



TMC 66



Test monitoring unit



Safety note:

- The TMC 66 test monitoring unit is a contactless active protective device according to EN 61496-1, only in connection with an EC certified protective photoelectric sensor category 2.
- Maximum test response time for muting senders Start 1 and Start 2 is 240ms for each sender.
- Extensive description is part of every shipment.

Accessories

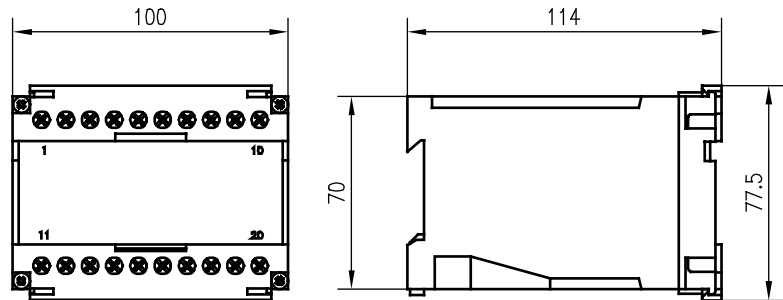
(available separately)

- Testable muting sender - suitable:
 - PRK 96 K/P-1361-29 (Part No. 500 80474)
 - PRK 97/4.8 L (Part No. 500 80474)
 - IPRK 92/4.8 S (Part No. 500 14199)
 - PRK 46/4.8-S12 (Part No. 500 60920)
- All throughbeam photoelectric sensors with (.8) activation input

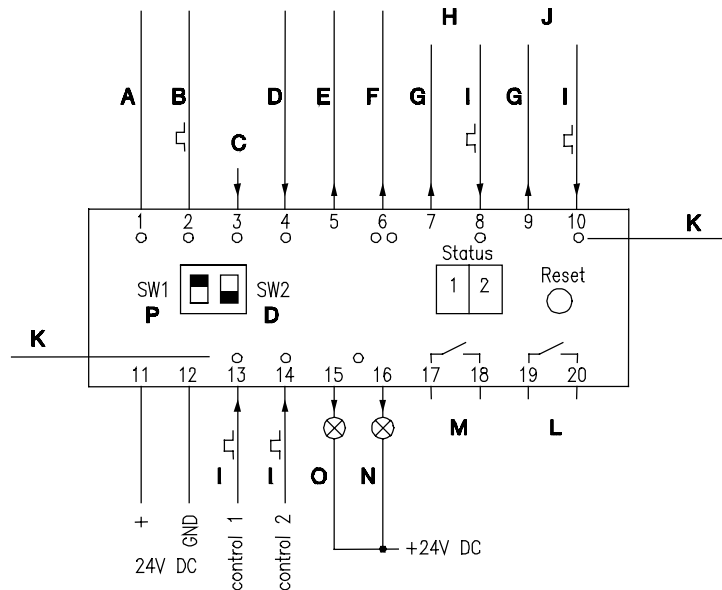
Features

- High security through permanent cyclic test in time intervals of 2 sec.
- Security relay output with fault protected monitoring
- No interruption of operating during test procedure
- Connection possibility for all current testable protective photoelectric sensors
- Selectable start and restart-disable and contactor control
- Processing of PLC control signals as muting sender
- Integrated muting function
- Connection for two monitored muting warning lights (necessary acc. to EN 61496-1)
- Integrated self-containing mode (start with dimmed AOPD)
- Separate signaling outputs as PNP transistor outputs

Dimensional Drawing



Electrical Connection



- | | |
|------------------------------------|--|
| A SLS transmitter active | J Start 2 |
| B SLS receiver | K Indicator diodes |
| C Start | L Safety relay output 2 |
| D Relay monitoring | M Safety relay output 1 |
| E Signal output "Error" | N Muting lamp 1 |
| F Signal output "Safety on" | O Muting lamp 2 |
| G Output Test | P Start/Restart-disable |
| H Start 1 | Status 1 Test monitoring unit – SLS |
| I Input | Status 2 Muting controller |

