets electrical termination of RS422/485 lines	read/ write	Struct 16	1	0x7E	0x416	0x01	0x0F	0, 1	0x430F				

Command	Description	Read/Write	Data Type	PROFIBUS slot	PROFIBUS Index	EIP Class Code	EIP Instance Values	EIP Attribute #	PROFINET slot + subslot	PROFINET Index	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
General timeout	Timeout for issued command Parameter: 0 – 65535 Seconds	read/ write	Float 32	1	0x46	0x417	0x01	0x01	0, 1	0x4351				X
Observation time for zero	Report Zero Stability time Parameter: 0.1 – 4.0 Seconds	read/ write	Float 32	1	0x48	0x417	0x01	0x03	0, 1	0x4353				X
Tolerance for zero	Report Zero Stability digit [d] Parameter: 0.25 – 1000 digits	read/ write	Float 32	1	0x49	0x417	0x01	0x04	0, 1	0x4354				X
Observation time for tare	Report Tare Stability time Parameter: 0.1 – 4.0 Seconds	read/ write	Float 32	1	0x4A	0x417	0x01	0x05	0, 1	0x4355				X
Tolerance for tare	Report Tare Stability digit [d] Parameter: 0.25 – 1000 digits	read/ write	Float 32	1	0x4B	0x417	0x01	0x06	0, 1	0x4356				X
Observation time for weighing	Report Weight Stability time Parameter: 0.1 – 4.0 Seconds	read/ write	Float 32	1	0x4C	0x417	0x01	0x07	0, 1	0x4357				X
Tolerance for weighing	Report Weight Stability digit [d] Parameter: 0.25 – 1000 digits	read/ write	Float 32	1	0x4D	0x417	0x01	0x08	0, 1	0x4358				X
Smallest calculated approvable interval value	Smallest calculated approvable interval value	read/ write	Float 32	1	0x5A	0x417	0x01	0x15	0, 1	0x4365				
d, increment	Smallest available digit	read	Float 32	1	0x5B	0x417	0x01	0x16	0, 1	0x4366	X	X	X	
Nmax (Maximal capacity)	Scale/Sensor capacity	read	Float 32	1	0x5C	0x417	0x01	0x17	0, 1	0x4367	X	X	X	
Automatic zero tracking	Enable / Disable auto zero function Parameter: 0 = Disabled 1 = Enabled	read/ write	Uint 8	1	0x63	0x417	0x01	0x1E	0, 1	0x436E				X
Zeroing at start-up	Enable / Disable zeroing mode at startup Parameter: 0 = Disabled 1 = Enabled	read/ write	Uint 8	1	0x64	0x417	0x01	0x1F	0, 1	0x436F				X
Report gross weight from each LC	Reports gross weight value from each individual load cell. Placed into 15 element array of floating point values. The first element is the total gross weight for the scale. Individual weight values follow in subsequent elements of the array. If not all possible load cells are used, a value of 0 will be reported in all unused array elements.	Read	Struct	2	0xB0	0x417	0x01	0x24	0,1	4374			X	

Command	Description	Read/Write	Data Type	PROFIBUS slot	PROFIBUS Index	EIP Class Code	EIP Instance Values	EIP Attribute #	PROFINET slot + subslot	PROFINET Index	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
Report net weight from each LC	Reports net weight value from each individual load cell. Placed into 15 element array of floating point values. The first element is the total net weight for the scale. Individual weight values follow in subsequent elements of the array. If not all possible load cells are used, a value of 0 will be reported in all unused array elements.	Read	Struct	2	0xB1	0x417	0x01	0x25	0,1	4375			X	
