Anwendung

Zur Datenkopplung zwischen ProRate PLUS PCM-KD Steuerungsmodul und verschieden Leitsystemen stehen zwei Schnittstellenmodule zur Verfügung. Das Modul wird im PCM-KD auf die CPU Karte gesteckt ohne den Zusatz von externen Bauteilen.

Über diese Schnittstelle sind alle Kontrollfunktionen adressierbar, somit ergibt eine extrem flexible und leistungsfähige Schnittstelle, konfigurierbar für einfache Start/Stop und Datenüberwachungs-Funktionen bis zu komplexen Aufgaben wie automatisierter Produktewechsel usw.

Schnittstellenmodule

Alle Module sind konform mit: UL/UR (US), CSA (Kanada), und CE (Europa).

Modul	Protokoll	Schnittstellentyp	Max. Transfer-Rate	Anz. Knoten	Anschluss
	Ethernet/IP oder Profinet-IO	Ethernet	100 Mbit/s	von Netzwerkkonf. abhängig	RJ-45

Quick-Start Konfiguration

Das PCM-KD wird vorkonfiguriert geliefert für die einfache Schnittstellen-Realisierung. Die Tabellen unten und auf Seite 2 enthalten die Registerdefinitionen für 1 bis 8 Dosierer.

Bit#	LineCommands (System Write Block)
0	Acknowledge Alarms (Line & System)
1	Clear Alarms (Line & System)
2	Stop, Preserve Alarms
3	Start, Clear Alarms
6	Clear Totalizer
28	Acknowledge Alarms (Line only)
29	Clear Alarms (Line only)
30	Acknowledge Alarms (System only)
31	Clear Alarms (System only)

Bit#	LineAlarmStatus (System Read Block)
0	Line Unit #1 Hard Alarm
1	Line Unit #2 Hard Alarm
2	Line Unit #3 Hard Alarm
3	Line Unit #4 Hard Alarm
4	Line Unit #5 Hard Alarm
5	Line Unit #6 Hard Alarm
6	Line Unit #7 Hard Alarm
7	Line Unit #8 Hard Alarm
8	Line Setpoint High
9	Line Recipe Error

Bit#	UnitCommands (Unit Write Block)
0	Acknowledge Alarm(s)
1	Clear Alarm(s)
2	Stop
3	Start & Clear Alarms
6	Clear Totalizer
7	Gravimetric Mode
8	Volumetric Mode
10	Calibrate Feeder
11	Empty Feeder
12	Tare Feeder
13	Refill Feeder
21	Repoll
22	Reconfigure
25	Screw Fill
30	Clear FeedFactor Array (Internal Use)
31	Recalculate FeedFactor Array (Internal Use)

Bit#	LineProcessStatus (System Read Block)
0	Initialization Complete
1	Line is Running
2	Disabled
4	Interlock By Digital Input
5	Any Unit In Line Disabled
6	Any Unit In Line Hard Alarm
7	Wait (Setpont zero or interlock open)
8	Start OK
9	Started
10	Any Unit In Line Soft Alarm
11	Recipe OK
12	Line setpoint exceeds one of units
13	Not all units in line are running
17	Any unit in line has an alarm shutdown
18	Alarm shutdown input
19	Alarm shutdown output = line stop
20	Line Hard Alarm
21	Line Soft Alarm
22	Line Warning
28	Hport initialization complete
29	Local user interface present
30	1 hour toggle bit
31	5 hour toggle bit

Bit#	UnitAlarmStatus (Unit Read Block)
1	Internal Channel Failure
2	Weight Failure
3	Motor Fail
4	Motor Drive Aux Interlock
5	Start Ignored
6	Massflow High
7	Massflow Low
8	Drive Command High
9	Drive Command Low
10	Feed Factor Alarm
11	Refill Timeout
12	Scale Overrange
13	Scale Underrange
14	Setpoint Limit
15	Low Gain
16	Weight Limit
17	Reset While Running
18	Motor Overheat
19	Motor Overload
20	Loader Empty

Bit#	SystemAlarmStatus (System Read Block)
0	SD Card Failure
1	Power Glitch
8	Battery Low
10	Unexpected Reset
12	Keypad failure
13	Digital output fault
15	Watchdog reset
16	Operating System Fault
26	Coprocessor failure
27	Host Port fail
28	Host Port fail during initialization
29	Host Port wrong board

Bit#	UnitProcessStatus (Unit Read Block)
1	Line is Running
2	Disabled
3	Drive Enable Output
4	Line Interlock In
5	MDU Hard Interlock status
6	MDU Enable Input status
7	Wait
8	Start OK (start will start for go to Wait)
9	Started
10	Unit in Line Mode
11	Mass Mode (Gravimetic) Status
12	Calibrating
13	Emptying
14	Screw Filling
15	Pert
16	Refill Output
17	Mass Mode (Gravimetic) Setting
18	Alarm Shutdown Input
19	Alarm Shutdown Output
20	Hard Alarm
21	Soft Alarm
22	Warning
23	Alarm Relay (Opposite Hard Alarm)
25	Loading
26	Load enable/disable input

