



Приложение	
Применение	for functionally safe applications with the ecomatBasic and the ecomatController
Функция	software package for programming in CODESYS 3.5 SP18
Системные решения, состоящие из программного и аппаратного обеспечения	
Программное обеспечение	CP100S
Аппаратное обеспечение	CR403S, CR413S
	CR710S, CR711S
	CR720S, CR721S



Safety package for ecomatBasic and ecomatController

Controller safety package

Входы/выходы		
CR403S		
Input function	safety inputs	12
	Соединение	IN00xx, IN01xx, IN02xx, IN03xx, IN04xx, IN05xx
Функция выходного сигнала	safety outputs	0
CR413S		
Input function	safety inputs	16
	Соединение	IN00xx, IN01xx, IN02xx, IN03xx, IN04xx, IN05xx, IN06xx, IN07xx
Функция выходного сигнала	safety outputs	4
	Соединение	OUT02xx
CR710S		
Input function	safety inputs	20
	Соединение	IN00xx, IN01xx, IN04xx, IN05xx, IN06xx, IN09xx
Функция выходного сигнала	safety outputs	16
	Соединение	OUT00xx, OUT01xx
CR711S		
Input function	safety inputs	64
	Соединение	IN00xx, IN01xx, IN02xx, IN03xx, IN04xx, IN05xx, IN06xx, IN07xx, IN08xx, IN09xx
Функция выходного сигнала	safety outputs	27
	Соединение	OUT00xx, OUT01xx, OUT02xx
CR720S		
Input function	safety inputs	60
	Соединение	IN00xx, IN01xx, IN02xx, IN03xx, IN04xx, IN05xx, IN06xx, IN07xx, IN08xx, IN09xx, IN10xx, IN11xx, IN13xx, IN15xx, IN16xx, IN17xx
Функция выходного сигнала	safety outputs	36
	Соединение	OUT00xx, OUT01xx, OUT02xx, OUT03xx
CR721S		
Input function	safety inputs	64
	Соединение	IN00xx, IN01xx, IN02xx, IN03xx, IN04xx, IN05xx, IN06xx, IN07xx, IN08xx, IN09xx, IN10xx, IN11xx, IN12xx, IN13xx, IN14xx, IN15xx, IN16xx, IN17xx, IN18xx
Функция выходного сигнала	safety outputs	68
	Соединение	OUT00xx, OUT01xx, OUT02xx, OUT03xx, OUT04xx, OUT05xx
Интерфейсы		
Протокол	CANopen Safety	
Испытания / одобрения		
ЭМС	DIN EN 61326-3-1	
Классификация безопасности		
Соответствует требованиям	IEC 61508 SIL 2	
	ISO 26262 ASIL C	



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CR403S: в соответствии с IEC 61508		
Срок службы ТМ (Mission Time)	20 лет	
PFH [1/h]	external one-channel input	< 5,0E-9
	external two-channel input	< 5,0E-10
	logic	< 2,0E-7
CR413S: в соответствии с IEC 61508		
Срок службы ТМ (Mission Time)	20 лет	
PFH [1/h]	external one-channel input	< 5,0E-9
	external two-channel input	< 5,0E-10
	logic	< 2,0E-7
	external one-channel output	< 3,0E-8
CR403S, CR413S: в соответствии с ISO 26262		
Total Life Time	20 Jahre	
TTrip	10 h	
Typical use case	PMFH: 70 Fit	this classification applies to the following assumption:
		TLifetime (Total Operating Hours) = 40000 h
		(operating and non-operating phase of the device considered)
		(this is equivalent to operation for 20 years, 8 h a day on 250 days of the year or 10 h a day on 200 days)
Worst case	PMFH: 90 Fit	this classification applies to the following assumption:
		"always on"
		(non-operating phase of the device not considered)
CR710S, CR711S, CR720S, CR721S: в соответствии с IEC 61508		
Срок службы ТМ (Mission Time)	20 лет	
PFH [1/h]	external one-channel input	4.0E-09
	external two-channel input	5.0E-10
	logic	1,0E-07
	external one-channel output	2.0E-08
	external two-channel output	1.0E-09
CR710S, CR711S, CR720S, CR721S: в соответствии с ISO 26262		
Total Life Time	20 Jahre	
TTrip	10 h	
Typical use case	PMFH: 48 Fit	this classification applies to the following assumption:
		TLifetime (Total Operating Hours) = 40000 h
		(operating and non-operating phase of the device considered)
		(this is equivalent to operation for 20 years, 8 h a day on 250 days of the year or 10 h a day on 200 days)



Safety package for ecomatBasic and ecomatController

Controller safety package

Worst case	PMFH: 73 Fit	this classification applies to the following assumption:
		"always on"
		(non-operating phase of the device not considered)

Примечания	
Примечания	can be used in applications up to SIL 2 in accordance with IEC 62061
	can be used in applications up to PL d in accordance with ISO 13849-1
	can be used in applications up to AgPL d in accordance with ISO 25119
	can be used in applications in accordance with DIN EN ISO 13766-2