Report #1 Input Polarity	Determines the polarity of the input at setup.	read	byte, 1	2	0x10	0x418	0x01	0x01	0, 1	0x4401		X	X	X
Write #1 Input Polarity	Determines the polarity of the input at setup.	write	byte, 1	2	0x10	0x418	0x01	0x01	0, 1	0x4401		X	X	X
Report #1 Input Assignment	Application dependent ex. 0=None, 1=Clear Tare, 2 = Tare, 3 = zero	read	byte, 1	2	0x11	0x418	0x01	0x02	0, 1	0x4402		X	X	X
Write #1 Input Assignment	Application dependent ex. 0=None, 1=Clear Tare, 2 = Tare, 3 = zero	write	byte, 1	2	0x11	0x418	0x01	0x02	0, 1	0x4402		X	X	X
Report #2 Input Polarity	Determines the polarity of the input at setup.	read	byte, 1	2	0x13	0x418	0x01	0x04	0, 1	0x4404		X	X	X
Write #2 Input Polarity	Determines the polarity of the input at setup.	write	byte, 1	2	0x13	0x418	0x01	0x04	0, 1	0x4404		X	X	X
Report #2 Input Assignment	Application dependent ex. 0=None, 1=Clear Tare, 2 = Tare, 3 = zero	read	byte, 1	2	0x14	0x418	0x01	0x05	0, 1	0x4405		X	X	X
Write #2 Input Assignment	Application dependent ex. 0=None, 1=Clear Tare, 2 = Tare, 3 = zero	write	byte, 1	2	0x14	0x418	0x01	0x05	0, 1	0x4405		X	X	X
Report #3 Input Polarity	Determines the polarity of the input at setup.	read	byte, 1	2	0x16	0x418	0x01	0x07	0, 1	0x4407		X	X	X
Write #3 Input Polarity	Determines the polarity of the input at setup.	write	byte, 1	2	0x16	0x418	0x01	0x07	0, 1	0x4407		X	X	X
Report #3 Input Assignment	Application dependent ex. 0=None, 1=Clear Tare, 2 = Tare, 3 = zero	read	byte, 1	2	0x17	0x418	0x01	0x08	0, 1	0x4408		X	X	X
Write #3 Input Assignment	Application dependent ex. 0=None, 1=Clear Tare, 2 = Tare, 3 = zero	write	byte, 1	2	0x17	0x418	0x01	0x08	0, 1	0x4408		X	X	X
Report Output Polarity	Read Output polarity	read	byte, 1	2	0x1C	0x418	0x01	0x0D	0, 1	0x440D		X	X	X
Write Output Polarity	Write Output polarity	write	byte, 1	2	0x1C	0x418	0x01	0x0D	0, 1	0x440D		X	X	X
Report #1 Output Assignment	Value based on application: 0, 1, 2, 3, 4, 5,etc.	read	byte, 1	2	0x1D	0x418	0x01	0x0E	0, 1	0x440E		X	X	X
Write #1 Output Assignment	Value based on application: 0, 1, 2, 3, 4, 5,etc.	write	byte, 1	2	0x1D	0x418	0x01	0x0E	0, 1	0x440E		X	X	X
Report #2 Output Assignment	Value based on application: 0, 1, 2, 3, 4, 5,etc.	read	byte, 1	2	0x24	0x418	0x01	0x15	0, 1	0x4415		X	X	X
Write #2 Output Assignment	Value based on application: 0, 1, 2, 3, 4, 5,etc.	write	byte, 1	2	0x24	0x418	0x01	0x15	0, 1	0x4415		X	X	X
Report #3 Output Assignment	Value based on application: 0, 1, 2, 3, 4, 5,etc.	read	byte, 1	2	0x2B	0x418	0x01	0x1C	0, 1	0x441C		X	X	X
Write #3 Output Assignment	Value based on application: 0, 1, 2, 3, 4, 5,etc.	write	byte, 1	2	0x2B	0x418	0x01	0x1C	0, 1	0x441C		X	X	X
Report #4 Output Assignment	Value based on application: 0, 1, 2, 3, 4, 5,etc.	read	byte, 1	2	0x32	0x418	0x01	0x23	0, 1	0x4423		X	X	X
Write #4 Output Assignment	Value based on application: 0, 1, 2, 3, 4, 5,etc.	write	byte, 1	2	0x32	0x418	0x01	0x23	0, 1	0x4423		X	X	X