System Read Block (64 bytes starting at byte 0)			
Parameter	**DataType**	**Offset**	**Bytes**
HeartBeat	int-16 bit	0	0-1
DatabaseIndex	int-16 bit	2	2-3
ParameterMsg	int-16 bit	4	4-5
LineReadyToRun	int-16 bit	6	6-7
DatabaseValue	float	8	8-11
ParameterMin	float	12	12-15
ParameterMax	float	16	16-19
LineSetpoint	float	20	20-23
LineMassflow	float	24	24-27
LineTotalizer	float	28	28-31
LineMaxSetpoint	float	32	32-35
LineUnitPercentages	float	36	36-39
LineAlarmStatus	int-32-bit	40	40-43
LineProcessStatus	int-32-bit	44	44-47
SystemAlarmStatus	int-32-bit	48	48-51

System Write Block (64 bytes starting at byte 0)			
Parameter	**DataType**	**Offset**	**Bytes**
AlarmDelay	int-16 bit	0	0-1
AlarmStartupDelay	int-16 bit	2	2-3
DatabaseIndex	int-16 bit	4	4-5
spare	*int-16 bit*	*6*	*6-7*
LineCommands	int-32 bit	8	8-11
DatabaseValue	float	12	12-15
LineSetpoint	float	16	16-19
LineMaxSetpoint	float	20	20-23
LineTotalizer	float	24	24-27

Unit Read Blocks (64 bytes/unit starting at byte 64)										
		Unit #:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Parameter	**DataType**	**Offset**	**Bytes**	**Bytes**	**Bytes**	**Bytes**	**Bytes**	**Bytes**	**Bytes**	**Bytes**
FdrCtrlMode	int-16 bit	0	64-65	128-129	192-193	256-257	320-321	384-385	448-449	512-513
RefillEna	int-16 bit	2	66-67	130-131	194-195	258-259	322-323	386-387	450-451	514-515
MaximumFlow	float	4	68-71	132-135	196-199	260-263	324-327	388-391	452-455	516-519
Setpoint	float	8	72-75	136-139	200-203	264-267	328-331	392-395	456-459	520-523
Massflow	float	12	76-79	140-143	204-207	268-271	332-335	396-399	460-463	524-527
Totalizer	float	16	80-83	144-147	208-211	272-275	336-339	400-403	464-467	528-531
DriveCommand	float	20	84-87	148-151	212-215	276-279	340-343	404-407	468-471	532-535
MotorSpeed	float	24	88-91	152-155	216-219	280-283	344-347	408-411	472-475	536-539
AverageFeedFactor	float	28	92-95	156-159	220-223	284-287	348-351	412-415	476-479	540-543
NetWeight	float	32	96-99	160-163	224-227	288-291	352-355	416-419	480-483	544-547
RefillLevelMax	float	36	100-103	164-167	228-231	292-295	356-359	420-423	484-487	548-551
RefillLevelMin	float	40	104-107	168-171	232-235	296-299	360-363	424-427	488-491	552-555
PertValue	float	44	108-111	172-175	236-239	300-303	364-367	428-431	492-495	556-559
SetpointRatio	float	48	112-115	176-179	240-243	304-307	368-371	432-435	496-499	560-563
MDULoad	float	52	116-119	180-183	244-247	308-311	372-375	436-439	500-503	564-567
UnitAlarmStatus	int-32 bit	56	120-123	184-187	248-251	312-315	376-379	440-443	504-507	568-571
UnitProcessStatus	int-32 bit	60	124-127	188-191	252-255	316-319	380-383	444-447	508-511	572-575

Unit Write Blocks (64 bytes/unit starting at byte 64)										
		Unit #:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Parameter	**DataType**	**Offset**	**Bytes**	**Bytes**	**Bytes**	**Bytes**	**Bytes**	**Bytes**	**Bytes**	**Bytes**
FdrCtrlMode	int-16 bit	0	64-65	128-129	192-193	256-257	320-321	384-385	448-449	512-513
RefillEna	int-16 bit	2	66-67	130-131	194-195	258-259	322-323	386-387	450-451	514-515
UnitCommands	int-32 bit	4	68-71	132-135	196-199	260-263	324-327	388-391	452-455	516-519
MaximumFlow	float	8	72-75	136-139	200-203	264-267	328-331	392-395	456-459	520-523
Setpoint	float	12	76-79	140-143	204-207	268-271	332-335	396-399	460-463	524-527
Totalizer	float	16	80-83	144-147	208-211	272-275	336-339	400-403	464-467	528-531
InitialFeedFactor	float	20	84-87	148-151	212-215	276-279	340-343	404-407	468-471	532-535
RefillLevelMax	float	24	88-91	152-155	216-219	280-283	344-347	408-411	472-475	536-539
RefillLevelMin	float	28	92-95	156-159	220-223	284-287	348-351	412-415	476-479	540-543
SetpointRatio	float	32	96-99	160-163	224-227	288-291	352-355	416-419	480-483	544-547

Copyright 2022 by K-Tron Technologies, Inc. Covered by patents in USA and other countries. Specifications subject to change without notice.