

Extremely low self-inductance
High volumetric efficiency

Construction

- Self-healing
- Plastic and paper dielectric
- Oil-impregnated tubular windings (no PCB)
- Metal-sprayed end faces
ensure reliable contacting
- Fully insulated case

Terminals

- Internal thread M8 × 10, axial

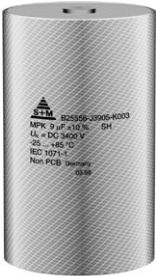
Mounting

- On the terminals

Individual data sheets

One capacitor of this series is specified in detail
(incl. thermal data) [on page 96](#).

Upon request, these data sheets are available for each capacitor type.



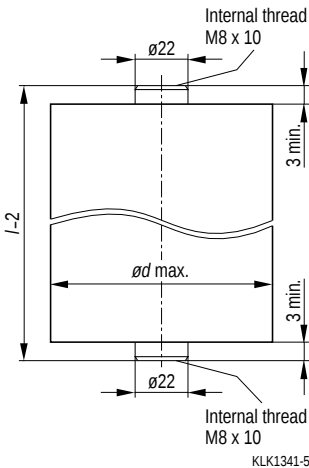
Technical data

Standards		IEC 1071-1/2 EN 61071-1/2 VDE 0560 part 120 and 121
Dielectric dissipation factor	$\tan \delta_0$	$\leq 20 \cdot 10^{-4}$
Max. current	$I_{\max}$	$\leq 80 \text{ A}$
Climatic data:		
Min. operating temperature	$\Theta_{\min}$	$-25 \text{ }^{\circ}\text{C}$
Max. operating temperature	$\Theta_{\max}$	$+85 \text{ }^{\circ}\text{C}$
Average relative humidity		$\leq 95 \text{ \%}$
Failure quota	$\alpha_{\text{FQ(co)}}$	300 failures per 10^9 component hours
Load duration	$t_{\text{LD(co)}}$	100000 h
Storage temperature limit	Θ_{stg}	$-55/+85 \text{ }^{\circ}\text{C}$
IEC climatic category (IEC 68-1 and 2)		25/085/56
Test A, cold		$-25 \text{ }^{\circ}\text{C}$
Test B, dry heat		$+85 \text{ }^{\circ}\text{C}$
Test Ca, damp heat, steady state		56 days/40 $^{\circ}\text{C}$ /93 % rel. humidity

Technical data

IEC climatic category (IEC 68-1 and 2)		25/085/56
Values after test Ca:		
Capacitance change	$\Delta C / C$	$\leq 1 \%$
Self-discharge time constant $\tau =$	$R_{is} \cdot C$	$\geq 10000 \text{ s}$
Dissipation factor change	$\Delta \tan \delta$	$\leq 5 \cdot 10^{-4}$
Test data:		
DC test voltage between terminals	U_{TT}	$1,5 \cdot U_N, 10 \text{ s}$
Self-discharge time constant $\tau =$	$R_{is} \cdot C$	$\geq 10000 \text{ s}$
Dissipation factor (50 Hz)	$\Delta \tan \delta$	$\leq 25 \cdot 10^{-4}$

Dimensional drawing



$\varnothing d_{\max}$ mm	$l-2$ mm
83	163
93	163
98	163

Dimensions in mm

Available ratings

U_N (V)	DC	2300	3400	
$C_N^{1)}$ (μF)				
7,5				
9				
12				

1) Capacitance tolerance $\pm 10 \%$

B 25 556

GTO Clamping

9 μF / 3400 Vdc

Ordering code: B25556-J3905-K003

Characteristics

C_N , tol.	9 $\mu\text{F} \pm 10\%$
U_N	DC 3400 V
I_{max}	70 A
L_{self}	< 20 nH
$\tan \delta_0$	$17 \cdot 10^{-4}$
R_S	3,8 m Ω

