

Product designation	Diesel engine fire pump controller, supply 12-24VDC, built-in RS485, not expandable FFL...DP		
Product type designation			
Auxiliary supply			
Rated auxil. supply voltage	12/24VDC		
Operating auxil. supply voltage range	7.5...33VDC		
Voltage inputs			
Rated voltage U_s	min	VAC	100
	Max	VAC	250
Measurement range	V		50...264
Frequency range	Hz		45...65
Engine running input (D+) for pre-excited alternator			
Operating range	VDC		0...33VDC
Maximum input current	mA		0.5mA
Max voltage at D+ terminal	VDC		12 or 24 VDC (battery voltage)
Pre-excitation current	210mA at 12VDC / 130mA at 24VDC		
Engine speed input (pick-up/W input)			
Input type	AC coupling		
Minimum reading frequency voltage			
	High sensitivity		$\geq 2.8V_{pp}$ (1Vrms) at 40Hz $\geq 10V_{pp}$ (3.5Vrms) at 20000Hz
	Low sensitivity		$\geq 3.7V_{pp}$ (1.3Vrms) at 40Hz $\geq 7V_{pp}$ (2.5Vrms) at 2000Hz
Measuring input impedance	> 100k Ω		
Max input voltage	84Vpp (30Vrms)		
Pinion input			
Voltage range	0...33VDC		
Input current	$\leq 8mA$		
Threshold	adjustable		
Input delay	adjustable		
NTC probe input			
Sensor type	NTC (LOVATO code NTC01)		
Measuring range	$^{\circ}C$	-40...+85	
Maximum connection length	mt	3m	
Digital inputs			
Number of digital input	Nr.	10	
Digital input type	Negative		
Digital input current	mA	≤ 6	
High digital input signal	V	$\geq 4.9V$ (typical 3.8V)	

Low digital input signal	V	≤1.25V (typical 1.9V)
Digital input signal delay	ms	≥50
Relay outputs		
Number of relay output	Nr.	10
Mechanical endurance		10 ⁷
Electrical endurance		10 ⁵
Static Outputs		
Number of static output		1 (OUT11)
Static output type		NO
Operating voltage	V	10...30VDC
Maximum current	mA	50mA
RS485 serial interface		
Interface type		Isolated RS485 serial interface
Baud rate	bps	1200...115200
Insulation voltage (RS485-Vbatt)		1kVDC
Connections		
Type of terminal		Removable screw-type
Conductor cross section		
AWG/Kcmil	min	AWG 24
	Max	AWG 12
IEC	min	mm ² 0.2
	Max	mm ² 2.5
Tightening torque for terminals	max	Nm 0.56
	max	lbin 5
Ambient conditions		
Temperature		
Operating temperature	min	°C -25
	max	°C +70
Storage temperature	min	°C -30
	max	°C +80
Relative humidity		% <80% (IEC/EN 60068-2-78)
Housing		
Execution		Flush-mount
Material		Polycarbonate
Degree of protection		IP65 Frontal; IP20 on terminals
Dimensions (W x H x D)	mm	240 x 180 x 43.9
Weight	g	980
ETIM classification		
ETIM 8.0		EC002685 - Central fire alarm control panel