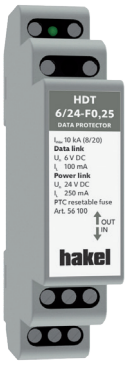
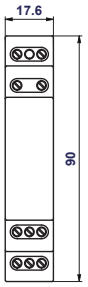
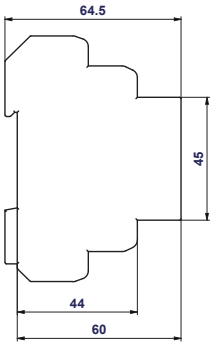
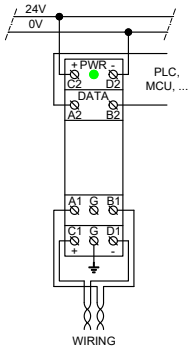
The module of data surge protection and overcurrent protection

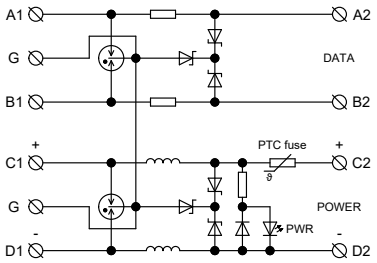
LPZ 1-2-3 / IP20 / CE











HDT/6/24-F0,25
HDT/6/24-F1,1

HDT/6/24-F* is a range of combined two-stage surge protection intended for a low voltage data and power supply lines routed by a common cable. An example might be a pair of RS485 data line wires and a pair of 24 V DC power line wires routed by a common cable from the control system to remote sensors requiring an external supply voltage. The module can also be used to connect many other types of analog or digital sensors with symmetrical or asymmetrical output. The protection module must be installed just before the protected device. The 1st stage of surge protection consists of three-pole gas discharge tubes, the 2nd stage is using transils. The overcurrent protection of the power supply line is ensured by a PPTC resettable fuse. The fuse heats up during the overcurrent and its internal resistance increases by several levels. This will limit (not interrupt) the flowing current. The green LED has only an orientation function about the presence of voltage on the power supply line. To reset the resettable fuse, the circuit must be switched off and let the fuse cool down. Unlike a standard fuse, resettable fuses do not have to be changed, which can reduce the service interventions or make the service faster.

Type		HDT/6/24-F0,25	HDT/6/24-F1,1
Data line protection			
Nominal voltage DC	U_n	6 V	
Max. continuous operating voltage DC	U_C	7,2 V	
Rated load current	I_L	100 mA	
Power supply system protection			
Nominal voltage DC	U_n	24 V	
Max. continuous operating voltage DC	U_C	28,6 V	
Rated load current	I_L	250 mA	1100 mA
Hold-current of the resettable fuse at -40; 23; 70 °C	I_{hold}	408; 250; 133 mA	1790; 1100; 580 mA
Trip-current of the resettable fuse at -40; 23; 70 °C	I_{trip}	816; 500; 266 mA	3580; 2200; 1160 mA
C1 Nominal discharge current 8/20 µs	I_n	1 kA	
C1 Voltage protection level line-G at I_n	U_p	40 V	
C1 Voltage protection level line-line at I_n	U_p	35 V	
C2 Nominal discharge current 8/20 µs	I_n	10 kA	
C2 Voltage protection level line-G at I_n	U_p	60 V	
C2 Voltage protection level line-line at I_n	U_p	40 V	
C3 Voltage protection level line-G at 1 kV/µs	U_p	35 V	
C3 Voltage protection level line-line at 1 kV/µs	U_p	35 V	
Operating temperature range	ϑ	-40 °C ÷ +70 °C	
Cross-section of the connected conductors		0,25 ÷ 1,5 mm^2	
Protection type		IP20	
Meet the standard requirements		EN 61643-21 (IEC 61643-21)	
Article number		56 100	56 101

Note: The current of the resettable fuse I_{hold} is a value valid for an ambient temperature of 23 °C at which the fuse has not tripped yet. The current I_{trip} is a value at which the fuse will definitely trip and this value is equal to twice the current I_{hold}. For another ambient temperature, the I_{hold} value must be multiplied by a coefficient according to the formula $k=(123-T_a)/100$ [-, °C], where T_a is the actual ambient temperature of the fuse.