Maximum ratings

$\hat{U}$	4300 V
u_S	5100 V
$\hat{I}$	5,4 kA
I_S	14,0 kA
$(du/dt)_{\text{max}}$	600 V/ μs
$(du/dt)_S$	1500 V/ μs

Test data

U_{TT}	DC 5100 V, 10 s
$R_{is} \cdot C$	≥ 10000 s
$\tan \delta$ (50 Hz)	$\leq 22 \cdot 10^{-4}$

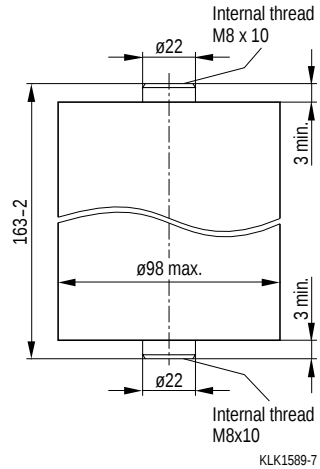
Climatic data

Θ_{min}	- 25 °C
Θ_{max}	+ 85 °C
Humidity	Average relative humidity $\leq 95\%$
$\alpha_{\text{FQ}(\text{co})}$	300/10 ⁹ h
$t_{\text{LD}(\text{co})}$	100000 h
Θ_{stg}	- 55 to + 85 °C

IEC climatic category: 25/085/56

(IEC 68-1 and 2)

Θ_{test}	+ 40 °C
Rel. humidity	93 %
t_{test}	56 days
$\Delta C/C$	$\leq 1\%$
$\Delta \tan \delta$	$\leq 5 \cdot 10^{-4}$
$R_{is} \cdot C$	≥ 10000 s



Design data

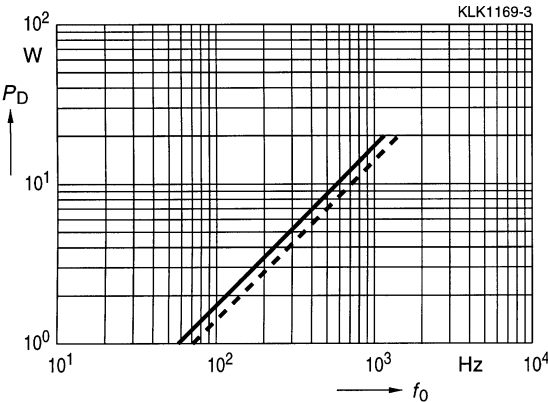
Dimensions $\varnothing \times l$	98 mm $\times$ 163 mm
Approx. weight	1700 g
Impregnation	Oil
Terminals	Internal thread M8 $\times$ 10
Max. torque	7 Nm
Terminal cross section	16 mm ²
Without overpressure disconnecter	
Fully insulated	

Thermal data

B25556-J3905-K003

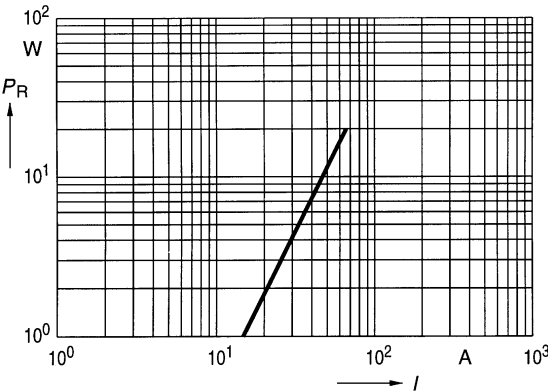
Dielectric power dissipation P_D
versus repetition frequency f_0

$\hat{u}_{ac} = 600 \text{ V}$ —————
 $\hat{u}_{ac} = 540 \text{ V}$ - - - - -



Ohmic power dissipation P_R
versus rms current value I

$R_S (85^\circ\text{C}) = 4,6 \text{ m}\Omega$



Permissible ambient temperature Θ_A
versus total power dissipation P
(Upright mounting position)

Natural cooling —————
Forced cooling 2 m/s - - - - -
Permissible capacitor
temperature -