Report #5 Output Assignment	Value based on application: 0, 1, 2, 3, 4, 5,etc.	read	byte, 1	2	0x39	0x418	0x01	0x2A	0, 1	0x442A		X	X	X
Write #5 Output Assignment	Value based on application: 0, 1, 2, 3, 4, 5,etc.	write	byte, 1	2	0x39	0x418	0x01	0x2A	0, 1	0x442A		X	X	X
Last dynamic weight value	Last dynamic weight value	Read	Float 32	2	0x90	0x41A	0x01	0x01	0, 1	0x4501		X		
Calculated number of dynamic weighments	Calculated number of dynamic weighments (counts)	Read	UInt 32	2	0x92	0x41A	0x01	0x03	0, 1	0x4503		X		
Maximum dynamic weight value	Max dynamic weight	Read	Float 32	2	0x93	0x41A	0x01	0x04	0, 1	0x4504		X		
Minimum dynamic weight value	Min dynamic weight	Read	Float 32	2	0x94	0x41A	0x01	0x05	0, 1	0x4505		X		
Mean dynamic weight value	Average dynamic weight	Read	Float 32	2	0x95	0x41A	0x01	0x06	0, 1	0x4506		X		
Standard deviation of last 20 dynamic weighments	Standard deviation of last 20 dynamic weighments	Read	Float 32	2	0x96	0x41A	0x01	0x07	0, 1	0x4507		X		
Input setup using structure (DIN & SICS string)	Input setup using structure (DIN & SICS string)	read/ write	Struct	2	0x41	0x418	0x01	0x32	0, 1	0x4432	X	X		

Command	Description	Read/Write	Data Type	PROFIBUS slot	PROFIBUS Index	EIP Class Code	EIP Instance Values	EIP Attribute #	PROFINET slot + subslot	PROFINET Index	ACT350	ACT350 DIO	ACT350 POWERCELL	ACT350 Precision
Write Output Signal	Manually control output ports of device. High value will force the corresponding output to turn high. e.g. When using little Endian format, 00011101 will cause output 0, 2, 3 and 4 high. Output 1 will be low.	Write	Byte, 1	2	0x42	0x418	0x01	0x33	0, 1	0x4433		X	X	
Report Target weight	Report Target Weight	read	Float 32	2	0x5F	0x419	0x01	0x10	0, 1	0x4460	X	X		
Read float32	Test floating point variable – always reads 123.45 – no write permitted	read	Float 32	1	0x0A	0x30F	0x01	0x01	0, 1	0x5000	X	X	X	X
Write float32	Test floating point variable – no usage in device except for test	write	Float 32	1	0x0B	0x30F	0x01	0x02	0, 0	0x5001	X	X	X	X
Read uint16	Test integer variable – always reads 9876	read	Uint 8	1	0x0C	0x30F	0x01	0x03	0, 1	0x5002	X	X	X	X
Write uint16	Test integer variable – no usage in device except for test	write	Uint 8	1	0x0D	0x30F	0x01	0x04	0, 1	0x5003	X	X	X	X
Read string	Test string variable – always read "ABCD"	read	String 160	1	0x0E	0x30F	0x01	0x05	0, 1	0x5004	X	X	X	X
Write string	Test string variable – always read "ABCD"	write	String 160	1	0x0F	0x30F	0x01	0x06	0, 1	0x5005	X	X	X	X
Read uint32	Test long integer variable – always reads 98765	read	Long	1	0x10	0x30F	0x01	0x07	0, 1	0x5006	X	X	X	X
Write uint32	Test long integer variable – no usage in device except for test	write	Long	1	0x11	0x30F	0x01	0x08	0, 1	0x5007	X	X	X	X
Read uint8	Test byte variable – always reads 56h	read	byte, 1	1	0x12	0x30F	0x01	0x09	0, 1	0x5008	X	X	X	X
Write uint8	Test byte variable – no usage in device except for test	write	byte, 1	1	0x13	0x30F	0x01	0x10	0, 1	0x5009	X	X	X	X

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