Order guide

Designation	Part No.
TMC 66	500 82121



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Technical Data

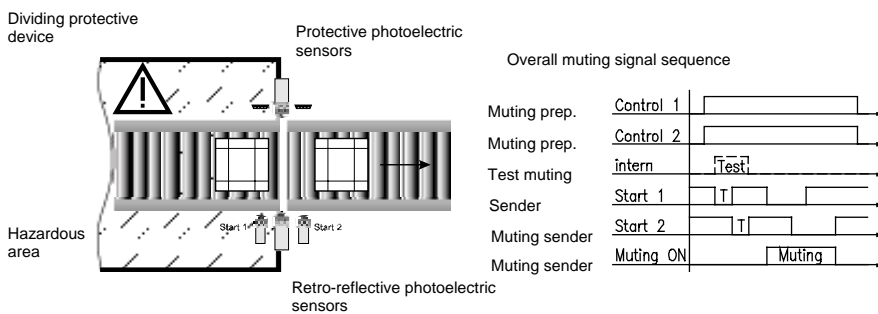
Specifications	
Operating voltage U_B	24V DC $\pm 15\%$ (incl. residual ripple)
Residual ripple	$\leq 15\%$ of U_B
Current consumption	approx. 200mA
Response time	$\leq 20\text{ms}$
Sensors	
Transmitter activation	PNP (HIGH active)
Receiver input	optical coupler input ¹⁾
Activation muting sender	PNP (HIGH active)
Input muting sender	optical coupler input ¹⁾
Inputs/outputs	
Start input	optical coupler input (HIGH active) ¹⁾
Signal output „Error“	PNP transistor output, 100mA ²⁾
Signal output „Safety on“	PNP transistor output, 100mA ²⁾
Muting preparation Control 1/Control2	optical coupler inputs (HIGH active) ¹⁾
Muting light signal transmitter ³⁾	N.O. contacts, 24VDC, max. 2A integrated filament monitoring
Relay monitoring	optical coupler input (HIGH active) ¹⁾
Safety output	voltage free N.O. contacts, max. current load 4 A
External fuse protection	internal with max. 4 AMT
Overvoltage category 4	for rating voltage 300 V AC acc. to VDE 0110 part 1
Mechanical data	
Housing	polycarbonate, cover ABS/v-o gray
Connection	screw terminals max. connection cross section $2 \times 2.5\text{mm}^2$ acc. to DIN 46288
Mounting type	snap-on mounting on top hat rail
Weight	200g
Environmental data	
Ambient temp. (operating/storage)	$-20^\circ\text{C} \dots +60^\circ\text{C} / -30^\circ\text{C} \dots +70^\circ\text{C}$
Protection class	IP 40 (only for application in electrical operating rooms/ switching cabinet with minimum protection class IP 54 is suitable)
Contact protection	acc. to VBG 4 and VDE 0106 part 100

1) Input current approx. 10mA

2) Short-circuit and polarity reversal protection

3) Acc. to EN61496-1 light density min. $200\text{cd}/\text{m}^2$, light area min. 1cm^2

Muting system structure



Muting procedure

Before inducing a muting function, a test of the connected muting signal senders, e.g. retro-reflective photoelectric sensor with activation input via the muting preparatory signals of Control 1 and Control 2 is performed.

With the TMC 66, a start of the unit can be performed even with dimmed protective photoelectric sensors. This "self-containing mode" can be induced with the start condition $U_{B\text{ON}}$, if using retro-reflective photoelectric sensors or security switches as muting sender. The muting function starts with actuation of the first muting sensor "Start 1" and ends with the release of the second muting sensor "Start 2" and the switching off of the muting preparatory signals. A new muting process starts with the new activation of the muting preparatory signals.